



Cotton Contamination Surveys

2009•2011•2013•2016•2019•2022

INTERNATIONAL TEXTILE MANUFACTURERS FEDERATION
FÉDÉRATION INTERNATIONALE DES INDUSTRIES TEXTILES
INTERNATIONALE VEREINIGUNG DER TEXTILINDUSTRIE



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Survey 2009 2011 2013 2016 2019 2022

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Foreword

In an effort to shed light on spinners' perception of the problem of cotton contamination and foreign matter, the International Textile Manufacturers Federation (www.itmf.org) has conducted regular surveys since 1982 with spinning mills affiliated to its world-wide membership.

For decades, spinners have produced evidence of all kinds of foreign matter found inside cotton bales which could often be eliminated by hand as long as spinning was still largely a labour-intensive processing technology. Following the extensive modernization of production equipment in recent years, processing steps which previously required the intervention of manual labour are increasingly performed by machines. The trend towards automation in textile manufacturing is not limited to any particular geographical area and will gain further momentum in the years to come.

The biggest problem which automation presents for cotton relates to cleanliness. Automated equipment can detect and eliminate contamination or foreign matter only to a limited degree. In the case of plastic material - one of the most vicious forms of contamination - the damage is becoming visible only by the time the fabric leaves the final finishing process, at which stage it is too late to apply any remedy. It is not only affecting the quality and appearance of the final textile product but may actually damage the processing machinery itself.

By accumulating evidence of contamination and foreign matter at regular intervals, ITMF helps cotton producers, merchants and spinners to better identify problem areas and thus contribute towards their eradication.

January 2023
[Corrected on 3.02.2023]

Survey conducted and distributed by

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Methodology

The data used in the survey have been collected by means of a questionnaire which gave spinning companies the possibility of evaluating virtually all cotton descriptions (i.e. combinations of country of origin and name of growth) consumed and traded internationally. An excerpt of the questionnaire showing its legend and four of the pre-indicated descriptions is reproduced on the following page.

It is important to point out some methodological aspects and underlying assumptions before reading the results of the survey.

For each description, participating companies (respondents) were asked to indicate whether or not they had consumed that particular description. This has been done in an attempt to avoid respondents inadvertently "forgetting" descriptions which had been consumed but were not found to be contaminated.

The basic statistical unit (the sample) of this survey is a mill's evaluation of a given description which it had consumed during the last 12 months. It is assumed that no description by the average mill has been consumed to a distorting degree, i.e. in much larger/smaller quantities than each of the other descriptions reported on. If this were not the case, sources of contamination appearing in a discrete, i.e. discontinuous fashion (e.g. metal/wire) might in this survey make descriptions consumed in larger quantities appear "worse" than descriptions consumed in smaller quantities. Nevertheless, in order to technically prevent such a possible bias from having an undue impact on the final results, no distinction has been made between "non-existent" and "insignificant" contamination, the underlying assumption being that respondents who have experienced discrete contamination in a much used description would be inclined to consider it insignificant in relation to the volume consumed.

In the weighting of the 16 sources of contamination, these are all assumed to be equally serious. It is, therefore, important to note that the key summary indicators for each description (the averages of all 16 contaminants combined) are calculated only for the purpose of facilitating general comparisons between different descriptions. Thus, for instance, a low average percentage figure under the category "seriously contaminated" in the summary indicator for a description does not exclude that description from being seriously contaminated by one of the 16 sources indicated. The latter would, however, be clearly visible from the individual table for the description in question.

Moreover, in the introductory summary tables, in which comparisons are made between different descriptions, the ranking has basically been made according to the percentages of replies falling into the category "non-existent/insignificant". However, descriptions with an identical percentage of replies falling into this category have been further ranked according to the percentages of replies falling into the category "serious". In the same summary tables showing a ranking of descriptions, only those descriptions which have been evaluated by at least five respondents have been included.

Finally, concerning stickiness and seed-coat fragments, there do not seem to be any methodologically critical points in the rather simple approach to those two questions in the survey.

Contamination

Fig. 1: Contamination 1989 – 2022

% of all cottons evaluated

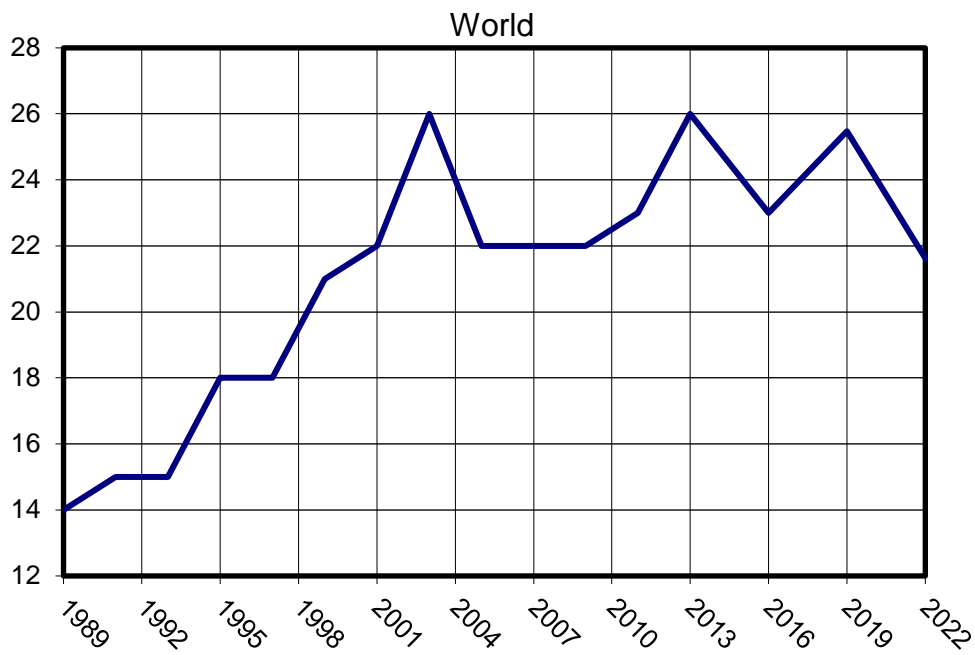
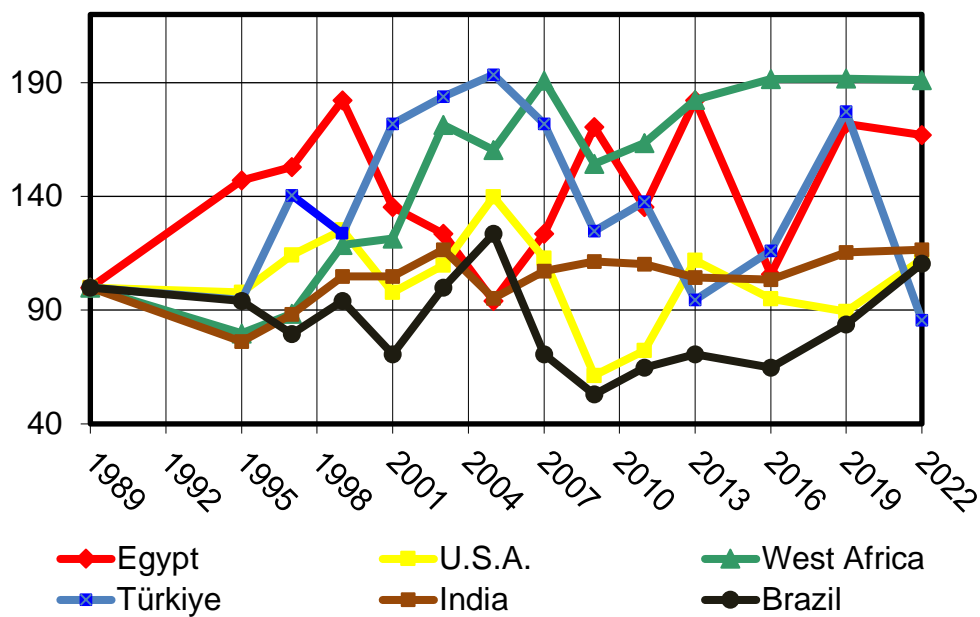


Fig. 2: Contamination by Country 1989 – 2022

1989 = 100



Stickiness

Fig. 3: Stickiness 1989 - 2022

% of all cottons evaluated

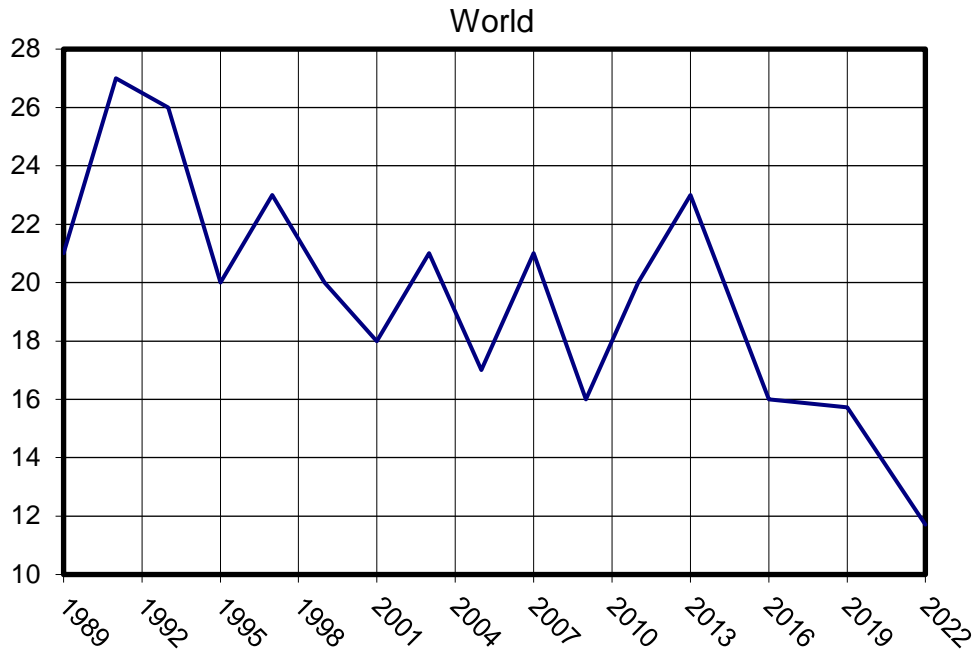
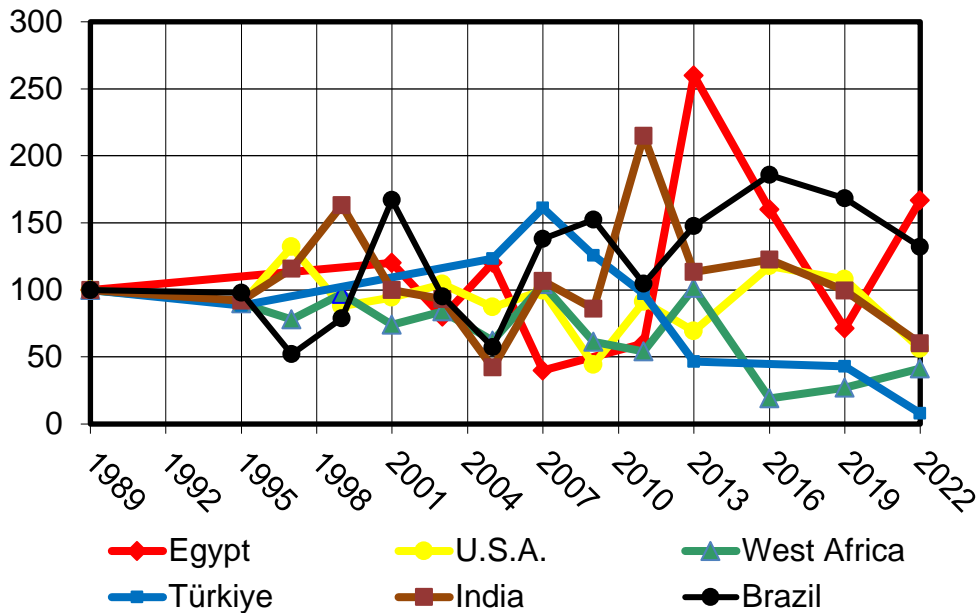


Fig. 4: Stickiness by Country 1989 – 2022

1989 = 100



Seed-coat Fragments

Fig. 5: Seed-coat Fragments 1991 - 2022 % of all cottons evaluated

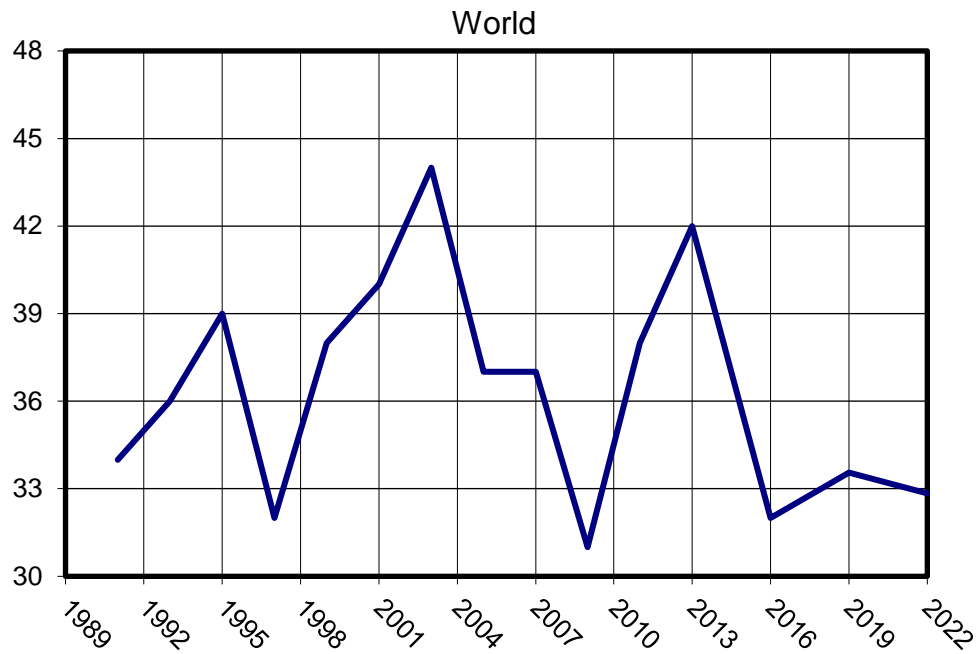
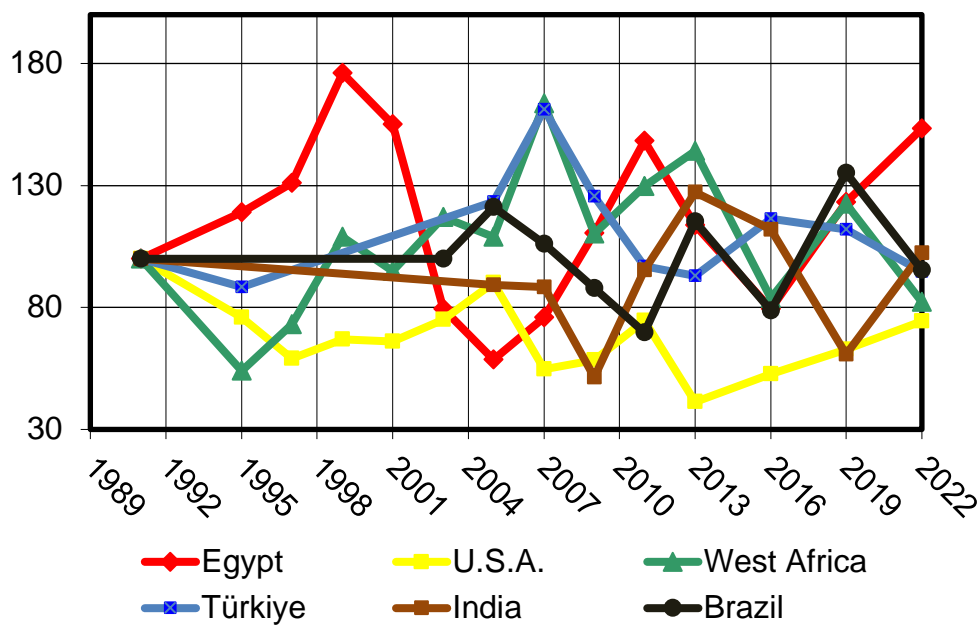


Fig. 6 Seed-coat Fragments by Country 1991 - 2022 1991 = 100



CHRONOLOGICAL REPORTS 2009 - 2022

Press Release

Summary of Survey Results 2009

“Despite some improvements in the recent past foreign matter, stickiness and seed-coat fragments in raw cotton continue to be serious challenges to the cotton spinning industry worldwide.” This is the general conclusion to be drawn from the “Cotton Contamination Survey 2009” which has just been released by the International Textile Manufacturers Federation (ITMF). The survey is carried out every other year, the 2009 edition being the eleventh in the series since the changeover to a new methodology in 1989. In the 2009 report, 110 spinning mills located in 23 countries evaluated 63 different cotton growths.

Contamination – unchanged in comparison to 2007

The level of cottons modestly or seriously contaminated as perceived by the spinning mills from around the world did not increase compared to the last survey in 2007 remaining constant at 22%. A closer look at the extent of the contamination shows that 6% (2007: 7%) of all cotton evaluated were seriously contaminated by some sort of foreign matter whereas 16% (2007: 15%) were only moderately contaminated. As the summary data are arithmetic averages of the different contaminants, the extent of contamination is fully illustrated only by the results for the individual contaminants. They range from 4% for “tar” (2007: 5%) to 42% of all cottons processed being contaminated by “organic matter”, i.e. leaves, feathers, paper, leather, etc. (2007: 40%). Other serious contaminants are “strings made of jute hessian” (32%), “strings made of woven plastic” (29%), “fabrics made of cotton” as well as “fabrics made of plastic film” and “strings made of cotton” (26% each). The most contaminated cotton descriptions considered for the survey originated in India, Pakistan, Egypt, Uzbekistan and Mali. In contrast, very clean raw cottons were produced in the USA, (Texas High Plains, Memphis, Pima, South Eastern, California), Israel, Australia, Brazil and the Ivory Coast.

Stickiness – record low

The presence of sticky cotton as perceived by the spinning mills fell in 2009 to 16%, the lowest level ever recorded (compared to 21% in 2007). Nevertheless, the level of stickiness is still considerable high and remains a major challenge to the spinning industry. Descriptions that were affected most by stickiness were those from Burkina Faso, Benin, Brazil, Chad, and Uzbekistan (medium staples). Also US cotton growths like US-Pima, Israel-Pima, Mali or Tajikistan (medium staples) were reported to be sticky. On the other end of the range, cottons from Egypt, Greece, USA (California, South Eastern), Australia, Ivory Coast, Nigeria, and Pakistan (AmSeed AFZAL, Others) or India (Shankar-4/6, MCU-5) were not or hardly affected by stickiness.

Seed-coat fragments – lowest level recorded since introduction in 1991

With regard to seed-coat fragments the Cotton Contamination Survey 2009 shows that their appearance in cotton growths remained an issue for spinners around the world with 31% claiming that they have encountered them in the cotton growths consumed. This is the lowest level since including measuring the level of seed-coat fragments in the survey in 1991. The origins affected most by seed-coat fragments are those from Nigeria, India (H-4, J-34), USA (South Eastern), Uzbekistan (medium staples), Tajikistan (medium staples), Burkina Faso and Syria. Cotton descriptions for which the existence of seed-coat fragments was negligible (prevalence of less than 20%) included those from Australia, Benin, India (Others), Pakistan (Others), and the US (California, Texas High Plains).

April 2010

Participation

Table I

2009

Participation in 2009 Survey			
Country	Number of respondents (participating companies)	Number of samples (evaluations)	Number of cotton growths evaluated*
Argentina	2	4	2
Bangladesh	1	7	7
Belgium	1	10	10
Brazil	6	13	7
China	10	17	9
Ecuador	1	1	1
Egypt	26	56	5
Germany	4	18	11
Greece	1	2	2
India	17	79	20
Indonesia	1	19	19
Italy	2	13	11
Korea, Rep.	3	12	8
Malaysia	1	4	4
Nigeria	5	5	1
Pakistan	6	34	21
South Africa	2	9	6
Spain	2	6	5
Switzerland	1	3	3
Taiwan, China	5	33	24
Thailand	4	34	23
Turkey	5	18	11
USA	4	11	7
Total	110	408	-

* 63 different cotton descriptions have been evaluated.

Main Results

Table IIa

2009

All Countries/All Growths			Number of Samples: 408		
Source of contamination			Degree of contamination (%)		
			Non-existent/insignificant	Moderate	Serious
1	Fabrics made of	woven plastic	75	13	12
2		plastic film	74	19	7
3		jute/hessian	75	15	10
4		cotton	73	22	5
5	Strings made of	woven plastic	71	16	13
6		plastic film	77	15	8
7		jute/hessian	68	20	12
8		cotton	74	22	4
9	Organic matter	leaves,feathers,paper,leather,etc.	58	32	10
10	Inorganic matter	sand/dust	74	21	5
11		rust	85	14	1
12		metal/wire	85	10	5
13	Oily substances/chemicals	grease/oil	84	13	3
14		rubber	92	8	0
15		stamp colour	89	9	2
16		tar	96	3	1
Average of 1-16			78	16	6
Stickiness			No (%) 84	Yes (%) 16	
			Seed-coat fragments		
			No (%) 69	Yes (%) 31	

Table IIb

2009

Summary 1989 - 2009					
Year	Degree of contamination (%)			Stickiness (%)	Seed-coat fragments (%)
	Non-existent/insignificant	Moderate	Serious		
1989	86	9	5	21	-
1991	85	11	4	27	34
1993	85	11	4	26	36
1995	82	13	5	20	39
1997	82	13	5	23	32
1999	79	15	6	20	38
2001	78	16	6	18	40
2003	73	18	8	21	44
2005	78	15	7	17	37
2007	78	15	7	21	37
2009	78	16	6	16	31

Contamination

Table IIIa

2009

The Most Contaminated Descriptions						
Ranking	Description		Degree of contamination (%)*			Number of samples**
			Non-existent/ insignificant	Moderate	Serious	
1.	India	MCU-5	44	30	26	14
2.	India	J-34	46	36	18	10
3.	India	H-4	48	30	22	8
4.	India	DCH	50	31	19	11
5.	Pakistan	Pakistan-Others	54	21	25	5
6.	India	Shankar-4/6	54	34	12	23
7.	Pakistan	AmSeed AFZAL	56	33	11	5
8.	Egypt	Giza	71	22	7	38
9.	Uzbekistan	Medium Staples	71	22	7	12
10.	Mali	Mali	73	18	9	5
11.	Benin	Benin	76	16	8	6
12.	India	India-Others	76	23	1	6
13.	Tajikistan	Medium Staples	77	20	3	5
14.	Nigeria	Nigeria	81	6	13	5

* Average degree of contamination by *each* of the 16 pre-indicated contaminants

** Minimum: 5 samples

Contamination

Table IIIb

2009

The Least Contaminated Descriptions						
Ranking	Description		Degree of contamination (%)*			Number of samples**
			Non-existent/ insignificant	Moderate	Serious	
1.	USA	Texas High Plains	96	4	0	13
2.	USA	Pima	95	5	0	15
3.	Israel	Pima	95	5	0	5
4.	USA	Memphis Territory	94	6	0	17
5.	Australia	Australia	94	6	0	9
6.	USA	South Eastern	94	6	0	7
7.	Brazil	Brazil	92	7	1	28
8.	Ivory Coast	Ivory Coast	91	8	1	5
9.	Syria	Syria	90	7	3	11
10.	USA	California	90	7	3	10
11.	Greece	Greece	88	11	1	27
12.	Chad	Chad	86	12	2	7
13.	Zimbabwe	Zimbabwe	81	19	0	8
14.	Burkina Faso	Burkina Faso	81	16	3	11

* Average degree of contamination by *each* of the 16 pre-indicated contaminants

** Minimum: 5 samples

Stickiness

Table IVa

2009

Descriptions Most Affected by Stickiness				
Ranking	Description		Affirmative replies (%)*	Number of samples**
1.	Burkina Faso	Burkina Faso	45	11
2.	Benin	Benin	33	6
3.	Brazil	Brazil	32	28
4.	Chad	Chad	29	7
5.	Uzbekistan	Medium Staples	25	12
6.	USA	Pima	20	15
7.	Israel	Pima	20	5
8.	Mali	Mali	20	5
9.	Tajikistan	Medium Staples	20	5
10.	India	DCH	18	11
11.	Syria	Syria	18	11
12.	India	India-Others	17	6
13.	USA	Texas High Plains	15	13
14.	USA	Memphis Territory	12	17

* Percentage of replies indicating the existence of stickiness

** Minimum: 5 samples

Stickiness

Table IVb

2009

Descriptions Least Affected by Stickiness				
Ranking	Description		Affirmative replies (%)*	Number of samples**
1.	Egypt	Giza	0	38
2.	Greece	Greece	0	27
3.	USA	California	0	10
4.	Australia	Australia	0	9
5.	USA	South Eastern	0	7
6.	Ivory Coast	Ivory Coast	0	5
7.	Nigeria	Nigeria	0	5
8.	Pakistan	AmSeed AFZAL	0	5
9.	Pakistan	Pakistan-Others	0	5
10.	India	Shankar-4/6	4	23
11.	India	MCU-5	7	14
12.	India	J-34	10	10
13.	USA	Memphis Territory	12	17
14.	India	H-4	12	8

* Percentage of replies indicating the existence of stickiness

** Minimum: 5 samples

Seed-coat Fragments

Table Va

2009

Descriptions Most Affected by Seed-coat Fragments				
Ranking	Description		Affirmative replies (%)*	Number of samples**
1.	Nigeria	Nigeria	100	5
2.	India	H-4	50	8
3.	USA	South Eastern	43	7
4.	Uzbekistan	Medium Staples	42	12
5.	India	J-34	40	10
6.	Tajikistan	Medium Staples	40	5
7.	Burkina Faso	Burkina Faso	36	11
8.	Syria	Syria	36	11
9.	Egypt	Giza	32	38
10.	Greece	Greece	30	27
11.	India	Shankar-4/6	30	23
12.	Brazil	Brazil	29	28
13.	USA	Memphis Territory	29	17
14.	India	MCU-5	29	14

* Percentage of replies indicating the existence of seed-coat fragments

** Minimum: 5 samples

Seed-coat Fragments

Table Vb

2009

Descriptions Least Affected by Seed-coat Fragments				
Ranking	Description		Affirmative replies (%)*	Number of samples**
1.	Australia	Australia	0	9
2.	Benin	Benin	0	6
3.	India	India-Others	0	6
4.	Pakistan	Pakistan-Others	0	5
5.	USA	California	10	10
6.	Zimbabwe	Zimbabwe	12	8
7.	USA	Texas High Plains	15	13
8.	USA	Pima	20	15
9.	Israel	Pima	20	5
10.	Ivory Coast	Ivory Coast	20	5
11.	Mali	Mali	20	5
12.	Pakistan	AmSeed AFZAL	20	5
13.	India	DCH	27	11
14.	Brazil	Brazil	29	28

* Percentage of replies indicating the existence of seed-coat fragments

** Minimum: 5 samples

Africa

Table 1

2009

Country: Benin		Growth: Benin		Number of Samples: 6		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	50	17	33	
2		- plastic film	66	17	17	
3		- jute/hessian	83	17	0	
4		- cotton	66	17	17	
5	Strings made of	- woven plastic	66	17	17	
6		- plastic film	83	0	17	
7		- jute/hessian	50	50	0	
8		- cotton	50	17	33	
9	Organic matter	- leaves, feathers, paper, leather e	50	50	0	
10	Inorganic matter	- sand/dust	83	17	0	
11		- rust	83	17	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	83	17	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			76	16	8	
Stickiness		No(%)	67	Yes(%)	33	
Seed-coat fragments		No(%)	100	Yes(%)	0	

Table 2

2009

Country: Burkina Faso		Growth: Burkina Faso		Number of Samples: 11		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	64	18	18	
2		- plastic film	91	0	9	
3		- jute/hessian	100	0	0	
4		- cotton	82	18	0	
5	Strings made of	- woven plastic	73	18	9	
6		- plastic film	91	0	9	
7		- jute/hessian	91	9	0	
8		- cotton	73	27	0	
9	Organic matter	- leaves, feathers, paper, leather e	55	36	9	
10	Inorganic matter	- sand/dust	64	36	0	
11		- rust	82	18	0	
12		- metal/wire	82	18	0	
13	Oily substances/chemicals	- grease/oil	82	18	0	
14		- rubber	91	9	0	
15		- stamp colour	82	18	0	
16		- tar	91	9	0	
Average of 1-16			81	16	3	
Stickiness		No(%)	55	Yes(%)	45	
Seed-coat fragments		No(%)	64	Yes(%)	36	

Africa

Table 3

2009

Country: C. A. Republic		Growth: Central African Rep		Number of Samples: 1	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	100	0	0	
2	- plastic film	0	100	0	
3	- jute/hessian	100	0	0	
4	- cotton	100	0	0	
5	Strings made of - woven plastic	0	100	0	
6	- plastic film	100	0	0	
7	- jute/hessian	100	0	0	
8	- cotton	0	100	0	
9	Organic matter - leaves, feathers, paper, leather e	0	100	0	
10	Inorganic matter - sand/dust	100	0	0	
11	- rust	100	0	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		75	25	0	
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments	
		No(%) 100	Yes(%) 0	No(%) 100	Yes(%) 0

Table 4

2009

Country: Cameroon		Growth: Cameroon		Number of Samples: 3	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	100	0	0	
2	- plastic film	100	0	0	
3	- jute/hessian	100	0	0	
4	- cotton	67	33	0	
5	Strings made of - woven plastic	100	0	0	
6	- plastic film	100	0	0	
7	- jute/hessian	100	0	0	
8	- cotton	100	0	0	
9	Organic matter - leaves, feathers, paper, leather e	67	33	0	
10	Inorganic matter - sand/dust	33	67	0	
11	- rust	100	0	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	33	67	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		87	13	0	
Stickiness		No(%) 67	Yes(%) 33	Seed-coat fragments	
		No(%) 67	Yes(%) 33	No(%) 67	Yes(%) 33

Africa

Table 5

2009

Country: Chad		Growth: Chad		Number of Samples: 7		
Source of contamination		Degree of contamination (%)				
		Non-existent/insignificant	Moderate	Serious		
1	Fabrics made of - woven plastic	86	14	0		
2	- plastic film	86	14	0		
3	- jute/hessian	100	0	0		
4	- cotton	100	0	0		
5	Strings made of - woven plastic	100	0	0		
6	- plastic film	86	14	0		
7	- jute/hessian	100	0	0		
8	- cotton	100	0	0		
9	Organic matter - leaves, feathers, paper, leather e	71	29	0		
10	Inorganic matter - sand/dust	14	57	29		
11	- rust	71	29	0		
12	- metal/wire	100	0	0		
13	Oily substances/chemicals - grease/oil	86	14	0		
14	- rubber	100	0	0		
15	- stamp colour	100	0	0		
16	- tar	86	14	0		
Average of 1-16		86	12	2		
Stickiness		No(%) 71	Yes(%) 29	Seed-coat fragments		
				No(%) 71	Yes(%) 29	

Table 6

2009

Country: Egypt		Growth: Giza		Number of Samples: 38		
Source of contamination		Degree of contamination (%)				
		Non-existent/insignificant	Moderate	Serious		
1	Fabrics made of - woven plastic	71	21	8		
2	- plastic film	79	16	5		
3	- jute/hessian	73	16	11		
4	- cotton	66	29	5		
5	Strings made of - woven plastic	71	21	8		
6	- plastic film	63	21	16		
7	- jute/hessian	57	32	11		
8	- cotton	63	32	5		
9	Organic matter - leaves, feathers, paper, leather e	39	50	11		
10	Inorganic matter - sand/dust	73	24	3		
11	- rust	76	21	3		
12	- metal/wire	84	8	8		
13	Oily substances/chemicals - grease/oil	74	21	5		
14	- rubber	86	11	3		
15	- stamp colour	68	24	8		
16	- tar	97	3	0		
Average of 1-16		71	22	7		
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments		
				No(%) 68	Yes(%) 32	

Africa

Table 7

2009

Country: Ethiopia		Growth: Ethiopia		Number of Samples: 3		
Source of contamination		Degree of contamination (%)				
		Non-existent/insignificant	Moderate	Serious		
1	Fabrics made of - woven plastic	33	0	67		
2	- plastic film	100	0	0		
3	- jute/hessian	33	0	67		
4	- cotton	33	0	67		
5	Strings made of - woven plastic	33	0	67		
6	- plastic film	100	0	0		
7	- jute/hessian	33	0	67		
8	- cotton	33	0	67		
9	Organic matter - leaves, feathers, paper, leather e	0	33	67		
10	Inorganic matter - sand/dust	67	33	0		
11	- rust	67	33	0		
12	- metal/wire	100	0	0		
13	Oily substances/chemicals - grease/oil	100	0	0		
14	- rubber	100	0	0		
15	- stamp colour	100	0	0		
16	- tar	100	0	0		
Average of 1-16		65	6	29		
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments		
		No(%) 100	Yes(%) 0			

Table 8

2009

Country: Ghana		Growth: Ghana		Number of Samples: 1		
Source of contamination		Degree of contamination (%)				
		Non-existent/insignificant	Moderate	Serious		
1	Fabrics made of - woven plastic	100	0	0		
2	- plastic film	100	0	0		
3	- jute/hessian	100	0	0		
4	- cotton	100	0	0		
5	Strings made of - woven plastic	100	0	0		
6	- plastic film	100	0	0		
7	- jute/hessian	100	0	0		
8	- cotton	100	0	0		
9	Organic matter - leaves, feathers, paper, leather e	100	0	0		
10	Inorganic matter - sand/dust	100	0	0		
11	- rust	0	0	100		
12	- metal/wire	100	0	0		
13	Oily substances/chemicals - grease/oil	100	0	0		
14	- rubber	100	0	0		
15	- stamp colour	100	0	0		
16	- tar	100	0	0		
Average of 1-16		94	0	6		
Stickiness		No(%) 0	Yes(%) 100	Seed-coat fragments		
		No(%) 100	Yes(%) 0			

Africa

Table 9

2009

Country: Ivory Coast		Growth: Ivory Coast		Number of Samples: 5		
Source of contamination		Degree of contamination (%)				
		Non-existent/insignificant	Moderate	Serious		
1	Fabrics made of - woven plastic	80	0	20		
2	- plastic film	100	0	0		
3	- jute/hessian	100	0	0		
4	- cotton	80	20	0		
5	Strings made of - woven plastic	80	20	0		
6	- plastic film	100	0	0		
7	- jute/hessian	100	0	0		
8	- cotton	80	20	0		
9	Organic matter - leaves, feathers, paper, leather e	80	20	0		
10	Inorganic matter - sand/dust	100	0	0		
11	- rust	100	0	0		
12	- metal/wire	60	40	0		
13	Oily substances/chemicals - grease/oil	100	0	0		
14	- rubber	100	0	0		
15	- stamp colour	100	0	0		
16	- tar	100	0	0		
Average of 1-16		91	8	1		
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments		
				No(%) 80	Yes(%) 20	

Table 10

2009

Country: Malawi		Growth: Malawi		Number of Samples: 2		
Source of contamination		Degree of contamination (%)				
		Non-existent/insignificant	Moderate	Serious		
1	Fabrics made of - woven plastic	100	0	0		
2	- plastic film	100	0	0		
3	- jute/hessian	50	50	0		
4	- cotton	50	50	0		
5	Strings made of - woven plastic	100	0	0		
6	- plastic film	100	0	0		
7	- jute/hessian	50	50	0		
8	- cotton	50	50	0		
9	Organic matter - leaves, feathers, paper, leather e	50	50	0		
10	Inorganic matter - sand/dust	100	0	0		
11	- rust	100	0	0		
12	- metal/wire	100	0	0		
13	Oily substances/chemicals - grease/oil	100	0	0		
14	- rubber	100	0	0		
15	- stamp colour	100	0	0		
16	- tar	100	0	0		
Average of 1-16		84	16	0		
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments		
				No(%) 50	Yes(%) 50	

Africa

Table 11

2009

Country: Mali		Growth: Mali		Number of Samples: 5		
Source of contamination		Degree of contamination (%)				
		Non-existent/insignificant	Moderate	Serious		
1	Fabrics made of - woven plastic	60	20	20		
2	- plastic film	40	40	20		
3	- jute/hessian	80	20	0		
4	- cotton	80	0	20		
5	Strings made of - woven plastic	40	20	40		
6	- plastic film	60	20	20		
7	- jute/hessian	60	40	0		
8	- cotton	60	20	20		
9	Organic matter - leaves, feathers, paper, leather e	40	60	0		
10	Inorganic matter - sand/dust	80	20	0		
11	- rust	80	20	0		
12	- metal/wire	100	0	0		
13	Oily substances/chemicals - grease/oil	100	0	0		
14	- rubber	100	0	0		
15	- stamp colour	100	0	0		
16	- tar	100	0	0		
Average of 1-16		73	18	9		
Stickiness		No(%) 80	Yes(%) 20	Seed-coat fragments		
				No(%) 80	Yes(%) 20	

Table 12

2009

Country: Mozambique		Growth: Mozambique		Number of Samples: 2		
Source of contamination		Degree of contamination (%)				
		Non-existent/insignificant	Moderate	Serious		
1	Fabrics made of - woven plastic	100	0	0		
2	- plastic film	50	50	0		
3	- jute/hessian	100	0	0		
4	- cotton	100	0	0		
5	Strings made of - woven plastic	100	0	0		
6	- plastic film	50	50	0		
7	- jute/hessian	50	50	0		
8	- cotton	100	0	0		
9	Organic matter - leaves, feathers, paper, leather e	50	50	0		
10	Inorganic matter - sand/dust	0	100	0		
11	- rust	100	0	0		
12	- metal/wire	100	0	0		
13	Oily substances/chemicals - grease/oil	50	50	0		
14	- rubber	100	0	0		
15	- stamp colour	100	0	0		
16	- tar	50	50	0		
Average of 1-16		75	25	0		
Stickiness		No(%) 50	Yes(%) 50	Seed-coat fragments		
				No(%) 50	Yes(%) 50	

Africa

Table 13

2009

Country: Nigeria		Growth: Nigeria		Number of Samples: 5		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of - woven plastic	0	0	100		
2	- plastic film	100	0	0		
3	- jute/hessian	100	0	0		
4	- cotton	100	0	0		
5	Strings made of - woven plastic	0	0	100		
6	- plastic film	100	0	0		
7	- jute/hessian	100	0	0		
8	- cotton	100	0	0		
9	Organic matter - leaves, feathers, paper, leather e	100	0	0		
10	Inorganic matter - sand/dust	0	100	0		
11	- rust	100	0	0		
12	- metal/wire	100	0	0		
13	Oily substances/chemicals - grease/oil	100	0	0		
14	- rubber	100	0	0		
15	- stamp colour	100	0	0		
16	- tar	100	0	0		
Average of 1-16		81	6	13		
Stickiness		No(%) 100	Yes(%) 0			
Seed-coat fragments		No(%) 0	Yes(%) 100			

Table 14

2009

Country: Senegal		Growth: Senegal		Number of Samples: 3		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of - woven plastic	100	0	0		
2	- plastic film	100	0	0		
3	- jute/hessian	67	0	33		
4	- cotton	100	0	0		
5	Strings made of - woven plastic	100	0	0		
6	- plastic film	67	33	0		
7	- jute/hessian	67	33	0		
8	- cotton	100	0	0		
9	Organic matter - leaves, feathers, paper, leather e	34	33	33		
10	Inorganic matter - sand/dust	100	0	0		
11	- rust	100	0	0		
12	- metal/wire	100	0	0		
13	Oily substances/chemicals - grease/oil	100	0	0		
14	- rubber	100	0	0		
15	- stamp colour	100	0	0		
16	- tar	100	0	0		
Average of 1-16		90	6	4		
Stickiness		No(%) 100	Yes(%) 0			
Seed-coat fragments		No(%) 100	Yes(%) 0			

Africa

Table 15

2009

Country: South Africa		Growth: South Africa		Number of Samples: 2	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	100	0	0	
2	- plastic film	100	0	0	
3	- jute/hessian	100	0	0	
4	- cotton	100	0	0	
5	Strings made of - woven plastic	100	0	0	
6	- plastic film	100	0	0	
7	- jute/hessian	100	0	0	
8	- cotton	100	0	0	
9	Organic matter - leaves, feathers, paper, leather e	100	0	0	
10	Inorganic matter - sand/dust	100	0	0	
11	- rust	100	0	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		100	0	0	
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments	
				No(%) 50	Yes(%) 50

Table 16

2009

Country: Sudan		Growth: Barakat		Number of Samples: 4	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	75	25	0	
2	- plastic film	100	0	0	
3	- jute/hessian	25	75	0	
4	- cotton	50	25	25	
5	Strings made of - woven plastic	100	0	0	
6	- plastic film	75	25	0	
7	- jute/hessian	0	50	50	
8	- cotton	75	25	0	
9	Organic matter - leaves, feathers, paper, leather e	75	0	25	
10	Inorganic matter - sand/dust	75	0	25	
11	- rust	100	0	0	
12	- metal/wire	25	25	50	
13	Oily substances/chemicals - grease/oil	75	25	0	
14	- rubber	50	50	0	
15	- stamp colour	100	0	0	
16	- tar	75	25	0	
Average of 1-16		67	22	11	
Stickiness		No(%) 50	Yes(%) 50	Seed-coat fragments	
				No(%) 75	Yes(%) 25

Africa

Table 17

2009

Country: Tanzania		Growth: Coastal		Number of Samples: 1	
Source of contamination		Degree of contamination (%)			
		Non-existent/insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	100	0	0	
2	- plastic film	100	0	0	
3	- jute/hessian	0	100	0	
4	- cotton	100	0	0	
5	Strings made of - woven plastic	0	100	0	
6	- plastic film	100	0	0	
7	- jute/hessian	0	100	0	
8	- cotton	0	100	0	
9	Organic matter - leaves, feathers, paper, leather e	0	100	0	
10	Inorganic matter - sand/dust	0	100	0	
11	- rust	100	0	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		62	38	0	
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments	
				No(%) 100	Yes(%) 0

Table 18

2009

Country: Togo		Growth: Togo		Number of Samples: 2	
Source of contamination		Degree of contamination (%)			
		Non-existent/insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	50	50	0	
2	- plastic film	100	0	0	
3	- jute/hessian	100	0	0	
4	- cotton	100	0	0	
5	Strings made of - woven plastic	50	50	0	
6	- plastic film	100	0	0	
7	- jute/hessian	50	50	0	
8	- cotton	50	50	0	
9	Organic matter - leaves, feathers, paper, leather e	50	50	0	
10	Inorganic matter - sand/dust	100	0	0	
11	- rust	100	0	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		84	16	0	
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments	
				No(%) 100	Yes(%) 0

Africa

Table 19

2009

Country: Uganda		Growth: Uganda		Number of Samples: 3		
Source of contamination		Degree of contamination (%)				
		Non-existent/insignificant	Moderate	Serious		
1	Fabrics made of - woven plastic	100	0	0		
2	- plastic film	100	0	0		
3	- jute/hessian	100	0	0		
4	- cotton	33	67	0		
5	Strings made of - woven plastic	100	0	0		
6	- plastic film	100	0	0		
7	- jute/hessian	100	0	0		
8	- cotton	33	67	0		
9	Organic matter - leaves, feathers, paper, leather e	100	0	0		
10	Inorganic matter - sand/dust	100	0	0		
11	- rust	100	0	0		
12	- metal/wire	100	0	0		
13	Oily substances/chemicals - grease/oil	100	0	0		
14	- rubber	100	0	0		
15	- stamp colour	100	0	0		
16	- tar	100	0	0		
Average of 1-16		92	8	0		
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments		
		No(%) 100	Yes(%) 0	No(%) 100	Yes(%) 0	

Table 20

2009

Country: Zambia		Growth: Zambia		Number of Samples: 3		
Source of contamination		Degree of contamination (%)				
		Non-existent/insignificant	Moderate	Serious		
1	Fabrics made of - woven plastic	67	33	0		
2	- plastic film	67	33	0		
3	- jute/hessian	67	33	0		
4	- cotton	33	67	0		
5	Strings made of - woven plastic	67	33	0		
6	- plastic film	67	33	0		
7	- jute/hessian	33	67	0		
8	- cotton	33	67	0		
9	Organic matter - leaves, feathers, paper, leather e	67	33	0		
10	Inorganic matter - sand/dust	100	0	0		
11	- rust	100	0	0		
12	- metal/wire	100	0	0		
13	Oily substances/chemicals - grease/oil	100	0	0		
14	- rubber	100	0	0		
15	- stamp colour	100	0	0		
16	- tar	100	0	0		
Average of 1-16		75	25	0		
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments		
		No(%) 100	Yes(%) 0	No(%) 67	Yes(%) 33	

Africa

Table 21

2009

Country: Zimbabwe		Growth: Zimbabwe		Number of Samples: 8		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of - woven plastic	87	13	0		
2	- plastic film	87	13	0		
3	- jute/hessian	75	25	0		
4	- cotton	62	38	0		
5	Strings made of - woven plastic	75	25	0		
6	- plastic film	87	13	0		
7	- jute/hessian	62	38	0		
8	- cotton	62	38	0		
9	Organic matter - leaves, feathers, paper, leather e	62	38	0		
10	Inorganic matter - sand/dust	62	38	0		
11	- rust	87	13	0		
12	- metal/wire	100	0	0		
13	Oily substances/chemicals - grease/oil	87	13	0		
14	- rubber	100	0	0		
15	- stamp colour	100	0	0		
16	- tar	100	0	0		
Average of 1-16		81	19	0		
Stickiness		No(%) 88	Yes(%) 13	Seed-coat fragments		
		No(%) 88	Yes(%) 13			

America, North

Table 22

2009

Country: Mexico		Growth: Mexicali		Number of Samples: 1		
Source of contamination		Degree of contamination (%)				
		Non-existent/insignificant	Moderate	Serious		
1	Fabrics made of - woven plastic	100	0	0		
2	- plastic film	100	0	0		
3	- jute/hessian	100	0	0		
4	- cotton	100	0	0		
5	Strings made of - woven plastic	100	0	0		
6	- plastic film	100	0	0		
7	- jute/hessian	100	0	0		
8	- cotton	100	0	0		
9	Organic matter - leaves, feathers, paper, leather e	100	0	0		
10	Inorganic matter - sand/dust	100	0	0		
11	- rust	100	0	0		
12	- metal/wire	100	0	0		
13	Oily substances/chemicals - grease/oil	100	0	0		
14	- rubber	100	0	0		
15	- stamp colour	100	0	0		
16	- tar	100	0	0		
Average of 1-16		100	0	0		
Stickiness		No(%) 0	Yes(%) 100	Seed-coat fragments		
				No(%) 100	Yes(%) 0	

Table 23

2009

Country: Mexico		Growth: Mexico-Others		Number of Samples: 2		
Source of contamination		Degree of contamination (%)				
		Non-existent/insignificant	Moderate	Serious		
1	Fabrics made of - woven plastic	0	0	100		
2	- plastic film	100	0	0		
3	- jute/hessian	100	0	0		
4	- cotton	100	0	0		
5	Strings made of - woven plastic	0	0	100		
6	- plastic film	100	0	0		
7	- jute/hessian	100	0	0		
8	- cotton	100	0	0		
9	Organic matter - leaves, feathers, paper, leather e	100	0	0		
10	Inorganic matter - sand/dust	100	0	0		
11	- rust	100	0	0		
12	- metal/wire	100	0	0		
13	Oily substances/chemicals - grease/oil	100	0	0		
14	- rubber	100	0	0		
15	- stamp colour	100	0	0		
16	- tar	100	0	0		
Average of 1-16		87	0	13		
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments		
				No(%) 100	Yes(%) 0	

America, North

Table 24

2009

Country: Mexico		Growth: Sinaloa/Senora		Number of Samples: 1	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	100	0	0	
2	- plastic film	100	0	0	
3	- jute/hessian	100	0	0	
4	- cotton	100	0	0	
5	Strings made of - woven plastic	0	100	0	
6	- plastic film	100	0	0	
7	- jute/hessian	0	100	0	
8	- cotton	0	100	0	
9	Organic matter - leaves, feathers, paper, leather e	0	100	0	
10	Inorganic matter - sand/dust	100	0	0	
11	- rust	100	0	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		75	25	0	
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments	
		No(%) 100	Yes(%) 0	No(%) 100	Yes(%) 0

Table 25

2009

Country: U.S.A.		Growth: Arizona		Number of Samples: 3	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	100	0	0	
2	- plastic film	100	0	0	
3	- jute/hessian	67	33	0	
4	- cotton	67	33	0	
5	Strings made of - woven plastic	100	0	0	
6	- plastic film	100	0	0	
7	- jute/hessian	100	0	0	
8	- cotton	100	0	0	
9	Organic matter - leaves, feathers, paper, leather e	100	0	0	
10	Inorganic matter - sand/dust	100	0	0	
11	- rust	100	0	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		96	4	0	
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments	
		No(%) 100	Yes(%) 0	No(%) 100	Yes(%) 0

America, North

Table 26

2009

Country: U.S.A.		Growth: California		Number of Samples: 10		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	100	0	0	
2		- plastic film	80	20	0	
3		- jute/hessian	80	0	20	
4		- cotton	100	0	0	
5	Strings made of	- woven plastic	90	0	10	
6		- plastic film	80	20	0	
7		- jute/hessian	80	0	20	
8		- cotton	100	0	0	
9	Organic matter	- leaves, feathers, paper, leather e	80	20	0	
10	Inorganic matter	- sand/dust	70	30	0	
11		- rust	80	20	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			90	7	3	
Stickiness		No(%)	Yes(%)			
		100	0			
Seed-coat fragments		No(%)	Yes(%)			
		90	10			

Table 27

2009

Country: U.S.A.		Growth: El Paso		Number of Samples: 3		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	100	0	0	
2		- plastic film	100	0	0	
3		- jute/hessian	100	0	0	
4		- cotton	100	0	0	
5	Strings made of	- woven plastic	100	0	0	
6		- plastic film	100	0	0	
7		- jute/hessian	100	0	0	
8		- cotton	100	0	0	
9	Organic matter	- leaves, feathers, paper, leather e	100	0	0	
10	Inorganic matter	- sand/dust	100	0	0	
11		- rust	100	0	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			100	0	0	
Stickiness		No(%)	Yes(%)			
		100	0			
Seed-coat fragments		No(%)	Yes(%)			
		100	0			

America, North

Table 28

2009

Country: U.S.A.		Growth: Memphis Territory		Number of Samples: 17	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	94	6	0	
2	- plastic film	70	24	6	
3	- jute/hessian	100	0	0	
4	- cotton	94	6	0	
5	Strings made of - woven plastic	94	6	0	
6	- plastic film	94	6	0	
7	- jute/hessian	100	0	0	
8	- cotton	94	6	0	
9	Organic matter - leaves, feathers, paper, leather e	88	12	0	
10	Inorganic matter - sand/dust	94	6	0	
11	- rust	94	6	0	
12	- metal/wire	94	6	0	
13	Oily substances/chemicals - grease/oil	88	12	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		94	6	0	
Stickiness		No(%) 88	Yes(%) 12	Seed-coat fragments	
				No(%) 71	Yes(%) 29

Table 29

2009

Country: U.S.A.		Growth: Pima		Number of Samples: 15	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	100	0	0	
2	- plastic film	100	0	0	
3	- jute/hessian	93	7	0	
4	- cotton	100	0	0	
5	Strings made of - woven plastic	93	7	0	
6	- plastic film	93	7	0	
7	- jute/hessian	87	13	0	
8	- cotton	93	7	0	
9	Organic matter - leaves, feathers, paper, leather e	80	20	0	
10	Inorganic matter - sand/dust	93	7	0	
11	- rust	100	0	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	93	7	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		95	5	0	
Stickiness		No(%) 80	Yes(%) 20	Seed-coat fragments	
				No(%) 80	Yes(%) 20

America, North

Table 30

2009

Country: U.S.A.		Growth: South Eastern		Number of Samples: 7		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of - woven plastic	100	0	0		
2	- plastic film	71	29	0		
3	- jute/hessian	100	0	0		
4	- cotton	100	0	0		
5	Strings made of - woven plastic	100	0	0		
6	- plastic film	100	0	0		
7	- jute/hessian	100	0	0		
8	- cotton	100	0	0		
9	Organic matter - leaves, feathers, paper, leather e	100	0	0		
10	Inorganic matter - sand/dust	86	14	0		
11	- rust	86	14	0		
12	- metal/wire	86	14	0		
13	Oily substances/chemicals - grease/oil	71	29	0		
14	- rubber	100	0	0		
15	- stamp colour	100	0	0		
16	- tar	100	0	0		
Average of 1-16		94	6	0		
Stickiness		No(%) 100	Yes(%) 0			
Seed-coat fragments		No(%) 57	Yes(%) 43			

Table 31

2009

Country: U.S.A.		Growth: Texas High Plains		Number of Samples: 13		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of - woven plastic	100	0	0		
2	- plastic film	92	8	0		
3	- jute/hessian	85	15	0		
4	- cotton	100	0	0		
5	Strings made of - woven plastic	100	0	0		
6	- plastic film	100	0	0		
7	- jute/hessian	100	0	0		
8	- cotton	100	0	0		
9	Organic matter - leaves, feathers, paper, leather e	85	15	0		
10	Inorganic matter - sand/dust	85	15	0		
11	- rust	100	0	0		
12	- metal/wire	92	8	0		
13	Oily substances/chemicals - grease/oil	92	8	0		
14	- rubber	100	0	0		
15	- stamp colour	100	0	0		
16	- tar	100	0	0		
Average of 1-16		96	4	0		
Stickiness		No(%) 85	Yes(%) 15			
Seed-coat fragments		No(%) 85	Yes(%) 15			

America, North

Table 32

2009

Country: U.S.A.		Growth: USA-Others		Number of Samples: 3		
Source of contamination		Degree of contamination (%)				
		Non-existent/insignificant	Moderate	Serious		
1	Fabrics made of - woven plastic	100	0	0		
2	- plastic film	100	0	0		
3	- jute/hessian	100	0	0		
4	- cotton	100	0	0		
5	Strings made of - woven plastic	100	0	0		
6	- plastic film	100	0	0		
7	- jute/hessian	100	0	0		
8	- cotton	100	0	0		
9	Organic matter - leaves, feathers, paper, leather e	67	0	33		
10	Inorganic matter - sand/dust	100	0	0		
11	- rust	100	0	0		
12	- metal/wire	100	0	0		
13	Oily substances/chemicals - grease/oil	100	0	0		
14	- rubber	100	0	0		
15	- stamp colour	100	0	0		
16	- tar	100	0	0		
Average of 1-16		98	0	2		
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments		
		No(%) 100	Yes(%) 0			

America, South

Table 33

2009

Country: Argentina		Growth: Argentina		Number of Samples: 4		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	75	25	0	
2		- plastic film	100	0	0	
3		- jute/hessian	100	0	0	
4		- cotton	75	25	0	
5	Strings made of	- woven plastic	75	25	0	
6		- plastic film	100	0	0	
7		- jute/hessian	100	0	0	
8		- cotton	75	25	0	
9	Organic matter	- leaves, feathers, paper, leather e	100	0	0	
10	Inorganic matter	- sand/dust	100	0	0	
11		- rust	75	25	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			92	8	0	
Stickiness		No(%)	Yes(%)			
		100	0			
Seed-coat fragments		No(%)	Yes(%)			
		75	25			

Table 34

2009

Country: Brazil		Growth: Brazil		Number of Samples: 28		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	92	4	4	
2		- plastic film	82	14	4	
3		- jute/hessian	100	0	0	
4		- cotton	86	14	0	
5	Strings made of	- woven plastic	82	14	4	
6		- plastic film	89	7	4	
7		- jute/hessian	93	7	0	
8		- cotton	93	7	0	
9	Organic matter	- leaves, feathers, paper, leather e	75	25	0	
10	Inorganic matter	- sand/dust	86	14	0	
11		- rust	100	0	0	
12		- metal/wire	89	7	4	
13	Oily substances/chemicals	- grease/oil	96	0	4	
14		- rubber	96	4	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			91	7	2	
Stickiness		No(%)	Yes(%)			
		68	32			
Seed-coat fragments		No(%)	Yes(%)			
		71	29			

America, South

Table 35

2009

Country: Colombia		Growth: Acala		Number of Samples: 1	
Source of contamination		Degree of contamination (%)			
		Non-existent/insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	100	0	0	
2	- plastic film	100	0	0	
3	- jute/hessian	100	0	0	
4	- cotton	100	0	0	
5	Strings made of - woven plastic	100	0	0	
6	- plastic film	100	0	0	
7	- jute/hessian	100	0	0	
8	- cotton	100	0	0	
9	Organic matter - leaves, feathers, paper, leather e	100	0	0	
10	Inorganic matter - sand/dust	100	0	0	
11	- rust	100	0	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		100	0	0	
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments	
				No(%) 100	Yes(%) 0

Table 36

2009

Country: Peru		Growth: Pima		Number of Samples: 1	
Source of contamination		Degree of contamination (%)			
		Non-existent/insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	100	0	0	
2	- plastic film	100	0	0	
3	- jute/hessian	100	0	0	
4	- cotton	100	0	0	
5	Strings made of - woven plastic	100	0	0	
6	- plastic film	100	0	0	
7	- jute/hessian	100	0	0	
8	- cotton	100	0	0	
9	Organic matter - leaves, feathers, paper, leather e	100	0	0	
10	Inorganic matter - sand/dust	100	0	0	
11	- rust	100	0	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		100	0	0	
Stickiness		No(%) 0	Yes(%) 100	Seed-coat fragments	
				No(%) 100	Yes(%) 0

Asia

Table 37

2009

Country: Australia		Growth: Australia		Number of Samples: 9	
Source of contamination		Degree of contamination (%)			
		Non-existent/insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	100	0	0	
2	- plastic film	100	0	0	
3	- jute/hessian	89	11	0	
4	- cotton	89	11	0	
5	Strings made of - woven plastic	89	11	0	
6	- plastic film	100	0	0	
7	- jute/hessian	67	33	0	
8	- cotton	89	11	0	
9	Organic matter - leaves, feathers, paper, leather e	89	11	0	
10	Inorganic matter - sand/dust	100	0	0	
11	- rust	100	0	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		94	6	0	
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments	
				No(%) 100	Yes(%) 0

Table 38

2009

Country: China		Growth: China-Others		Number of Samples: 1	
Source of contamination		Degree of contamination (%)			
		Non-existent/insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	100	0	0	
2	- plastic film	100	0	0	
3	- jute/hessian	100	0	0	
4	- cotton	100	0	0	
5	Strings made of - woven plastic	100	0	0	
6	- plastic film	100	0	0	
7	- jute/hessian	100	0	0	
8	- cotton	100	0	0	
9	Organic matter - leaves, feathers, paper, leather e	100	0	0	
10	Inorganic matter - sand/dust	100	0	0	
11	- rust	100	0	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		100	0	0	
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments	
				No(%) 100	Yes(%) 0

Asia

Table 39

2009

Country: China		Growth: Xinjiang		Number of Samples: 3		
Source of contamination		Degree of contamination (%)				
		Non-existent/insignificant	Moderate	Serious		
1	Fabrics made of - woven plastic	100	0	0		
2	- plastic film	100	0	0		
3	- jute/hessian	100	0	0		
4	- cotton	100	0	0		
5	Strings made of - woven plastic	100	0	0		
6	- plastic film	67	33	0		
7	- jute/hessian	67	33	0		
8	- cotton	100	0	0		
9	Organic matter - leaves, feathers, paper, leather e	100	0	0		
10	Inorganic matter - sand/dust	100	0	0		
11	- rust	100	0	0		
12	- metal/wire	100	0	0		
13	Oily substances/chemicals - grease/oil	100	0	0		
14	- rubber	100	0	0		
15	- stamp colour	100	0	0		
16	- tar	100	0	0		
Average of 1-16		96	4	0		
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments		
				No(%) 100	Yes(%) 0	

Table 40

2009

Country: India		Growth: DCH		Number of Samples: 11		
Source of contamination		Degree of contamination (%)				
		Non-existent/insignificant	Moderate	Serious		
1	Fabrics made of - woven plastic	45	0	55		
2	- plastic film	46	36	18		
3	- jute/hessian	46	9	45		
4	- cotton	27	73	0		
5	Strings made of - woven plastic	27	18	55		
6	- plastic film	37	36	27		
7	- jute/hessian	9	27	64		
8	- cotton	45	55	0		
9	Organic matter - leaves, feathers, paper, leather e	19	36	45		
10	Inorganic matter - sand/dust	45	55	0		
11	- rust	64	36	0		
12	- metal/wire	64	36	0		
13	Oily substances/chemicals - grease/oil	91	9	0		
14	- rubber	73	27	0		
15	- stamp colour	73	27	0		
16	- tar	91	9	0		
Average of 1-16		50	31	19		
Stickiness		No(%) 82	Yes(%) 18	Seed-coat fragments		
				No(%) 73	Yes(%) 27	

Asia

Table 41

2009

Country: India		Growth: H-4		Number of Samples: 8	
Source of contamination		Degree of contamination (%)			
		Non-existent/insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	62	0	38	
2	- plastic film	50	25	25	
3	- jute/hessian	24	13	63	
4	- cotton	12	75	13	
5	Strings made of - woven plastic	37	50	13	
6	- plastic film	37	38	25	
7	- jute/hessian	37	0	63	
8	- cotton	25	75	0	
9	Organic matter - leaves, feathers, paper, leather e	24	38	38	
10	Inorganic matter - sand/dust	49	13	38	
11	- rust	62	38	0	
12	- metal/wire	49	38	13	
13	Oily substances/chemicals - grease/oil	62	25	13	
14	- rubber	75	25	0	
15	- stamp colour	62	25	13	
16	- tar	100	0	0	
Average of 1-16		48	30	22	
Stickiness		No(%) 88	Yes(%) 13		
Seed-coat fragments				No(%) 50	Yes(%) 50

Table 42

2009

Country: India		Growth: India-Others		Number of Samples: 6	
Source of contamination		Degree of contamination (%)			
		Non-existent/insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	67	33	0	
2	- plastic film	83	0	17	
3	- jute/hessian	33	67	0	
4	- cotton	83	17	0	
5	Strings made of - woven plastic	67	33	0	
6	- plastic film	83	17	0	
7	- jute/hessian	33	67	0	
8	- cotton	83	17	0	
9	Organic matter - leaves, feathers, paper, leather e	0	100	0	
10	Inorganic matter - sand/dust	100	0	0	
11	- rust	100	0	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	83	17	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		76	23	1	
Stickiness		No(%) 83	Yes(%) 17		
Seed-coat fragments				No(%) 100	Yes(%) 0

Asia

Table 43

2009

Country: India		Growth: J-34		Number of Samples: 10	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	30	40	30	
2	- plastic film	40	40	20	
3	- jute/hessian	30	40	30	
4	- cotton	40	60	0	
5	Strings made of - woven plastic	20	60	20	
6	- plastic film	30	50	20	
7	- jute/hessian	20	30	50	
8	- cotton	30	60	10	
9	Organic matter - leaves, feathers, paper, leather e	30	30	40	
10	Inorganic matter - sand/dust	40	10	50	
11	- rust	60	40	0	
12	- metal/wire	60	40	0	
13	Oily substances/chemicals - grease/oil	70	10	20	
14	- rubber	50	50	0	
15	- stamp colour	80	20	0	
16	- tar	100	0	0	
Average of 1-16		46	36	18	
Stickiness		No(%) 90	Yes(%) 10		
Seed-coat fragments		No(%) 60		Yes(%) 40	

Table 44

2009

Country: India		Growth: LRA		Number of Samples: 3	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	67	33	0	
2	- plastic film	0	100	0	
3	- jute/hessian	67	33	0	
4	- cotton	67	33	0	
5	Strings made of - woven plastic	100	0	0	
6	- plastic film	33	67	0	
7	- jute/hessian	67	33	0	
8	- cotton	67	33	0	
9	Organic matter - leaves, feathers, paper, leather e	67	33	0	
10	Inorganic matter - sand/dust	100	0	0	
11	- rust	100	0	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		77	23	0	
Stickiness		No(%) 100	Yes(%) 0		
Seed-coat fragments		No(%) 100		Yes(%) 0	

Asia

Table 45

2009

Country: India		Growth: MCU-5		Number of Samples: 14	
Source of contamination		Degree of contamination (%)			
		Non-existent/insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	36	7	57	
2	- plastic film	43	36	21	
3	- jute/hessian	15	14	71	
4	- cotton	29	57	14	
5	Strings made of - woven plastic	15	14	71	
6	- plastic film	36	43	21	
7	- jute/hessian	8	21	71	
8	- cotton	43	43	14	
9	Organic matter - leaves, feathers, paper, leather e	14	57	29	
10	Inorganic matter - sand/dust	57	36	7	
11	- rust	57	43	0	
12	- metal/wire	50	14	36	
13	Oily substances/chemicals - grease/oil	50	50	0	
14	- rubber	79	21	0	
15	- stamp colour	79	21	0	
16	- tar	86	7	7	
Average of 1-16		44	30	26	
Stickiness		No(%) 93	Yes(%) 7	Seed-coat fragments	
				No(%) 71	Yes(%) 29

Table 46

2009

Country: India		Growth: Shankar-4/6		Number of Samples: 23	
Source of contamination		Degree of contamination (%)			
		Non-existent/insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	43	48	9	
2	- plastic film	35	52	13	
3	- jute/hessian	35	39	26	
4	- cotton	31	52	17	
5	Strings made of - woven plastic	48	35	17	
6	- plastic film	52	35	13	
7	- jute/hessian	31	43	26	
8	- cotton	35	48	17	
9	Organic matter - leaves, feathers, paper, leather e	22	52	26	
10	Inorganic matter - sand/dust	69	22	9	
11	- rust	83	17	0	
12	- metal/wire	57	30	13	
13	Oily substances/chemicals - grease/oil	83	17	0	
14	- rubber	74	26	0	
15	- stamp colour	74	26	0	
16	- tar	92	4	4	
Average of 1-16		54	34	12	
Stickiness		No(%) 96	Yes(%) 4	Seed-coat fragments	
				No(%) 70	Yes(%) 30

Asia

Table 47

2009

Country: Israel		Growth: Acala		Number of Samples: 2		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of - woven plastic	100	0	0		
2	- plastic film	100	0	0		
3	- jute/hessian	100	0	0		
4	- cotton	100	0	0		
5	Strings made of - woven plastic	100	0	0		
6	- plastic film	100	0	0		
7	- jute/hessian	100	0	0		
8	- cotton	100	0	0		
9	Organic matter - leaves, feathers, paper, leather e	100	0	0		
10	Inorganic matter - sand/dust	100	0	0		
11	- rust	100	0	0		
12	- metal/wire	100	0	0		
13	Oily substances/chemicals - grease/oil	100	0	0		
14	- rubber	100	0	0		
15	- stamp colour	100	0	0		
16	- tar	100	0	0		
Average of 1-16		100	0	0		
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments		
				No(%) 50	Yes(%) 50	

Table 48

2009

Country: Israel		Growth: Pima		Number of Samples: 5		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of - woven plastic	100	0	0		
2	- plastic film	100	0	0		
3	- jute/hessian	100	0	0		
4	- cotton	100	0	0		
5	Strings made of - woven plastic	80	20	0		
6	- plastic film	80	20	0		
7	- jute/hessian	80	20	0		
8	- cotton	100	0	0		
9	Organic matter - leaves, feathers, paper, leather e	80	20	0		
10	Inorganic matter - sand/dust	100	0	0		
11	- rust	100	0	0		
12	- metal/wire	100	0	0		
13	Oily substances/chemicals - grease/oil	100	0	0		
14	- rubber	100	0	0		
15	- stamp colour	100	0	0		
16	- tar	100	0	0		
Average of 1-16		95	5	0		
Stickiness		No(%) 80	Yes(%) 20	Seed-coat fragments		
				No(%) 80	Yes(%) 20	

Asia

Table 49

2009

Country: Pakistan		Growth: AmSeed AFZAL		Number of Samples: 5	
Source of contamination		Degree of contamination (%)			
		Non-existent/insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	40	20	40	
2	- plastic film	20	40	40	
3	- jute/hessian	20	80	0	
4	- cotton	40	60	0	
5	Strings made of - woven plastic	20	20	60	
6	- plastic film	40	20	40	
7	- jute/hessian	20	80	0	
8	- cotton	60	40	0	
9	Organic matter - leaves, feathers, paper, leather e	60	40	0	
10	Inorganic matter - sand/dust	60	40	0	
11	- rust	60	40	0	
12	- metal/wire	80	20	0	
13	Oily substances/chemicals - grease/oil	80	20	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		56	33	11	
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments	
				No(%) 80	Yes(%) 20

Table 50

2009

Country: Pakistan		Growth: MNH93		Number of Samples: 4	
Source of contamination		Degree of contamination (%)			
		Non-existent/insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	25	75	0	
2	- plastic film	50	50	0	
3	- jute/hessian	50	25	25	
4	- cotton	50	25	25	
5	Strings made of - woven plastic	50	0	50	
6	- plastic film	25	25	50	
7	- jute/hessian	25	25	50	
8	- cotton	75	0	25	
9	Organic matter - leaves, feathers, paper, leather e	50	25	25	
10	Inorganic matter - sand/dust	75	0	25	
11	- rust	75	25	0	
12	- metal/wire	75	0	25	
13	Oily substances/chemicals - grease/oil	75	25	0	
14	- rubber	75	25	0	
15	- stamp colour	75	25	0	
16	- tar	100	0	0	
Average of 1-16		59	22	19	
Stickiness		No(%) 75	Yes(%) 25	Seed-coat fragments	
				No(%) 75	Yes(%) 25

Asia

Table 51

2009

Country: Pakistan		Growth: NAIB		Number of Samples: 2	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	50	50	0	
2	- plastic film	50	50	0	
3	- jute/hessian	50	50	0	
4	- cotton	50	50	0	
5	Strings made of - woven plastic	50	0	50	
6	- plastic film	50	50	0	
7	- jute/hessian	50	50	0	
8	- cotton	50	50	0	
9	Organic matter - leaves, feathers, paper, leather e	100	0	0	
10	Inorganic matter - sand/dust	100	0	0	
11	- rust	100	0	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		75	22	3	
Stickiness		No(%) 50	Yes(%) 50	Seed-coat fragments	
				No(%) 50	Yes(%) 50

Table 52

2009

Country: Pakistan		Growth: Pakistan-Others		Number of Samples: 5	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	20	40	40	
2	- plastic film	20	40	40	
3	- jute/hessian	40	40	20	
4	- cotton	60	20	20	
5	Strings made of - woven plastic	0	0	100	
6	- plastic film	20	20	60	
7	- jute/hessian	40	40	20	
8	- cotton	80	0	20	
9	Organic matter - leaves, feathers, paper, leather e	20	20	60	
10	Inorganic matter - sand/dust	80	20	0	
11	- rust	60	40	0	
12	- metal/wire	80	0	20	
13	Oily substances/chemicals - grease/oil	80	20	0	
14	- rubber	80	20	0	
15	- stamp colour	80	20	0	
16	- tar	100	0	0	
Average of 1-16		54	21	25	
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments	
				No(%) 100	Yes(%) 0

Asia

Table 53

2009

Country: Syria		Growth: Syria		Number of Samples: 11		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of - woven plastic	100	0	0		
2	- plastic film	100	0	0		
3	- jute/hessian	100	0	0		
4	- cotton	82	18	0		
5	Strings made of - woven plastic	91	9	0		
6	- plastic film	91	9	0		
7	- jute/hessian	82	18	0		
8	- cotton	64	36	0		
9	Organic matter - leaves, feathers, paper, leather e	82	9	9		
10	Inorganic matter - sand/dust	82	9	9		
11	- rust	91	0	9		
12	- metal/wire	91	0	9		
13	Oily substances/chemicals - grease/oil	82	9	9		
14	- rubber	100	0	0		
15	- stamp colour	91	0	9		
16	- tar	100	0	0		
Average of 1-16		90	7	3		
Stickiness		No(%) 82	Yes(%) 18	Seed-coat fragments		
				No(%) 64	Yes(%) 36	

Table 54

2009

Country: Tajikistan		Growth: Long Staples		Number of Samples: 1		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of - woven plastic	100	0	0		
2	- plastic film	100	0	0		
3	- jute/hessian	100	0	0		
4	- cotton	100	0	0		
5	Strings made of - woven plastic	100	0	0		
6	- plastic film	100	0	0		
7	- jute/hessian	100	0	0		
8	- cotton	100	0	0		
9	Organic matter - leaves, feathers, paper, leather e	100	0	0		
10	Inorganic matter - sand/dust	100	0	0		
11	- rust	100	0	0		
12	- metal/wire	100	0	0		
13	Oily substances/chemicals - grease/oil	100	0	0		
14	- rubber	100	0	0		
15	- stamp colour	100	0	0		
16	- tar	100	0	0		
Average of 1-16		100	0	0		
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments		
				No(%) 0	Yes(%) 100	

Asia

Table 55

2009

Country: Tajikistan		Growth: Medium Staples		Number of Samples: 5	
Source of contamination		Degree of contamination (%)			
		Non-existent/insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	60	40	0	
2	- plastic film	80	20	0	
3	- jute/hessian	80	20	0	
4	- cotton	80	20	0	
5	Strings made of - woven plastic	40	60	0	
6	- plastic film	80	0	20	
7	- jute/hessian	100	0	0	
8	- cotton	100	0	0	
9	Organic matter - leaves, feathers, paper, leather e	60	40	0	
10	Inorganic matter - sand/dust	60	40	0	
11	- rust	80	20	0	
12	- metal/wire	80	20	0	
13	Oily substances/chemicals - grease/oil	80	20	0	
14	- rubber	100	0	0	
15	- stamp colour	80	0	20	
16	- tar	80	20	0	
Average of 1-16		77	20	3	
Stickiness		No(%) 80	Yes(%) 20	Seed-coat fragments	
				No(%) 60	Yes(%) 40

Table 56

2009

Country: Turkmenistan		Growth: Medium Staples		Number of Samples: 4	
Source of contamination		Degree of contamination (%)			
		Non-existent/insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	75	25	0	
2	- plastic film	75	25	0	
3	- jute/hessian	75	25	0	
4	- cotton	100	0	0	
5	Strings made of - woven plastic	50	50	0	
6	- plastic film	100	0	0	
7	- jute/hessian	100	0	0	
8	- cotton	75	25	0	
9	Organic matter - leaves, feathers, paper, leather e	50	50	0	
10	Inorganic matter - sand/dust	50	50	0	
11	- rust	75	25	0	
12	- metal/wire	75	25	0	
13	Oily substances/chemicals - grease/oil	75	25	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		80	20	0	
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments	
				No(%) 75	Yes(%) 25

Asia

Table 57

2009

Country: Uzbekistan		Growth: Long Staples		Number of Samples: 1	
Source of contamination		Degree of contamination (%)			
		Non-existent/insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	100	0	0	
2	- plastic film	100	0	0	
3	- jute/hessian	100	0	0	
4	- cotton	0	100	0	
5	Strings made of - woven plastic	100	0	0	
6	- plastic film	100	0	0	
7	- jute/hessian	0	100	0	
8	- cotton	0	100	0	
9	Organic matter - leaves, feathers, paper, leather e	100	0	0	
10	Inorganic matter - sand/dust	0	100	0	
11	- rust	0	100	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		69	31	0	
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments	
		No(%) 100	Yes(%) 0	No(%) 100	Yes(%) 0

Table 58

2009

Country: Uzbekistan		Growth: Medium Staples		Number of Samples: 12	
Source of contamination		Degree of contamination (%)			
		Non-existent/insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	67	25	8	
2	- plastic film	75	17	8	
3	- jute/hessian	75	25	0	
4	- cotton	58	17	25	
5	Strings made of - woven plastic	75	25	0	
6	- plastic film	92	8	0	
7	- jute/hessian	92	8	0	
8	- cotton	84	8	8	
9	Organic matter - leaves, feathers, paper, leather e	25	75	0	
10	Inorganic matter - sand/dust	41	42	17	
11	- rust	75	25	0	
12	- metal/wire	67	25	8	
13	Oily substances/chemicals - grease/oil	75	8	17	
14	- rubber	83	17	0	
15	- stamp colour	75	8	17	
16	- tar	83	17	0	
Average of 1-16		71	22	7	
Stickiness		No(%) 75	Yes(%) 25	Seed-coat fragments	
		No(%) 75	Yes(%) 25	No(%) 58	Yes(%) 42

Asia

Table 59

2009

Country: Yemen		Growth: Yemen		Number of Samples: 1		
Source of contamination		Degree of contamination (%)				
		Non-existent/insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	100	0	0	
2		- plastic film	100	0	0	
3		- jute/hessian	100	0	0	
4		- cotton	100	0	0	
5	Strings made of	- woven plastic	100	0	0	
6		- plastic film	100	0	0	
7		- jute/hessian	100	0	0	
8		- cotton	100	0	0	
9	Organic matter	- leaves, feathers, paper, leather e	100	0	0	
10	Inorganic matter	- sand/dust	100	0	0	
11		- rust	100	0	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			100	0	0	
Stickiness		No(%)	Yes(%)			
		100	0			
Seed-coat fragments		No(%)	Yes(%)			
		0	100			

Europe

Table 60

2009

Country: Greece		Growth: Greece		Number of Samples: 27		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of - woven plastic	100	0	0		
2	- plastic film	81	15	4		
3	- jute/hessian	85	15	0		
4	- cotton	81	15	4		
5	Strings made of - woven plastic	96	4	0		
6	- plastic film	96	4	0		
7	- jute/hessian	85	15	0		
8	- cotton	89	11	0		
9	Organic matter - leaves, feathers, paper, leather e	63	33	4		
10	Inorganic matter - sand/dust	78	22	0		
11	- rust	81	15	4		
12	- metal/wire	96	4	0		
13	Oily substances/chemicals - grease/oil	81	15	4		
14	- rubber	96	4	0		
15	- stamp colour	89	11	0		
16	- tar	100	0	0		
Average of 1-16		88	11	1		
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments		
				No(%) 70	Yes(%) 30	

Table 61

2009

Country: Spain		Growth: Spain		Number of Samples: 3		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of - woven plastic	100	0	0		
2	- plastic film	67	33	0		
3	- jute/hessian	67	33	0		
4	- cotton	100	0	0		
5	Strings made of - woven plastic	34	33	33		
6	- plastic film	34	33	33		
7	- jute/hessian	67	0	33		
8	- cotton	100	0	0		
9	Organic matter - leaves, feathers, paper, leather e	100	0	0		
10	Inorganic matter - sand/dust	33	67	0		
11	- rust	100	0	0		
12	- metal/wire	100	0	0		
13	Oily substances/chemicals - grease/oil	100	0	0		
14	- rubber	100	0	0		
15	- stamp colour	67	33	0		
16	- tar	67	33	0		
Average of 1-16		77	17	6		
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments		
				No(%) 67	Yes(%) 33	

Europe

Table 62

2009

Country: Turkey		Growth: Izmir		Number of Samples: 3		
Source of contamination		Degree of contamination (%)				
		Non-existent/insignificant	Moderate	Serious		
1	Fabrics made of - woven plastic	67	33	0		
2	- plastic film	33	67	0		
3	- jute/hessian	100	0	0		
4	- cotton	100	0	0		
5	Strings made of - woven plastic	67	33	0		
6	- plastic film	67	33	0		
7	- jute/hessian	67	33	0		
8	- cotton	100	0	0		
9	Organic matter - leaves, feathers, paper, leather e	33	67	0		
10	Inorganic matter - sand/dust	100	0	0		
11	- rust	67	33	0		
12	- metal/wire	100	0	0		
13	Oily substances/chemicals - grease/oil	67	33	0		
14	- rubber	100	0	0		
15	- stamp colour	67	33	0		
16	- tar	100	0	0		
Average of 1-16		77	23	0		
Stickiness		No(%) 67	Yes(%) 33	Seed-coat fragments		
				No(%) 67	Yes(%) 33	

Table 63

2009

Country: Turkey		Growth: Turkey-Others		Number of Samples: 4		
Source of contamination		Degree of contamination (%)				
		Non-existent/insignificant	Moderate	Serious		
1	Fabrics made of - woven plastic	75	0	25		
2	- plastic film	50	25	25		
3	- jute/hessian	75	0	25		
4	- cotton	75	0	25		
5	Strings made of - woven plastic	75	0	25		
6	- plastic film	50	25	25		
7	- jute/hessian	75	0	25		
8	- cotton	50	25	25		
9	Organic matter - leaves, feathers, paper, leather e	25	25	50		
10	Inorganic matter - sand/dust	75	0	25		
11	- rust	75	0	25		
12	- metal/wire	50	25	25		
13	Oily substances/chemicals - grease/oil	75	0	25		
14	- rubber	75	0	25		
15	- stamp colour	75	0	25		
16	- tar	75	0	25		
Average of 1-16		65	8	27		
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments		
				No(%) 25	Yes(%) 75	

Press Release

Summary of Survey Results 2011

“After some improvements in the recent past foreign matter, stickiness and seed-coat fragments in raw cotton pose serious challenges to the cotton spinning industry worldwide.”

This is the general conclusion to be drawn from the “Cotton Contamination Survey 2011” which has just been released by the International Textile Manufacturers Federation (ITMF). The survey is carried out every other year, the 2011 edition being the twelfth in the series since the changeover to a new methodology in 1989. In the 2011 report, 119 spinning mills located in 24 countries evaluated 71 different cotton growths.

Contamination – slight increase

The level of cottons modestly or seriously contaminated as perceived by the spinning mills from around the world rose slightly from 22% to 23% compared to the last survey in 2009. A closer look at the extent of the contamination shows that 7% (2009: 6%) of all cotton evaluated were seriously contaminated by some sort of foreign matter whereas 16% (2009: 15%) were only moderately contaminated. As the summary data are arithmetic averages of the different contaminants, the extent of contamination is fully illustrated only by the results for the individual contaminants. They range from 5% for “tar” (2009: 4%) to 51% of all cottons processed being moderately or seriously contaminated by “organic matter”, i.e. leaves, feathers, paper, leather, etc. (2009: 42%). Other serious contaminants are “inorganic matter” (31%), “fabrics made of cotton” (30%), “strings made of woven plastic” (29%) as well as “fabrics made of woven plastic” and “strings made of plastic film” (28% each). The most contaminated cotton descriptions considered for the survey originated in India, Nigeria, Zimbabwe, China and Turkey. In contrast, very clean raw cottons were produced in the USA, (Texas High Plains, Arizona, Pima, USA-Others, Memphis and California), Syria, Benin, Brazil, Spain, Argentina, Greece and Australia).

Stickiness – significant rise

The presence of sticky cotton as perceived by the spinning mills increased in 2011 significantly from the record low of 16% in 2009 to 20%. While this level is still lower than the long-term average, the level of stickiness is still considerable high and remains a major challenge to the global cotton spinning industry. Descriptions that were affected most by stickiness were those from India (DCH, MCU-5, India-Others), Syria, USA (California, Pima), Spain, Mali and Uzbekistan (Medium-Staples). On the other end of the range, cottons from Argentina, Turkey (Izmir), USA (Arizona), Egypt (Giza), India (J-34) and USA (Texas High Plains) were not or hardly affected by stickiness.

Seed-coat fragments – noticeable jump

With regard to seed-coat fragments the Cotton Contamination Survey 2011 shows that their appearance in cotton growths remains an issue for spinners around the world. 38% of cotton spinners (2009: 31%) claim that they have encountered seed-coat fragments in the cotton growths consumed. This is a jump of 7 percentage points, up from only 31% in 2009, the lowest level since including measuring the level of seed-coat fragments in the survey in 1991. The origins affected most by seed-coat fragments are those from Nigeria, India (India-Others, MCU-5, Shankar-4/6, J-34) USA (South Eastern, California), Ivory Coast and Turkey (Turkey-Others). Cotton descriptions for which the existence of seed-coat fragments was negligible (prevalence of less than 20%) included those from Australia, Benin, India (Others), Pakistan (Others), and the US (California, Texas High Plains).

January 2012

Participation

Table I

2011

Participation in 2011 Survey			
Country	Number of respondents (participating companies)	Number of samples (evaluations)	Number of cotton growths evaluated*
Argentina	3	3	3
Bangladesh	3	14	12
Belgium	1	14	14
Brazil	4	9	6
China	20	51	17
Egypt	20	49	7
Germany	4	31	19
Greece	1	1	1
India	18	62	14
Indonesia	2	20	18
Italy	2	18	14
Korea, Rep.	4	23	12
Malaysia	1	4	4
Nigeria	6	6	1
Pakistan	4	31	24
Singapore	1	9	9
South Africa	2	6	4
Spain	1	9	9
Switzerland	1	4	4
Taiwan, China	5	29	18
Thailand	3	31	24
Turkey	9	43	19
USA	3	9	5
	1	9	9
Total	119	485	-

* 71 different cotton descriptions have been evaluated.

Main Results

Table IIa

2011

All Countries/All Growths			Number of Samples: 485		
Source of contamination			Degree of contamination (%)		
			Non-existent/insignificant	Moderate	Serious
1	Fabrics made of	woven plastic	72	20	8
2		plastic film	76	17	7
3		jute/hessian	77	16	7
4		cotton	70	19	11
5	Strings made of	woven plastic	71	16	13
6		plastic film	72	20	8
7		jute/hessian	73	16	11
8		cotton	74	16	10
9	Organic matter	leaves,feathers,paper,leather,etc.	49	34	17
10	Inorganic matter	sand/dust	69	22	9
11		rust	84	14	2
12		metal/wire	85	11	4
13	Oily substances/chemicals	grease/oil	87	11	2
14		rubber	94	5	1
15		stamp colour	91	7	2
16		tar	95	4	1
Average of 1-16			77	16	7
Stickiness			No (%) 80	Yes (%) 20	
Seed-coat fragments			No (%) 62	Yes (%) 38	

Table IIb

2011

Summary 1989 - 2011					
Year	Degree of contamination (%)			Stickiness (%)	Seed-coat fragments (%)
	Non-existent/insignificant	Moderate	Serious		
1989	86	9	5	21	0
1991	85	11	4	27	34
1993	85	11	4	26	36
1995	82	13	5	20	39
1997	82	13	5	23	32
1999	79	15	6	20	38
2001	78	16	6	18	40
2003	73	18	8	21	44
2005	78	15	7	17	37
2007	78	15	7	21	37
2009	78	16	6	16	31
2011	77	16	7	20	38

Contamination

Table IIIa

2011

The Most Contaminated Descriptions						
Ranking	Description		Degree of contamination (%) [*]			Number of samples ^{**}
			Non-existent/ insignificant	Moderate	Serious	
1.	India	MCU-5	40	25	35	12
2.	India	Shankar-4/6	50	33	17	30
3.	India	DCH	52	28	20	8
4.	India	J-34	58	26	16	14
5.	India	H-4	61	33	6	6
6.	India	India-Others	62	19	19	10
7.	Nigeria	Nigeria	67	14	19	10
8.	Zimbabwe	Zimbabwe	67	24	9	8
9.	China	Xinjiang	69	22	9	11
10.	Turkey	Turkey-Others	74	19	7	6
11.	Egypt	Giza	77	14	9	35
12.	Burkina Faso	Burkina Faso	78	14	8	9
13.	Uzbekistan	Medium Staples	78	17	5	15
14.	Ivory Coast	Ivory Coast	78	22	0	6
15.	Turkey	Izmir	80	7	13	6
16.	USA	South Eastern	82	15	3	5

* Average degree of contamination by *each* of the 16 pre-indicated contaminants

** Minimum: 5 samples

Contamination

Table IIIb

2011

The Least Contaminated Descriptions						
Ranking	Description		Degree of contamination (%)*			Number of samples**
			Non-existent/ insignificant	Moderate	Serious	
1.	USA	Texas High Plains	96	4	0	14
2.	USA	Arizona	96	4	0	5
3.	USA	Pima	95	4	1	20
4.	Syria	Syria	94	5	1	9
5.	USA	USA-Others	93	4	3	7
6.	Benin	Benin	91	8	1	7
7.	Brazil	Brazil	90	10	0	27
8.	Spain	Spain	89	8	3	9
9.	Argentina	Argentina	88	10	2	9
10.	Greece	Greece	88	6	6	28
11.	Australia	Australia	87	12	1	18
12.	USA	Memphis Territory	86	13	1	22
13.	USA	California	86	12	2	20
14.	Chad	Chad	84	16	0	6
15.	Mali	Mali	83	16	1	6

* Average degree of contamination by *each* of the 16 pre-indicated contaminants

** Minimum: 5 samples

Stickiness

Table IVa

2011

Descriptions Most Affected by Stickiness				
Ranking	Description		Affirmative replies (%)*	Number of samples**
1.	India	DCH	50	8
2.	Syria	Syria	44	9
3.	India	MCU-5	42	12
4.	USA	California	40	20
5.	India	India-Others	40	10
6.	USA	Pima	35	20
7.	Spain	Spain	33	9
8.	Mali	Mali	33	6
9.	Uzbekistan	Medium Staples	27	15
10.	USA	Memphis Territory	23	22
11.	Brazil	Brazil	22	27
12.	Nigeria	Nigeria	20	10
13.	USA	South Eastern	20	5
14.	China	Xinjiang	18	11
15.	Chad	Chad	17	6
16.	India	H-4	17	6
17.	India	Shankar-4/6	17	30
18.	Ivory Coast	Ivory Coast	17	6
19.	Turkey	Turkey-Others	17	6

* Percentage of replies indicating the existence of stickiness

** Minimum: 5 samples

Stickiness

Table IVb

2011

Descriptions Least Affected by Stickiness				
Ranking	Description		Affirmative replies (%)*	Number of samples**
1.	Argentina	Argentina	0	9
2.	Turkey	Izmir	0	6
3.	USA	Arizona	0	5
4.	Egypt	Giza	3	35
5.	India	J-34	7	14
6.	USA	Texas High Plains	7	14
7.	Australia	Australia	11	18
8.	Burkina Faso	Burkina Faso	11	9
9.	Zimbabwe	Zimbabwe	12	8
10.	Benin	Benin	14	7
11.	Greece	Greece	14	28
12.	USA	USA-Others	14	7

* Percentage of replies indicating the existence of stickiness

** Minimum: 5 samples

Seed-coat Fragments

Table Va

2011

Descriptions Most Affected by Seed-coat Fragments				
Ranking	Description		Affirmative replies (%)*	Number of samples**
1.	Nigeria	Nigeria	90	10
2.	India	India-Others	70	10
3.	India	MCU-5	67	12
4.	USA	South Eastern	60	5
5.	India	Shankar-4/6	50	30
6.	India	J-34	50	14
7.	Ivory Coast	Ivory Coast	50	6
8.	USA	California	50	20
9.	Turkey	Turkey-Others	50	6
10.	China	Xinjiang	45	11
11.	Egypt	Giza	43	35
12.	USA	Memphis Territory	41	22
13.	India	DCH	37	8
14.	Zimbabwe	Zimbabwe	37	8
15.	India	H-4	33	6
16.	Mali	Mali	33	6
17.	Syria	Syria	33	9
18.	Uzbekistan	Medium Staple	33	15

* Percentage of replies indicating the existence of seed-coat fragments

** Minimum: 5 samples

Seed-coat Fragments

Table Vb

2011

Descriptions Least Affected by Seed-coat Fragments				
Ranking	Description		Affirmative replies (%)*	Number of samples**
1.	Turkey	Izmir	0	6
2.	Argentina	Argentina	11	9
3.	Chad	Chad	17	6
4.	USA	Arizona	20	5
5.	USA	Pima	20	20
6.	Burkina Faso	Burkina Faso	22	9
7.	Spain	Spain	22	9
8.	Brazil	Brazil	26	27
9.	Australia	Australia	28	18
10.	Benin	Benin	29	7
11.	USA	Texas High Plains	29	14
12.	USA	USA-Others	29	7
13.	Greece	Greece	32	28

* Percentage of replies indicating the existence of seed-coat fragments

** Minimum: 5 samples

Africa

Table 1

2011

Country: Angola		Growth: Angola		Number of Samples: 1	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	100	0	0
2		- plastic film	100	0	0
3		- jute/hessian	100	0	0
4		- cotton	100	0	0
5	Strings made of	- woven plastic	100	0	0
6		- plastic film	100	0	0
7		- jute/hessian	100	0	0
8		- cotton	100	0	0
9	Organic matter	- leaves, feathers, paper, leather e	0	100	0
10	Inorganic matter	- sand/dust	0	100	0
11		- rust	100	0	0
12		- metal/wire	100	0	0
13	Oily substances/chemicals	- grease/oil	100	0	0
14		- rubber	100	0	0
15		- stamp colour	100	0	0
16		- tar	100	0	0
Average of 1-16			87	13	0
Stickiness		No(%)	Yes(%)		
		100	0		
Seed-coat fragments		No(%)	Yes(%)		
		100	0		

Table 2

2011

Country: Benin		Growth: Benin		Number of Samples: 7	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	86	14	0
2		- plastic film	86	14	0
3		- jute/hessian	100	0	0
4		- cotton	86	14	0
5	Strings made of	- woven plastic	86	0	14
6		- plastic film	71	29	0
7		- jute/hessian	100	0	0
8		- cotton	86	14	0
9	Organic matter	- leaves, feathers, paper, leather e	71	29	0
10	Inorganic matter	- sand/dust	100	0	0
11		- rust	86	14	0
12		- metal/wire	100	0	0
13	Oily substances/chemicals	- grease/oil	100	0	0
14		- rubber	100	0	0
15		- stamp colour	100	0	0
16		- tar	100	0	0
Average of 1-16			91	8	1
Stickiness		No(%)	Yes(%)		
		86	14		
Seed-coat fragments		No(%)	Yes(%)		
		71	29		

Africa

Table 3

2011

Country: Burkina Faso		Growth: Burkina Faso		Number of Samples: 9	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	67	11	22	
2	- plastic film	78	22	0	
3	- jute/hessian	67	33	0	
4	- cotton	78	11	11	
5	Strings made of - woven plastic	67	11	22	
6	- plastic film	89	11	0	
7	- jute/hessian	78	22	0	
8	- cotton	78	11	11	
9	Organic matter - leaves, feathers, paper, leather e	56	33	11	
10	Inorganic matter - sand/dust	78	11	11	
11	- rust	89	0	11	
12	- metal/wire	89	0	11	
13	Oily substances/chemicals - grease/oil	89	11	0	
14	- rubber	89	0	11	
15	- stamp colour	78	22	0	
16	- tar	89	11	0	
Average of 1-16		78	14	8	
Stickiness		No(%) 89	Yes(%) 11	Seed-coat fragments	
				No(%) 78	Yes(%) 22

Table 4

2011

Country: C. A. Republic		Growth: Central African Rep		Number of Samples: 1	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	100	0	0	
2	- plastic film	100	0	0	
3	- jute/hessian	100	0	0	
4	- cotton	100	0	0	
5	Strings made of - woven plastic	100	0	0	
6	- plastic film	100	0	0	
7	- jute/hessian	100	0	0	
8	- cotton	100	0	0	
9	Organic matter - leaves, feathers, paper, leather e	100	0	0	
10	Inorganic matter - sand/dust	0	100	0	
11	- rust	0	100	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		87	13	0	
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments	
				No(%) 100	Yes(%) 0

Africa

Table 5

2011

Country: Cameroon		Growth: Cameroon		Number of Samples: 4	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	100	0	0
2		- plastic film	75	25	0
3		- jute/hessian	75	25	0
4		- cotton	75	25	0
5	Strings made of	- woven plastic	100	0	0
6		- plastic film	100	0	0
7		- jute/hessian	100	0	0
8		- cotton	100	0	0
9	Organic matter	- leaves, feathers, paper, leather e	75	25	0
10	Inorganic matter	- sand/dust	75	25	0
11		- rust	75	25	0
12		- metal/wire	100	0	0
13	Oily substances/chemicals	- grease/oil	100	0	0
14		- rubber	100	0	0
15		- stamp colour	100	0	0
16		- tar	100	0	0
Average of 1-16			91	9	0
Stickiness		No(%)	Yes(%)		
		75	25		
Seed-coat fragments		No(%)	Yes(%)		
		100	0		

Table 6

2011

Country: Chad		Growth: Chad		Number of Samples: 6	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	50	50	0
2		- plastic film	50	50	0
3		- jute/hessian	83	17	0
4		- cotton	83	17	0
5	Strings made of	- woven plastic	100	0	0
6		- plastic film	100	0	0
7		- jute/hessian	83	17	0
8		- cotton	83	17	0
9	Organic matter	- leaves, feathers, paper, leather e	50	50	0
10	Inorganic matter	- sand/dust	83	17	0
11		- rust	100	0	0
12		- metal/wire	83	17	0
13	Oily substances/chemicals	- grease/oil	100	0	0
14		- rubber	100	0	0
15		- stamp colour	100	0	0
16		- tar	100	0	0
Average of 1-16			84	16	0
Stickiness		No(%)	Yes(%)		
		83	17		
Seed-coat fragments		No(%)	Yes(%)		
		83	17		

Africa

Table 7

2011

Country: Egypt		Growth: Egypt-Others		Number of Samples: 4	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	50	25	25	
2	- plastic film	100	0	0	
3	- jute/hessian	50	25	25	
4	- cotton	75	0	25	
5	Strings made of - woven plastic	50	25	25	
6	- plastic film	100	0	0	
7	- jute/hessian	75	25	0	
8	- cotton	100	0	0	
9	Organic matter - leaves, feathers, paper, leather e	50	50	0	
10	Inorganic matter - sand/dust	75	25	0	
11	- rust	100	0	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		83	11	6	
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments	
				No(%) 75	Yes(%) 25

Table 8

2011

Country: Egypt		Growth: Giza		Number of Samples: 35	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	72	14	14	
2	- plastic film	80	11	9	
3	- jute/hessian	72	17	11	
4	- cotton	75	14	11	
5	Strings made of - woven plastic	66	17	17	
6	- plastic film	75	14	11	
7	- jute/hessian	60	26	14	
8	- cotton	75	14	11	
9	Organic matter - leaves, feathers, paper, leather e	52	34	14	
10	Inorganic matter - sand/dust	68	23	9	
11	- rust	83	11	6	
12	- metal/wire	82	9	9	
13	Oily substances/chemicals - grease/oil	94	3	3	
14	- rubber	94	3	3	
15	- stamp colour	85	9	6	
16	- tar	97	0	3	
Average of 1-16		77	14	9	
Stickiness		No(%) 97	Yes(%) 3	Seed-coat fragments	
				No(%) 57	Yes(%) 43

Africa

Table 9

2011

Country: Ghana		Growth: Ghana		Number of Samples: 3	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	33	67	0
2		- plastic film	100	0	0
3		- jute/hessian	100	0	0
4		- cotton	67	33	0
5	Strings made of	- woven plastic	33	67	0
6		- plastic film	67	33	0
7		- jute/hessian	100	0	0
8		- cotton	100	0	0
9	Organic matter	- leaves, feathers, paper, leather e	67	33	0
10	Inorganic matter	- sand/dust	33	67	0
11		- rust	33	67	0
12		- metal/wire	67	33	0
13	Oily substances/chemicals	- grease/oil	67	33	0
14		- rubber	100	0	0
15		- stamp colour	67	33	0
16		- tar	100	0	0
Average of 1-16			71	29	0
Stickiness		No(%)	Yes(%)		
		67	33		
Seed-coat fragments		No(%)	Yes(%)		
		67	33		

Table 10

2011

Country: Ivory Coast		Growth: Ivory Coast		Number of Samples: 6	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	83	17	0
2		- plastic film	83	17	0
3		- jute/hessian	100	0	0
4		- cotton	50	50	0
5	Strings made of	- woven plastic	67	33	0
6		- plastic film	67	33	0
7		- jute/hessian	67	33	0
8		- cotton	67	33	0
9	Organic matter	- leaves, feathers, paper, leather e	50	50	0
10	Inorganic matter	- sand/dust	67	33	0
11		- rust	67	33	0
12		- metal/wire	83	17	0
13	Oily substances/chemicals	- grease/oil	100	0	0
14		- rubber	100	0	0
15		- stamp colour	100	0	0
16		- tar	100	0	0
Average of 1-16			78	22	0
Stickiness		No(%)	Yes(%)		
		83	17		
Seed-coat fragments		No(%)	Yes(%)		
		50	50		

Africa

Table 11

2011

Country: Malawi		Growth: Malawi		Number of Samples: 2	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	100	0	0
2		- plastic film	50	50	0
3		- jute/hessian	50	50	0
4		- cotton	0	100	0
5	Strings made of	- woven plastic	50	50	0
6		- plastic film	50	50	0
7		- jute/hessian	0	50	50
8		- cotton	0	50	50
9	Organic matter	- leaves, feathers, paper, leather e	50	50	0
10	Inorganic matter	- sand/dust	50	50	0
11		- rust	100	0	0
12		- metal/wire	100	0	0
13	Oily substances/chemicals	- grease/oil	50	50	0
14		- rubber	100	0	0
15		- stamp colour	100	0	0
16		- tar	100	0	0
Average of 1-16			60	34	6
Stickiness		No(%)	Yes(%)		
		100	0		
Seed-coat fragments		No(%)	Yes(%)		
		50	50		

Table 12

2011

Country: Mali		Growth: Mali		Number of Samples: 6	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	67	33	0
2		- plastic film	50	50	0
3		- jute/hessian	83	17	0
4		- cotton	67	33	0
5	Strings made of	- woven plastic	66	17	17
6		- plastic film	83	17	0
7		- jute/hessian	67	33	0
8		- cotton	83	17	0
9	Organic matter	- leaves, feathers, paper, leather e	83	17	0
10	Inorganic matter	- sand/dust	100	0	0
11		- rust	83	17	0
12		- metal/wire	100	0	0
13	Oily substances/chemicals	- grease/oil	100	0	0
14		- rubber	100	0	0
15		- stamp colour	100	0	0
16		- tar	100	0	0
Average of 1-16			83	16	1
Stickiness		No(%)	Yes(%)		
		67	33		
Seed-coat fragments		No(%)	Yes(%)		
		67	33		

Africa

Table 13

2011

Country: Mozambique		Growth: Mozambique		Number of Samples: 3	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	67	33	0	
2	- plastic film	100	0	0	
3	- jute/hessian	67	33	0	
4	- cotton	67	33	0	
5	Strings made of - woven plastic	100	0	0	
6	- plastic film	100	0	0	
7	- jute/hessian	33	67	0	
8	- cotton	33	67	0	
9	Organic matter - leaves, feathers, paper, leather e	33	67	0	
10	Inorganic matter - sand/dust	100	0	0	
11	- rust	100	0	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		81	19	0	
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments	
				No(%) 100	Yes(%) 0

Table 14

2011

Country: Nigeria		Growth: Nigeria		Number of Samples: 10	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	20	50	30	
2	- plastic film	80	10	10	
3	- jute/hessian	90	10	0	
4	- cotton	80	0	20	
5	Strings made of - woven plastic	20	10	70	
6	- plastic film	20	70	10	
7	- jute/hessian	90	10	0	
8	- cotton	80	10	10	
9	Organic matter - leaves, feathers, paper, leather e	10	30	60	
10	Inorganic matter - sand/dust	20	10	70	
11	- rust	90	10	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	80	10	10	
14	- rubber	100	0	0	
15	- stamp colour	90	0	10	
16	- tar	100	0	0	
Average of 1-16		67	14	19	
Stickiness		No(%) 80	Yes(%) 20	Seed-coat fragments	
				No(%) 10	Yes(%) 90

Africa

Table 15

2011

Country: Senegal		Growth: Senegal		Number of Samples: 1	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	100	0	0	
2	- plastic film	100	0	0	
3	- jute/hessian	100	0	0	
4	- cotton	100	0	0	
5	Strings made of - woven plastic	100	0	0	
6	- plastic film	0	100	0	
7	- jute/hessian	100	0	0	
8	- cotton	100	0	0	
9	Organic matter - leaves, feathers, paper, leather e	0	100	0	
10	Inorganic matter - sand/dust	0	100	0	
11	- rust	100	0	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		81	19	0	
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments	
				No(%) 0	Yes(%) 100

Table 16

2011

Country: South Africa		Growth: South Africa		Number of Samples: 1	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	100	0	0	
2	- plastic film	100	0	0	
3	- jute/hessian	100	0	0	
4	- cotton	100	0	0	
5	Strings made of - woven plastic	100	0	0	
6	- plastic film	100	0	0	
7	- jute/hessian	100	0	0	
8	- cotton	100	0	0	
9	Organic matter - leaves, feathers, paper, leather e	0	100	0	
10	Inorganic matter - sand/dust	100	0	0	
11	- rust	100	0	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		94	6	0	
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments	
				No(%) 100	Yes(%) 0

Africa

Table 17

2011

Country: Sudan		Growth: Acala		Number of Samples: 1	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	100	0	0	
2	- plastic film	100	0	0	
3	- jute/hessian	100	0	0	
4	- cotton	100	0	0	
5	Strings made of - woven plastic	100	0	0	
6	- plastic film	100	0	0	
7	- jute/hessian	100	0	0	
8	- cotton	100	0	0	
9	Organic matter - leaves, feathers, paper, leather e	0	100	0	
10	Inorganic matter - sand/dust	100	0	0	
11	- rust	100	0	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		94	6	0	
Stickiness		No(%) 0	Yes(%) 100	Seed-coat fragments	
				No(%) 0	Yes(%) 100

Table 18

2011

Country: Sudan		Growth: Barakat		Number of Samples: 2	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	50	0	50	
2	- plastic film	50	50	0	
3	- jute/hessian	0	50	50	
4	- cotton	50	0	50	
5	Strings made of - woven plastic	50	50	0	
6	- plastic film	0	50	50	
7	- jute/hessian	0	100	0	
8	- cotton	50	50	0	
9	Organic matter - leaves, feathers, paper, leather e	0	50	50	
10	Inorganic matter - sand/dust	50	50	0	
11	- rust	50	50	0	
12	- metal/wire	50	50	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	50	50	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		46	38	16	
Stickiness		No(%) 50	Yes(%) 50	Seed-coat fragments	
				No(%) 100	Yes(%) 0

Africa

Table 19

2011

Country: Sudan		Growth: Sudan-Others		Number of Samples: 1	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	100	0	0	
2	- plastic film	100	0	0	
3	- jute/hessian	100	0	0	
4	- cotton	100	0	0	
5	Strings made of - woven plastic	100	0	0	
6	- plastic film	100	0	0	
7	- jute/hessian	100	0	0	
8	- cotton	100	0	0	
9	Organic matter - leaves, feathers, paper, leather e	0	100	0	
10	Inorganic matter - sand/dust	100	0	0	
11	- rust	100	0	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		94	6	0	
Stickiness		No(%) 0	Yes(%) 100	Seed-coat fragments	
				No(%) 0	Yes(%) 100

Table 20

2011

Country: Tanzania		Growth: Coastal		Number of Samples: 4	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	100	0	0	
2	- plastic film	50	50	0	
3	- jute/hessian	75	0	25	
4	- cotton	50	50	0	
5	Strings made of - woven plastic	75	0	25	
6	- plastic film	100	0	0	
7	- jute/hessian	75	0	25	
8	- cotton	75	25	0	
9	Organic matter - leaves, feathers, paper, leather e	0	75	25	
10	Inorganic matter - sand/dust	75	25	0	
11	- rust	50	25	25	
12	- metal/wire	75	0	25	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	75	25	0	
16	- tar	100	0	0	
Average of 1-16		74	17	9	
Stickiness		No(%) 50	Yes(%) 50	Seed-coat fragments	
				No(%) 0	Yes(%) 100

Africa

Table 21

2011

Country: Tanzania		Growth: Mwanza		Number of Samples: 1	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	100	0	0
2		- plastic film	100	0	0
3		- jute/hessian	0	100	0
4		- cotton	100	0	0
5	Strings made of	- woven plastic	100	0	0
6		- plastic film	100	0	0
7		- jute/hessian	100	0	0
8		- cotton	100	0	0
9	Organic matter	- leaves, feathers, paper, leather e	0	0	100
10	Inorganic matter	- sand/dust	100	0	0
11		- rust	100	0	0
12		- metal/wire	100	0	0
13	Oily substances/chemicals	- grease/oil	0	0	100
14		- rubber	100	0	0
15		- stamp colour	100	0	0
16		- tar	100	0	0
Average of 1-16			81	6	13
Stickiness		No(%)	Yes(%)		
		100	0		
Seed-coat fragments		No(%)	Yes(%)		
		100	0		

Table 22

2011

Country: Togo		Growth: Togo		Number of Samples: 3	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	100	0	0
2		- plastic film	67	33	0
3		- jute/hessian	100	0	0
4		- cotton	100	0	0
5	Strings made of	- woven plastic	100	0	0
6		- plastic film	100	0	0
7		- jute/hessian	100	0	0
8		- cotton	67	33	0
9	Organic matter	- leaves, feathers, paper, leather e	67	33	0
10	Inorganic matter	- sand/dust	100	0	0
11		- rust	67	33	0
12		- metal/wire	100	0	0
13	Oily substances/chemicals	- grease/oil	100	0	0
14		- rubber	100	0	0
15		- stamp colour	100	0	0
16		- tar	100	0	0
Average of 1-16			92	8	0
Stickiness		No(%)	Yes(%)		
		100	0		
Seed-coat fragments		No(%)	Yes(%)		
		67	33		

Africa

Table 23

2011

Country: Uganda		Growth: Uganda		Number of Samples: 2	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	50	0	50
2		- plastic film	50	50	0
3		- jute/hessian	50	50	0
4		- cotton	100	0	0
5	Strings made of	- woven plastic	50	0	50
6		- plastic film	50	50	0
7		- jute/hessian	50	50	0
8		- cotton	100	0	0
9	Organic matter	- leaves, feathers, paper, leather e	50	50	0
10	Inorganic matter	- sand/dust	50	50	0
11		- rust	100	0	0
12		- metal/wire	100	0	0
13	Oily substances/chemicals	- grease/oil	100	0	0
14		- rubber	100	0	0
15		- stamp colour	100	0	0
16		- tar	100	0	0
Average of 1-16			75	19	6
Stickiness		No(%)	Yes(%)		
		100	0		
Seed-coat fragments		No(%)	Yes(%)		
		50	50		

Table 24

2011

Country: Zambia		Growth: Zambia		Number of Samples: 2	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	50	50	0
2		- plastic film	100	0	0
3		- jute/hessian	0	100	0
4		- cotton	50	0	50
5	Strings made of	- woven plastic	50	50	0
6		- plastic film	100	0	0
7		- jute/hessian	0	100	0
8		- cotton	50	50	0
9	Organic matter	- leaves, feathers, paper, leather e	0	100	0
10	Inorganic matter	- sand/dust	100	0	0
11		- rust	100	0	0
12		- metal/wire	50	50	0
13	Oily substances/chemicals	- grease/oil	100	0	0
14		- rubber	100	0	0
15		- stamp colour	50	50	0
16		- tar	100	0	0
Average of 1-16			63	34	3
Stickiness		No(%)	Yes(%)		
		100	0		
Seed-coat fragments		No(%)	Yes(%)		
		0	100		

Africa

Table 25

2011

Country: Zimbabwe		Growth: Zimbabwe		Number of Samples: 8	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	62	25	13
2		- plastic film	62	13	25
3		- jute/hessian	75	25	0
4		- cotton	25	50	25
5	Strings made of	- woven plastic	62	25	13
6		- plastic film	49	38	13
7		- jute/hessian	49	38	13
8		- cotton	37	50	13
9	Organic matter	- leaves, feathers, paper, leather e	37	50	13
10	Inorganic matter	- sand/dust	74	13	13
11		- rust	75	25	0
12		- metal/wire	75	25	0
13	Oily substances/chemicals	- grease/oil	100	0	0
14		- rubber	100	0	0
15		- stamp colour	87	13	0
16		- tar	100	0	0
Average of 1-16			67	24	9
Stickiness		<u>No(%)</u>	<u>Yes(%)</u>		
		88	13		
Seed-coat fragments		<u>No(%)</u>	<u>Yes(%)</u>		
		63	38		

America, North

Table 26

2011

Country: Mexico		Growth: Juarez		Number of Samples: 1	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	100	0	0
2		- plastic film	100	0	0
3		- jute/hessian	100	0	0
4		- cotton	100	0	0
5	Strings made of	- woven plastic	100	0	0
6		- plastic film	100	0	0
7		- jute/hessian	100	0	0
8		- cotton	100	0	0
9	Organic matter	- leaves, feathers, paper, leather e	100	0	0
10	Inorganic matter	- sand/dust	0	100	0
11		- rust	100	0	0
12		- metal/wire	100	0	0
13	Oily substances/chemicals	- grease/oil	100	0	0
14		- rubber	100	0	0
15		- stamp colour	100	0	0
16		- tar	100	0	0
Average of 1-16			94	6	0
Stickiness		No(%)	Yes(%)		
		0	100		
Seed-coat fragments		No(%)	Yes(%)		
		100	0		

Table 27

2011

Country: Mexico		Growth: Mexicali		Number of Samples: 1	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	0	0	100
2		- plastic film	100	0	0
3		- jute/hessian	100	0	0
4		- cotton	100	0	0
5	Strings made of	- woven plastic	100	0	0
6		- plastic film	0	100	0
7		- jute/hessian	100	0	0
8		- cotton	100	0	0
9	Organic matter	- leaves, feathers, paper, leather e	0	100	0
10	Inorganic matter	- sand/dust	100	0	0
11		- rust	100	0	0
12		- metal/wire	100	0	0
13	Oily substances/chemicals	- grease/oil	100	0	0
14		- rubber	100	0	0
15		- stamp colour	100	0	0
16		- tar	100	0	0
Average of 1-16			81	13	6
Stickiness		No(%)	Yes(%)		
		100	0		
Seed-coat fragments		No(%)	Yes(%)		
		100	0		

America, North

Table 28

2011

Country: Mexico		Growth: Mexico-Others		Number of Samples: 3	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	100	0	0	
2	- plastic film	67	33	0	
3	- jute/hessian	100	0	0	
4	- cotton	100	0	0	
5	Strings made of - woven plastic	100	0	0	
6	- plastic film	67	33	0	
7	- jute/hessian	100	0	0	
8	- cotton	100	0	0	
9	Organic matter - leaves, feathers, paper, leather e	67	33	0	
10	Inorganic matter - sand/dust	100	0	0	
11	- rust	100	0	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		94	6	0	
Stickiness		No(%) 33	Yes(%) 67	Seed-coat fragments	
				No(%) 67	Yes(%) 33

Table 29

2011

Country: U.S.A.		Growth: Arizona		Number of Samples: 5	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	100	0	0	
2	- plastic film	100	0	0	
3	- jute/hessian	100	0	0	
4	- cotton	100	0	0	
5	Strings made of - woven plastic	100	0	0	
6	- plastic film	80	20	0	
7	- jute/hessian	100	0	0	
8	- cotton	100	0	0	
9	Organic matter - leaves, feathers, paper, leather e	60	40	0	
10	Inorganic matter - sand/dust	100	0	0	
11	- rust	100	0	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		96	4	0	
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments	
				No(%) 80	Yes(%) 20

America, North

Table 30

2011

Country: U.S.A.		Growth: California		Number of Samples: 20	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	80	10	10	
2	- plastic film	85	10	5	
3	- jute/hessian	90	5	5	
4	- cotton	95	5	0	
5	Strings made of - woven plastic	80	15	5	
6	- plastic film	85	15	0	
7	- jute/hessian	85	15	0	
8	- cotton	95	5	0	
9	Organic matter - leaves, feathers, paper, leather e	75	15	10	
10	Inorganic matter - sand/dust	65	35	0	
11	- rust	95	5	0	
12	- metal/wire	90	10	0	
13	Oily substances/chemicals - grease/oil	85	15	0	
14	- rubber	95	5	0	
15	- stamp colour	95	5	0	
16	- tar	85	15	0	
Average of 1-16		86	12	2	
Stickiness		No(%) 60	Yes(%) 40	Seed-coat fragments	
				No(%) 50	Yes(%) 50

Table 31

2011

Country: U.S.A.		Growth: El Paso		Number of Samples: 1	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	100	0	0	
2	- plastic film	100	0	0	
3	- jute/hessian	100	0	0	
4	- cotton	100	0	0	
5	Strings made of - woven plastic	100	0	0	
6	- plastic film	100	0	0	
7	- jute/hessian	100	0	0	
8	- cotton	100	0	0	
9	Organic matter - leaves, feathers, paper, leather e	100	0	0	
10	Inorganic matter - sand/dust	100	0	0	
11	- rust	100	0	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		100	0	0	
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments	
				No(%) 100	Yes(%) 0

America, North

Table 32

2011

Country: U.S.A.		Growth: Memphis Territory		Number of Samples: 22	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	68	27	5
2		- plastic film	73	27	0
3		- jute/hessian	90	5	5
4		- cotton	95	5	0
5	Strings made of	- woven plastic	82	18	0
6		- plastic film	86	14	0
7		- jute/hessian	95	5	0
8		- cotton	100	0	0
9	Organic matter	- leaves, feathers, paper, leather e	54	41	5
10	Inorganic matter	- sand/dust	77	23	0
11		- rust	86	14	0
12		- metal/wire	95	5	0
13	Oily substances/chemicals	- grease/oil	86	14	0
14		- rubber	95	5	0
15		- stamp colour	95	5	0
16		- tar	95	5	0
Average of 1-16			86	13	1
Stickiness		No(%)	Yes(%)		
		77	23		
Seed-coat fragments		No(%)	Yes(%)		
		59	41		

Table 33

2011

Country: U.S.A.		Growth: Pima		Number of Samples: 20	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	100	0	0
2		- plastic film	100	0	0
3		- jute/hessian	100	0	0
4		- cotton	95	0	5
5	Strings made of	- woven plastic	95	5	0
6		- plastic film	95	5	0
7		- jute/hessian	100	0	0
8		- cotton	85	10	5
9	Organic matter	- leaves, feathers, paper, leather e	80	15	5
10	Inorganic matter	- sand/dust	70	25	5
11		- rust	95	5	0
12		- metal/wire	100	0	0
13	Oily substances/chemicals	- grease/oil	95	5	0
14		- rubber	100	0	0
15		- stamp colour	100	0	0
16		- tar	100	0	0
Average of 1-16			95	4	1
Stickiness		No(%)	Yes(%)		
		60	40		
Seed-coat fragments		No(%)	Yes(%)		
		80	20		

America, North

Table 34

2011

Country: U.S.A.		Growth: South Eastern		Number of Samples: 5	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	80	20	0	
2	- plastic film	60	40	0	
3	- jute/hessian	100	0	0	
4	- cotton	60	20	20	
5	Strings made of - woven plastic	80	20	0	
6	- plastic film	80	20	0	
7	- jute/hessian	80	20	0	
8	- cotton	80	0	20	
9	Organic matter - leaves, feathers, paper, leather e	60	40	0	
10	Inorganic matter - sand/dust	80	20	0	
11	- rust	80	20	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	80	20	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		82	15	3	
Stickiness		No(%) 80	Yes(%) 20	Seed-coat fragments	
				No(%) 40	Yes(%) 60

Table 35

2011

Country: U.S.A.		Growth: Texas High Plains		Number of Samples: 14	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	100	0	0	
2	- plastic film	86	14	0	
3	- jute/hessian	93	0	7	
4	- cotton	100	0	0	
5	Strings made of - woven plastic	93	7	0	
6	- plastic film	93	7	0	
7	- jute/hessian	100	0	0	
8	- cotton	100	0	0	
9	Organic matter - leaves, feathers, paper, leather e	86	14	0	
10	Inorganic matter - sand/dust	93	7	0	
11	- rust	93	7	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	93	7	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		96	4	0	
Stickiness		No(%) 93	Yes(%) 7	Seed-coat fragments	
				No(%) 71	Yes(%) 29

America, North

Table 36

2011

Country: U.S.A.		Growth: USA-Others		Number of Samples: 7	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	100	0	0	
2	- plastic film	86	14	0	
3	- jute/hessian	100	0	0	
4	- cotton	86	0	14	
5	Strings made of - woven plastic	100	0	0	
6	- plastic film	100	0	0	
7	- jute/hessian	100	0	0	
8	- cotton	86	0	14	
9	Organic matter - leaves, feathers, paper, leather e	72	14	14	
10	Inorganic matter - sand/dust	86	14	0	
11	- rust	86	14	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		93	4	3	
Stickiness		<u>No(%)</u> 86	<u>Yes(%)</u> 14	Seed-coat fragments	
				<u>No(%)</u> 71	<u>Yes(%)</u> 29

America, South

Table 37

2011

Country: Argentina		Growth: Argentina		Number of Samples: 9	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	100	0	0
2		- plastic film	100	0	0
3		- jute/hessian	100	0	0
4		- cotton	67	22	11
5	Strings made of	- woven plastic	100	0	0
6		- plastic film	100	0	0
7		- jute/hessian	100	0	0
8		- cotton	78	22	0
9	Organic matter	- leaves, feathers, paper, leather e	22	56	22
10	Inorganic matter	- sand/dust	44	56	0
11		- rust	100	0	0
12		- metal/wire	100	0	0
13	Oily substances/chemicals	- grease/oil	100	0	0
14		- rubber	100	0	0
15		- stamp colour	89	11	0
16		- tar	100	0	0
Average of 1-16			88	10	2
Stickiness		No(%)	Yes(%)		
		100	0		
Seed-coat fragments		No(%)	Yes(%)		
		89	11		

Table 38

2011

Country: Brazil		Growth: Brazil		Number of Samples: 27	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	89	11	0
2		- plastic film	93	7	0
3		- jute/hessian	89	11	0
4		- cotton	78	22	0
5	Strings made of	- woven plastic	89	7	4
6		- plastic film	93	7	0
7		- jute/hessian	100	0	0
8		- cotton	78	22	0
9	Organic matter	- leaves, feathers, paper, leather e	63	33	4
10	Inorganic matter	- sand/dust	85	15	0
11		- rust	93	7	0
12		- metal/wire	96	4	0
13	Oily substances/chemicals	- grease/oil	93	7	0
14		- rubber	96	4	0
15		- stamp colour	96	4	0
16		- tar	96	4	0
Average of 1-16			89	10	1
Stickiness		No(%)	Yes(%)		
		78	22		
Seed-coat fragments		No(%)	Yes(%)		
		74	26		

America, South

Table 39

2011

Country: Brazil		Growth: Brazil South		Number of Samples: 1	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	100	0	0
2		- plastic film	100	0	0
3		- jute/hessian	100	0	0
4		- cotton	100	0	0
5	Strings made of	- woven plastic	100	0	0
6		- plastic film	100	0	0
7		- jute/hessian	100	0	0
8		- cotton	100	0	0
9	Organic matter	- leaves, feathers, paper, leather e	100	0	0
10	Inorganic matter	- sand/dust	100	0	0
11		- rust	100	0	0
12		- metal/wire	100	0	0
13	Oily substances/chemicals	- grease/oil	100	0	0
14		- rubber	100	0	0
15		- stamp colour	100	0	0
16		- tar	100	0	0
Average of 1-16			100	0	0
Stickiness		No(%)	Yes(%)		
		100	0		
Seed-coat fragments		No(%)	Yes(%)		
		100	0		

Table 40

2011

Country: Paraguay		Growth: Paraguay		Number of Samples: 1	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	100	0	0
2		- plastic film	100	0	0
3		- jute/hessian	100	0	0
4		- cotton	100	0	0
5	Strings made of	- woven plastic	100	0	0
6		- plastic film	100	0	0
7		- jute/hessian	100	0	0
8		- cotton	100	0	0
9	Organic matter	- leaves, feathers, paper, leather e	100	0	0
10	Inorganic matter	- sand/dust	100	0	0
11		- rust	100	0	0
12		- metal/wire	100	0	0
13	Oily substances/chemicals	- grease/oil	100	0	0
14		- rubber	100	0	0
15		- stamp colour	100	0	0
16		- tar	100	0	0
Average of 1-16			100	0	0
Stickiness		No(%)	Yes(%)		
		100	0		
Seed-coat fragments		No(%)	Yes(%)		
		100	0		

America, South

Table 41

2011

Country: Peru		Growth: Del Cerro		Number of Samples: 1	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	100	0	0
2		- plastic film	100	0	0
3		- jute/hessian	100	0	0
4		- cotton	100	0	0
5	Strings made of	- woven plastic	100	0	0
6		- plastic film	100	0	0
7		- jute/hessian	100	0	0
8		- cotton	100	0	0
9	Organic matter	- leaves, feathers, paper, leather e	100	0	0
10	Inorganic matter	- sand/dust	100	0	0
11		- rust	100	0	0
12		- metal/wire	100	0	0
13	Oily substances/chemicals	- grease/oil	100	0	0
14		- rubber	100	0	0
15		- stamp colour	100	0	0
16		- tar	100	0	0
Average of 1-16			100	0	0
Stickiness		<u>No(%)</u> 100	<u>Yes(%)</u> 0	Seed-coat fragments	
				<u>No(%)</u> 0	<u>Yes(%)</u> 100

Asia

Table 42

2011

Country: Afghanistan		Growth: Afghanistan		Number of Samples: 1	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	100	0	0
2		- plastic film	100	0	0
3		- jute/hessian	100	0	0
4		- cotton	100	0	0
5	Strings made of	- woven plastic	100	0	0
6		- plastic film	100	0	0
7		- jute/hessian	100	0	0
8		- cotton	0	0	100
9	Organic matter	- leaves, feathers, paper, leather e	100	0	0
10	Inorganic matter	- sand/dust	100	0	0
11		- rust	100	0	0
12		- metal/wire	100	0	0
13	Oily substances/chemicals	- grease/oil	100	0	0
14		- rubber	100	0	0
15		- stamp colour	100	0	0
16		- tar	100	0	0
Average of 1-16			94	0	6
Stickiness		No(%)	Yes(%)		
		100	0		
Seed-coat fragments		No(%)	Yes(%)		
		100	0		

Table 43

2011

Country: Australia		Growth: Australia		Number of Samples: 18	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	94	6	0
2		- plastic film	100	0	0
3		- jute/hessian	89	11	0
4		- cotton	77	17	6
5	Strings made of	- woven plastic	89	11	0
6		- plastic film	89	11	0
7		- jute/hessian	83	17	0
8		- cotton	72	22	6
9	Organic matter	- leaves, feathers, paper, leather e	72	22	6
10	Inorganic matter	- sand/dust	83	11	6
11		- rust	89	11	0
12		- metal/wire	83	17	0
13	Oily substances/chemicals	- grease/oil	89	11	0
14		- rubber	94	6	0
15		- stamp colour	94	6	0
16		- tar	89	11	0
Average of 1-16			86	12	2
Stickiness		No(%)	Yes(%)		
		89	11		
Seed-coat fragments		No(%)	Yes(%)		
		72	28		

Asia

Table 44

2011

Country: China		Growth: China-Others		Number of Samples: 1	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	0	0	100	
2	- plastic film	0	100	0	
3	- jute/hessian	0	100	0	
4	- cotton	0	100	0	
5	Strings made of - woven plastic	0	0	100	
6	- plastic film	100	0	0	
7	- jute/hessian	0	0	100	
8	- cotton	0	0	100	
9	Organic matter - leaves, feathers, paper, leather e	0	0	100	
10	Inorganic matter - sand/dust	0	100	0	
11	- rust	100	0	0	
12	- metal/wire	0	100	0	
13	Oily substances/chemicals - grease/oil	0	100	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		31	38	31	
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments	
				No(%) 0	Yes(%) 100

Table 45

2011

Country: China		Growth: Xinjiang		Number of Samples: 11	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	27	73	0	
2	- plastic film	36	55	9	
3	- jute/hessian	91	9	0	
4	- cotton	64	18	18	
5	Strings made of - woven plastic	55	18	27	
6	- plastic film	73	18	9	
7	- jute/hessian	91	0	9	
8	- cotton	64	9	27	
9	Organic matter - leaves, feathers, paper, leather e	46	36	18	
10	Inorganic matter - sand/dust	55	45	0	
11	- rust	100	0	0	
12	- metal/wire	82	9	9	
13	Oily substances/chemicals - grease/oil	64	36	0	
14	- rubber	91	9	0	
15	- stamp colour	91	9	0	
16	- tar	91	0	9	
Average of 1-16		70	22	8	
Stickiness		No(%) 82	Yes(%) 18	Seed-coat fragments	
				No(%) 55	Yes(%) 45

Asia

Table 46

2011

Country: India		Growth: DCH		Number of Samples: 8	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	25	50	25
2		- plastic film	49	13	38
3		- jute/hessian	37	50	13
4		- cotton	62	13	25
5	Strings made of	- woven plastic	37	50	13
6		- plastic film	49	13	38
7		- jute/hessian	12	38	50
8		- cotton	50	25	25
9	Organic matter	- leaves, feathers, paper, leather e	24	13	63
10	Inorganic matter	- sand/dust	49	38	13
11		- rust	62	38	0
12		- metal/wire	75	0	25
13	Oily substances/chemicals	- grease/oil	62	38	0
14		- rubber	75	25	0
15		- stamp colour	62	38	0
16		- tar	87	13	0
Average of 1-16			51	28	21
Stickiness		No(%)	Yes(%)		
		50	50		
Seed-coat fragments		No(%)	Yes(%)		
		63	38		

Table 47

2011

Country: India		Growth: H-4		Number of Samples: 6	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	67	33	0
2		- plastic film	83	17	0
3		- jute/hessian	50	50	0
4		- cotton	17	83	0
5	Strings made of	- woven plastic	50	33	17
6		- plastic film	33	50	17
7		- jute/hessian	50	33	17
8		- cotton	50	33	17
9	Organic matter	- leaves, feathers, paper, leather e	0	83	17
10	Inorganic matter	- sand/dust	83	17	0
11		- rust	83	17	0
12		- metal/wire	83	17	0
13	Oily substances/chemicals	- grease/oil	66	17	17
14		- rubber	83	17	0
15		- stamp colour	83	17	0
16		- tar	83	17	0
Average of 1-16			61	33	6
Stickiness		No(%)	Yes(%)		
		83	17		
Seed-coat fragments		No(%)	Yes(%)		
		67	33		

Asia

Table 48

2011

Country: India		Growth: India-Others		Number of Samples: 10	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	60	20	20	
2	- plastic film	60	30	10	
3	- jute/hessian	50	30	20	
4	- cotton	20	40	40	
5	Strings made of - woven plastic	70	0	30	
6	- plastic film	50	30	20	
7	- jute/hessian	40	20	40	
8	- cotton	30	40	30	
9	Organic matter - leaves, feathers, paper, leather e	20	30	50	
10	Inorganic matter - sand/dust	70	10	20	
11	- rust	80	20	0	
12	- metal/wire	80	10	10	
13	Oily substances/chemicals - grease/oil	70	10	20	
14	- rubber	100	0	0	
15	- stamp colour	90	10	0	
16	- tar	100	0	0	
Average of 1-16		62	19	19	
Stickiness		No(%) 60	Yes(%) 40	Seed-coat fragments	
				No(%) 30	Yes(%) 70

Table 49

2011

Country: India		Growth: J-34		Number of Samples: 14	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	43	43	14	
2	- plastic film	50	14	36	
3	- jute/hessian	35	36	29	
4	- cotton	35	36	29	
5	Strings made of - woven plastic	28	43	29	
6	- plastic film	36	50	14	
7	- jute/hessian	14	43	43	
8	- cotton	50	21	29	
9	Organic matter - leaves, feathers, paper, leather e	22	64	14	
10	Inorganic matter - sand/dust	72	14	14	
11	- rust	86	14	0	
12	- metal/wire	86	14	0	
13	Oily substances/chemicals - grease/oil	79	21	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		58	26	16	
Stickiness		No(%) 93	Yes(%) 7	Seed-coat fragments	
				No(%) 50	Yes(%) 50

Asia

Table 50

2011

Country: India		Growth: LRA		Number of Samples: 1	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	0	100	0	
2	- plastic film	100	0	0	
3	- jute/hessian	100	0	0	
4	- cotton	100	0	0	
5	Strings made of - woven plastic	100	0	0	
6	- plastic film	0	100	0	
7	- jute/hessian	0	100	0	
8	- cotton	100	0	0	
9	Organic matter - leaves, feathers, paper, leather e	100	0	0	
10	Inorganic matter - sand/dust	100	0	0	
11	- rust	100	0	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		81	19	0	
Stickiness		No(%) <u>100</u>	Yes(%) <u>0</u>	Seed-coat fragments	
				No(%) <u>100</u>	Yes(%) <u>0</u>

Table 51

2011

Country: India		Growth: MCU-5		Number of Samples: 12	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	25	33	42	
2	- plastic film	25	33	42	
3	- jute/hessian	9	33	58	
4	- cotton	9	33	58	
5	Strings made of - woven plastic	17	8	75	
6	- plastic film	16	17	67	
7	- jute/hessian	0	17	83	
8	- cotton	42	8	50	
9	Organic matter - leaves, feathers, paper, leather e	25	25	50	
10	Inorganic matter - sand/dust	41	42	17	
11	- rust	67	33	0	
12	- metal/wire	58	42	0	
13	Oily substances/chemicals - grease/oil	50	42	8	
14	- rubber	75	25	0	
15	- stamp colour	92	0	8	
16	- tar	92	8	0	
Average of 1-16		40	25	35	
Stickiness		No(%) <u>58</u>	Yes(%) <u>42</u>	Seed-coat fragments	
				No(%) <u>33</u>	Yes(%) <u>67</u>

Asia

Table 52

2011

Country: India		Growth: Shankar-4/6		Number of Samples: 30	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	44	43	13
2		- plastic film	47	30	23
3		- jute/hessian	47	43	10
4		- cotton	36	37	27
5	Strings made of	- woven plastic	30	37	33
6		- plastic film	30	43	27
7		- jute/hessian	26	47	27
8		- cotton	33	37	30
9	Organic matter	- leaves, feathers, paper, leather e	20	43	37
10	Inorganic matter	- sand/dust	50	40	10
11		- rust	66	27	7
12		- metal/wire	60	30	10
13	Oily substances/chemicals	- grease/oil	66	27	7
14		- rubber	87	10	3
15		- stamp colour	70	20	10
16		- tar	90	7	3
Average of 1-16			50	33	17
Stickiness		No(%)	Yes(%)		
		83	17		
Seed-coat fragments		No(%)	Yes(%)		
		50	50		

Table 53

2011

Country: Israel		Growth: Pima		Number of Samples: 4	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	100	0	0
2		- plastic film	75	25	0
3		- jute/hessian	75	25	0
4		- cotton	100	0	0
5	Strings made of	- woven plastic	100	0	0
6		- plastic film	100	0	0
7		- jute/hessian	100	0	0
8		- cotton	100	0	0
9	Organic matter	- leaves, feathers, paper, leather e	75	25	0
10	Inorganic matter	- sand/dust	75	25	0
11		- rust	100	0	0
12		- metal/wire	100	0	0
13	Oily substances/chemicals	- grease/oil	100	0	0
14		- rubber	100	0	0
15		- stamp colour	100	0	0
16		- tar	100	0	0
Average of 1-16			94	6	0
Stickiness		No(%)	Yes(%)		
		75	25		
Seed-coat fragments		No(%)	Yes(%)		
		50	50		

Asia

Table 54

2011

Country: Pakistan		Growth: AmSeed 1505		Number of Samples: 3	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	34	33	33	
2	- plastic film	67	0	33	
3	- jute/hessian	67	33	0	
4	- cotton	67	0	33	
5	Strings made of - woven plastic	33	67	0	
6	- plastic film	67	33	0	
7	- jute/hessian	67	0	33	
8	- cotton	67	0	33	
9	Organic matter - leaves, feathers, paper, leather e	33	0	67	
10	Inorganic matter - sand/dust	67	0	33	
11	- rust	67	33	0	
12	- metal/wire	67	33	0	
13	Oily substances/chemicals - grease/oil	67	33	0	
14	- rubber	100	0	0	
15	- stamp colour	67	33	0	
16	- tar	67	33	0	
Average of 1-16		62	21	17	
Stickiness		No(%) 67	Yes(%) 33	Seed-coat fragments	
				No(%) 33	Yes(%) 67

Table 55

2011

Country: Pakistan		Growth: AmSeed AFZAL		Number of Samples: 4	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	50	50	0	
2	- plastic film	25	50	25	
3	- jute/hessian	25	75	0	
4	- cotton	25	50	25	
5	Strings made of - woven plastic	50	50	0	
6	- plastic film	25	75	0	
7	- jute/hessian	25	75	0	
8	- cotton	25	50	25	
9	Organic matter - leaves, feathers, paper, leather e	0	50	50	
10	Inorganic matter - sand/dust	50	25	25	
11	- rust	75	0	25	
12	- metal/wire	75	0	25	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	75	25	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		51	36	13	
Stickiness		No(%) 75	Yes(%) 25	Seed-coat fragments	
				No(%) 50	Yes(%) 50

Asia

Table 56

2011

Country: Pakistan		Growth: MNH93		Number of Samples: 3	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	67	33	0	
2	- plastic film	67	33	0	
3	- jute/hessian	67	0	33	
4	- cotton	67	33	0	
5	Strings made of - woven plastic	33	0	67	
6	- plastic film	33	67	0	
7	- jute/hessian	33	0	67	
8	- cotton	67	33	0	
9	Organic matter - leaves, feathers, paper, leather e	0	67	33	
10	Inorganic matter - sand/dust	0	33	67	
11	- rust	67	33	0	
12	- metal/wire	67	33	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		60	23	17	
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments	
				No(%) 67	Yes(%) 33

Table 57

2011

Country: Pakistan		Growth: NAIB		Number of Samples: 2	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	50	50	0	
2	- plastic film	50	50	0	
3	- jute/hessian	50	0	50	
4	- cotton	50	0	50	
5	Strings made of - woven plastic	50	0	50	
6	- plastic film	50	50	0	
7	- jute/hessian	50	0	50	
8	- cotton	50	50	0	
9	Organic matter - leaves, feathers, paper, leather e	0	0	100	
10	Inorganic matter - sand/dust	0	0	100	
11	- rust	50	50	0	
12	- metal/wire	50	50	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		56	19	25	
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments	
				No(%) 50	Yes(%) 50

Asia

Table 58

2011

Country: Pakistan		Growth: Pakistan-Others		Number of Samples: 3	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	100	0	0
2		- plastic film	67	33	0
3		- jute/hessian	67	0	33
4		- cotton	67	0	33
5	Strings made of	- woven plastic	100	0	0
6		- plastic film	67	0	33
7		- jute/hessian	67	33	0
8		- cotton	67	33	0
9	Organic matter	- leaves, feathers, paper, leather e	34	33	33
10	Inorganic matter	- sand/dust	67	0	33
11		- rust	67	33	0
12		- metal/wire	67	33	0
13	Oily substances/chemicals	- grease/oil	100	0	0
14		- rubber	100	0	0
15		- stamp colour	100	0	0
16		- tar	100	0	0
Average of 1-16			78	12	10
Stickiness		No(%)	Yes(%)		
		33	67		
Seed-coat fragments		No(%)	Yes(%)		
		67	33		

Table 59

2011

Country: Syria		Growth: Syria		Number of Samples: 9	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	100	0	0
2		- plastic film	89	11	0
3		- jute/hessian	100	0	0
4		- cotton	100	0	0
5	Strings made of	- woven plastic	89	11	0
6		- plastic film	89	11	0
7		- jute/hessian	89	11	0
8		- cotton	89	11	0
9	Organic matter	- leaves, feathers, paper, leather e	78	11	11
10	Inorganic matter	- sand/dust	89	11	0
11		- rust	100	0	0
12		- metal/wire	100	0	0
13	Oily substances/chemicals	- grease/oil	100	0	0
14		- rubber	100	0	0
15		- stamp colour	100	0	0
16		- tar	100	0	0
Average of 1-16			94	5	1
Stickiness		No(%)	Yes(%)		
		56	44		
Seed-coat fragments		No(%)	Yes(%)		
		67	33		

Asia

Table 60

2011

Country: Tajikistan		Growth: Long Staples		Number of Samples: 2	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	50	50	0	
2	- plastic film	50	50	0	
3	- jute/hessian	50	50	0	
4	- cotton	50	50	0	
5	Strings made of - woven plastic	0	100	0	
6	- plastic film	50	50	0	
7	- jute/hessian	50	50	0	
8	- cotton	100	0	0	
9	Organic matter - leaves, feathers, paper, leather e	0	100	0	
10	Inorganic matter - sand/dust	100	0	0	
11	- rust	100	0	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		69	31	0	
Stickiness		No(%) 0	Yes(%) 100	Seed-coat fragments	
				No(%) 0	Yes(%) 100

Table 61

2011

Country: Tajikistan		Growth: Medium Staples		Number of Samples: 4	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	50	50	0	
2	- plastic film	75	25	0	
3	- jute/hessian	50	50	0	
4	- cotton	50	50	0	
5	Strings made of - woven plastic	25	75	0	
6	- plastic film	75	25	0	
7	- jute/hessian	100	0	0	
8	- cotton	100	0	0	
9	Organic matter - leaves, feathers, paper, leather e	25	75	0	
10	Inorganic matter - sand/dust	50	50	0	
11	- rust	75	25	0	
12	- metal/wire	75	25	0	
13	Oily substances/chemicals - grease/oil	75	25	0	
14	- rubber	100	0	0	
15	- stamp colour	75	25	0	
16	- tar	100	0	0	
Average of 1-16		69	31	0	
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments	
				No(%) 100	Yes(%) 0

Asia

Table 62

2011

Country: Turkmenistan		Growth: Long Staples		Number of Samples: 2	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	50	0	50
2		- plastic film	50	50	0
3		- jute/hessian	0	50	50
4		- cotton	50	50	0
5	Strings made of	- woven plastic	50	50	0
6		- plastic film	50	0	50
7		- jute/hessian	0	50	50
8		- cotton	100	0	0
9	Organic matter	- leaves, feathers, paper, leather e	0	50	50
10	Inorganic matter	- sand/dust	50	0	50
11		- rust	50	0	50
12		- metal/wire	50	50	0
13	Oily substances/chemicals	- grease/oil	50	50	0
14		- rubber	50	50	0
15		- stamp colour	50	50	0
16		- tar	50	50	0
Average of 1-16			44	34	22
Stickiness		No(%)	Yes(%)		
		50	50		
Seed-coat fragments		No(%)	Yes(%)		
		50	50		

Table 63

2011

Country: Turkmenistan		Growth: Medium Staples		Number of Samples: 4	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	100	0	0
2		- plastic film	100	0	0
3		- jute/hessian	100	0	0
4		- cotton	75	25	0
5	Strings made of	- woven plastic	100	0	0
6		- plastic film	75	25	0
7		- jute/hessian	100	0	0
8		- cotton	100	0	0
9	Organic matter	- leaves, feathers, paper, leather e	100	0	0
10	Inorganic matter	- sand/dust	100	0	0
11		- rust	75	25	0
12		- metal/wire	50	50	0
13	Oily substances/chemicals	- grease/oil	100	0	0
14		- rubber	100	0	0
15		- stamp colour	100	0	0
16		- tar	100	0	0
Average of 1-16			92	8	0
Stickiness		No(%)	Yes(%)		
		75	25		
Seed-coat fragments		No(%)	Yes(%)		
		100	0		

Asia

Table 64

2011

Country: Uzbekistan		Growth: Long Staples		Number of Samples: 3	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	33	67	0	
2	- plastic film	67	33	0	
3	- jute/hessian	67	33	0	
4	- cotton	33	67	0	
5	Strings made of - woven plastic	67	33	0	
6	- plastic film	67	33	0	
7	- jute/hessian	33	67	0	
8	- cotton	67	33	0	
9	Organic matter - leaves, feathers, paper, leather e	0	67	33	
10	Inorganic matter - sand/dust	67	33	0	
11	- rust	33	67	0	
12	- metal/wire	67	33	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	67	33	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		61	37	2	
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments	
				No(%) 67	Yes(%) 33

Table 65

2011

Country: Uzbekistan		Growth: Medium Staples		Number of Samples: 15	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	60	33	7	
2	- plastic film	87	13	0	
3	- jute/hessian	80	13	7	
4	- cotton	80	20	0	
5	Strings made of - woven plastic	73	20	7	
6	- plastic film	73	27	0	
7	- jute/hessian	93	0	7	
8	- cotton	93	0	7	
9	Organic matter - leaves, feathers, paper, leather e	47	33	20	
10	Inorganic matter - sand/dust	60	27	13	
11	- rust	73	27	0	
12	- metal/wire	80	13	7	
13	Oily substances/chemicals - grease/oil	87	13	0	
14	- rubber	87	13	0	
15	- stamp colour	87	13	0	
16	- tar	100	0	0	
Average of 1-16		78	17	5	
Stickiness		No(%) 73	Yes(%) 27	Seed-coat fragments	
				No(%) 67	Yes(%) 33

Europe

Table 66

2011

Country: Greece		Growth: Greece		Number of Samples: 28	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	85	11	4	
2	- plastic film	82	7	11	
3	- jute/hessian	96	0	4	
4	- cotton	92	4	4	
5	Strings made of - woven plastic	93	0	7	
6	- plastic film	85	11	4	
7	- jute/hessian	96	0	4	
8	- cotton	92	4	4	
9	Organic matter - leaves, feathers, paper, leather e	60	29	11	
10	Inorganic matter - sand/dust	71	11	18	
11	- rust	86	7	7	
12	- metal/wire	96	0	4	
13	Oily substances/chemicals - grease/oil	89	4	7	
14	- rubber	92	4	4	
15	- stamp colour	96	0	4	
16	- tar	96	0	4	
Average of 1-16		88	6	6	
Stickiness		No(%) 86	Yes(%) 14	Seed-coat fragments	
				No(%) 68	Yes(%) 32

Table 67

2011

Country: Spain		Growth: Spain		Number of Samples: 9	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	89	0	11	
2	- plastic film	89	11	0	
3	- jute/hessian	89	11	0	
4	- cotton	78	11	11	
5	Strings made of - woven plastic	89	0	11	
6	- plastic film	56	33	11	
7	- jute/hessian	100	0	0	
8	- cotton	100	0	0	
9	Organic matter - leaves, feathers, paper, leather e	56	33	11	
10	Inorganic matter - sand/dust	89	11	0	
11	- rust	89	11	0	
12	- metal/wire	89	11	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		89	8	3	
Stickiness		No(%) 67	Yes(%) 33	Seed-coat fragments	
				No(%) 78	Yes(%) 22

Europe

Table 68

2011

Country: Turkey		Growth: Antalya		Number of Samples: 1	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	100	0	0
2		- plastic film	100	0	0
3		- jute/hessian	100	0	0
4		- cotton	0	100	0
5	Strings made of	- woven plastic	100	0	0
6		- plastic film	100	0	0
7		- jute/hessian	100	0	0
8		- cotton	0	100	0
9	Organic matter	- leaves, feathers, paper, leather e	100	0	0
10	Inorganic matter	- sand/dust	100	0	0
11		- rust	100	0	0
12		- metal/wire	100	0	0
13	Oily substances/chemicals	- grease/oil	100	0	0
14		- rubber	100	0	0
15		- stamp colour	100	0	0
16		- tar	100	0	0
Average of 1-16			87	13	0
Stickiness		No(%)	Yes(%)		
		100	0		
Seed-coat fragments		No(%)	Yes(%)		
		100	0		

Table 69

2011

Country: Turkey		Growth: Cukurova/South		Number of Samples: 4	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	50	50	0
2		- plastic film	50	25	25
3		- jute/hessian	75	25	0
4		- cotton	25	50	25
5	Strings made of	- woven plastic	50	50	0
6		- plastic film	50	25	25
7		- jute/hessian	75	25	0
8		- cotton	0	100	0
9	Organic matter	- leaves, feathers, paper, leather e	25	25	50
10	Inorganic matter	- sand/dust	25	50	25
11		- rust	75	25	0
12		- metal/wire	25	50	25
13	Oily substances/chemicals	- grease/oil	75	25	0
14		- rubber	75	25	0
15		- stamp colour	75	25	0
16		- tar	75	25	0
Average of 1-16			51	38	11
Stickiness		No(%)	Yes(%)		
		100	0		
Seed-coat fragments		No(%)	Yes(%)		
		25	75		

Europe

Table 70

2011

Country: Turkey		Growth: Izmir		Number of Samples: 6	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	83	0	17
2		- plastic film	83	0	17
3		- jute/hessian	83	0	17
4		- cotton	66	17	17
5	Strings made of	- woven plastic	83	0	17
6		- plastic film	66	17	17
7		- jute/hessian	83	0	17
8		- cotton	66	17	17
9	Organic matter	- leaves, feathers, paper, leather e	83	0	17
10	Inorganic matter	- sand/dust	83	0	17
11		- rust	83	0	17
12		- metal/wire	83	0	17
13	Oily substances/chemicals	- grease/oil	83	17	0
14		- rubber	83	17	0
15		- stamp colour	83	17	0
16		- tar	83	17	0
Average of 1-16			80	7	13
Stickiness		No(%)	Yes(%)		
		100	0		
Seed-coat fragments		No(%)	Yes(%)		
		100	0		

Table 71

2011

Country: Turkey		Growth: Turkey-Others		Number of Samples: 6	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	100	0	0
2		- plastic film	100	0	0
3		- jute/hessian	67	33	0
4		- cotton	50	50	0
5	Strings made of	- woven plastic	83	17	0
6		- plastic film	83	17	0
7		- jute/hessian	83	0	17
8		- cotton	50	33	17
9	Organic matter	- leaves, feathers, paper, leather e	17	50	33
10	Inorganic matter	- sand/dust	33	17	50
11		- rust	67	33	0
12		- metal/wire	67	33	0
13	Oily substances/chemicals	- grease/oil	100	0	0
14		- rubber	100	0	0
15		- stamp colour	83	17	0
16		- tar	100	0	0
Average of 1-16			74	19	7
Stickiness		No(%)	Yes(%)		
		83	17		
Seed-coat fragments		No(%)	Yes(%)		
		50	50		

Press Release

Summary of Survey Results 2013

“After some improvements in the recent past foreign matters, stickiness and seed-coat fragments in raw cotton pose serious challenges to the cotton spinning industry worldwide.” This is the general conclusion to be drawn from the “Cotton Contamination Survey 2013” which has just been released by the International Textile Manufacturers Federation (ITMF). The survey is carried out every other year, the 2013 edition being the thirteenth in the series since the changeover to a new methodology in 1989. In the 2013 report, 119 spinning mills located in 24 countries evaluated 73 different cotton growths.

Contamination – slight increase

The level of cottons moderately or seriously contaminated as perceived by the spinning mills from around the world rose from 23% to 26% compared to the last survey in 2011. A closer look at the extent of the contamination shows that 8% (2011: 7%) of all cotton evaluated were seriously contaminated by some sort of foreign matter whereas 18% (2011: 16%) were only moderately contaminated. As the summary data are arithmetic averages of the different contaminants, the extent of contamination is fully illustrated only by the results for the individual contaminants. They range from 7% for “tar” (2011: 5%) to 55% of all cottons processed being moderately or seriously contaminated by “organic matter”, i.e. leaves, feathers, paper, leather, etc. (2011: 51%). Other serious contaminants are “strings made of cotton” (38%), “strings made of woven plastics” (36%), “fabrics made of cotton” (36%) as well as “strings made of jute/hessian” (34%). The most contaminated cotton descriptions considered for the survey originated in India (DCH, Shankar-4/6, MCU-5, J-34, India-Others), Zambia, Pakistan (Pakistan Others), Tajikistan (Medium Staples), Uzbekistan (Medium Staples) and China (Xinjiang). In contrast, very clean raw cottons were produced in USA, (California, USA-Others, Memphis Territory, South Eastern and Pima), Spain, Australia, Brazil, Togo and Benin.

Stickiness – significant rise

The presence of sticky cotton as perceived by the spinning mills increased again in 2013 significantly from 20% in 2011 to 23%. This level is higher than the long-term average. Therefore, stickiness remains a major challenge to the global cotton spinning industry. Descriptions that were affected most by stickiness were those from Uzbekistan (Medium Staples), Turkmenistan (Medium Staples), Togo, Mozambique, Chad, Burkina Faso, Tajikistan (Medium Staples), Mali, Ivory Coast and China (Xinjiang). On the other end of the range, cottons from USA (Texas High Plains, California, South Eastern), India (J-34, MCU, India-Others), Zambia, Pakistan (Others) and Egypt (Giza) were not or hardly affected by stickiness.

Seed-coat fragments – noticeable jump

With regard to seed-coat fragments the Cotton Contamination Survey 2013 shows that their appearance in cotton growths remains an issue for spinners around the world. 42% of cotton spinners (2011: 38%) claim that they have encountered moderate or significant amounts of seed-coat fragments in the cotton growths consumed. This is a jump of 11 percentage points since the all-time low of 31% in 2009. The origins affected most by seed-coat fragments are those from Nigeria, India (H-4, J-34, Shankar-4/6, MCU-5, India-Others), Pakistan-Others, Argentina, Mozambique and Zambia. Countries for which the existence of seed-coat fragments was negligible (prevalence of less than 30%) included those from USA (California, South Eastern, Texas High Plains, Pima, Memphis Territory, USA-Others), Spain, Benin, Australia and Burkina Faso.

February 2014

Participation

Table I

2013

Participation in 2013 Survey			
Country	Number of respondents (participating companies)	Number of samples (evaluations)	Number of cotton growth evaluated *
Argentina	2	2	2
Bangladesh	6	72	36
Belgium	1	6	6
Brazil	2	7	6
China	27	73	24
Chinese Taipei	10	58	32
Colombia	2	2	2
Egypt	12	19	7
Germany	1	5	5
India	15	71	24
Indonesia	3	27	20
Italy	2	16	14
Japan	2	11	10
Korea, Rep.	2	8	6
Malaysia	2	12	11
Mexico	2	5	5
Nigeria	4	4	1
Pakistan	5	15	11
Peru	3	6	5
South Africa	1	2	2
Switzerland	1	5	5
Thailand	2	11	8
Turkey	5	32	21
U.S.A.	7	15	6
Total	119	484	

* Divided among 73 cotton descriptions

Main Results

Table IIa

2013

Country		All Countries	Growth: All Growths	Number of samples: 484		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	71	19	10	
2		- plastic film	69	21	10	
3		- jute/hessian	75	17	8	
4		- cotton	64	22	14	
5	Strings made of	- woven plastic	64	22	14	
6		- plastic film	69	19	12	
7		- jute/hessian	66	22	12	
8		- cotton	62	24	14	
9	Organic matter	- leaves, feathers, paper, leather e	45	39	16	
10	Inorganic matter	- sand/dust	67	25	8	
11		- rust	85	12	3	
12		- metal/wire	82	14	4	
13	Oily substances/chemicals	- grease/oil	86	13	1	
14		- rubber	90	8	2	
15		- stamp colour	91	7	2	
16		- tar	93	5	2	
Average of 1-16			74	18	8	
Stickiness		No(%)	Yes(%)			
		78	22			
Seed-coat fragments		No(%)	Yes(%)			
		59	41			

Table IIb

Summary 1989-2013					
Year	Degree of Contamination (%)			Stickiness (%)	Seed-coat fragments (%)
	Non-existent/ insignificant	Moderate	Serious		
1989	86	9	5	21	0
1991	85	11	4	27	34
1993	85	11	4	26	36
1995	82	13	5	20	39
1997	82	13	5	23	32
1999	79	15	6	20	38
2001	78	16	6	18	40
2003	73	18	8	21	44
2005	78	15	7	17	37
2007	78	15	7	21	37
2009	78	16	6	13	27
2011	77	16	7	20	38
2013	74	18	8	22	41

Contamination

Table IIIa

2013

The Most Contaminated Descriptions						
Ranking	Description		Degree of Contamination (%) *			Number of Samples **
			Non-existent/ insignificant	Moderate	Serious	
1	India	DCH	43	33	24	10
2	India	Shankar-4/6	48	24	28	30
3	Zambia	Zambia	48	46	6	6
4	Pakistan	Pakistan-Others	51	34	15	5
5	India	MCU-5	53	19	28	12
6	India	J-34	54	27	19	8
7	Tajikistan	Medium Staples	55	40	5	8
8	Uzbekistan	Medium Staples	59	31	10	10
9	China	Xinjiang	59	41	0	9
10	India	India-Others	62	25	13	8
11	India	H-4	67	20	13	5
12	Turkmenistan	Medium Staples	67	26	7	8
13	Pakistan	AmSeed AFZAL	68	19	13	5
14	Nigeria	Nigeria	69	18	13	7
15	Mozambique	Mozambique	69	30	1	7
16	Egypt	Giza	70	22	8	24
17	Zimbabwe	Zimbabwe	71	18	11	9
18	Mali	Mali	72	21	7	11

* Average degree of contamination by each of the 16 pre-indicated contaminants

** Minimum: 5 Samples

Contamination

Table IIIb

2013

The Least Contaminated Descriptions						
Ranking	Description		Degree of Contamination (%) *			Number of Samples **
			Non-existent/insignificant	Moderate	Serious	
1	Spain	Spain	95	4	1	8
2	USA	California	94	6	0	9
3	USA	USA-Others	93	7	0	7
4	USA	Memphis Territory	89	10	1	28
5	USA	South Eastern	89	10	1	12
6	Australia	Australia	89	9	2	38
7	Brazil	Brazil	88	11	1	29
8	USA	Pima	87	12	1	20
9	Togo	Togo	87	9	4	6
10	Benin	Benin	85	11	4	5
11	Argentina	Argentina	80	15	5	11
12	USA	Texas High Plains	80	13	7	12
13	Burkina Faso	Burkina Faso	79	11	10	8
14	Turkey	Izmir	78	21	1	5
15	Ivory Coast	Ivory Coast	77	20	3	12
16	Greece	Greece	77	16	7	13
17	Chad	Chad	76	19	5	5

* Average degree of contamination by each of the 16 pre-indicated contaminants

** Minimum: 5 Samples

Stickiness

Table IVa

2013

Descriptions Most Affected by Stickiness				
Ranking	Description		Affirmative replies(%)*	Number of Samples**
1	Uzbekistan	Medium Staples	60	10
2	Turkmenistan	Medium Staples	50	8
3	Togo	Togo	50	6
4	Mozambique	Mozambique	43	7
5	Chad	Chad	40	5
6	Burkina Faso	Burkina Faso	37	8
7	Tajikistan	Medium Staples	37	8
8	Mali	Mali	36	11
9	Ivory Coast	Ivory Coast	33	12
10	China	Xinjiang	33	9
11	Zimbabwe	Zimbabwe	33	9
12	Brazil	Brazil	31	29
13	USA	Pima	30	20
14	India	DCH	30	10
15	Nigeria	Nigeria	29	7
16	USA	USA-Others	29	7
17	Argentina	Argentina	27	11
18	USA	Memphis Territory	21	28

* Percentage of replies indicating the existence of stickiness

** Minimum 5 samples

Stickiness

Table IVb

2013

Descriptions Least Affected by Stickiness				
Ranking	Description		Affirmative replies(%)*	Number of Samples**
1	USA	Texas High Plains	0	12
2	USA	California	0	9
3	India	J-34	0	8
4	Spain	Spain	0	8
5	Zambia	Zambia	0	6
6	Pakistan	Pakistan-Others	0	5
7	India	MCU-5	8	12
8	USA	South Eastern	8	12
9	Egypt	Giza	12	24
10	India	India-Others	12	8
11	Greece	Greece	15	13
12	Australia	Australia	18	38
13	India	Shankar-4/6	20	30
14	Benin	Benin	20	5
15	India	H-4	20	5
16	Pakistan	AmSeed AFZAL	20	5
17	Turkey	Izmir	20	5

* Percentage of replies indicating the existence of stickiness

** Minimum 5 samples

Seed-Coat Fragments

Table Va

2013

Descriptions Most Affected by Seed-Coat Fragments				
Ranking	Description		Affirmative replies(%)*	Number of Samples**
1	Nigeria	Nigeria	100	7
2	India	H-4	100	5
3	India	J-34	87	8
4	Pakistan	Pakistan-Others	80	5
5	Argentina	Argentina	73	11
6	Mozambique	Mozambique	71	7
7	India	Shankar-4/6	67	30
8	India	MCU-5	67	12
9	Zambia	Zambia	67	6
10	India	India-Others	62	8
11	Pakistan	AmSeed AFZAL	60	5
12	India	DCH	50	10
13	Tajikistan	Medium Staples	50	8
14	Turkmentistan	Medium Staples	50	8
15	Togo	Togo	50	6
16	Zimbabwe	Zimbabwe	44	9
17	Ivory Coast	Ivory Coast	42	12
18	Uzbekistan	Medium Staples	40	10

* Percentage of replies indicating the existence of seed-coat fragments

** Minimum 5 samples

Seed-Coat Fragments

Table Vb

2013

Descriptions Least Affected by Seed-Coat Fragments				
Ranking	Description		Affirmative replies(%)*	Number of Samples**
1	USA	California	0	9
2	USA	South Eastern	8	12
3	USA	Texas High Plains	8	12
4	Spain	Spain	12	8
5	Benin	Benin	20	5
6	Australia	Australia	24	38
7	USA	Pima	25	20
8	Burkina Faso	Burkina Faso	25	8
9	USA	Memphis Territory	29	28
10	USA	USA-Others	29	7
11	Greece	Greece	31	13
12	Egypt	Giza	33	24
13	China	Xinjiang	33	9
14	Mali	Mali	36	11
15	Brazil	Brazil	38	29
16	Uzbekistan	Medium Staples	40	10
17	Chad	Chad	40	5

* Percentage of replies indicating the existence of seed-coat fragments

** Minimum 5 samples

Africa

Table 1

2013

Country: Benin		Growth: Benin		Number of Samples: 5	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	100	0	0	
2	- plastic film	100	0	0	
3	- jute/hessian	80	20	0	
4	- cotton	80	0	20	
5	Strings made of - woven plastic	100	0	0	
6	- plastic film	100	0	0	
7	- jute/hessian	80	20	0	
8	- cotton	80	0	20	
9	Organic matter - leaves, feathers, paper, leather e	40	40	20	
10	Inorganic matter - sand/dust	60	40	0	
11	- rust	100	0	0	
12	- metal/wire	80	20	0	
13	Oily substances/chemicals - grease/oil	80	20	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	80	20	0	
Average of 1-16		85	11	4	
Stickiness		No(%) 80	Yes(%) 20	Seed-coat fragments	
				No(%) 80	Yes(%) 20

Table 2

2013

Country: Burkina Faso		Growth: Burkina Faso		Number of Samples: 8	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	74	13	13	
2	- plastic film	74	13	13	
3	- jute/hessian	100	0	0	
4	- cotton	62	13	25	
5	Strings made of - woven plastic	49	38	13	
6	- plastic film	75	0	25	
7	- jute/hessian	100	0	0	
8	- cotton	62	13	25	
9	Organic matter - leaves, feathers, paper, leather e	62	25	13	
10	Inorganic matter - sand/dust	74	13	13	
11	- rust	75	0	25	
12	- metal/wire	75	25	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	75	25	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		79	11	10	
Stickiness		No(%) 63	Yes(%) 38	Seed-coat fragments	
				No(%) 75	Yes(%) 25

Africa

Table 3

2013

Country: Cameroon		Growth: Cameroon		Number of Samples: 3	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	100	0	0	
2	- plastic film	100	0	0	
3	- jute/hessian	67	33	0	
4	- cotton	33	67	0	
5	Strings made of - woven plastic	33	67	0	
6	- plastic film	100	0	0	
7	- jute/hessian	67	33	0	
8	- cotton	100	0	0	
9	Organic matter - leaves, feathers, paper, leather e	67	33	0	
10	Inorganic matter - sand/dust	33	67	0	
11	- rust	100	0	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		81	19	0	
Stickiness		No(%) 67	Yes(%) 33	Seed-coat fragments	
				No(%) 100	Yes(%) 0

Table 4

2013

Country: Chad		Growth: Chad		Number of Samples: 5	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	80	20	0	
2	- plastic film	100	0	0	
3	- jute/hessian	80	20	0	
4	- cotton	20	60	20	
5	Strings made of - woven plastic	100	0	0	
6	- plastic film	100	0	0	
7	- jute/hessian	60	40	0	
8	- cotton	40	40	20	
9	Organic matter - leaves, feathers, paper, leather e	20	60	20	
10	Inorganic matter - sand/dust	40	60	0	
11	- rust	100	0	0	
12	- metal/wire	80	0	20	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		76	19	5	
Stickiness		No(%) 60	Yes(%) 40	Seed-coat fragments	
				No(%) 60	Yes(%) 40

Africa

Table 5

2013

Country: Egypt		Growth: Egypt-Others		Number of Samples: 3	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	34	33	33
2		- plastic film	67	0	33
3		- jute/hessian	34	33	33
4		- cotton	67	0	33
5	Strings made of	- woven plastic	34	33	33
6		- plastic film	67	0	33
7		- jute/hessian	34	33	33
8		- cotton	67	0	33
9	Organic matter	- leaves, feathers, paper, leather e	34	33	33
10	Inorganic matter	- sand/dust	67	0	33
11		- rust	67	0	33
12		- metal/wire	67	0	33
13	Oily substances/chemicals	- grease/oil	67	33	0
14		- rubber	67	0	33
15		- stamp colour	67	0	33
16		- tar	67	0	33
Average of 1-16			57	12	31
Stickiness		No(%)	Yes(%)	Seed-coat fragments	
		100	0	No(%)	Yes(%)
				33	67

Table 6

2013

Country: Egypt		Growth: Giza		Number of Samples: 24	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	70	17	13
2		- plastic film	75	21	4
3		- jute/hessian	59	33	8
4		- cotton	54	38	8
5	Strings made of	- woven plastic	58	21	21
6		- plastic film	71	21	8
7		- jute/hessian	54	25	21
8		- cotton	49	38	13
9	Organic matter	- leaves, feathers, paper, leather e	49	38	13
10	Inorganic matter	- sand/dust	63	33	4
11		- rust	87	13	0
12		- metal/wire	83	17	0
13	Oily substances/chemicals	- grease/oil	83	17	0
14		- rubber	88	8	4
15		- stamp colour	79	13	8
16		- tar	92	8	0
Average of 1-16			69	23	8
Stickiness		No(%)	Yes(%)	Seed-coat fragments	
		88	13	No(%)	Yes(%)
				67	33

Africa

Table 7

2013

Country: Ghana		Growth: Ghana		Number of Samples: 2	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	100	0	0	
2	- plastic film	100	0	0	
3	- jute/hessian	100	0	0	
4	- cotton	50	0	50	
5	Strings made of - woven plastic	100	0	0	
6	- plastic film	100	0	0	
7	- jute/hessian	100	0	0	
8	- cotton	0	50	50	
9	Organic matter - leaves, feathers, paper, leather e	0	50	50	
10	Inorganic matter - sand/dust	50	0	50	
11	- rust	100	0	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	50	50	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		78	9	13	
Stickiness		No(%) 50	Yes(%) 50	Seed-coat fragments	
				No(%) 50	Yes(%) 50

Table 8

2013

Country: Ivory Coast		Growth: Ivory Coast		Number of Samples: 12	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	92	8	0	
2	- plastic film	83	17	0	
3	- jute/hessian	92	8	0	
4	- cotton	66	17	17	
5	Strings made of - woven plastic	50	50	0	
6	- plastic film	75	25	0	
7	- jute/hessian	92	8	0	
8	- cotton	75	17	8	
9	Organic matter - leaves, feathers, paper, leather e	25	67	8	
10	Inorganic matter - sand/dust	58	42	0	
11	- rust	75	17	8	
12	- metal/wire	75	25	0	
13	Oily substances/chemicals - grease/oil	92	8	0	
14	- rubber	100	0	0	
15	- stamp colour	92	8	0	
16	- tar	100	0	0	
Average of 1-16		77	20	3	
Stickiness		No(%) 67	Yes(%) 33	Seed-coat fragments	
				No(%) 58	Yes(%) 42

Africa

Table 9

2013

Country: Malawi		Growth: Malawi		Number of Samples: 1	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	0	100	0
2		- plastic film	100	0	0
3		- jute/hessian	0	100	0
4		- cotton	0	100	0
5	Strings made of	- woven plastic	0	0	100
6		- plastic film	0	100	0
7		- jute/hessian	0	100	0
8		- cotton	0	100	0
9	Organic matter	- leaves, feathers, paper, leather e	0	100	0
10	Inorganic matter	- sand/dust	0	100	0
11		- rust	100	0	0
12		- metal/wire	100	0	0
13	Oily substances/chemicals	- grease/oil	100	0	0
14		- rubber	100	0	0
15		- stamp colour	100	0	0
16		- tar	100	0	0
Average of 1-16			44	50	6
Stickiness		No(%)	Yes(%)		
		100	0		
Seed-coat fragments		No(%)	Yes(%)		
		0	100		

Table 10

2013

Country: Mali		Growth: Mali		Number of Samples: 11	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	82	9	9
2		- plastic film	73	18	9
3		- jute/hessian	82	9	9
4		- cotton	55	36	9
5	Strings made of	- woven plastic	64	27	9
6		- plastic film	55	36	9
7		- jute/hessian	55	36	9
8		- cotton	46	45	9
9	Organic matter	- leaves, feathers, paper, leather e	55	36	9
10	Inorganic matter	- sand/dust	64	27	9
11		- rust	91	0	9
12		- metal/wire	82	9	9
13	Oily substances/chemicals	- grease/oil	73	27	0
14		- rubber	91	9	0
15		- stamp colour	91	9	0
16		- tar	100	0	0
Average of 1-16			72	21	7
Stickiness		No(%)	Yes(%)		
		64	36		
Seed-coat fragments		No(%)	Yes(%)		
		64	36		

Africa

Table 11

2013

Country: Mozambique		Growth: Mozambique		Number of Samples: 7	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	43	57	0	
2	- plastic film	57	43	0	
3	- jute/hessian	100	0	0	
4	- cotton	29	71	0	
5	Strings made of - woven plastic	43	43	14	
6	- plastic film	43	57	0	
7	- jute/hessian	71	29	0	
8	- cotton	29	71	0	
9	Organic matter - leaves, feathers, paper, leather e	29	71	0	
10	Inorganic matter - sand/dust	86	14	0	
11	- rust	86	14	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	86	14	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		69	30	1	
Stickiness		No(%) 57	Yes(%) 43	Seed-coat fragments	
				No(%) 29	Yes(%) 71

Table 12

2013

Country: Nigeria		Growth: Nigeria		Number of Samples: 7	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	86	0	14	
2	- plastic film	86	14	0	
3	- jute/hessian	57	43	0	
4	- cotton	57	14	29	
5	Strings made of - woven plastic	29	0	71	
6	- plastic film	57	14	29	
7	- jute/hessian	86	14	0	
8	- cotton	57	14	29	
9	Organic matter - leaves, feathers, paper, leather e	0	71	29	
10	Inorganic matter - sand/dust	29	71	0	
11	- rust	86	14	0	
12	- metal/wire	86	14	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		69	18	13	
Stickiness		No(%) 71	Yes(%) 29	Seed-coat fragments	
				No(%) 0	Yes(%) 100

Africa

Table 13

2013

Country: Senegal		Growth: Senegal		Number of Samples: 2	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	100	0	0	
2	- plastic film	100	0	0	
3	- jute/hessian	100	0	0	
4	- cotton	50	0	50	
5	Strings made of - woven plastic	100	0	0	
6	- plastic film	100	0	0	
7	- jute/hessian	50	50	0	
8	- cotton	0	50	50	
9	Organic matter - leaves, feathers, paper, leather e	50	0	50	
10	Inorganic matter - sand/dust	50	50	0	
11	- rust	50	50	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		78	13	9	
Stickiness		No(%) 50	Yes(%) 50	Seed-coat fragments	
				No(%) 50	Yes(%) 50

Table 14

2013

Country: South Africa		Growth: South Africa		Number of Samples: 2	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	50	0	50	
2	- plastic film	50	50	0	
3	- jute/hessian	50	0	50	
4	- cotton	50	0	50	
5	Strings made of - woven plastic	50	50	0	
6	- plastic film	50	0	50	
7	- jute/hessian	50	0	50	
8	- cotton	50	50	0	
9	Organic matter - leaves, feathers, paper, leather e	50	0	50	
10	Inorganic matter - sand/dust	50	0	50	
11	- rust	100	0	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		69	9	22	
Stickiness		No(%) 50	Yes(%) 50	Seed-coat fragments	
				No(%) 50	Yes(%) 50

Africa

Table 15

2013

Country: Sudan		Growth: Barakat		Number of Samples: 1	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	100	0	0
2		- plastic film	100	0	0
3		- jute/hessian	100	0	0
4		- cotton	100	0	0
5	Strings made of	- woven plastic	0	100	0
6		- plastic film	100	0	0
7		- jute/hessian	0	0	100
8		- cotton	100	0	0
9	Organic matter	- leaves, feathers, paper, leather e	0	100	0
10	Inorganic matter	- sand/dust	100	0	0
11		- rust	100	0	0
12		- metal/wire	100	0	0
13	Oily substances/chemicals	- grease/oil	100	0	0
14		- rubber	100	0	0
15		- stamp colour	100	0	0
16		- tar	100	0	0
Average of 1-16			81	13	6
Stickiness		No(%)	Yes(%)		
		0	100		
Seed-coat fragments		No(%)	Yes(%)		
		100	0		

Table 16

2013

Country: Tanzania		Growth: Coastal		Number of Samples: 2	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	50	50	0
2		- plastic film	50	50	0
3		- jute/hessian	50	50	0
4		- cotton	0	50	50
5	Strings made of	- woven plastic	0	100	0
6		- plastic film	50	50	0
7		- jute/hessian	0	100	0
8		- cotton	0	100	0
9	Organic matter	- leaves, feathers, paper, leather e	0	100	0
10	Inorganic matter	- sand/dust	0	100	0
11		- rust	100	0	0
12		- metal/wire	100	0	0
13	Oily substances/chemicals	- grease/oil	100	0	0
14		- rubber	100	0	0
15		- stamp colour	50	50	0
16		- tar	100	0	0
Average of 1-16			47	50	3
Stickiness		No(%)	Yes(%)		
		50	50		
Seed-coat fragments		No(%)	Yes(%)		
		50	50		

Africa

Table 17

2013

Country: Togo		Growth: Togo		Number of Samples: 6	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	83	17	0
2		- plastic film	67	33	0
3		- jute/hessian	100	0	0
4		- cotton	83	0	17
5	Strings made of	- woven plastic	50	50	0
6		- plastic film	83	17	0
7		- jute/hessian	100	0	0
8		- cotton	83	0	17
9	Organic matter	- leaves, feathers, paper, leather e	83	0	17
10	Inorganic matter	- sand/dust	83	0	17
11		- rust	83	17	0
12		- metal/wire	100	0	0
13	Oily substances/chemicals	- grease/oil	100	0	0
14		- rubber	83	17	0
15		- stamp colour	100	0	0
16		- tar	100	0	0
Average of 1-16			87	9	4
Stickiness		No(%)	Yes(%)	Seed-coat fragments	
		50	50	No(%)	Yes(%)
				50	50

Table 18

2013

Country: Uganda		Growth: Uganda		Number of Samples: 2	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	0	0	100
2		- plastic film	0	0	100
3		- jute/hessian	0	0	100
4		- cotton	0	0	100
5	Strings made of	- woven plastic	0	0	100
6		- plastic film	0	0	100
7		- jute/hessian	0	0	100
8		- cotton	0	0	100
9	Organic matter	- leaves, feathers, paper, leather e	0	0	100
10	Inorganic matter	- sand/dust	50	0	50
11		- rust	100	0	0
12		- metal/wire	100	0	0
13	Oily substances/chemicals	- grease/oil	100	0	0
14		- rubber	100	0	0
15		- stamp colour	100	0	0
16		- tar	100	0	0
Average of 1-16			41	0	59
Stickiness		No(%)	Yes(%)	Seed-coat fragments	
		50	50	No(%)	Yes(%)
				0	100

Africa

Table 19

2013

Country: Zambia		Growth: Zambia		Number of Samples: 6	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	50	50	0	
2	- plastic film	67	33	0	
3	- jute/hessian	16	67	17	
4	- cotton	16	67	17	
5	Strings made of - woven plastic	0	83	17	
6	- plastic film	50	50	0	
7	- jute/hessian	16	67	17	
8	- cotton	33	50	17	
9	Organic matter - leaves, feathers, paper, leather e	16	67	17	
10	Inorganic matter - sand/dust	50	50	0	
11	- rust	67	33	0	
12	- metal/wire	50	50	0	
13	Oily substances/chemicals - grease/oil	83	17	0	
14	- rubber	67	33	0	
15	- stamp colour	83	17	0	
16	- tar	100	0	0	
Average of 1-16		48	46	6	
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments	
				No(%) 33	Yes(%) 67

Table 20

2013

Country: Zimbabwe		Growth: Zimbabwe		Number of Samples: 9	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	67	22	11	
2	- plastic film	45	44	11	
3	- jute/hessian	78	11	11	
4	- cotton	34	33	33	
5	Strings made of - woven plastic	67	11	22	
6	- plastic film	45	44	11	
7	- jute/hessian	56	33	11	
8	- cotton	45	33	22	
9	Organic matter - leaves, feathers, paper, leather e	78	0	22	
10	Inorganic matter - sand/dust	78	0	22	
11	- rust	78	22	0	
12	- metal/wire	78	22	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	89	11	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		71	18	11	
Stickiness		No(%) 67	Yes(%) 33	Seed-coat fragments	
				No(%) 56	Yes(%) 44

America, North

Table 21

2013

Country: Mexico		Growth: Juarez		Number of Samples: 1	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	100	0	0	
2	- plastic film	100	0	0	
3	- jute/hessian	100	0	0	
4	- cotton	100	0	0	
5	Strings made of - woven plastic	100	0	0	
6	- plastic film	100	0	0	
7	- jute/hessian	100	0	0	
8	- cotton	100	0	0	
9	Organic matter - leaves, feathers, paper, leather e	100	0	0	
10	Inorganic matter - sand/dust	100	0	0	
11	- rust	100	0	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		100	0	0	
Stickiness		No(%) 0	Yes(%) 100	Seed-coat fragments	
				No(%) 100	Yes(%) 0

Table 22

2013

Country: Mexico		Growth: Laguna/Delicias		Number of Samples: 1	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	100	0	0	
2	- plastic film	100	0	0	
3	- jute/hessian	100	0	0	
4	- cotton	100	0	0	
5	Strings made of - woven plastic	0	100	0	
6	- plastic film	100	0	0	
7	- jute/hessian	100	0	0	
8	- cotton	100	0	0	
9	Organic matter - leaves, feathers, paper, leather e	100	0	0	
10	Inorganic matter - sand/dust	100	0	0	
11	- rust	100	0	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		94	6	0	
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments	
				No(%) 100	Yes(%) 0

America, North

Table 23

2013

Country: Mexico		Growth: Mexicali		Number of Samples: 1	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	100	0	0
2		- plastic film	100	0	0
3		- jute/hessian	100	0	0
4		- cotton	100	0	0
5	Strings made of	- woven plastic	100	0	0
6		- plastic film	100	0	0
7		- jute/hessian	100	0	0
8		- cotton	100	0	0
9	Organic matter	- leaves, feathers, paper, leather e	100	0	0
10	Inorganic matter	- sand/dust	100	0	0
11		- rust	100	0	0
12		- metal/wire	100	0	0
13	Oily substances/chemicals	- grease/oil	100	0	0
14		- rubber	100	0	0
15		- stamp colour	100	0	0
16		- tar	100	0	0
Average of 1-16			100	0	0
Stickiness		No(%)	Yes(%)		
		100	0		
Seed-coat fragments		No(%)	Yes(%)		
		100	0		

Table 24

2013

Country: Mexico		Growth: Mexico-Others		Number of Samples: 3	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	100	0	0
2		- plastic film	100	0	0
3		- jute/hessian	100	0	0
4		- cotton	100	0	0
5	Strings made of	- woven plastic	67	33	0
6		- plastic film	100	0	0
7		- jute/hessian	100	0	0
8		- cotton	67	33	0
9	Organic matter	- leaves, feathers, paper, leather e	100	0	0
10	Inorganic matter	- sand/dust	100	0	0
11		- rust	100	0	0
12		- metal/wire	100	0	0
13	Oily substances/chemicals	- grease/oil	100	0	0
14		- rubber	100	0	0
15		- stamp colour	100	0	0
16		- tar	100	0	0
Average of 1-16			96	4	0
Stickiness		No(%)	Yes(%)		
		33	67		
Seed-coat fragments		No(%)	Yes(%)		
		33	67		

America, North

Table 25

2013

Country: U.S.A.		Growth: Arizona		Number of Samples: 1	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	100	0	0
2		- plastic film	100	0	0
3		- jute/hessian	100	0	0
4		- cotton	100	0	0
5	Strings made of	- woven plastic	100	0	0
6		- plastic film	100	0	0
7		- jute/hessian	100	0	0
8		- cotton	100	0	0
9	Organic matter	- leaves, feathers, paper, leather e	100	0	0
10	Inorganic matter	- sand/dust	100	0	0
11		- rust	100	0	0
12		- metal/wire	100	0	0
13	Oily substances/chemicals	- grease/oil	100	0	0
14		- rubber	100	0	0
15		- stamp colour	100	0	0
16		- tar	100	0	0
Average of 1-16			100	0	0
Stickiness		No(%)	Yes(%)		
		0	100		
Seed-coat fragments		No(%)	Yes(%)		
		100	0		

Table 26

2013

Country: U.S.A.		Growth: California		Number of Samples: 9	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	100	0	0
2		- plastic film	78	22	0
3		- jute/hessian	100	0	0
4		- cotton	100	0	0
5	Strings made of	- woven plastic	100	0	0
6		- plastic film	89	11	0
7		- jute/hessian	89	11	0
8		- cotton	100	0	0
9	Organic matter	- leaves, feathers, paper, leather e	89	11	0
10	Inorganic matter	- sand/dust	89	11	0
11		- rust	100	0	0
12		- metal/wire	100	0	0
13	Oily substances/chemicals	- grease/oil	89	11	0
14		- rubber	100	0	0
15		- stamp colour	100	0	0
16		- tar	89	11	0
Average of 1-16			94	6	0
Stickiness		No(%)	Yes(%)		
		100	0		
Seed-coat fragments		No(%)	Yes(%)		
		100	0		

America, North

Table 27

2013

Country: U.S.A.		Growth: Memphis Territory		Number of Samples: 28	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	82	14	4	
2	- plastic film	89	4	7	
3	- jute/hessian	89	11	0	
4	- cotton	89	11	0	
5	Strings made of - woven plastic	82	18	0	
6	- plastic film	82	18	0	
7	- jute/hessian	89	11	0	
8	- cotton	93	7	0	
9	Organic matter - leaves, feathers, paper, leather e	64	32	4	
10	Inorganic matter - sand/dust	86	14	0	
11	- rust	96	4	0	
12	- metal/wire	93	7	0	
13	Oily substances/chemicals - grease/oil	85	11	4	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		89	10	1	
Stickiness		No(%) 79	Yes(%) 21	Seed-coat fragments	
				No(%) 71	Yes(%) 29

Table 28

2013

Country: U.S.A.		Growth: Pima		Number of Samples: 20	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	95	0	5	
2	- plastic film	85	15	0	
3	- jute/hessian	95	5	0	
4	- cotton	90	10	0	
5	Strings made of - woven plastic	80	15	5	
6	- plastic film	85	10	5	
7	- jute/hessian	90	10	0	
8	- cotton	95	5	0	
9	Organic matter - leaves, feathers, paper, leather e	50	45	5	
10	Inorganic matter - sand/dust	75	25	0	
11	- rust	85	15	0	
12	- metal/wire	95	5	0	
13	Oily substances/chemicals - grease/oil	90	10	0	
14	- rubber	95	5	0	
15	- stamp colour	90	10	0	
16	- tar	95	5	0	
Average of 1-16		87	12	1	
Stickiness		No(%) 70	Yes(%) 30	Seed-coat fragments	
				No(%) 75	Yes(%) 25

America, North

Table 29

2013

Country: U.S.A.		Growth: Rio Grande Valley		Number of Samples: 1	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	100	0	0
2		- plastic film	100	0	0
3		- jute/hessian	100	0	0
4		- cotton	100	0	0
5	Strings made of	- woven plastic	100	0	0
6		- plastic film	100	0	0
7		- jute/hessian	100	0	0
8		- cotton	100	0	0
9	Organic matter	- leaves, feathers, paper, leather e	100	0	0
10	Inorganic matter	- sand/dust	100	0	0
11		- rust	100	0	0
12		- metal/wire	100	0	0
13	Oily substances/chemicals	- grease/oil	100	0	0
14		- rubber	100	0	0
15		- stamp colour	100	0	0
16		- tar	100	0	0
Average of 1-16			100	0	0
Stickiness		No(%)	Yes(%)	Seed-coat fragments	
		100	0	No(%)	Yes(%)
				100	0

Table 30

2013

Country: U.S.A.		Growth: South Eastern		Number of Samples: 12	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	75	25	0
2		- plastic film	75	17	8
3		- jute/hessian	92	8	0
4		- cotton	92	8	0
5	Strings made of	- woven plastic	83	17	0
6		- plastic film	83	17	0
7		- jute/hessian	100	0	0
8		- cotton	100	0	0
9	Organic matter	- leaves, feathers, paper, leather e	83	17	0
10	Inorganic matter	- sand/dust	83	17	0
11		- rust	100	0	0
12		- metal/wire	83	17	0
13	Oily substances/chemicals	- grease/oil	75	17	8
14		- rubber	100	0	0
15		- stamp colour	100	0	0
16		- tar	100	0	0
Average of 1-16			89	10	1
Stickiness		No(%)	Yes(%)	Seed-coat fragments	
		92	8	No(%)	Yes(%)
				92	8

America, North

Table 31

2013

Country: U.S.A.		Growth: Texas High Plains		Number of Samples: 12	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	75	8	17	
2	- plastic film	67	25	8	
3	- jute/hessian	84	8	8	
4	- cotton	92	8	0	
5	Strings made of - woven plastic	75	8	17	
6	- plastic film	75	17	8	
7	- jute/hessian	84	8	8	
8	- cotton	92	8	0	
9	Organic matter - leaves, feathers, paper, leather e	67	25	8	
10	Inorganic matter - sand/dust	83	17	0	
11	- rust	84	8	8	
12	- metal/wire	84	8	8	
13	Oily substances/chemicals - grease/oil	84	8	8	
14	- rubber	84	8	8	
15	- stamp colour	83	17	0	
16	- tar	75	25	0	
Average of 1-16		80	13	7	
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments	
				No(%) 92	Yes(%) 8

Table 32

2013

Country: U.S.A.		Growth: USA-Others		Number of Samples: 7	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	100	0	0	
2	- plastic film	100	0	0	
3	- jute/hessian	100	0	0	
4	- cotton	100	0	0	
5	Strings made of - woven plastic	100	0	0	
6	- plastic film	71	29	0	
7	- jute/hessian	86	14	0	
8	- cotton	86	14	0	
9	Organic matter - leaves, feathers, paper, leather e	71	29	0	
10	Inorganic matter - sand/dust	86	14	0	
11	- rust	100	0	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	86	14	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		93	7	0	
Stickiness		No(%) 71	Yes(%) 29	Seed-coat fragments	
				No(%) 71	Yes(%) 29

America, South

Table 33

2013

Country: Argentina		Growth: Argentina		Number of Samples: 11	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	100	0	0	
2	- plastic film	73	27	0	
3	- jute/hessian	82	0	18	
4	- cotton	82	9	9	
5	Strings made of - woven plastic	91	9	0	
6	- plastic film	73	27	0	
7	- jute/hessian	73	27	0	
8	- cotton	73	18	9	
9	Organic matter - leaves, feathers, paper, leather e	36	55	9	
10	Inorganic matter - sand/dust	73	18	9	
11	- rust	91	0	9	
12	- metal/wire	91	9	0	
13	Oily substances/chemicals - grease/oil	82		0	
14	- rubber	91	18	9	
15	- stamp colour	82	18	0	
16	- tar	100	0	0	
Average of 1-16		80	15	5	
Stickiness		No(%) 73	Yes(%) 27	Seed-coat fragments	
				No(%) 27	Yes(%) 73

Table 34

2013

Country: Brazil		Growth: Brazil		Number of Samples: 29	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	90	7	3	
2	- plastic film	76	24	0	
3	- jute/hessian	90	10	0	
4	- cotton	83	17	0	
5	Strings made of - woven plastic	86	14	0	
6	- plastic film	90	10	0	
7	- jute/hessian	83	17	0	
8	- cotton	86	14	0	
9	Organic matter - leaves, feathers, paper, leather e	62	24	14	
10	Inorganic matter - sand/dust	90	10	0	
11	- rust	97	3	0	
12	- metal/wire	93	7	0	
13	Oily substances/chemicals - grease/oil	93	7	0	
14	- rubber	100	0	0	
15	- stamp colour	90	7	3	
16	- tar	97	3	0	
Average of 1-16		88	11	1	
Stickiness		No(%) 69	Yes(%) 31	Seed-coat fragments	
				No(%) 62	Yes(%) 38

America, South

Table 35

2013

Country: Colombia		Growth: Acala		Number of Samples: 1	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	100	0	0
2		- plastic film	100	0	0
3		- jute/hessian	100	0	0
4		- cotton	100	0	0
5	Strings made of	- woven plastic	100	0	0
6		- plastic film	0	0	100
7		- jute/hessian	100	0	0
8		- cotton	100	0	0
9	Organic matter	- leaves, feathers, paper, leather e	100	0	0
10	Inorganic matter	- sand/dust	100	0	0
11		- rust	100	0	0
12		- metal/wire	100	0	0
13	Oily substances/chemicals	- grease/oil	100	0	0
14		- rubber	100	0	0
15		- stamp colour	100	0	0
16		- tar	100	0	0
Average of 1-16			94	0	6
Stickiness		No(%)	Yes(%)		
		100	0		
Seed-coat fragments		No(%)	Yes(%)		
		100	0		

Table 36

2013

Country: Colombia		Growth: Coastal		Number of Samples: 1	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	0	100	0
2		- plastic film	100	0	0
3		- jute/hessian	100	0	0
4		- cotton	0	100	0
5	Strings made of	- woven plastic	0	100	0
6		- plastic film	100	0	0
7		- jute/hessian	100	0	0
8		- cotton	0	0	100
9	Organic matter	- leaves, feathers, paper, leather e	100	0	0
10	Inorganic matter	- sand/dust	100	0	0
11		- rust	100	0	0
12		- metal/wire	100	0	0
13	Oily substances/chemicals	- grease/oil	0	100	0
14		- rubber	100	0	0
15		- stamp colour	100	0	0
16		- tar	100	0	0
Average of 1-16			69	25	6
Stickiness		No(%)	Yes(%)		
		0	100		
Seed-coat fragments		No(%)	Yes(%)		
		0	100		

America, South

Table 37

2013

Country: Paraguay		Growth: Paraguay		Number of Samples: 1	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	100	0	0	
2	- plastic film	100	0	0	
3	- jute/hessian	100	0	0	
4	- cotton	100	0	0	
5	Strings made of - woven plastic	100	0	0	
6	- plastic film	100	0	0	
7	- jute/hessian	100	0	0	
8	- cotton	100	0	0	
9	Organic matter - leaves, feathers, paper, leather e	100	0	0	
10	Inorganic matter - sand/dust	100	0	0	
11	- rust	100	0	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		100	0	0	
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments	
				No(%) 100	Yes(%) 0

Table 38

2013

Country: Peru		Growth: Del Cerro		Number of Samples: 1	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	0	100	0	
2	- plastic film	100	0	0	
3	- jute/hessian	100	0	0	
4	- cotton	100	0	0	
5	Strings made of - woven plastic	100	0	0	
6	- plastic film	100	0	0	
7	- jute/hessian	100	0	0	
8	- cotton	100	0	0	
9	Organic matter - leaves, feathers, paper, leather e	0	100	0	
10	Inorganic matter - sand/dust	100	0	0	
11	- rust	100	0	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		87	13	0	
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments	
				No(%) 100	Yes(%) 0

America, South

Table 39

2013

Country: Peru		Growth: Peru-Others		Number of Samples: 1	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	0	100	0	
2	- plastic film	100	0	0	
3	- jute/hessian	100	0	0	
4	- cotton	100	0	0	
5	Strings made of - woven plastic	100	0	0	
6	- plastic film	100	0	0	
7	- jute/hessian	100	0	0	
8	- cotton	100	0	0	
9	Organic matter - leaves, feathers, paper, leather e	0	100	0	
10	Inorganic matter - sand/dust	100	0	0	
11	- rust	100	0	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		87	13	0	
Stickiness		No(%) <u>100</u>	Yes(%) <u>0</u>	Seed-coat fragments	
				No(%) <u>100</u>	Yes(%) <u>0</u>

Table 40

2013

Country: Peru		Growth: Pima		Number of Samples: 3	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	67	33	0	
2	- plastic film	100	0	0	
3	- jute/hessian	67	33	0	
4	- cotton	67	33	0	
5	Strings made of - woven plastic	67	33	0	
6	- plastic film	67	0	33	
7	- jute/hessian	67	33	0	
8	- cotton	67	33	0	
9	Organic matter - leaves, feathers, paper, leather e	33	67	0	
10	Inorganic matter - sand/dust	100	0	0	
11	- rust	100	0	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		81	17	2	
Stickiness		No(%) <u>100</u>	Yes(%) <u>0</u>	Seed-coat fragments	
				No(%) <u>100</u>	Yes(%) <u>0</u>

America, South

Table 41

2013

Country: Peru		Growth: Tanguis		Number of Samples: 2	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	0	50	50
2		- plastic film	50	50	0
3		- jute/hessian	100	0	0
4		- cotton	50	0	50
5	Strings made of	- woven plastic	50	50	0
6		- plastic film	50	50	0
7		- jute/hessian	100	0	0
8		- cotton	50	50	0
9	Organic matter	- leaves, feathers, paper, leather e	0	100	0
10	Inorganic matter	- sand/dust	50	50	0
11		- rust	100	0	0
12		- metal/wire	100	0	0
13	Oily substances/chemicals	- grease/oil	100	0	0
14		- rubber	100	0	0
15		- stamp colour	50	50	0
16		- tar	100	0	0
Average of 1-16			66	28	6
Stickiness		No(%)	Yes(%)		
		100	0		
Seed-coat fragments		No(%)	Yes(%)		
		50	50		

Asia

Table 42

2013

Country: Australia		Growth: Australia		Number of Samples: 38	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	92	5	3
2		- plastic film	89	8	3
3		- jute/hessian	87	13	0
4		- cotton	95	5	0
5	Strings made of	- woven plastic	89	8	3
6		- plastic film	87	5	8
7		- jute/hessian	89	11	0
8		- cotton	89	11	0
9	Organic matter	- leaves, feathers, paper, leather e	61	34	5
10	Inorganic matter	- sand/dust	79	18	3
11		- rust	92	5	3
12		- metal/wire	94	3	3
13	Oily substances/chemicals	- grease/oil	89	11	0
14		- rubber	95	5	0
15		- stamp colour	97	3	0
16		- tar	97	3	0
Average of 1-16			89	9	2
Stickiness		No(%)	Yes(%)	Seed-coat fragments	
		82	18	No(%)	Yes(%)
				76	24

Table 43

2013

Country: China		Growth: Anhui		Number of Samples: 2	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	0	50	50
2		- plastic film	50	0	50
3		- jute/hessian	100	0	0
4		- cotton	50	0	50
5	Strings made of	- woven plastic	0	50	50
6		- plastic film	50	0	50
7		- jute/hessian	50	0	50
8		- cotton	0	50	50
9	Organic matter	- leaves, feathers, paper, leather e	50	50	0
10	Inorganic matter	- sand/dust	100	0	0
11		- rust	100	0	0
12		- metal/wire	100	0	0
13	Oily substances/chemicals	- grease/oil	100	0	0
14		- rubber	100	0	0
15		- stamp colour	100	0	0
16		- tar	100	0	0
Average of 1-16			65	13	22
Stickiness		No(%)	Yes(%)	Seed-coat fragments	
		100	0	No(%)	Yes(%)
				100	0

Asia

Table 44

2013

Country: China		Growth: Hebei		Number of Samples: 4	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	0	50	50	
2	- plastic film	0	50	50	
3	- jute/hessian	50	50	0	
4	- cotton	25	50	25	
5	Strings made of - woven plastic	0	50	50	
6	- plastic film	25	50	25	
7	- jute/hessian	25	50	25	
8	- cotton	25	50	25	
9	Organic matter - leaves, feathers, paper, leather e	0	50	50	
10	Inorganic matter - sand/dust	25	25	50	
11	- rust	75	25	0	
12	- metal/wire	50	50	0	
13	Oily substances/chemicals - grease/oil	50	50	0	
14	- rubber	50	50	0	
15	- stamp colour	50	50	0	
16	- tar	75	25	0	
Average of 1-16		33	45	22	
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments	
				No(%) 75	Yes(%) 25

Table 45

2013

Country: China		Growth: Jiangsu		Number of Samples: 2	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	50	0	50	
2	- plastic film	0	50	50	
3	- jute/hessian	100	0	0	
4	- cotton	0	50	50	
5	Strings made of - woven plastic	0	50	50	
6	- plastic film	50	0	50	
7	- jute/hessian	50	0	50	
8	- cotton	0	50	50	
9	Organic matter - leaves, feathers, paper, leather e	0	100	0	
10	Inorganic matter - sand/dust	100	0	0	
11	- rust	100	0	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		59	19	22	
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments	
				No(%) 100	Yes(%) 0

Asia

Table 46

2013

Country: China		Growth: Shandong		Number of Samples: 4	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	0	25	75	
2	- plastic film	0	25	75	
3	- jute/hessian	75	0	25	
4	- cotton	25	25	50	
5	Strings made of - woven plastic	0	25	75	
6	- plastic film	50	0	50	
7	- jute/hessian	50	0	50	
8	- cotton	50	0	50	
9	Organic matter - leaves, feathers, paper, leather e	0	50	50	
10	Inorganic matter - sand/dust	50	25	25	
11	- rust	75	25	0	
12	- metal/wire	50	50	0	
13	Oily substances/chemicals - grease/oil	75	25	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		50	17	33	
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments	
				No(%) 100	Yes(%) 0

Table 47

2013

Country: China		Growth: Xinjiang		Number of Samples: 9	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	44	56	0	
2	- plastic film	44	56	0	
3	- jute/hessian	67	33	0	
4	- cotton	33	67	0	
5	Strings made of - woven plastic	33	67	0	
6	- plastic film	67	33	0	
7	- jute/hessian	44	56	0	
8	- cotton	33	67	0	
9	Organic matter - leaves, feathers, paper, leather e	22	78	0	
10	Inorganic matter - sand/dust	78	22	0	
11	- rust	89	11	0	
12	- metal/wire	78	22	0	
13	Oily substances/chemicals - grease/oil	78	22	0	
14	- rubber	78	22	0	
15	- stamp colour	78	22	0	
16	- tar	78	22	0	
Average of 1-16		59	41	0	
Stickiness		No(%) 67	Yes(%) 33	Seed-coat fragments	
				No(%) 67	Yes(%) 33

Asia

Table 48

2013

Country: India		Growth: DCH		Number of Samples: 10	
Source of contamination		Degree of contamination (%)			
		Non-existent/insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	10	60	30	
2	- plastic film	20	50	30	
3	- jute/hessian	30	40	30	
4	- cotton	30	30	40	
5	Strings made of - woven plastic	10	30	60	
6	- plastic film	20	40	40	
7	- jute/hessian	10	30	60	
8	- cotton	20	40	40	
9	Organic matter - leaves, feathers, paper, leather e	10	60	30	
10	Inorganic matter - sand/dust	60	40	0	
11	- rust	70	30	0	
12	- metal/wire	90	0	10	
13	Oily substances/chemicals - grease/oil	70	30	0	
14	- rubber	80	20	0	
15	- stamp colour	80	20	0	
16	- tar	80	10	10	
Average of 1-16		43	33	24	
Stickiness		No(%) 70	Yes(%) 30	Seed-coat fragments	
				No(%) 50	Yes(%) 50

Table 49

2013

Country: India		Growth: F-414		Number of Samples: 1	
Source of contamination		Degree of contamination (%)			
		Non-existent/insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	0	0	100	
2	- plastic film	0	0	100	
3	- jute/hessian	0	100	0	
4	- cotton	0	0	100	
5	Strings made of - woven plastic	100	0	0	
6	- plastic film	100	0	0	
7	- jute/hessian	0	0	100	
8	- cotton	0	0	100	
9	Organic matter - leaves, feathers, paper, leather e	0	100	0	
10	Inorganic matter - sand/dust	0	0	100	
11	- rust	100	0	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	0	100	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		43	19	38	
Stickiness		No(%) 0	Yes(%) 100	Seed-coat fragments	
				No(%) 0	Yes(%) 100

Asia

Table 50

2013

Country: India		Growth: H-4	Number of Samples: 5		
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	60	40	0
2		- plastic film	60	40	0
3		- jute/hessian	40	40	20
4		- cotton	20	60	20
5	Strings made of	- woven plastic	60	20	20
6		- plastic film	80	0	20
7		- jute/hessian	60	20	20
8		- cotton	80	0	20
9	Organic matter	- leaves, feathers, paper, leather e	40	40	20
10	Inorganic matter	- sand/dust	60	20	20
11		- rust	80	0	20
12		- metal/wire	80	0	20
13	Oily substances/chemicals	- grease/oil	60	40	0
14		- rubber	100	0	0
15		- stamp colour	100	0	0
16		- tar	100	0	0
Average of 1-16			67	20	13
Stickiness		No(%)	Yes(%)		
		80	20		
Seed-coat fragments		No(%)	Yes(%)		
		0	100		

Table 51

2013

Country: India		Growth: India-Others	Number of Samples: 8		
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	62	38	0
2		- plastic film	62	25	13
3		- jute/hessian	62	13	25
4		- cotton	37	25	38
5	Strings made of	- woven plastic	37	38	25
6		- plastic film	49	38	13
7		- jute/hessian	37	38	25
8		- cotton	37	38	25
9	Organic matter	- leaves, feathers, paper, leather e	24	38	38
10	Inorganic matter	- sand/dust	49	38	13
11		- rust	75	25	0
12		- metal/wire	75	25	0
13	Oily substances/chemicals	- grease/oil	100	0	0
14		- rubber	87	13	0
15		- stamp colour	87	13	0
16		- tar	100	0	0
Average of 1-16			62	25	13
Stickiness		No(%)	Yes(%)		
		88	13		
Seed-coat fragments		No(%)	Yes(%)		
		38	63		

Asia

Table 52

2013

Country: India		Growth: J-34		Number of Samples: 8	
Source of contamination		Degree of contamination (%)			
		Non-existent/insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	49	38	13	
2	- plastic film	24	13	63	
3	- jute/hessian	37	38	25	
4	- cotton	25	50	25	
5	Strings made of - woven plastic	12	63	25	
6	- plastic film	25	50	25	
7	- jute/hessian	24	38	38	
8	- cotton	24	38	38	
9	Organic matter - leaves, feathers, paper, leather e	37	38	25	
10	Inorganic matter - sand/dust	49	38	13	
11	- rust	87	0	13	
12	- metal/wire	87	13	0	
13	Oily substances/chemicals - grease/oil	87	13	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		54	27	19	
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments	
				No(%) 13	Yes(%) 88

Table 53

2013

Country: India		Growth: LRA		Number of Samples: 2	
Source of contamination		Degree of contamination (%)			
		Non-existent/insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	50	50	0	
2	- plastic film	50	50	0	
3	- jute/hessian	50	50	0	
4	- cotton	50	50	0	
5	Strings made of - woven plastic	100	0	0	
6	- plastic film	50	0	50	
7	- jute/hessian	100	0	0	
8	- cotton	50	50	0	
9	Organic matter - leaves, feathers, paper, leather e	0	50	50	
10	Inorganic matter - sand/dust	50	50	0	
11	- rust	100	0	0	
12	- metal/wire	0	100	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		66	28	6	
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments	
				No(%) 0	Yes(%) 100

Asia

Table 54

2013

Country: India		Growth: MCU-5	Number of Samples: 12		
Source of contamination		Degree of contamination (%)			
		Non-existent/insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	25	42	33	
2	- plastic film	25	50	25	
3	- jute/hessian	41	17	42	
4	- cotton	42	25	33	
5	Strings made of - woven plastic	25	25	50	
6	- plastic film	42	0	58	
7	- jute/hessian	25	8	67	
8	- cotton	25	25	50	
9	Organic matter - leaves, feathers, paper, leather e	42	25	33	
10	Inorganic matter - sand/dust	75	8	17	
11	- rust	75	17	8	
12	- metal/wire	75	8	17	
13	Oily substances/chemicals - grease/oil	67	33	0	
14	- rubber	92	8	0	
15	- stamp colour	92	8	0	
16	- tar	92	0	8	
Average of 1-16		53	19	28	
Stickiness		No(%) 92	Yes(%) 8	Seed-coat fragments	
				No(%) 33	Yes(%) 67

Table 55

2013

Country: India		Growth: Shankar-4/6	Number of Samples: 30		
Source of contamination		Degree of contamination (%)			
		Non-existent/insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	50	27	23	
2	- plastic film	40	23	37	
3	- jute/hessian	40	37	23	
4	- cotton	26	27	47	
5	Strings made of - woven plastic	27	30	43	
6	- plastic film	27	33	40	
7	- jute/hessian	23	30	47	
8	- cotton	26	27	47	
9	Organic matter - leaves, feathers, paper, leather e	24	43	33	
10	Inorganic matter - sand/dust	56	27	17	
11	- rust	74	13	13	
12	- metal/wire	53	20	27	
13	Oily substances/chemicals - grease/oil	76	17	7	
14	- rubber	74	13	13	
15	- stamp colour	80	3	17	
16	- tar	80	7	13	
Average of 1-16		48	24	28	
Stickiness		No(%) 80	Yes(%) 20	Seed-coat fragments	
				No(%) 33	Yes(%) 67

Asia

Table 56

2013

Country: Israel		Growth: Acala		Number of Samples: 3	
Source of contamination		Degree of contamination (%)			
		Non-existent/insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	100	0	0	
2	- plastic film	67	33	0	
3	- jute/hessian	100	0	0	
4	- cotton	100	0	0	
5	Strings made of - woven plastic	67	33	0	
6	- plastic film	100	0	0	
7	- jute/hessian	67	0	33	
8	- cotton	67	33	0	
9	Organic matter - leaves, feathers, paper, leather e	67	0	33	
10	Inorganic matter - sand/dust	100	0	0	
11	- rust	100	0	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		90	6	4	
Stickiness		No(%) <u>100</u>	Yes(%) <u>0</u>	Seed-coat fragments	
				No(%) <u>100</u>	Yes(%) <u>0</u>

Table 57

2013

Country: Israel		Growth: Pima		Number of Samples: 3	
Source of contamination		Degree of contamination (%)			
		Non-existent/insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	100	0	0	
2	- plastic film	100	0	0	
3	- jute/hessian	100	0	0	
4	- cotton	100	0	0	
5	Strings made of - woven plastic	100	0	0	
6	- plastic film	100	0	0	
7	- jute/hessian	100	0	0	
8	- cotton	100	0	0	
9	Organic matter - leaves, feathers, paper, leather e	67	0	33	
10	Inorganic matter - sand/dust	100	0	0	
11	- rust	100	0	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		98	0	2	
Stickiness		No(%) <u>100</u>	Yes(%) <u>0</u>	Seed-coat fragments	
				No(%) <u>100</u>	Yes(%) <u>0</u>

Asia

Table 58

2013

Country: Pakistan		Growth: AmSeed 1505		Number of Samples: 3	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	33	67	0	
2	- plastic film	67	0	33	
3	- jute/hessian	34	33	33	
4	- cotton	34	33	33	
5	Strings made of - woven plastic	33	67	0	
6	- plastic film	33	0	67	
7	- jute/hessian	0	67	33	
8	- cotton	33	67	0	
9	Organic matter - leaves, feathers, paper, leather e	34	33	33	
10	Inorganic matter - sand/dust	33	0	67	
11	- rust	33	67	0	
12	- metal/wire	33	67	0	
13	Oily substances/chemicals - grease/oil	67	33	0	
14	- rubber	67	33	0	
15	- stamp colour	67	33	0	
16	- tar	67	33	0	
Average of 1-16		41	40	19	
Stickiness		No(%) <u>100</u>	Yes(%) <u>0</u>	Seed-coat fragments	
				No(%) <u>0</u>	Yes(%) <u>100</u>

Table 59

2013

Country: Pakistan		Growth: AmSeed AFZAL		Number of Samples: 5	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	80	0	20	
2	- plastic film	60	20	20	
3	- jute/hessian	80	0	20	
4	- cotton	60	0	40	
5	Strings made of - woven plastic	80	0	20	
6	- plastic film	60	20	20	
7	- jute/hessian	60	40	0	
8	- cotton	60	0	40	
9	Organic matter - leaves, feathers, paper, leather e	20	60	20	
10	Inorganic matter - sand/dust	60	40	0	
11	- rust	40	60	0	
12	- metal/wire	40	60	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		68	19	13	
Stickiness		No(%) <u>80</u>	Yes(%) <u>20</u>	Seed-coat fragments	
				No(%) <u>40</u>	Yes(%) <u>60</u>

Asia

Table 60

2013

Country: Pakistan		Growth: MNH93		Number of Samples: 3	
Source of contamination		Degree of contamination (%)			
		Non-existent/insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	67	33	0	
2	- plastic film	100	0	0	
3	- jute/hessian	67	0	33	
4	- cotton	67	33	0	
5	Strings made of - woven plastic	67	0	33	
6	- plastic film	100	0	0	
7	- jute/hessian	33	67	0	
8	- cotton	67	33	0	
9	Organic matter - leaves, feathers, paper, leather e	0	33	67	
10	Inorganic matter - sand/dust	33	0	67	
11	- rust	67	33	0	
12	- metal/wire	67	33	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	67	33	0	
Average of 1-16		68	19	13	
Stickiness		No(%) <u>100</u>	Yes(%) <u>0</u>	Seed-coat fragments	
				No(%) <u>0</u>	Yes(%) <u>100</u>

Table 61

2013

Country: Pakistan		Growth: NAIB		Number of Samples: 2	
Source of contamination		Degree of contamination (%)			
		Non-existent/insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	50	50	0	
2	- plastic film	100	0	0	
3	- jute/hessian	50	0	50	
4	- cotton	50	0	50	
5	Strings made of - woven plastic	50	0	50	
6	- plastic film	100	0	0	
7	- jute/hessian	0	50	50	
8	- cotton	50	50	0	
9	Organic matter - leaves, feathers, paper, leather e	0	50	50	
10	Inorganic matter - sand/dust	50	50	0	
11	- rust	50	50	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		65	19	16	
Stickiness		No(%) <u>100</u>	Yes(%) <u>0</u>	Seed-coat fragments	
				No(%) <u>0</u>	Yes(%) <u>100</u>

Asia

Table 62

2013

Country: Pakistan		Growth: Pakistan-Others		Number of Samples: 5	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	40	40	20
2		- plastic film	40	40	20
3		- jute/hessian	40	40	20
4		- cotton	60	40	0
5	Strings made of	- woven plastic	60	20	20
6		- plastic film	20	40	40
7		- jute/hessian	40	20	40
8		- cotton	60	20	20
9	Organic matter	- leaves, feathers, paper, leather e	20	60	20
10	Inorganic matter	- sand/dust	20	40	40
11		- rust	60	40	0
12		- metal/wire	60	40	0
13	Oily substances/chemicals	- grease/oil	60	40	0
14		- rubber	80	20	0
15		- stamp colour	60	40	0
16		- tar	100	0	0
Average of 1-16			51	34	15
Stickiness		No(%)	Yes(%)		
		100	0		
Seed-coat fragments		No(%)	Yes(%)		
		20	80		

Table 63

2013

Country: Syria		Growth: Syria		Number of Samples: 2	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	50	50	0
2		- plastic film	50	50	0
3		- jute/hessian	100	0	0
4		- cotton	100	0	0
5	Strings made of	- woven plastic	100	0	0
6		- plastic film	50	50	0
7		- jute/hessian	50	50	0
8		- cotton	50	50	0
9	Organic matter	- leaves, feathers, paper, leather e	50	50	0
10	Inorganic matter	- sand/dust	50	50	0
11		- rust	100	0	0
12		- metal/wire	100	0	0
13	Oily substances/chemicals	- grease/oil	100	0	0
14		- rubber	100	0	0
15		- stamp colour	50	50	0
16		- tar	100	0	0
Average of 1-16			75	25	0
Stickiness		No(%)	Yes(%)		
		100	0		
Seed-coat fragments		No(%)	Yes(%)		
		50	50		

Asia

Table 64

2013

Country: Tajikistan		Growth: Medium Staples		Number of Samples: 8	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	75	25	0	
2	- plastic film	62	38	0	
3	- jute/hessian	62	38	0	
4	- cotton	49	38	13	
5	Strings made of - woven plastic	62	25	13	
6	- plastic film	62	38	0	
7	- jute/hessian	37	63	0	
8	- cotton	37	50	13	
9	Organic matter - leaves, feathers, paper, leather e	12	75	13	
10	Inorganic matter - sand/dust	24	63	13	
11	- rust	37	63	0	
12	- metal/wire	50	50	0	
13	Oily substances/chemicals - grease/oil	75	25	0	
14	- rubber	75	25	0	
15	- stamp colour	87	13	0	
16	- tar	74	13	13	
Average of 1-16		55	40	5	
Stickiness		No(%) 63	Yes(%) 38	Seed-coat fragments	
				No(%) 50	Yes(%) 50

Table 65

2013

Country: Turkmenistan		Growth: Long Staples		Number of Samples: 2	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	100	0	0	
2	- plastic film	100	0	0	
3	- jute/hessian	100	0	0	
4	- cotton	0	50	50	
5	Strings made of - woven plastic	100	0	0	
6	- plastic film	100	0	0	
7	- jute/hessian	50	50	0	
8	- cotton	0	50	50	
9	Organic matter - leaves, feathers, paper, leather e	0	50	50	
10	Inorganic matter - sand/dust	50	50	0	
11	- rust	100	0	0	
12	- metal/wire	50	50	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	50	0	50	
15	- stamp colour	50	0	50	
16	- tar	100	0	0	
Average of 1-16		65	19	16	
Stickiness		No(%) 50	Yes(%) 50	Seed-coat fragments	
				No(%) 50	Yes(%) 50

Asia

Table 66

2013

Country: Turkmenistan		Growth: Medium Staples		Number of Samples: 8	
Source of contamination		Degree of contamination (%)			
		Non-existent/insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	74	13	13	
2	- plastic film	74	13	13	
3	- jute/hessian	75	25	0	
4	- cotton	62	13	25	
5	Strings made of - woven plastic	74	13	13	
6	- plastic film	74	13	13	
7	- jute/hessian	62	38	0	
8	- cotton	25	50	25	
9	Organic matter - leaves, feathers, paper, leather e	37	50	13	
10	Inorganic matter - sand/dust	25	75	0	
11	- rust	62	38	0	
12	- metal/wire	62	38	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	75	25	0	
15	- stamp colour	100	0	0	
16	- tar	87	13	0	
Average of 1-16		67	26	7	
Stickiness		No(%) 50	Yes(%) 50	Seed-coat fragments	
				No(%) 50	Yes(%) 50

Table 67

2013

Country: Uzbekistan		Growth: Medium Staples		Number of Samples: 10	
Source of contamination		Degree of contamination (%)			
		Non-existent/insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	50	30	20	
2	- plastic film	60	40	0	
3	- jute/hessian	60	30	10	
4	- cotton	60	30	10	
5	Strings made of - woven plastic	50	30	20	
6	- plastic film	60	40	0	
7	- jute/hessian	60	30	10	
8	- cotton	50	40	10	
9	Organic matter - leaves, feathers, paper, leather e	30	40	30	
10	Inorganic matter - sand/dust	40	30	30	
11	- rust	60	40	0	
12	- metal/wire	30	50	20	
13	Oily substances/chemicals - grease/oil	80	20	0	
14	- rubber	70	30	0	
15	- stamp colour	90	10	0	
16	- tar	90	10	0	
Average of 1-16		59	31	10	
Stickiness		No(%) 40	Yes(%) 60	Seed-coat fragments	
				No(%) 60	Yes(%) 40

Europe

Table 68

2013

Country: Greece		Growth: Greece		Number of Samples: 13	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	62	23	15	
2	- plastic film	62	23	15	
3	- jute/hessian	85	15	0	
4	- cotton	85	15	0	
5	Strings made of - woven plastic	84	8	8	
6	- plastic film	77	8	15	
7	- jute/hessian	85	15	0	
8	- cotton	77	23	0	
9	Organic matter - leaves, feathers, paper, leather e	54	31	15	
10	Inorganic matter - sand/dust	62	23	15	
11	- rust	77	15	8	
12	- metal/wire	77	15	8	
13	Oily substances/chemicals - grease/oil	77	15	8	
14	- rubber	84	8	8	
15	- stamp colour	92	8	0	
16	- tar	92	8	0	
Average of 1-16		77	16	7	
Stickiness		No(%) 85	Yes(%) 15	Seed-coat fragments	
				No(%) 69	Yes(%) 31

Table 69

2013

Country: Spain		Growth: Spain		Number of Samples: 8	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	100	0	0	
2	- plastic film	87	13	0	
3	- jute/hessian	100	0	0	
4	- cotton	100	0	0	
5	Strings made of - woven plastic	100	0	0	
6	- plastic film	100	0	0	
7	- jute/hessian	87	13	0	
8	- cotton	100	0	0	
9	Organic matter - leaves, feathers, paper, leather e	75	25	0	
10	Inorganic matter - sand/dust	74	13	13	
11	- rust	100	0	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		95	4	1	
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments	
				No(%) 88	Yes(%) 13

Europe

Table 70

2013

Country: Turkey		Growth: Antalya		Number of Samples: 1	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	0	100	0	
2	- plastic film	0	100	0	
3	- jute/hessian	100	0	0	
4	- cotton	100	0	0	
5	Strings made of - woven plastic	100	0	0	
6	- plastic film	0	100	0	
7	- jute/hessian	100	0	0	
8	- cotton	100	0	0	
9	Organic matter - leaves, feathers, paper, leather e	0	100	0	
10	Inorganic matter - sand/dust	100	0	0	
11	- rust	100	0	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	0	100	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		69	31	0	
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments	
				No(%) 0	Yes(%) 100

Table 71

2013

Country: Turkey		Growth: Cukurova/South		Number of Samples: 2	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	50	50	0	
2	- plastic film	50	0	50	
3	- jute/hessian	100	0	0	
4	- cotton	50	0	50	
5	Strings made of - woven plastic	50	50	0	
6	- plastic film	50	50	0	
7	- jute/hessian	50	50	0	
8	- cotton	50	50	0	
9	Organic matter - leaves, feathers, paper, leather e	0	50	50	
10	Inorganic matter - sand/dust	50	50	0	
11	- rust	100	0	0	
12	- metal/wire	0	100	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	50	50	0	
15	- stamp colour	100	0	0	
16	- tar	100	0	0	
Average of 1-16		60	31	9	
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments	
				No(%) 50	Yes(%) 50

Europe

Table 72

2013

Country: Turkey		Growth: Izmir		Number of Samples: 5	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	100	0	0	
2	- plastic film	80	20	0	
3	- jute/hessian	80	20	0	
4	- cotton	60	40	0	
5	Strings made of - woven plastic	80	20	0	
6	- plastic film	40	60	0	
7	- jute/hessian	80	20	0	
8	- cotton	60	40	0	
9	Organic matter - leaves, feathers, paper, leather e	60	20	20	
10	Inorganic matter - sand/dust	60	40	0	
11	- rust	100	0	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	80	20	0	
15	- stamp colour	60	40	0	
16	- tar	100	0	0	
Average of 1-16		78	21	1	
Stickiness		No(%) 80	Yes(%) 20	Seed-coat fragments	
				No(%) 60	Yes(%) 40

Table 73

2013

Country: Turkey		Growth: Turkey-Others		Number of Samples: 2	
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of - woven plastic	100	0	0	
2	- plastic film	100	0	0	
3	- jute/hessian	100	0	0	
4	- cotton	0	100	0	
5	Strings made of - woven plastic	100	0	0	
6	- plastic film	100	0	0	
7	- jute/hessian	50	50	0	
8	- cotton	50	50	0	
9	Organic matter - leaves, feathers, paper, leather e	0	50	50	
10	Inorganic matter - sand/dust	0	50	50	
11	- rust	100	0	0	
12	- metal/wire	100	0	0	
13	Oily substances/chemicals - grease/oil	100	0	0	
14	- rubber	100	0	0	
15	- stamp colour	50	50	0	
16	- tar	100	0	0	
Average of 1-16		72	22	6	
Stickiness		No(%) 100	Yes(%) 0	Seed-coat fragments	
				No(%) 0	Yes(%) 100

Press Release

Summary of Survey Results 2016

“Raw cotton has become cleaner. ITMF’s Cotton Contamination Survey shows that the level of contamination of raw cotton by foreign matters has fallen in 2016. The level of contamination, however, remains high and poses a serious challenge for the cotton spinning industry. The survey also shows that the level of stickiness and the appearance of seed-coat fragments have fallen significantly in 2016 compared to the previous survey from 2013.” This is the general conclusion to be drawn from the “Cotton Contamination Survey 2016” which has just been released by the International Textile Manufacturers Federation (ITMF). The 2016 edition is the fourteenth in the series since the changeover to a new methodology in 1989. In the 2016 report, 90 spinning mills located in 22 countries evaluated 71 different cotton growths.

Contamination – slight decrease

The level of cottons moderately or seriously contaminated as perceived by the spinning mills from around the world fell from 26% to 23% compared to the last survey in 2013. A closer look at the extent of the contamination shows that 5% (2013: 8%) of all cotton evaluated were seriously contaminated by some sort of foreign matter whereas 18% (2013: 18%) were only moderately contaminated. As the summary data are arithmetic averages of the different contaminants, the extent of contamination is fully illustrated only by the results for the individual contaminants. They range from 5% for “tar” to 47% of all cottons processed being moderately or seriously contaminated by “organic matter”, i.e. leaves, feathers, paper, leather, etc. Other serious contaminants are “fabrics made of plastic film” (38%), “strings made of woven plastic” (31%), “fabrics made of woven plastic” (31%) as well as “sand and dust” (31%). The most contaminated cotton descriptions considered for the survey originated in India (DCH, Shankar-4/6, MCU-5, J-34, India-Others), Pakistan (Pakistan Others), Uzbekistan (Medium Staples) and Ivory Coast. In contrast, very clean raw cottons were produced in Australia, Brazil, the USA, (Arizona, California, USA-Others, Memphis Territory, South Eastern and Pima) and China (Shandong, Xinjiang).

Stickiness – significant fall

The presence of sticky cotton as perceived by the spinning mills fell in 2016 significantly from 23% in 2013 to 16%, the lowest level since 2009. Descriptions that were affected most by stickiness were those from Brazil, India (DCH, MCU-5, India Others), the USA (Arizona, California, Pima and South Eastern), Spain and Pakistan (Pakistan Others). On the other end of the range, cottons from China (Hebei, Henan, Hubei, Shandong), Cameroon, Argentina and Benin were not or hardly affected by stickiness.

Seed-coat fragments – noticeable decline

With regard to seed-coat fragments the Cotton Contamination Survey 2016 shows that their appearance in cotton growths remains an issue for spinners around the world though the level of contamination fell significantly. 32% of cotton spinners (2013: 42%) claim that they have encountered moderate or significant amounts of seed-coat fragments in the cotton growths consumed, the lowest level since 2009. The origins affected most by seed-coat fragments are those from India (DCH, J-34, Shankar-4/6, MCU-5, India-Others), Pakistan-Others, Mali and Turkey (Izmir). Countries for which the existence of seed-coat fragments was negligible (prevalence of less than 30%) included those from the USA (Arizona, California, Pima, USA-Others), Australia, China (Hebei, Henan, Hubei, Shandong) and Burkina Faso.

December 2016

Participation

Table I

2016

Participation in 2016 Survey			
Country	Number of respondents (participating companies)	Number of samples (evaluations)	Number of cotton growth evaluated *
Argentina	2	3	2
Bangladesh	3	37	28
Belgium	1	5	5
Brazil	3	4	3
China	24	184	43
Chinese Taipei	6	56	30
Colombia	1	2	2
Egypt	1	2	2
Germany	1	4	4
Greece	1	1	1
India	16	64	19
Indonesia	3	25	19
Italy	1	8	8
Japan	1	10	10
Korea, Rep.	2	11	7
Mexico	3	5	4
Pakistan	4	24	14
South Africa	1	4	4
Spain	1	1	1
Thailand	1	4	4
Turkey	6	24	13
U.S.A.	8	16	8
Total	90	494	

* Divided among 71 cotton descriptions

Main Results

Table IIa

2016

Country		All Countries		Growth: All Growths		Number of samples:		494	
Source of contamination				Degree of contamination (%)					
				Non-existent/ insignificant	Moderate	Serious			
1	Fabrics made of	- woven plastic	69	21	10				
2		- plastic film	62	29	9				
3		- jute/hessian	73	21	6				
4		- cotton	73	22	5				
5	Strings made of	- woven plastic	69	21	10				
6		- plastic film	70	23	7				
7		- jute/hessian	71	22	7				
8		- cotton	76	19	5				
9	Organic matter	- leaves, feathers, paper, leather etc.	53	34	13				
10	Inorganic matter	- sand/dust	69	26	5				
11		- rust	86	11	3				
12		- metal/wire	87	10	3				
13	Oily substances/chemicals	- grease/oil	89	10	1				
14		- rubber	94	5	1				
15		- stamp colour	90	9	1				
16		- tar	95	4	1				
Average of 1-16			77	18	5				
			No (%)	Yes(%)			No (%)	Yes(%)	
Stickiness			84	16			Seed-coat fragments	68	32

Table IIb

Summary 1989-2016					
Year	Degree of Contamination (%)			Stickiness (%)	Seed-coat fragments (%)
	Non-existent/ insignificant	Moderate	Serious		
1989	86	9	5	21	0
1991	85	11	4	27	34
1993	85	11	4	26	36
1995	82	13	5	20	39
1997	82	13	5	23	32
1999	79	15	6	20	38
2001	78	16	6	18	40
2003	73	18	8	21	44
2005	78	15	7	17	37
2007	78	15	7	21	37
2009	78	16	6	13	27
2011	77	16	7	20	38
2013	73	18	8	23	42
2016	77	18	5	16	32

Contamination

Table IIIa

2016

The Most Contaminated Descriptions						
Ranking	Description		Degree of Contamination (%) *			Number of Samples **
			Non-existent/ insignificant	Moderate	Serious	
1	India	India-Others	49	41	10	17
2	Pakistan	Pakistan-Others	49	40	11	5
3	India	J-34	50	34	16	12
4	India	MCU-5	55	28	17	19
5	Ivory Coast	Ivory Coast	61	30	9	9
6	India	Shankar	61	27	12	30
7	India	DCH	68	22	10	13
8	Uzbekistan	Medium Staples	69	28	3	7
9	Greece	Greece	71	23	6	8
10	Turkey	Izmir	73	25	2	6
11	China	Hebei	74	26	0	12
12	Benin	Benin	77	23	0	7
13	Argentina	Argentina	77	19	4	5
14	Spain	Spain	77	19	4	5
15	Burkina Faso	Burkina Faso	81	17	2	10

* Average degree of contamination by each of the 18 pre-indicated contaminants

** Minimum: 5 Samples

Contamination

Table IIIb

2016

The Least Contaminated Descriptions						
Ranking	Description		Degree of Contamination (%) *			Number of Samples **
			Non-existent/ insignificant	Moderate	Serious	
1	Australia	Australia	95	4	1	23
2	USA	Arizona	95	4	1	14
3	USA	Pima	94	5	1	20
4	USA	California	93	6	1	14
5	China	Shandong	91	9	0	9
6	Brazil	Brazil	89	9	2	23
7	China	Xinjiang	89	6	5	21
8	USA	USA Others	89	10	1	15
9	USA	Memphis Territory	88	9	2	27
10	USA	South Eastern	88	8	4	9
11	USA	Texas High Plains	86	12	2	15
12	China	Henan	85	15	0	8
13	China	Hubei	85	15	0	9
14	Mali	Mali	83	11	6	8
15	Egypt	Giza	82	15	3	13

* Average degree of contamination by each of the 18 pre-indicated contaminants

** Minimum: 5 Samples

Stickiness

Table IVa

2016

Descriptions Most Affected by Stickiness				
Ranking	Description		Affirmative replies(%)*	Number of Samples**
1	USA	Pima	50	20
2	Brazil	Brazil	39	23
3	USA	South Eastern	33	9
4	India	DCH	31	13
5	USA	Arizona	29	14
6	USA	California	24	14
7	India	MCU-5	21	19
8	Spain	Spain	20	5
9	Pakistan	Pakistan Others	20	5
10	USA	Memphis Territory	19	27
11	USA	Texas High Plains	13	15
12	Mali	Mali	12	8
13	Greece	Greece	12	8
14	India	India Others	12	17
15	Ivory Coast	Ivory Coast	11	9

* Percentage of replies indicating the existence of stickiness

** Minimum 5 samples

Stickiness

Table IVb

2016

Descriptions Least Affected by Stickiness				
Ranking	Description		Affirmative replies(%)*	Number of Samples**
1	China	Shandong	0	9
2	China	Henan	0	8
3	China	Hubei	0	9
4	Cameroon	Cameroon	0	8
5	Argentina	Argentina	0	5
6	Benin	Benin	0	7
7	China	Hebei	0	12
8	Turkey	Izmir	0	6
9	Uzbekistan	Medium Staples	0	7
10	USA	USA Others	7	15
11	Egypt	Giza	8	13
12	India	J-34	8	12
13	Australia	Australia	9	23
14	China	Xinjiang	10	21
15	Burkina Faso	Burkina Faso	10	10

* Percentage of replies indicating the existence of stickiness

** Minimum 5 samples

Seed-Coat Fragments

Table Va

2016

Descriptions Most Affected by Seed-Coat Fragments				
Ranking	Description		Affirmative replies(%)*	Number of Samples**
1	India	J-34	75	12
2	India	DCH	69	13
3	India	MCU-5	63	19
4	Pakistan	Pakistan Others	60	5
5	India	India Others	59	17
6	India	India Shankar-4/6	53	30
7	Mali	Mali	50	8
8	Turkey	Izmir	50	6
9	Ivory Coast	Ivory Coast	44	9
10	Argentina	Argentina	40	5
11	Spain	Spain	40	5
12	USA	Memphis Territory	33	27
13	USA	South Eastern	33	9
14	USA	Texas High Plains	27	15
15	Brazil	Brazil	26	23

* Percentage of replies indicating the existence of stickiness

** Minimum 5 samples

Seed-Coat Fragments

Table Vb

2016

Descriptions Least Affected by Seed-Coat Fragments				
Ranking	Description		Affirmative replies(%)*	Number of Samples**
1	China	Hebei	0	12
2	China	Henan	0	8
3	China	Shandong	0	9
4	USA	USA Others	7	15
5	Australia	Australia	9	23
6	Burkina Faso	Burkina Faso	10	10
7	USA	Pima	10	20
8	China	Hubei	11	9
9	Cameroon	Cameroon	12	8
10	Benin	Benin	14	7
11	USA	Arizona	14	14
12	Uzbekistan	Medium Staples	14	7
13	China	Xinjiang	19	22
14	Egypt	Giza	23	13
15	USA	California	24	17

* Percentage of replies indicating the existence of stickiness

** Minimum 5 samples

Africa

Table 1

2016

Country Benin		Growth: Benin		Number of samples: 7		
Source of contamination		Degree of contamination (%)				
		Non- existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	43	57	0	
2		- plastic film	57	43	0	
3		- jute/hessian	71	29	0	
4		- cotton	71	29	0	
5	Strings made of	- woven plastic	71	29	0	
6		- plastic film	71	29	0	
7		- jute/hessian	57	43	0	
8		- cotton	86	14	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	57	43	0	
10	Inorganic matter	- sand/dust	71	29	0	
11		- rust	100	0	0	
12		- metal/wire	86	14	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	86	14	0	
16		- tar	100	0	0	
Average of 1-16			77	23	0	
		No (%)	Yes(%)			
Stickiness		100	0			
				No (%)	Yes(%)	
Seed-coat fragments				86	14	

Table 2

2016

Country Burkina Faso		Growth: Burkina Faso		Number of samples: 10		
Source of contamination		Degree of contamination (%)				
		Non- existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	60	30	10	
2		- plastic film	80	10	10	
3		- jute/hessian	70	30	0	
4		- cotton	80	20	0	
5	Strings made of	- woven plastic	50	40	10	
6		- plastic film	70	20	10	
7		- jute/hessian	60	40	0	
8		- cotton	80	20	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	60	40	0	
10	Inorganic matter	- sand/dust	90	10	0	
11		- rust	90	10	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			81	17	2	
		No (%)	Yes(%)			
Stickiness		90	10			
				No (%)	Yes(%)	
Seed-coat fragments				90	10	

Africa

Table 3

2016

Country Cameroon		Growth: Cameroon		Number of samples: 8		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	88	0	12	
2		- plastic film	75	13	12	
3		- jute/hessian	88	12	0	
4		- cotton	63	37	0	
5	Strings made of	- woven plastic	75	13	12	
6		- plastic film	75	13	12	
7		- jute/hessian	50	50	0	
8		- cotton	75	25	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	50	50	0	
10	Inorganic matter	- sand/dust	75	25	0	
11		- rust	100	0	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			82	15	3	
		No (%)	Yes(%)			
Stickiness		100	0			
				No (%)	Yes(%)	
Seed-coat fragments				88	12	

Table 4

2016

Country Chad		Growth: Chad		Number of samples: 3		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	67	0	33	
2		- plastic film	67	0	33	
3		- jute/hessian	100	0	0	
4		- cotton	100	0	0	
5	Strings made of	- woven plastic	67	0	33	
6		- plastic film	67	0	33	
7		- jute/hessian	33	67	0	
8		- cotton	67	33	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	33	67	0	
10	Inorganic matter	- sand/dust	67	33	0	
11		- rust	100	0	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			79	13	8	
		No (%)	Yes(%)			
Stickiness		67	33			
				No (%)	Yes(%)	
Seed-coat fragments				67	33	

Africa

Table 5

2016

Country Egypt		Growth: Egypt-Others		Number of samples: 2		
Source of contamination		Degree of contamination (%)				
		Non- existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	100	0	0	
2		- plastic film	100	0	0	
3		- jute/hessian	50	50	0	
4		- cotton	100	0	0	
5	Strings made of	- woven plastic	100	0	0	
6		- plastic film	100	0	0	
7		- jute/hessian	50	50	0	
8		- cotton	100	0	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	50	50	0	
10	Inorganic matter	- sand/dust	0	100	0	
11		- rust	50	50	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			81	19	0	
		No (%)	Yes(%)			
Stickiness		50	50			
		No (%)	Yes(%)			
Seed-coat fragments		100	0			

Table 6

2016

Country Egypt		Growth: Giza		Number of samples: 13		
Source of contamination		Degree of contamination (%)				
		Non- existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	84	8	8	
2		- plastic film	85	15	0	
3		- jute/hessian	69	23	8	
4		- cotton	92	8	0	
5	Strings made of	- woven plastic	77	23	0	
6		- plastic film	85	15	0	
7		- jute/hessian	62	23	15	
8		- cotton	85	15	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	54	38	8	
10	Inorganic matter	- sand/dust	54	46	0	
11		- rust	92	8	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	85	15	0	
16		- tar	92	8	0	
Average of 1-16			82	15	3	
		No (%)	Yes(%)			
Stickiness		92	8			
		No (%)	Yes(%)			
Seed-coat fragments		77	23			

Africa

Table 7

2016

Country Ivory Coast		Growth: Ivory Coast		Number of samples: 9		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	45	22	33	
2		- plastic film	56	33	11	
3		- jute/hessian	67	22	11	
4		- cotton	56	22	22	
5	Strings made of	- woven plastic	33	45	22	
6		- plastic film	45	44	11	
7		- jute/hessian	78	11	11	
8		- cotton	78	11	11	
9	Organic matter	- leaves, feathers, paper, leather etc.	22	67	11	
10	Inorganic matter	- sand/dust	33	56	11	
11		- rust	67	33	0	
12		- metal/wire	56	44	0	
13	Oily substances/chemicals	- grease/oil	78	22	0	
14		- rubber	89	11	0	
15		- stamp colour	78	22	0	
16		- tar	89	11	0	
Average of 1-16			61	30	9	
		No (%)	Yes(%)			
Stickiness		89	11			
				No (%)	Yes(%)	
Seed-coat fragments				56	44	

Table 8

2016

Country Madagascar		Growth: Madagascar		Number of samples: 1		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	0	100	0	
2		- plastic film	0	100	0	
3		- jute/hessian	0	100	0	
4		- cotton	0	100	0	
5	Strings made of	- woven plastic	0	100	0	
6		- plastic film	100	0	0	
7		- jute/hessian	100	0	0	
8		- cotton	0	100	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	100	0	0	
10	Inorganic matter	- sand/dust	100	0	0	
11		- rust	100	0	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			63	37	0	
		No (%)	Yes(%)			
Stickiness		100	0			
				No (%)	Yes(%)	
Seed-coat fragments				100	0	

Africa

Table 9

2016

Country Malawi		Growth: Malawi		Number of samples: 1		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	0	100	0	
2		- plastic film	0	100	0	
3		- jute/hessian	0	100	0	
4		- cotton	0	100	0	
5	Strings made of	- woven plastic	0	100	0	
6		- plastic film	100	0	0	
7		- jute/hessian	100	0	0	
8		- cotton	100	0	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	100	0	0	
10	Inorganic matter	- sand/dust	100	0	0	
11		- rust	100	0	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			69	31	0	
		No (%)	Yes(%)			
Stickiness		100	0	Seed-coat fragments		
				No (%)	Yes(%)	
				100	0	

Table 10

2016

Country Mali		Growth: Mali		Number of samples: 8		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	63	12	25	
2		- plastic film	63	12	25	
3		- jute/hessian	100	0	0	
4		- cotton	75	25	0	
5	Strings made of	- woven plastic	63	12	25	
6		- plastic film	63	25	12	
7		- jute/hessian	88	12	0	
8		- cotton	88	12	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	63	25	12	
10	Inorganic matter	- sand/dust	88	12	0	
11		- rust	100	0	0	
12		- metal/wire	88	12	0	
13	Oily substances/chemicals	- grease/oil	88	12	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			83	11	6	
		No (%)	Yes(%)			
Stickiness		88	12	Seed-coat fragments		
				No (%)	Yes(%)	
				50	50	

Africa

Table 11

2016

Country Mozambique		Growth: Mozambique		Number of samples: 1		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	0	100	0	
2		- plastic film	0	100	0	
3		- jute/hessian	100	0	0	
4		- cotton	100	0	0	
5	Strings made of	- woven plastic	100	0	0	
6		- plastic film	0	100	0	
7		- jute/hessian	100	0	0	
8		- cotton	0	100	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	0	100	0	
10	Inorganic matter	- sand/dust	100	0	0	
11		- rust	100	0	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			69	31	0	
		No (%)	Yes(%)			
Stickiness		100	0			
				No (%)	Yes(%)	
Seed-coat fragments				100	0	

Table 12

2016

Country Nigeria		Growth: Nigeria		Number of samples: 2		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	0	50	50	
2		- plastic film	0	50	50	
3		- jute/hessian	0	100	0	
4		- cotton	0	50	50	
5	Strings made of	- woven plastic	0	0	100	
6		- plastic film	0	50	50	
7		- jute/hessian	0	100	0	
8		- cotton	0	50	50	
9	Organic matter	- leaves, feathers, paper, leather etc.	0	100	0	
10	Inorganic matter	- sand/dust	50	50	0	
11		- rust	50	50	0	
12		- metal/wire	50	50	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			34	44	22	
		No (%)	Yes(%)			
Stickiness		100	0			
				No (%)	Yes(%)	
Seed-coat fragments				0	100	

Africa

Table 13

2016

Country Senegal		Growth: Senegal		Number of samples: 1		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	100	0	0	
2		- plastic film	100	0	0	
3		- jute/hessian	100	0	0	
4		- cotton	100	0	0	
5	Strings made of	- woven plastic	100	0	0	
6		- plastic film	0	100	0	
7		- jute/hessian	100	0	0	
8		- cotton	100	0	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	0	100	0	
10	Inorganic matter	- sand/dust	100	0	0	
11		- rust	100	0	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			88	12	0	
		No (%)	Yes(%)			
Stickiness		100	0			
				No (%)	Yes(%)	
Seed-coat fragments				0	100	

Table 14

2016

Country South Africa		Growth: South Africa		Number of samples: 4		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	50	0	50	
2		- plastic film	50	50	0	
3		- jute/hessian	50	25	25	
4		- cotton	50	25	25	
5	Strings made of	- woven plastic	75	25	0	
6		- plastic film	50	50	0	
7		- jute/hessian	75	0	25	
8		- cotton	75	0	25	
9	Organic matter	- leaves, feathers, paper, leather etc.	25	75	0	
10	Inorganic matter	- sand/dust	75	0	25	
11		- rust	75	0	25	
12		- metal/wire	75	25	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			70	17	13	
		No (%)	Yes(%)			
Stickiness		50	50			
				No (%)	Yes(%)	
Seed-coat fragments				50	50	

Africa

Table 15

2016

Country Sudan		Growth: Barakat		Number of samples: 1		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	0	100	0	
2		- plastic film	100	0	0	
3		- jute/hessian	100	0	0	
4		- cotton	0	100	0	
5	Strings made of	- woven plastic	100	0	0	
6		- plastic film	100	0	0	
7		- jute/hessian	0	100	0	
8		- cotton	0	100	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	0	0	100	
10	Inorganic matter	- sand/dust	0	100	0	
11		- rust	100	0	0	
12		- metal/wire	0	100	0	
13	Oily substances/chemicals	- grease/oil	0	0	100	
14		- rubber	100	0	0	
15		- stamp colour	0	100	0	
16		- tar	100	0	0	
Average of 1-16			44	44	12	
		No (%)	Yes(%)			
Stickiness		0	100	Seed-coat fragments		
				No (%)	Yes(%)	
				0	100	

Table 16

2016

Country Tanzania		Growth: Coastal		Number of samples: 3		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	67	33	0	
2		- plastic film	33	67	0	
3		- jute/hessian	33	67	0	
4		- cotton	33	67	0	
5	Strings made of	- woven plastic	67	33	0	
6		- plastic film	33	67	0	
7		- jute/hessian	0	100	0	
8		- cotton	67	33	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	33	67	0	
10	Inorganic matter	- sand/dust	0	100	0	
11		- rust	67	33	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	67	33	0	
14		- rubber	67	33	0	
15		- stamp colour	67	33	0	
16		- tar	100	0	0	
Average of 1-16			52	48	0	
		No (%)	Yes(%)			
Stickiness		100	0	Seed-coat fragments		
				No (%)	Yes(%)	
				33	67	

Africa

Table 17

2016

Country Tanzania		Growth: Mwanza		Number of samples: 1		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	100	0	0	
2		- plastic film	0	100	0	
3		- jute/hessian	0	0	100	
4		- cotton	0	100	0	
5	Strings made of	- woven plastic	100	0	0	
6		- plastic film	100	0	0	
7		- jute/hessian	0	100	0	
8		- cotton	0	100	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	0	100	0	
10	Inorganic matter	- sand/dust	0	100	0	
11		- rust	0	100	0	
12		- metal/wire	0	100	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			44	50	6	
		No (%)	Yes(%)			
Stickiness		100	0			
		No (%)	Yes(%)			
Seed-coat fragments		100	0			

Table 18

2016

Country Togo		Growth: Togo		Number of samples: 4		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	50	25	25	
2		- plastic film	75	25	0	
3		- jute/hessian	75	25	0	
4		- cotton	75	25	0	
5	Strings made of	- woven plastic	50	25	25	
6		- plastic film	50	50	0	
7		- jute/hessian	50	50	0	
8		- cotton	75	25	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	25	75	0	
10	Inorganic matter	- sand/dust	50	50	0	
11		- rust	100	0	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	75	25	0	
14		- rubber	100	0	0	
15		- stamp colour	75	25	0	
16		- tar	100	0	0	
Average of 1-16			70	27	3	
		No (%)	Yes(%)			
Stickiness		75	25			
		No (%)	Yes(%)			
Seed-coat fragments		0	100			

Africa

Table 19

2016

Country Uganda		Growth: Uganda		Number of samples: 1		
Source of contamination		Degree of contamination (%)				
		Non- existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	0	0	100	
2		- plastic film	0	0	100	
3		- jute/hessian	0	0	100	
4		- cotton	0	0	100	
5	Strings made of	- woven plastic	100	0	0	
6		- plastic film	0	0	100	
7		- jute/hessian	0	0	100	
8		- cotton	0	0	100	
9	Organic matter	- leaves, feathers, paper, leather etc.	0	0	100	
10	Inorganic matter	- sand/dust	0	0	100	
11		- rust	0	0	100	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			38	0	62	
		No (%)	Yes(%)			
Stickiness		100	0			
				No (%)	Yes(%)	
Seed-coat fragments				0	100	

Table 20

2016

Country Zambia		Growth: Zambia		Number of samples: 1		
Source of contamination		Degree of contamination (%)				
		Non- existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	0	100	0	
2		- plastic film	0	100	0	
3		- jute/hessian	0	100	0	
4		- cotton	100	0	0	
5	Strings made of	- woven plastic	0	100	0	
6		- plastic film	0	100	0	
7		- jute/hessian	0	100	0	
8		- cotton	100	0	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	0	100	0	
10	Inorganic matter	- sand/dust	100	0	0	
11		- rust	100	0	0	
12		- metal/wire	0	0	100	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			50	44	6	
		No (%)	Yes(%)			
Stickiness		100	0			
				No (%)	Yes(%)	
Seed-coat fragments				0	100	

Africa

Table 21

2016

Country Zimbabwe		Growth: Zimbabwe		Number of samples: 4		
Source of contamination		Degree of contamination (%)				
		Non- existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	75	25	0	
2		- plastic film	25	75	0	
3		- jute/hessian	50	50	0	
4		- cotton	100	0	0	
5	Strings made of	- woven plastic	75	25	0	
6		- plastic film	50	50	0	
7		- jute/hessian	75	25	0	
8		- cotton	75	25	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	25	75	0	
10	Inorganic matter	- sand/dust	75	25	0	
11		- rust	75	25	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			75	25	0	
		No (%)	Yes(%)			
Stickiness		100	0			
				No (%)	Yes(%)	
Seed-coat fragments				100	0	

America, North

Table 22

2016

Country Mexico		Growth: Juarez		Number of samples: 4		
Source of contamination		Degree of contamination (%)				
		Non- existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	100	0	0	
2		- plastic film	100	0	0	
3		- jute/hessian	100	0	0	
4		- cotton	100	0	0	
5	Strings made of	- woven plastic	100	0	0	
6		- plastic film	100	0	0	
7		- jute/hessian	100	0	0	
8		- cotton	100	0	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	75	25	0	
10	Inorganic matter	- sand/dust	75	0	25	
11		- rust	100	0	0	
12		- metal/wire	75	25	0	
13	Oily substances/chemicals	- grease/oil	75	25	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			94	5	1	
		No (%)	Yes(%)			
Stickiness		75	25	Seed-coat fragments		
				No (%)	Yes(%)	
				75	25	

Table 23

2016

Country Mexico		Growth: Laguna/Delicias		Number of samples: 3		
Source of contamination		Degree of contamination (%)				
		Non- existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	34	33	33	
2		- plastic film	34	33	33	
3		- jute/hessian	67	33	0	
4		- cotton	67	33	0	
5	Strings made of	- woven plastic	34	33	33	
6		- plastic film	34	33	33	
7		- jute/hessian	100	0	0	
8		- cotton	100	0	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	100	0	0	
10	Inorganic matter	- sand/dust	67	33	0	
11		- rust	67	33	0	
12		- metal/wire	67	33	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	67	33	0	
16		- tar	100	0	0	
Average of 1-16			71	21	8	
		No (%)	Yes(%)			
Stickiness		75	25	Seed-coat fragments		
				No (%)	Yes(%)	
				75	25	

America, North

Table 24

2016

Country Mexico		Growth: Mexico-Others		Number of samples: 1		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	0	0	100	
2		- plastic film	0	100	0	
3		- jute/hessian	100	0	0	
4		- cotton	100	0	0	
5	Strings made of	- woven plastic	100	0	0	
6		- plastic film	100	0	0	
7		- jute/hessian	100	0	0	
8		- cotton	100	0	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	0	100	0	
10	Inorganic matter	- sand/dust	100	0	0	
11		- rust	100	0	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			81	13	6	
		No (%)	Yes(%)			
Stickiness		100	0			
		No (%)	Yes(%)			
Seed-coat fragments		100	0			

Table 25

2016

Country U.S.A.		Growth: Arizona		Number of samples: 14		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	100	0	0	
2		- plastic film	93	0	7	
3		- jute/hessian	100	0	0	
4		- cotton	100	0	0	
5	Strings made of	- woven plastic	93	7	0	
6		- plastic film	93	7	0	
7		- jute/hessian	93	7	0	
8		- cotton	100	0	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	64	29	7	
10	Inorganic matter	- sand/dust	79	21	0	
11		- rust	100	0	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			95	4	1	
		No (%)	Yes(%)			
Stickiness		71	29			
		No (%)	Yes(%)			
Seed-coat fragments		86	14			

America, North

Table 26

2016

Country U.S.A.		Growth: California		Number of samples: 14		
Source of contamination		Degree of contamination (%)				
		Non- existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	100	0	0	
2		- plastic film	88	6	6	
3		- jute/hessian	100	0	0	
4		- cotton	88	12	0	
5	Strings made of	- woven plastic	94	6	0	
6		- plastic film	94	6	0	
7		- jute/hessian	88	12	0	
8		- cotton	100	0	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	71	23	6	
10	Inorganic matter	- sand/dust	88	12	0	
11		- rust	94	6	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	94	6	0	
14		- rubber	100	0	0	
15		- stamp colour	94	6	0	
16		- tar	100	0	0	
Average of 1-16			93	6	1	
		No (%)	Yes(%)			
Stickiness		76	24	Seed-coat fragments		
				No (%)	Yes(%)	
				76	24	

Table 27

2016

Country U.S.A.		Growth: El Paso		Number of samples: 1		
Source of contamination		Degree of contamination (%)				
		Non- existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	100	0	0	
2		- plastic film	0	0	100	
3		- jute/hessian	100	0	0	
4		- cotton	100	0	0	
5	Strings made of	- woven plastic	100	0	0	
6		- plastic film	0	100	0	
7		- jute/hessian	100	0	0	
8		- cotton	100	0	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	0	0	100	
10	Inorganic matter	- sand/dust	0	100	0	
11		- rust	100	0	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			75	13	12	
		No (%)	Yes(%)			
Stickiness		0	100	Seed-coat fragments		
				No (%)	Yes(%)	
				100	0	

America, North

Table 28

2016

Country U.S.A.		Growth: Memphis Territory		Number of samples: 27		
Source of contamination		Degree of contamination (%)				
		Non- existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	93	4	3	
2		- plastic film	74	15	11	
3		- jute/hessian	93	7	0	
4		- cotton	89	11	0	
5	Strings made of	- woven plastic	85	11	4	
6		- plastic film	85	11	4	
7		- jute/hessian	89	11	0	
8		- cotton	96	4	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	74	19	7	
10	Inorganic matter	- sand/dust	81	15	4	
11		- rust	89	11	0	
12		- metal/wire	85	15	0	
13	Oily substances/chemicals	- grease/oil	93	7	0	
14		- rubber	100	0	0	
15		- stamp colour	93	7	0	
16		- tar	96	4	0	
Average of 1-16			88	10	2	
		No (%)	Yes(%)			
Stickiness		81	19			
		No (%)	Yes(%)			
Seed-coat fragments		67	33			

Table 29

2016

Country U.S.A.		Growth: Pima		Number of samples: 20		
Source of contamination		Degree of contamination (%)				
		Non- existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	95	5	0	
2		- plastic film	95	0	5	
3		- jute/hessian	100	0	0	
4		- cotton	100	0	0	
5	Strings made of	- woven plastic	85	15	0	
6		- plastic film	95	5	0	
7		- jute/hessian	90	10	0	
8		- cotton	90	5	5	
9	Organic matter	- leaves, feathers, paper, leather etc.	70	20	10	
10	Inorganic matter	- sand/dust	95	5	0	
11		- rust	95	5	0	
12		- metal/wire	95	5	0	
13	Oily substances/chemicals	- grease/oil	95	5	0	
14		- rubber	100	0	0	
15		- stamp colour	95	5	0	
16		- tar	100	0	0	
Average of 1-16			94	5	1	
		No (%)	Yes(%)			
Stickiness		50	50			
		No (%)	Yes(%)			
Seed-coat fragments		90	10			

America, North

Table 30

2016

Country U.S.A.		Growth: Rio Grande Valley		Number of samples: 2		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	50	0	50	
2		- plastic film	50	0	50	
3		- jute/hessian	100	0	0	
4		- cotton	100	0	0	
5	Strings made of	- woven plastic	50	0	50	
6		- plastic film	0	100	0	
7		- jute/hessian	100	0	0	
8		- cotton	100	0	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	50	0	50	
10	Inorganic matter	- sand/dust	50	50	0	
11		- rust	100	0	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			78	9	13	
		No (%)	Yes(%)			No (%)
Stickiness		50	50	Seed-coat fragments		100
						0

Table 31

2016

Country U.S.A.		Growth: South Eastern		Number of samples: 9		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	89	0	11	
2		- plastic film	67	11	22	
3		- jute/hessian	100	0	0	
4		- cotton	100	0	0	
5	Strings made of	- woven plastic	67	22	11	
6		- plastic film	67	22	11	
7		- jute/hessian	100	0	0	
8		- cotton	100	0	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	67	22	11	
10	Inorganic matter	- sand/dust	89	11	0	
11		- rust	89	11	0	
12		- metal/wire	89	11	0	
13	Oily substances/chemicals	- grease/oil	89	11	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			88	8	4	
		No (%)	Yes(%)			No (%)
Stickiness		67	33	Seed-coat fragments		67
						33

America, North

Table 32

2016

Country U.S.A.		Growth: Texas High Plains		Number of samples: 15		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	80	20	0	
2		- plastic film	67	27	6	
3		- jute/hessian	93	7	0	
4		- cotton	93	7	0	
5	Strings made of	- woven plastic	87	13	0	
6		- plastic film	73	27	0	
7		- jute/hessian	93	7	0	
8		- cotton	93	7	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	80	13	7	
10	Inorganic matter	- sand/dust	67	33	0	
11		- rust	87	7	7	
12		- metal/wire	93	7	0	
13	Oily substances/chemicals	- grease/oil	87	7	7	
14		- rubber	93	7	0	
15		- stamp colour	87	13	0	
16		- tar	100	0	0	
Average of 1-16			86	12	2	
		No (%)	Yes(%)			
Stickiness		87	13	Seed-coat fragments	73	
				No (%)	Yes(%)	
				73	27	

Table 33

2016

Country U.S.A.		Growth: USA-Others		Number of samples: 15		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	93	7	0	
2		- plastic film	73	20	7	
3		- jute/hessian	87	13	0	
4		- cotton	100	0	0	
5	Strings made of	- woven plastic	87	13	0	
6		- plastic film	80	20	0	
7		- jute/hessian	87	13	0	
8		- cotton	93	7	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	60	27	13	
10	Inorganic matter	- sand/dust	87	13	0	
11		- rust	93	7	0	
12		- metal/wire	93	7	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	93	7	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			89	10	1	
		No (%)	Yes(%)			
Stickiness		93	7	Seed-coat fragments	93	
				No (%)	Yes(%)	
				93	7	

America, South

Table 34

2016

Country Argentina		Growth: Argentina		Number of samples: 5		
Source of contamination		Degree of contamination (%)				
		Non- existent/ insignificant	Moderate	Serious		
1	Fabrics made of - woven plastic	80	20	0		
2	- plastic film	80	20	0		
3	- jute/hessian	80	20	0		
4	- cotton	60	20	20		
5	Strings made of - woven plastic	100	0	0		
6	- plastic film	80	20	0		
7	- jute/hessian	80	20	0		
8	- cotton	60	20	20		
9	Organic matter - leaves, feathers, paper, leather etc.	0	80	20		
10	Inorganic matter - sand/dust	60	40	0		
11	- rust	80	20	0		
12	- metal/wire	100	0	0		
13	Oily substances/chemicals - grease/oil	80	20	0		
14	- rubber	100	0	0		
15	- stamp colour	100	0	0		
16	- tar	100	0	0		
Average of 1-16		77	19	4		
Stickiness		No (%)	Yes(%)			
		100	0	Seed-coat fragments	No (%)	
				60	Yes(%)	
				40		

Table 35

2016

Country Brazil		Growth: Brazil		Number of samples: 23		
Source of contamination		Degree of contamination (%)				
		Non- existent/ insignificant	Moderate	Serious		
1	Fabrics made of - woven plastic	96	4	0		
2	- plastic film	91	5	4		
3	- jute/hessian	91	9	0		
4	- cotton	87	9	4		
5	Strings made of - woven plastic	91	9	0		
6	- plastic film	78	18	4		
7	- jute/hessian	83	17	0		
8	- cotton	87	9	4		
9	Organic matter - leaves, feathers, paper, leather etc.	61	35	4		
10	Inorganic matter - sand/dust	83	17	0		
11	- rust	91	9	0		
12	- metal/wire	96	0	4		
13	Oily substances/chemicals - grease/oil	96	4	0		
14	- rubber	100	0	0		
15	- stamp colour	100	0	0		
16	- tar	100	0	0		
Average of 1-16		89	9	2		
Stickiness		No (%)	Yes(%)			
		61	39	Seed-coat fragments	No (%)	
				74	Yes(%)	
				26		

America, South

Table 36

2016

Country Colombia		Growth: Coastal		Number of samples: 1		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	0	100	0	
2		- plastic film	0	100	0	
3		- jute/hessian	0	100	0	
4		- cotton	0	0	100	
5	Strings made of	- woven plastic	0	100	0	
6		- plastic film	100	0	0	
7		- jute/hessian	0	100	0	
8		- cotton	0	100	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	0	0	100	
10	Inorganic matter	- sand/dust	0	100	0	
11		- rust	100	0	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	0	0	100	
14		- rubber	0	100	0	
15		- stamp colour	0	100	0	
16		- tar	100	0	0	
Average of 1-16			25	56	19	
		No (%)	Yes(%)			
Stickiness		0	100	Seed-coat fragments		
				No (%)	Yes(%)	
				100	0	

Table 37

2016

Country Paraguay		Growth: Paraguay		Number of samples: 2		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	50	50	0	
2		- plastic film	50	50	0	
3		- jute/hessian	50	50	0	
4		- cotton	100	0	0	
5	Strings made of	- woven plastic	0	100	0	
6		- plastic film	50	50	0	
7		- jute/hessian	100	0	0	
8		- cotton	100	0	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	50	50	0	
10	Inorganic matter	- sand/dust	50	50	0	
11		- rust	100	0	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			75	25	0	
		No (%)	Yes(%)			
Stickiness		50	50	Seed-coat fragments		
				No (%)	Yes(%)	
				50	50	

Asia

Table 38

2016

Country Australia		Growth: Australia		Number of samples: 23		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	96	4	0	
2		- plastic film	96	4	0	
3		- jute/hessian	100	0	0	
4		- cotton	100	0	0	
5	Strings made of	- woven plastic	96	4	0	
6		- plastic film	91	9	0	
7		- jute/hessian	91	9	0	
8		- cotton	100	0	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	87	9	4	
10	Inorganic matter	- sand/dust	91	4	4	
11		- rust	91	9	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	91	9	0	
14		- rubber	100	0	0	
15		- stamp colour	96	4	0	
16		- tar	100	0	0	
Average of 1-16			95	4	1	
		No (%)	Yes(%)			
Stickiness		91	9			
		No (%)	Yes(%)			
Seed-coat fragments		91	9			

Table 39

2016

Country China		Growth: Anhui		Number of samples: 4		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	75	25	0	
2		- plastic film	50	50	0	
3		- jute/hessian	100	0	0	
4		- cotton	25	50	25	
5	Strings made of	- woven plastic	100	0	0	
6		- plastic film	75	25	0	
7		- jute/hessian	75	25	0	
8		- cotton	75	25	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	50	50	0	
10	Inorganic matter	- sand/dust	75	25	0	
11		- rust	75	25	0	
12		- metal/wire	75	25	0	
13	Oily substances/chemicals	- grease/oil	75	25	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			77	22	1	
		No (%)	Yes(%)			
Stickiness		100	0			
		No (%)	Yes(%)			
Seed-coat fragments		75	25			

Asia

Table 40

2016

Country China		Growth: Hebei		Number of samples: 12		
Source of contamination		Degree of contamination (%)				
		Non- existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	58	42	0	
2		- plastic film	50	50	0	
3		- jute/hessian	83	17	0	
4		- cotton	67	33	0	
5	Strings made of	- woven plastic	75	25	0	
6		- plastic film	92	8	0	
7		- jute/hessian	75	25	0	
8		- cotton	92	8	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	58	42	0	
10	Inorganic matter	- sand/dust	33	67	0	
11		- rust	50	50	0	
12		- metal/wire	92	8	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	75	25	0	
16		- tar	83	17	0	
Average of 1-16			74	26	0	
Stickiness		No (%)	Yes(%)			
		100	0			
Seed-coat fragments		No (%)	Yes(%)			
		100	0			

Table 41

2016

Country China		Growth: Henan		Number of samples: 8		
Source of contamination		Degree of contamination (%)				
		Non- existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	63	37	0	
2		- plastic film	50	50	0	
3		- jute/hessian	100	0	0	
4		- cotton	63	37	0	
5	Strings made of	- woven plastic	100	0	0	
6		- plastic film	100	0	0	
7		- jute/hessian	100	0	0	
8		- cotton	100	0	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	88	12	0	
10	Inorganic matter	- sand/dust	50	50	0	
11		- rust	88	12	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	75	25	0	
14		- rubber	88	12	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			85	15	0	
Stickiness		No (%)	Yes(%)			
		100	0			
Seed-coat fragments		No (%)	Yes(%)			
		100	0			

Asia

Table 42

2016

Country China		Growth: Hubei		Number of samples: 9			
Source of contamination		Degree of contamination (%)					
		Non- existent/ insignificant	Moderate	Serious			
1	Fabrics made of - woven plastic	78	22	0			
2	- plastic film	78	22	0			
3	- jute/hessian	100	0	0			
4	- cotton	56	44	0			
5	Strings made of - woven plastic	89	11	0			
6	- plastic film	67	33	0			
7	- jute/hessian	100	0	0			
8	- cotton	89	11	0			
9	Organic matter - leaves, feathers, paper, leather etc.	78	22	0			
10	Inorganic matter - sand/dust	78	22	0			
11	- rust	89	11	0			
12	- metal/wire	67	33	0			
13	Oily substances/chemicals - grease/oil	100	0	0			
14	- rubber	89	11	0			
15	- stamp colour	100	0	0			
16	- tar	100	0	0			
Average of 1-16		85	15	0			
		No (%)	Yes(%)		No (%)	Yes(%)	
	Stickiness	100	0		Seed-coat fragments	89	11

Table 43

2016

Country China		Growth: Jiangsu		Number of samples: 1			
Source of contamination		Degree of contamination (%)					
		Non- existent/ insignificant	Moderate	Serious			
1	Fabrics made of - woven plastic	100	0	0			
2	- plastic film	100	0	0			
3	- jute/hessian	100	0	0			
4	- cotton	100	0	0			
5	Strings made of - woven plastic	100	0	0			
6	- plastic film	100	0	0			
7	- jute/hessian	100	0	0			
8	- cotton	100	0	0			
9	Organic matter - leaves, feathers, paper, leather etc.	100	0	0			
10	Inorganic matter - sand/dust	100	0	0			
11	- rust	100	0	0			
12	- metal/wire	100	0	0			
13	Oily substances/chemicals - grease/oil	100	0	0			
14	- rubber	100	0	0			
15	- stamp colour	100	0	0			
16	- tar	100	0	0			
Average of 1-16		100	0	0			
		No (%)	Yes(%)		No (%)	Yes(%)	
	Stickiness	100	0		Seed-coat fragments	100	0

Asia

Table 44

2016

Country China		Growth: China-Others		Number of samples: 4		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	75	0	25	
2		- plastic film	50	50	0	
3		- jute/hessian	100	0	0	
4		- cotton	50	50	0	
5	Strings made of	- woven plastic	75	0	25	
6		- plastic film	50	50	0	
7		- jute/hessian	100	0	0	
8		- cotton	75	25	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	25	50	25	
10	Inorganic matter	- sand/dust	50	50	0	
11		- rust	100	0	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			78	17	5	
Stickiness		No (%)	Yes(%)			
		100	0			
Seed-coat fragments		No (%)	Yes(%)			
		100	0			

Table 45

2016

Country China		Growth: Shandong		Number of samples: 9		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	78	22	0	
2		- plastic film	89	11	0	
3		- jute/hessian	89	11	0	
4		- cotton	89	11	0	
5	Strings made of	- woven plastic	89	11	0	
6		- plastic film	78	22	0	
7		- jute/hessian	100	0	0	
8		- cotton	100	0	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	89	11	0	
10	Inorganic matter	- sand/dust	78	22	0	
11		- rust	78	22	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			91	9	0	
Stickiness		No (%)	Yes(%)			
		100	0			
Seed-coat fragments		No (%)	Yes(%)			
		100	0			

Asia

Table 46

2016

Country China		Growth: Xinjiang		Number of samples: 21		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	71	24	5	
2		- plastic film	71	24	5	
3		- jute/hessian	95	0	5	
4		- cotton	90	5	5	
5	Strings made of	- woven plastic	90	5	5	
6		- plastic film	81	14	5	
7		- jute/hessian	90	5	5	
8		- cotton	95	0	5	
9	Organic matter	- leaves, feathers, paper, leather etc.	95	0	5	
10	Inorganic matter	- sand/dust	86	10	5	
11		- rust	95	0	5	
12		- metal/wire	90	5	5	
13	Oily substances/chemicals	- grease/oil	95	0	5	
14		- rubber	90	5	5	
15		- stamp colour	95	0	5	
16		- tar	95	0	5	
Average of 1-16			89	6	5	
		No (%)	Yes(%)			
Stickiness		90	10			
				No (%)	Yes(%)	
Seed-coat fragments				81	19	

Table 47

2016

Country India		Growth: DCH		Number of samples: 13		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	69	8	23	
2		- plastic film	61	31	8	
3		- jute/hessian	46	46	8	
4		- cotton	54	38	8	
5	Strings made of	- woven plastic	62	23	15	
6		- plastic film	77	8	15	
7		- jute/hessian	54	15	31	
8		- cotton	62	23	15	
9	Organic matter	- leaves, feathers, paper, leather etc.	39	23	38	
10	Inorganic matter	- sand/dust	54	38	8	
11		- rust	92	8	0	
12		- metal/wire	85	15	0	
13	Oily substances/chemicals	- grease/oil	77	23	0	
14		- rubber	92	8	0	
15		- stamp colour	69	31	0	
16		- tar	92	8	0	
Average of 1-16			68	22	10	
		No (%)	Yes(%)			
Stickiness		69	31			
				No (%)	Yes(%)	
Seed-coat fragments				31	69	

Asia

Table 48

2016

Country India		Growth: F-414		Number of samples: 4		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	25	75	0	
2		- plastic film	50	50	0	
3		- jute/hessian	25	75	0	
4		- cotton	75	25	0	
5	Strings made of	- woven plastic	50	50	0	
6		- plastic film	100	0	0	
7		- jute/hessian	50	50	0	
8		- cotton	75	25	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	25	50	25	
10	Inorganic matter	- sand/dust	50	50	0	
11		- rust	100	0	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			70	28	2	
Stickiness		No (%)	Yes(%)	Seed-coat fragments		
		75	25	No (%)	Yes(%)	
				75	25	

Table 49

2016

Country India		Growth: H-4		Number of samples: 3		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	34	33	33	
2		- plastic film	33	67	0	
3		- jute/hessian	67	33	0	
4		- cotton	67	33	0	
5	Strings made of	- woven plastic	67	0	33	
6		- plastic film	100	0	0	
7		- jute/hessian	100	0	0	
8		- cotton	67	33	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	33	0	67	
10	Inorganic matter	- sand/dust	100	0	0	
11		- rust	100	0	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			79	13	8	
Stickiness		No (%)	Yes(%)	Seed-coat fragments		
		67	33	No (%)	Yes(%)	
				67	33	

Asia

Table 50

2016

Country India		Growth: J-34		Number of samples: 12		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	33	50	17	
2		- plastic film	8	59	33	
3		- jute/hessian	33	42	25	
4		- cotton	42	50	8	
5	Strings made of	- woven plastic	17	58	25	
6		- plastic film	50	33	17	
7		- jute/hessian	42	41	17	
8		- cotton	34	58	8	
9	Organic matter	- leaves, feathers, paper, leather etc.	25	33	42	
10	Inorganic matter	- sand/dust	42	33	25	
11		- rust	67	25	8	
12		- metal/wire	83	0	17	
13	Oily substances/chemicals	- grease/oil	75	25	0	
14		- rubber	83	17	0	
15		- stamp colour	75	17	8	
16		- tar	84	8	8	
Average of 1-16			50	34	16	
		No (%)	Yes(%)			No (%)
Stickiness		92	8	Seed-coat fragments		25
						75

Table 51

2016

Country India		Growth: LRA		Number of samples: 3		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	33	67	0	
2		- plastic film	33	67	0	
3		- jute/hessian	67	33	0	
4		- cotton	67	33	0	
5	Strings made of	- woven plastic	67	33	0	
6		- plastic film	100	0	0	
7		- jute/hessian	100	0	0	
8		- cotton	67	33	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	67	0	33	
10	Inorganic matter	- sand/dust	100	0	0	
11		- rust	100	0	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			81	17	2	
		No (%)	Yes(%)			No (%)
Stickiness		67	33	Seed-coat fragments		67
						33

Asia

Table 52

2016

Country India		Growth: MCU-5		Number of samples: 19		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of - woven plastic	42	32	26		
2	- plastic film	32	47	21		
3	- jute/hessian	42	32	26		
4	- cotton	42	58	0		
5	Strings made of - woven plastic	42	21	37		
6	- plastic film	48	26	26		
7	- jute/hessian	26	32	42		
8	- cotton	32	63	5		
9	Organic matter - leaves, feathers, paper, leather etc.	21	42	37		
10	Inorganic matter - sand/dust	69	26	5		
11	- rust	84	5	11		
12	- metal/wire	74	16	10		
13	Oily substances/chemicals - grease/oil	79	21	0		
14	- rubber	84	11	5		
15	- stamp colour	84	5	11		
16	- tar	84	11	5		
Average of 1-16		55	28	17		
	No (%)	Yes(%)	No (%)	Yes(%)		
Stickiness	79	21	Seed-coat fragments	37	63	

Table 53

2016

Country India		Growth: India-Others		Number of samples: 17		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of - woven plastic	18	64	18		
2	- plastic film	6	76	18		
3	- jute/hessian	23	59	18		
4	- cotton	35	53	12		
5	Strings made of - woven plastic	53	35	12		
6	- plastic film	53	35	12		
7	- jute/hessian	41	47	12		
8	- cotton	35	59	6		
9	Organic matter - leaves, feathers, paper, leather etc.	35	35	30		
10	Inorganic matter - sand/dust	47	41	12		
11	- rust	65	29	6		
12	- metal/wire	71	23	6		
13	Oily substances/chemicals - grease/oil	65	29	6		
14	- rubber	71	29	0		
15	- stamp colour	76	24	0		
16	- tar	82	18	0		
Average of 1-16		49	41	10		
	No (%)	Yes(%)	No (%)	Yes(%)		
Stickiness	88	12	Seed-coat fragments	41	59	

Asia

Table 54

2016

Country India		Growth: Shankar-4/6		Number of samples: 30		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	50	27	23	
2		- plastic film	40	43	17	
3		- jute/hessian	47	33	20	
4		- cotton	53	30	17	
5	Strings made of	- woven plastic	44	33	23	
6		- plastic film	54	33	13	
7		- jute/hessian	47	37	16	
8		- cotton	54	33	13	
9	Organic matter	- leaves, feathers, paper, leather etc.	37	40	23	
10	Inorganic matter	- sand/dust	63	30	7	
11		- rust	87	10	3	
12		- metal/wire	77	17	6	
13	Oily substances/chemicals	- grease/oil	83	17	0	
14		- rubber	80	13	7	
15		- stamp colour	80	17	3	
16		- tar	80	17	3	
Average of 1-16			61	27	12	
Stickiness		No (%)	Yes(%)	Seed-coat fragments		
		90	10	No (%)	Yes(%)	
				47	53	

Table 55

2016

Country Israel		Growth: Acala		Number of samples: 1		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	100	0	0	
2		- plastic film	0	0	100	
3		- jute/hessian	100	0	0	
4		- cotton	100	0	0	
5	Strings made of	- woven plastic	0	0	100	
6		- plastic film	100	0	0	
7		- jute/hessian	100	0	0	
8		- cotton	100	0	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	0	100	0	
10	Inorganic matter	- sand/dust	100	0	0	
11		- rust	100	0	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			81	6	13	
Stickiness		No (%)	Yes(%)	Seed-coat fragments		
		100	0	No (%)	Yes(%)	
				100	0	

Asia

Table 56

2016

Country Israel		Growth: Pima		Number of samples: 3		
Source of contamination		Degree of contamination (%)				
		Non- existent/ insignificant	Moderate	Serious		
1	Fabrics made of - woven plastic	100	0	0		
2	- plastic film	34	33	33		
3	- jute/hessian	67	33	0		
4	- cotton	100	0	0		
5	Strings made of - woven plastic	34	33	33		
6	- plastic film	67	33	0		
7	- jute/hessian	67	33	0		
8	- cotton	67	33	0		
9	Organic matter - leaves, feathers, paper, leather etc.	33	67	0		
10	Inorganic matter - sand/dust	67	33	0		
11	- rust	67	33	0		
12	- metal/wire	67	33	0		
13	Oily substances/chemicals - grease/oil	33	67	0		
14	- rubber	100	0	0		
15	- stamp colour	67	33	0		
16	- tar	100	0	0		
Average of 1-16		67	29	4		
Stickiness		No (%)	Yes(%)			
		100	0			
Seed-coat fragments		No (%)	Yes(%)			
		100	0			

Table 57

2016

Country Pakistan		Growth: MNH93		Number of samples: 3		
Source of contamination		Degree of contamination (%)				
		Non- existent/ insignificant	Moderate	Serious		
1	Fabrics made of - woven plastic	100	0	0		
2	- plastic film	67	33	0		
3	- jute/hessian	67	33	0		
4	- cotton	67	33	0		
5	Strings made of - woven plastic	67	33	0		
6	- plastic film	67	0	33		
7	- jute/hessian	33	67	0		
8	- cotton	67	33	0		
9	Organic matter - leaves, feathers, paper, leather etc.	0	67	33		
10	Inorganic matter - sand/dust	67	0	33		
11	- rust	100	0	0		
12	- metal/wire	67	33	0		
13	Oily substances/chemicals - grease/oil	67	33	0		
14	- rubber	100	0	0		
15	- stamp colour	100	0	0		
16	- tar	100	0	0		
Average of 1-16		71	23	6		
Stickiness		No (%)	Yes(%)			
		100	0			
Seed-coat fragments		No (%)	Yes(%)			
		67	33			

Asia

Table 58

2016

Country Pakistan		Growth: NAIB		Number of samples: 3		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of - woven plastic	100	0	0		
2	- plastic film	67	33	0		
3	- jute/hessian	67	33	0		
4	- cotton	67	33	0		
5	Strings made of - woven plastic	67	33	0		
6	- plastic film	67	0	33		
7	- jute/hessian	33	67	0		
8	- cotton	67	33	0		
9	Organic matter - leaves, feathers, paper, leather etc.	0	67	33		
10	Inorganic matter - sand/dust	33	33	33		
11	- rust	67	33	0		
12	- metal/wire	67	33	0		
13	Oily substances/chemicals - grease/oil	33	67	0		
14	- rubber	100	0	0		
15	- stamp colour	100	0	0		
16	- tar	100	0	0		
Average of 1-16		65	29	6		
	No (%)	Yes(%)		No (%)	Yes(%)	
Stickiness	100	0	Seed-coat fragments	33	67	

Table 59

2016

Country Pakistan		Growth: Pakistan-Others		Number of samples: 5		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of - woven plastic	0	80	20		
2	- plastic film	0	80	20		
3	- jute/hessian	20	80	0		
4	- cotton	20	80	0		
5	Strings made of - woven plastic	0	40	60		
6	- plastic film	0	80	20		
7	- jute/hessian	40	40	20		
8	- cotton	40	60	0		
9	Organic matter - leaves, feathers, paper, leather etc.	20	60	20		
10	Inorganic matter - sand/dust	40	40	20		
11	- rust	100	0	0		
12	- metal/wire	100	0	0		
13	Oily substances/chemicals - grease/oil	100	0	0		
14	- rubber	100	0	0		
15	- stamp colour	100	0	0		
16	- tar	100	0	0		
Average of 1-16		49	40	11		
	No (%)	Yes(%)		No (%)	Yes(%)	
Stickiness	80	20	Seed-coat fragments	40	60	

Asia

Table 60

2016

Country Syria		Growth: Syria		Number of samples: 1		
Source of contamination		Degree of contamination (%)				
		Non- existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	0	0	100	
2		- plastic film	0	0	100	
3		- jute/hessian	0	0	100	
4		- cotton	0	0	100	
5	Strings made of	- woven plastic	0	0	100	
6		- plastic film	0	0	100	
7		- jute/hessian	0	0	100	
8		- cotton	0	0	100	
9	Organic matter	- leaves, feathers, paper, leather etc.	0	0	100	
10	Inorganic matter	- sand/dust	0	0	100	
11		- rust	0	0	100	
12		- metal/wire	0	0	100	
13	Oily substances/chemicals	- grease/oil	0	0	100	
14		- rubber	0	0	100	
15		- stamp colour	0	100	0	
16		- tar	0	100	0	
Average of 1-16			0	12	88	
		No (%)	Yes(%)			
Stickiness		0	100	Seed-coat fragments		
				No (%)	Yes(%)	
				0	100	

Table 61

2016

Country Tajikistan		Growth: Long Staples		Number of samples: 1		
Source of contamination		Degree of contamination (%)				
		Non- existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	0	0	100	
2		- plastic film	0	0	100	
3		- jute/hessian	0	0	100	
4		- cotton	0	100	0	
5	Strings made of	- woven plastic	0	100	0	
6		- plastic film	0	0	100	
7		- jute/hessian	0	0	100	
8		- cotton	0	100	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	0	100	0	
10	Inorganic matter	- sand/dust	0	100	0	
11		- rust	0	100	0	
12		- metal/wire	0	100	0	
13	Oily substances/chemicals	- grease/oil	0	100	0	
14		- rubber	0	0	100	
15		- stamp colour	0	0	100	
16		- tar	0	0	100	
Average of 1-16			0	50	50	
		No (%)	Yes(%)			
Stickiness		100	0	Seed-coat fragments		
				No (%)	Yes(%)	
				100	0	

Asia

Table 62

2016

Country Tajikistan		Growth: Medium Staples		Number of samples: 4		
Source of contamination		Degree of contamination (%)				
		Non- existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	75	25	0	
2		- plastic film	75	25	0	
3		- jute/hessian	50	50	0	
4		- cotton	75	25	0	
5	Strings made of	- woven plastic	50	50	0	
6		- plastic film	25	75	0	
7		- jute/hessian	25	75	0	
8		- cotton	75	25	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	75	25	0	
10	Inorganic matter	- sand/dust	100	0	0	
11		- rust	100	0	0	
12		- metal/wire	75	25	0	
13	Oily substances/chemicals	- grease/oil	75	25	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			73	27	0	
Stickiness		No (%)	Yes(%)			
		100	0			
Seed-coat fragments		No (%)	Yes(%)			
		75	25			

Table 63

2016

Country Turkmenistan		Growth: Long Staples		Number of samples: 1		
Source of contamination		Degree of contamination (%)				
		Non- existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	0	100	0	
2		- plastic film	100	0	0	
3		- jute/hessian	0	100	0	
4		- cotton	100	0	0	
5	Strings made of	- woven plastic	100	0	0	
6		- plastic film	100	0	0	
7		- jute/hessian	0	100	0	
8		- cotton	100	0	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	0	100	0	
10	Inorganic matter	- sand/dust	0	100	0	
11		- rust	100	0	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			69	31	0	
Stickiness		No (%)	Yes(%)			
		0	100			
Seed-coat fragments		No (%)	Yes(%)			
		0	100			

Asia

Table 64

2016

Country Turkmenistan		Growth: Medium Staples		Number of samples: 4		
Source of contamination		Degree of contamination (%)				
		Non- existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	25	25	50	
2		- plastic film	25	50	25	
3		- jute/hessian	50	25	25	
4		- cotton	50	0	50	
5	Strings made of	- woven plastic	25	25	50	
6		- plastic film	25	50	25	
7		- jute/hessian	50	25	25	
8		- cotton	50	0	50	
9	Organic matter	- leaves, feathers, paper, leather etc.	0	75	25	
10	Inorganic matter	- sand/dust	25	50	25	
11		- rust	50	25	25	
12		- metal/wire	50	25	25	
13	Oily substances/chemicals	- grease/oil	75	25	0	
14		- rubber	75	25	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			48	27	25	
		No (%)	Yes(%)			
Stickiness		75	25			
		No (%)	Yes(%)			
Seed-coat fragments		50	50			

Table 65

2016

Country Uzbekistan		Growth: Medium Staples		Number of samples: 7		
Source of contamination		Degree of contamination (%)				
		Non- existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	86	0	14	
2		- plastic film	71	29	0	
3		- jute/hessian	43	57	0	
4		- cotton	57	29	14	
5	Strings made of	- woven plastic	57	29	14	
6		- plastic film	71	29	0	
7		- jute/hessian	57	43	0	
8		- cotton	57	29	14	
9	Organic matter	- leaves, feathers, paper, leather etc.	14	86	0	
10	Inorganic matter	- sand/dust	57	43	0	
11		- rust	86	14	0	
12		- metal/wire	71	29	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	86	14	0	
16		- tar	86	14	0	
Average of 1-16			69	28	3	
		No (%)	Yes(%)			
Stickiness		100	0			
		No (%)	Yes(%)			
Seed-coat fragments		86	14			

Europe

Table 66

2016

Country Greece		Growth: Greece		Number of samples: 8		
Source of contamination		Degree of contamination (%)				
		Non- existent/ insignificant	Moderate	Serious		
1	Fabrics made of - woven plastic	75	13	12		
2	- plastic film	75	13	12		
3	- jute/hessian	75	25	0		
4	- cotton	88	12	0		
5	Strings made of - woven plastic	75	25	0		
6	- plastic film	63	25	12		
7	- jute/hessian	38	37	25		
8	- cotton	50	50	0		
9	Organic matter - leaves, feathers, paper, leather etc.	13	87	0		
10	Inorganic matter - sand/dust	62	25	13		
11	- rust	75	13	12		
12	- metal/wire	75	25	0		
13	Oily substances/chemicals - grease/oil	88	12	0		
14	- rubber	100	0	0		
15	- stamp colour	88	0	12		
16	- tar	100	0	0		
Average of 1-16		71	23	6		
		No (%)	Yes(%)	No (%)	Yes(%)	
Stickiness		88	12	Seed-coat fragments	75 25	

Table 67

2016

Country Spain		Growth: Spain		Number of samples: 5		
Source of contamination		Degree of contamination (%)				
		Non- existent/ insignificant	Moderate	Serious		
1	Fabrics made of - woven plastic	80	20	0		
2	- plastic film	60	40	0		
3	- jute/hessian	80	0	20		
4	- cotton	100	0	0		
5	Strings made of - woven plastic	60	40	0		
6	- plastic film	20	80	0		
7	- jute/hessian	80	0	20		
8	- cotton	80	0	20		
9	Organic matter - leaves, feathers, paper, leather etc.	40	60	0		
10	Inorganic matter - sand/dust	60	40	0		
11	- rust	80	20	0		
12	- metal/wire	100	0	0		
13	Oily substances/chemicals - grease/oil	100	0	0		
14	- rubber	100	0	0		
15	- stamp colour	100	0	0		
16	- tar	100	0	0		
Average of 1-16		77	19	4		
		No (%)	Yes(%)	No (%)	Yes(%)	
Stickiness		80	20	Seed-coat fragments	60 40	

Europe

Table 68

2016

Country Turkey		Growth: Antalya		Number of samples: 1		
Source of contamination		Degree of contamination (%)				
		Non- existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	0	100	0	
2		- plastic film	0	100	0	
3		- jute/hessian	0	100	0	
4		- cotton	100	0	0	
5	Strings made of	- woven plastic	0	100	0	
6		- plastic film	100	0	0	
7		- jute/hessian	100	0	0	
8		- cotton	0	100	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	0	100	0	
10	Inorganic matter	- sand/dust	0	100	0	
11		- rust	100	0	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	0	100	0	
16		- tar	0	100	0	
Average of 1-16			44	56	0	
		No (%)	Yes(%)			
Stickiness		100	0	Seed-coat fragments		
				No (%)	Yes(%)	
				0	100	

Table 69

2016

Country Turkey		Growth: Cukurova/South		Number of samples: 1		
Source of contamination		Degree of contamination (%)				
		Non- existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	100	0	0	
2		- plastic film	0	100	0	
3		- jute/hessian	0	100	0	
4		- cotton	0	100	0	
5	Strings made of	- woven plastic	100	0	0	
6		- plastic film	100	0	0	
7		- jute/hessian	100	0	0	
8		- cotton	100	0	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	0	100	0	
10	Inorganic matter	- sand/dust	0	100	0	
11		- rust	100	0	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			69	31	0	
		No (%)	Yes(%)			
Stickiness		100	0	Seed-coat fragments		
				No (%)	Yes(%)	
				0	100	

Europe

Table 70

2016

Country Turkey		Growth: Izmir		Number of samples: 6		
Source of contamination		Degree of contamination (%)				
		Non- existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	67	33	0	
2		- plastic film	83	17	0	
3		- jute/hessian	50	50	0	
4		- cotton	50	50	0	
5	Strings made of	- woven plastic	50	33	17	
6		- plastic film	67	33	0	
7		- jute/hessian	67	33	0	
8		- cotton	50	50	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	67	17	16	
10	Inorganic matter	- sand/dust	83	17	0	
11		- rust	100	0	0	
12		- metal/wire	67	33	0	
13	Oily substances/chemicals	- grease/oil	83	17	0	
14		- rubber	100	0	0	
15		- stamp colour	83	17	0	
16		- tar	100	0	0	
Average of 1-16			73	25	2	
Stickiness		No (%)	Yes(%)			
		100	0			
Seed-coat fragments		No (%)	Yes(%)			
		50	50			

Table 71

2016

Country Turkey		Growth: Turkey-Others		Number of samples: 3		
Source of contamination		Degree of contamination (%)				
		Non- existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	0	67	33	
2		- plastic film	0	67	33	
3		- jute/hessian	34	33	33	
4		- cotton	0	67	33	
5	Strings made of	- woven plastic	0	67	33	
6		- plastic film	0	67	33	
7		- jute/hessian	34	33	33	
8		- cotton	34	33	33	
9	Organic matter	- leaves, feathers, paper, leather etc.	34	33	33	
10	Inorganic matter	- sand/dust	0	33	67	
11		- rust	0	67	33	
12		- metal/wire	33	0	67	
13	Oily substances/chemicals	- grease/oil	33	67	0	
14		- rubber	33	67	0	
15		- stamp colour	33	67	0	
16		- tar	33	67	0	
Average of 1-16			19	52	29	
Stickiness		No (%)	Yes(%)			
		100	0			
Seed-coat fragments		No (%)	Yes(%)			
		100	0			

Press Release

ITMF's Cotton Contamination Survey 2019 Contamination Level up and Stickiness Level down compared to 2016

“ITMF’s Cotton Contamination Survey 2019 shows that the level of contamination of raw cotton by foreign matters and the appearance of seed-coat fragments have increased compared with 2016, underscoring the importance of clean cotton to spinners. At the same time the level of stickiness has fallen slightly to the lowest level. Furthermore, the survey reveals that there are significant differences between cotton varieties when it comes to the level of contamination.” These are the main conclusions to be drawn from the “Cotton Contamination Survey 2019” which has just been released by the International Textile Manufacturers Federation (ITMF). This 15th edition covers 128 spinning mills located in 25 countries which evaluated 81 different cotton growths.

Contamination – increase

The level of cottons moderately or seriously contaminated as perceived by the spinning mills from around the world grew from 23% in 2016 to 26% in 2019. A closer look at the extent of the contamination shows that 7% (2016: 7%) of all cotton evaluated were seriously contaminated by some sort of foreign matter whereas 18% (2016: 18%) were only moderately contaminated. As the summary data are arithmetic averages of the different contaminants, the extent of contamination is fully illustrated by the results for the individual contaminants. They range from 6% all cottons processed being moderately or seriously contaminated by “tar” to 55% of them being moderately or seriously contaminated by “organic matter”, i.e. leaves, feathers, paper, leather, etc. Other serious contaminants are “strings made of plastic film” (39%), “fabrics made of plastic film” (39%), “strings made of woven plastic” (36%) as well as “fabrics made of woven plastic” (31%). The most contaminated cotton descriptions considered for the survey originated in India (MCU-5, J-34, India-Others, DCH), Pakistan (NAIB, Pakistan Others, MNH93), Tajikistan (Medium Staples) and Mozambique. In contrast, very clean raw cottons were produced in Australia, the USA, (Memphis Territory, California, Pima, South Eastern, Texas H. Plains and Arizona), Argentina, Brazil and Spain.

Stickiness – slight decrease

The presence of sticky cotton as perceived by the spinning mills is close to constant (i.e. 16% in 2016 vs. 15.7% in 2019) and remains at the lowest level since 1989. Descriptions that were affected most by stickiness were those from Sudan, the USA (Pima, USA-Others, Memphis Territory, Texas H. Plains, California, South Eastern), Mexico (Juarez) and Turkey (Turkey – Others). On the other end of the range, cottons from South Africa, Tanzania (Mwanza, Coastal), China (Shandong, Xinjiang), Mozambique, Chad, and Pakistan (MNH93, Pakistan – Others, NAIB) were not or hardly affected by stickiness.

Seed-coat fragments – increase

With regard to seed-coat fragments, the Cotton Contamination Survey 2019 shows that their appearance in cotton growths remains an issue for spinners around the world. 34% of all cotton growths consumed contained moderate or significant amounts of seed-coat fragments, a slight increase since 2016 (32%). The origins affected most by seed-coat fragments are those from Turkey (Turkey – Others, Cukurova / S.E.), India (India-Others, J-34, MCU-5), Sudan (Sudan – Others), and Pakistan (MNH93, Pakistan - Others). Countries for which the existence of seed-coat fragments were negligible included those from Tanzania (Coastal, Mwanza), India (Shankar-4/6), Australia, the USA (California, Pima, Memphis Territory, USA – Others, Texas H. Plains).

May 2020

Participation

Table I

2019

Participation in 2019 Survey			
Country	Number of respondents (participating companies)	Number of samples (evaluations)	Number of cotton growth evaluated *
Argentina	2	2	1
Austria	1	3	3
Bangladesh	13	215	48
Belgium	1	7	7
Brazil	8	9	2
China	20	108	32
Chinese Taipei	1	4	4
Ecuador	1	1	1
Egypt	4	16	11
Germany	1	5	5
India	19	108	26
India	2	10	7
Indonesia	6	32	17
Italy	3	11	8
Korea, Rep.	2	14	10
Malaysia	4	16	7
Mauritius	1	6	6
Mexico	3	9	5
Pakistan	12	101	39
Peru	3	16	10
South Africa	1	2	2
Spain	2	8	6
Turkey	8	70	25
U.S.A.	6	14	8
Vietnam	4	32	12
Total	128	819	-

* Divided among 81 cotton descriptions

Main Results

Table IIa

2019

Country All Countries		Growth: All Growths	Number of samples: 819		
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	69	21	10
2		- plastic film	61	28	11
3		- jute/hessian	80	13	6
4		- cotton	70	23	8
5	Strings made of	- woven plastic	64	22	14
6		- plastic film	61	26	13
7		- jute/hessian	70	21	9
8		- cotton	72	22	7
9	Organic matter	- leaves, feathers, paper, leather etc.	53	45	41
10	Inorganic matter	- sand/dust	70	22	8
11		- rust	87	10	3
12		- metal/wire	83	12	5
13	Oily substances/chemicals	- grease/oil	82	14	4
14		- rubber	93	5	2
15		- stamp colour	90	8	2
16		- tar	94	4	2
Average of 1-16			75	18	7
		No (%)	Yes (%)		
Stickiness		84	16		
		Seed-coat fragments		No (%)	Yes (%)
				66	34

Table IIb

Summary 1989-2019					
Year	Degree of Contamination (%)			Stickiness (%)	Seed-coat fragments (%)
	Non-existent/ insignificant	Moderate	Serious		
1989	86	9	5	21	0
1991	85	11	4	27	34
1993	85	11	4	26	36
1995	82	13	5	20	39
1997	82	13	5	23	32
1999	79	15	6	20	38
2001	78	16	6	18	40
2003	73	18	8	21	44
2005	78	15	7	17	37
2007	78	15	7	21	37
2009	78	16	6	13	27
2011	77	16	7	20	38
2013	73	18	8	23	42
2016	77	18	5	16	32
2019	75	18	7	16	34

Contamination

Table IIIa

2019

The Most Contaminated Descriptions						
Ranking	Description		Degree of Contamination (%) *			Number of Samples **
			Non-existent/ insignificant	Moderate	Serious	
1	India	MCU-5	47	30	23	26
2	Pakistan	NAIB	49	39	13	6
3	Tajikistan	Medium Staples	49	46	5	8
4	India	J-34	51	19	30	21
5	India	Shankar-4/6	53	25	21	42
6	India	India-Others	53	24	23	11
7	India	DCH	54	28	18	20
8	Pakistan	Pakistan-Others	54	39	7	6
9	Pakistan	MNH93	54	34	12	7
10	Mozambique	Mozambique	55	31	13	7
11	Turkey	Turkey-Others	55	20	25	8
12	Sudan	Sudan-Others	56	26	18	5
13	Turkey	Cukurova / S. E.	56	30	14	9
14	Turkey	Izmir	64	36	1	10
15	Afghanistan	Afghanistan	64	17	19	8

* Average degree of contamination by each of the 16 pre-indicated contaminants

** Minimum: 5 Samples

Contamination

Table IIIb

2019

The Least Contaminated Descriptions						
Ranking	Description		Degree of Contamination (%) *			Number of Samples **
			Non-existent/ insignificant	Moderate	Serious	
1	Australia	Australia	95	5	0	34
2	U.S.A.	Memphis Territory	94	5	1	42
3	U.S.A.	California	93	7	1	20
4	U.S.A.	Pima	92	6	2	43
5	U.S.A.	South Eastern	92	8	0	14
6	U.S.A.	Texas H. Plains	90	7	2	32
7	U.S.A.	Arizona	89	9	3	10
8	Argentina	Argentina	86	12	2	11
9	Brazil	Brazil	86	13	1	65
10	Spain	Spain	85	15	0	9
11	South Africa	South Africa	84	15	2	8
12	Greece	Greece	80	18	2	20
13	Burkina Faso	Burkina Faso	80	18	2	27
14	U.S.A.	USA-Others	80	14	7	18
15	Mexico	Juarez	79	8	13	6

* Average degree of contamination by each of the 16 pre-indicated contaminants

** Minimum: 5 Samples

Stickiness

Table IVa

2019

Descriptions Most Affected by Stickiness				
Ranking	Description		Affirmative replies (%)*	Number of Samples**
1	Sudan	Sudan-Others	80	5
2	U.S.A.	Pima	40	43
3	Brazil	Brazil	35	65
4	Mexico	Juarez	33	6
5	U.S.A.	USA-Others	33	18
6	Turkey	Turkey-Others	25	8
7	Afghanistan	Afghanistan	25	8
8	Turkey	Cukurova / S. E.	22	9
9	Argentina	Argentina	18	11
10	India	Shankar-4/6	17	42
11	Mali	Mali	17	18
12	U.S.A.	Memphis Territory	17	42
13	Benin	Benin	16	19
14	U.S.A.	Texas H. Plains	16	32
15	India	DCH	15	20

* Percentage of replies indicating the existence of stickiness

** Minimum 5 samples

Stickiness

Table IVb

2019

Descriptions Least Affected by Stickiness				
Ranking	Description		Affirmative replies (%)*	Number of Samples**
1	South Africa	South Africa	0	8
2	Tanzania	Mwanza	0	7
3	China	Shandong	0	6
4	Mozambique	Mozambique	0	7
5	Chad	Chad	0	5
6	Tanzania	Coastal	0	6
7	Pakistan	MNH93	0	7
8	Pakistan	Pakistan-Others	0	6
9	Pakistan	NAIB	0	6
10	Togo	Togo	0	8
11	Egypt	Giza	4	28
12	Greece	Greece	5	20
13	China	Xinjiang	6	18
14	Cameroon	Cameroon	6	16
15	Burkina Faso	Burkina Faso	7	27

* Percentage of replies indicating the existence of stickiness

** Minimum 5 samples

Seed-Coat Fragments

Table Va

2019

Descriptions Most Affected by Seed-Coat Fragments				
Ranking	Description		Affirmative replies (%)*	Number of Samples**
1	Turkey	Turkey-Others	75	8
2	India	India-Others	73	11
3	India	J-34	67	21
4	Sudan	Sudan-Others	60	5
5	Pakistan	MNH93	57	7
6	Spain	Spain	56	9
7	Pakistan	Pakistan-Others	50	6
8	Mexico	Juarez	50	6
9	Zambia	Zambia	50	8
10	Benin	Benin	47	19
11	India	MCU-5	46	26
12	Argentina	Argentina	45	11
13	Brazil	Brazil	45	65
14	Turkey	Cukurova / S. E.	44	9
15	Zimbabwe	Zimbabwe	43	7

* Percentage of replies indicating the existence of stickiness

** Minimum 5 samples

Seed-Coat Fragments

Table Vb

2019

Descriptions Least Affected by Seed-Coat Fragments				
Ranking	Description		Affirmative replies (%)*	Number of Samples**
1	Tanzania	Coastal	0	6
2	India	Shankar-4/6	0	42
3	Tanzania	Mwanza	14	7
4	China	Shandong	17	6
5	Australia	Australia	18	34
6	U.S.A.	California	20	20
7	U.S.A.	Memphis Territory	21	42
8	China	Xinjiang	22	18
9	U.S.A.	Pima	23	43
10	Togo	Togo	25	8
11	Greece	Greece	25	20
12	Afghanistan	Afghanistan	25	8
13	U.S.A.	USA-Others	28	18
14	U.S.A.	Texas H. Plains	28	32
15	Mozambique	Mozambique	29	7

* Percentage of replies indicating the existence of stickiness

** Minimum 5 samples

Africa

Table 1

2019

Country		Growth:		Number of samples:		
Angola		Angola		2		
Source of contamination			Degree of contamination (%)			
			Non- existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	100	0	0	
2		- plastic film	100	0	0	
3		- jute/hessian	100	0	0	
4		- cotton	33	67	0	
5	Strings made of	- woven plastic	100	0	0	
6		- plastic film	100	0	0	
7		- jute/hessian	100	0	0	
8		- cotton	33	67	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	100	0	0	
10	Inorganic matter	- sand/dust	100	0	0	
11		- rust	100	0	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			92	8	0	
			No (%)	Yes (%)		
Stickiness			100%	0%		
				No (%)	Yes (%)	
Seed-coat fragments				100%	0%	

Table 2

2019

Country		Growth:		Number of samples:		
Benin		Benin		19		
Source of contamination			Degree of contamination (%)			
			Non- existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	46	54	0	
2		- plastic film	36	64	0	
3		- jute/hessian	81	19	0	
4		- cotton	48	30	22	
5	Strings made of	- woven plastic	52	48	0	
6		- plastic film	31	69	0	
7		- jute/hessian	52	48	0	
8		- cotton	58	42	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	11	72	17	
10	Inorganic matter	- sand/dust	63	25	13	
11		- rust	77	9	14	
12		- metal/wire	65	35	0	
13	Oily substances/chemicals	- grease/oil	86	0	14	
14		- rubber	81	19	0	
15		- stamp colour	90	10	0	
16		- tar	90	10	0	
Average of 1-16			60	35	5	
			No (%)	Yes (%)		
Stickiness			84%	16%		
				No (%)	Yes (%)	
Seed-coat fragments				53%	47%	

Africa

Table 3

2019

Country		Burkina Faso		Growth: Burkina Faso		Number of samples:		27		
Source of contamination				Degree of contamination (%)						
				Non-existent/insignificant	Moderate	Serious				
1	Fabrics made of	- woven plastic		57	34	9				
2		- plastic film		42	58	0				
3		- jute/hessian		80	20	0				
4		- cotton		60	23	17				
5	Strings made of	- woven plastic		53	39	8				
6		- plastic film		33	47	21				
7		- jute/hessian		49	43	8				
8		- cotton		64	36	0				
9	Organic matter	- leaves, feathers, paper, leather etc.		31	62	7				
10	Inorganic matter	- sand/dust		74	26	0				
11		- rust		86	14	0				
12		- metal/wire		93	7	0				
13	Oily substances/chemicals	- grease/oil		86	14	0				
14		- rubber		100	0	0				
15		- stamp colour		86	14	0				
16		- tar		100	0	0				
Average of 1-16				68	27	4				
				No (%)	Yes (%)			No (%)	Yes (%)	
Stickiness				93%	7%			Seed-coat fragments	63%	37%

Table 4

2019

Country		Cameroon		Growth: Cameroon		Number of samples:		16		
Source of contamination				Degree of contamination (%)						
				Non-existent/insignificant	Moderate	Serious				
1	Fabrics made of	- woven plastic		60	40	0				
2		- plastic film		57	29	14				
3		- jute/hessian		78	22	0				
4		- cotton		36	40	24				
5	Strings made of	- woven plastic		60	40	0				
6		- plastic film		32	56	12				
7		- jute/hessian		60	40	0				
8		- cotton		28	72	0				
9	Organic matter	- leaves, feathers, paper, leather etc.		18	71	11				
10	Inorganic matter	- sand/dust		74	11	16				
11		- rust		78	22	0				
12		- metal/wire		88	12	0				
13	Oily substances/chemicals	- grease/oil		100	0	0				
14		- rubber		88	12	0				
15		- stamp colour		88	12	0				
16		- tar		100	0	0				
Average of 1-16				65	30	5				
				No (%)	Yes (%)			No (%)	Yes (%)	
Stickiness				94%	6%			Seed-coat fragments	63%	38%

Africa

Table 5

2019

Country Chad		Growth: Chad		Number of samples: 5		
Source of contamination			Degree of contamination (%)			
			Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	67	33	0	
2		- plastic film	67	33	0	
3		- jute/hessian	100	0	0	
4		- cotton	25	75	0	
5	Strings made of	- woven plastic	67	33	0	
6		- plastic film	67	33	0	
7		- jute/hessian	100	0	0	
8		- cotton	25	75	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	25	75	0	
10	Inorganic matter	- sand/dust	43	57	0	
11		- rust	100	0	0	
12		- metal/wire	67	33	0	
13	Oily substances/chemicals	- grease/oil	25	75	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			67	33	0	
			No (%)	Yes (%)		
Stickiness			100%	0%		
			No (%)		Yes (%)	
Seed-coat fragments			60%		40%	

Table 6

2019

Country Egypt		Growth: Giza		Number of samples: 28		
Source of contamination			Degree of contamination (%)			
			Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	48	10	43	
2		- plastic film	48	30	23	
3		- jute/hessian	48	30	23	
4		- cotton	61	22	17	
5	Strings made of	- woven plastic	40	33	28	
6		- plastic film	37	42	21	
7		- jute/hessian	38	48	14	
8		- cotton	63	29	9	
9	Organic matter	- leaves, feathers, paper, leather etc.	13	55	33	
10	Inorganic matter	- sand/dust	49	36	15	
11		- rust	68	24	9	
12		- metal/wire	61	22	17	
13	Oily substances/chemicals	- grease/oil	68	24	9	
14		- rubber	73	18	9	
15		- stamp colour	57	27	16	
16		- tar	93	7	0	
Average of 1-16			54	28	18	
			No (%)	Yes (%)		
Stickiness			96%	4%		
			No (%)		Yes (%)	
Seed-coat fragments			64%		36%	

Africa

Table 7

2019

Country Egypt		Growth: Egypt- Others		Number of samples: 1		
Source of contamination			Degree of contamination (%)			
			Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	100	0	0	
2		- plastic film	100	0	0	
3		- jute/hessian	0	100	0	
4		- cotton	100	0	0	
5	Strings made of	- woven plastic	0	100	0	
6		- plastic film	0	100	0	
7		- jute/hessian	0	100	0	
8		- cotton	100	0	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	0	100	0	
10	Inorganic matter	- sand/dust	100	0	0	
11		- rust	100	0	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			69	31	0	
			No (%)	Yes (%)		
Stickiness			100%	0%		
			No (%)		Yes (%)	
Seed-coat fragments			100%		0%	

Table 8

2019

Country Ethiopia		Growth: Ethiopia		Number of samples: 3		
Source of contamination			Degree of contamination (%)			
			Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	20	80	0	
2		- plastic film	20	80	0	
3		- jute/hessian	20	80	0	
4		- cotton	20	80	0	
5	Strings made of	- woven plastic	0	57	43	
6		- plastic film	0	57	43	
7		- jute/hessian	0	100	0	
8		- cotton	20	80	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	0	100	0	
10	Inorganic matter	- sand/dust	100	0	0	
11		- rust	100	0	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	20	80	0	
14		- rubber	100	0	0	
15		- stamp colour	20	80	0	
16		- tar	100	0	0	
Average of 1-16			40	55	5	
			No (%)	Yes (%)		
Stickiness			100%	0%		
			No (%)		Yes (%)	
Seed-coat fragments			100%		0%	

Africa

Table 9

2019

Country		Growth:		Number of samples:		
Ghana		Ghana		2		
Source of contamination				Degree of contamination (%)		
				Non-existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic	0	100	0	
2		- plastic film	0	100	0	
3		- jute/hessian	0	100	0	
4		- cotton	0	100	0	
5	Strings made of	- woven plastic	0	100	0	
6		- plastic film	0	100	0	
7		- jute/hessian	0	100	0	
8		- cotton	0	100	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	0	100	0	
10	Inorganic matter	- sand/dust	100	0	0	
11		- rust	100	0	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	0	100	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			38	63	0	
Stickiness		No (%)	Yes (%)			
		100%	0%			
Seed-coat fragments		No (%)	Yes (%)			
		100%	0%			

Table 10

2019

Country		Growth:		Number of samples:		
Ivory Coast		Ivory Coast		23		
Source of contamination				Degree of contamination (%)		
				Non-existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic	52	39	10	
2		- plastic film	39	61	0	
3		- jute/hessian	92	8	0	
4		- cotton	84	16	0	
5	Strings made of	- woven plastic	53	19	28	
6		- plastic film	36	39	25	
7		- jute/hessian	59	41	0	
8		- cotton	59	41	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	18	75	8	
10	Inorganic matter	- sand/dust	64	36	0	
11		- rust	68	21	11	
12		- metal/wire	68	21	11	
13	Oily substances/chemicals	- grease/oil	74	15	11	
14		- rubber	92	8	0	
15		- stamp colour	84	16	0	
16		- tar	92	8	0	
Average of 1-16			65	29	6	
Stickiness		No (%)	Yes (%)			
		91%	9%			
Seed-coat fragments		No (%)	Yes (%)			
		61%	39%			

Africa

Table 11

2019

Country		Growth:		Number of samples:		
Madagascar		Madagascar		2		
Source of contamination				Degree of contamination (%)		
				Non-existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic	0	100	0	
2		- plastic film	0	100	0	
3		- jute/hessian	0	100	0	
4		- cotton	0	100	0	
5	Strings made of	- woven plastic	0	100	0	
6		- plastic film	0	100	0	
7		- jute/hessian	0	100	0	
8		- cotton	0	100	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	0	100	0	
10	Inorganic matter	- sand/dust	100	0	0	
11		- rust	100	0	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	0	100	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			38	63	0	
Stickiness		No (%)	Yes (%)			
		100%	0%			
Seed-coat fragments		No (%)	Yes (%)			
		100%	0%			

Table 12

2019

Country		Growth:		Number of samples:		
Malawi		Malawi		2		
Source of contamination				Degree of contamination (%)		
				Non-existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic	0	100	0	
2		- plastic film	0	100	0	
3		- jute/hessian	100	0	0	
4		- cotton	100	0	0	
5	Strings made of	- woven plastic	0	100	0	
6		- plastic film	0	100	0	
7		- jute/hessian	0	100	0	
8		- cotton	0	100	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	0	100	0	
10	Inorganic matter	- sand/dust	100	0	0	
11		- rust	100	0	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			56	44	0	
Stickiness		No (%)	Yes (%)			
		100%	0%			
Seed-coat fragments		No (%)	Yes (%)			
		0%	100%			

Africa

Table 13

2019

Country		Mali		Growth:		Mali		Number of samples:		18	
Source of contamination						Degree of contamination (%)					
						Non-existent/insignificant		Moderate		Serious	
1	Fabrics made of	- woven plastic		64	36	0					
2		- plastic film		38	62	0					
3		- jute/hessian		80	20	0					
4		- cotton		64	36	0					
5	Strings made of	- woven plastic		41	37	22					
6		- plastic film		30	40	30					
7		- jute/hessian		64	36	0					
8		- cotton		64	36	0					
9	Organic matter	- leaves, feathers, paper, leather etc.		23	58	19					
10	Inorganic matter	- sand/dust		54	33	13					
11		- rust		76	10	14					
12		- metal/wire		64	36	0					
13	Oily substances/chemicals	- grease/oil		54	33	13					
14		- rubber		89	11	0					
15		- stamp colour		100	0	0					
16		- tar		89	11	0					
Average of 1-16				62	31	7					
						No (%)		Yes (%)			
Stickiness						83%	17%	Seed-coat fragments		67%	33%

Table 14

2019

Country		Mozambique		Growth:		Mozambique		Number of samples:		7	
Source of contamination						Degree of contamination (%)					
						Non-existent/insignificant		Moderate		Serious	
1	Fabrics made of	- woven plastic		15	62	23					
2		- plastic film		15	62	23					
3		- jute/hessian		75	25	0					
4		- cotton		17	83	0					
5	Strings made of	- woven plastic		6	38	56					
6		- plastic film		7	53	40					
7		- jute/hessian		6	38	56					
8		- cotton		23	31	46					
9	Organic matter	- leaves, feathers, paper, leather etc.		0	63	38					
10	Inorganic matter	- sand/dust		56	44	0					
11		- rust		100	0	0					
12		- metal/wire		67	0	33					
13	Oily substances/chemicals	- grease/oil		56	44	0					
14		- rubber		100	0	0					
15		- stamp colour		100	0	0					
16		- tar		100	0	0					
Average of 1-16				46	34	20					
						No (%)		Yes (%)			
Stickiness						100%	0%	Seed-coat fragments		71%	29%

Africa

Table 15

2019

Country		Growth:		Number of samples:		
Nigeria		Nigeria		4		
Source of contamination				Degree of contamination (%)		
				Non-existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic		13	50	38
2		- plastic film		0	67	33
3		- jute/hessian		0	100	0
4		- cotton		0	100	0
5	Strings made of	- woven plastic		10	0	90
6		- plastic film		0	18	82
7		- jute/hessian		0	40	60
8		- cotton		25	0	75
9	Organic matter	- leaves, feathers, paper, leather etc.		10	0	90
10	Inorganic matter	- sand/dust		50	0	50
11		- rust		100	0	0
12		- metal/wire		50	0	50
13	Oily substances/chemicals	- grease/oil		0	100	0
14		- rubber		14	86	0
15		- stamp colour		14	86	0
16		- tar		60	40	0
Average of 1-16				22	43	35
Stickiness						
		No (%)	Yes (%)			
		100%	0%			
Seed-coat fragments						
		No (%)	Yes (%)			
		0%	100%			

Table 16

2019

Country		Growth:		Number of samples:		
Senegal		Senegal		1		
Source of contamination				Degree of contamination (%)		
				Non-existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic		100	0	0
2		- plastic film		100	0	0
3		- jute/hessian		100	0	0
4		- cotton		100	0	0
5	Strings made of	- woven plastic		100	0	0
6		- plastic film		100	0	0
7		- jute/hessian		100	0	0
8		- cotton		100	0	0
9	Organic matter	- leaves, feathers, paper, leather etc.		100	0	0
10	Inorganic matter	- sand/dust		100	0	0
11		- rust		100	0	0
12		- metal/wire		100	0	0
13	Oily substances/chemicals	- grease/oil		100	0	0
14		- rubber		100	0	0
15		- stamp colour		100	0	0
16		- tar		100	0	0
Average of 1-16				100	0	0
Stickiness						
		No (%)	Yes (%)			
		100%	0%			
Seed-coat fragments						
		No (%)	Yes (%)			
		100%	0%			

Africa

Table 17

2019

Country		South Africa		Growth: South Africa		Number of samples:		8	
Source of contamination				Degree of contamination (%)					
				Non-existent/ insignificant	Moderate	Serious			
1	Fabrics made of	- woven plastic	60	40	0				
2		- plastic film	42	33	25				
3		- jute/hessian	100	0	0				
4		- cotton	100	0	0				
5	Strings made of	- woven plastic	45	55	0				
6		- plastic film	42	33	25				
7		- jute/hessian	78	22	0				
8		- cotton	100	0	0				
9	Organic matter	- leaves, feathers, paper, leather etc.	23	77	0				
10	Inorganic matter	- sand/dust	45	55	0				
11		- rust	78	22	0				
12		- metal/wire	100	0	0				
13	Oily substances/chemicals	- grease/oil	100	0	0				
14		- rubber	100	0	0				
15		- stamp colour	100	0	0				
16		- tar	100	0	0				
Average of 1-16			76	21	3				
		No (%)	Yes (%)			No (%)	Yes (%)		
Stickiness		100%	0%	Seed-coat fragments		63%	38%		

Table 18

2019

Country		Sudan		Growth: Barakat		Number of samples:		1	
Source of contamination				Degree of contamination (%)					
				Non-existent/ insignificant	Moderate	Serious			
1	Fabrics made of	- woven plastic	0	0	100				
2		- plastic film	0	0	100				
3		- jute/hessian	100	0	0				
4		- cotton	100	0	0				
5	Strings made of	- woven plastic	0	100	0				
6		- plastic film	0	100	0				
7		- jute/hessian	100	0	0				
8		- cotton	100	0	0				
9	Organic matter	- leaves, feathers, paper, leather etc.	0	0	100				
10	Inorganic matter	- sand/dust	0	0	100				
11		- rust	0	0	100				
12		- metal/wire	0	0	100				
13	Oily substances/chemicals	- grease/oil	0	0	100				
14		- rubber	0	0	100				
15		- stamp colour	0	0	100				
16		- tar	100	0	0				
Average of 1-16			31	13	56				
		No (%)	Yes (%)			No (%)	Yes (%)		
Stickiness		100%	0%	Seed-coat fragments		100%	0%		

Africa

Table 19

2019

Country		Growth:		Number of samples:		
Sudan		Shambat		1		
Source of contamination				Degree of contamination (%)		
				Non-existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic		100	0	0
2		- plastic film		100	0	0
3		- jute/hessian		100	0	0
4		- cotton		100	0	0
5	Strings made of	- woven plastic		100	0	0
6		- plastic film		100	0	0
7		- jute/hessian		100	0	0
8		- cotton		100	0	0
9	Organic matter	- leaves, feathers, paper, leather etc.		100	0	0
10	Inorganic matter	- sand/dust		100	0	0
11		- rust		100	0	0
12		- metal/wire		100	0	0
13	Oily substances/chemicals	- grease/oil		100	0	0
14		- rubber		100	0	0
15		- stamp colour		100	0	0
16		- tar		100	0	0
Average of 1-16				100	0	0
Stickiness		No (%)	Yes (%)	Seed-coat fragments		
		0%	100%	No (%)	Yes (%)	
				100%	0%	

Table 20

2019

Country		Growth:		Number of samples:		
Sudan		Sudan-Others		5		
Source of contamination				Degree of contamination (%)		
				Non-existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic		9	36	55
2		- plastic film		10	60	30
3		- jute/hessian		20	20	60
4		- cotton		67	33	0
5	Strings made of	- woven plastic		10	60	30
6		- plastic film		25	75	0
7		- jute/hessian		22	44	33
8		- cotton		67	33	0
9	Organic matter	- leaves, feathers, paper, leather etc.		20	20	60
10	Inorganic matter	- sand/dust		10	60	30
11		- rust		57	0	43
12		- metal/wire		67	33	0
13	Oily substances/chemicals	- grease/oil		57	0	43
14		- rubber		57	0	43
15		- stamp colour		57	0	43
16		- tar		100	0	0
Average of 1-16				41	30	29
Stickiness		No (%)	Yes (%)	Seed-coat fragments		
		20%	80%	No (%)	Yes (%)	
				40%	60%	

Africa

Table 21

2019

Country		Tanzania		Growth: Coastal		Number of samples:		6	
Source of contamination				Degree of contamination (%)					
				Non-existent/ insignificant	Moderate	Serious			
1	Fabrics made of	- woven plastic	71	29	0				
2		- plastic film	71	29	0				
3		- jute/hessian	50	50	0				
4		- cotton	33	67	0				
5	Strings made of	- woven plastic	63	0	38				
6		- plastic film	44	22	33				
7		- jute/hessian	50	50	0				
8		- cotton	50	50	0				
9	Organic matter	- leaves, feathers, paper, leather etc.	40	0	60				
10	Inorganic matter	- sand/dust	50	50	0				
11		- rust	100	0	0				
12		- metal/wire	71	29	0				
13	Oily substances/chemicals	- grease/oil	50	50	0				
14		- rubber	71	29	0				
15		- stamp colour	71	29	0				
16		- tar	71	29	0				
Average of 1-16			60	32	8				
Stickiness		No (%)	Yes (%)						
		100%	0%						
Seed-coat fragments		No (%)	Yes (%)						
		100%	0%						

Table 22

2019

Country		Tanzania		Growth: Mwanza		Number of samples:		7	
Source of contamination				Degree of contamination (%)					
				Non-existent/ insignificant	Moderate	Serious			
1	Fabrics made of	- woven plastic	40	60	0				
2		- plastic film	40	60	0				
3		- jute/hessian	56	44	0				
4		- cotton	17	83	0				
5	Strings made of	- woven plastic	40	60	0				
6		- plastic film	40	60	0				
7		- jute/hessian	27	73	0				
8		- cotton	17	83	0				
9	Organic matter	- leaves, feathers, paper, leather etc.	40	60	0				
10	Inorganic matter	- sand/dust	56	44	0				
11		- rust	100	0	0				
12		- metal/wire	100	0	0				
13	Oily substances/chemicals	- grease/oil	56	44	0				
14		- rubber	100	0	0				
15		- stamp colour	56	44	0				
16		- tar	100	0	0				
Average of 1-16			55	45	0				
Stickiness		No (%)	Yes (%)						
		100%	0%						
Seed-coat fragments		No (%)	Yes (%)						
		86%	14%						

Africa

Table 23

2019

Country		Togo		Growth: Togo		Number of samples:		8	
Source of contamination				Degree of contamination (%)					
				Non-existent/ insignificant	Moderate	Serious			
1	Fabrics made of	- woven plastic	45	55	0				
2		- plastic film	60	40	0				
3		- jute/hessian	78	22	0				
4		- cotton	45	55	0				
5	Strings made of	- woven plastic	45	55	0				
6		- plastic film	45	55	0				
7		- jute/hessian	45	55	0				
8		- cotton	23	77	0				
9	Organic matter	- leaves, feathers, paper, leather etc.	45	55	0				
10	Inorganic matter	- sand/dust	70	0	30				
11		- rust	100	0	0				
12		- metal/wire	78	22	0				
13	Oily substances/chemicals	- grease/oil	100	0	0				
14		- rubber	100	0	0				
15		- stamp colour	100	0	0				
16		- tar	100	0	0				
Average of 1-16			68	31	2				
		No (%)	Yes (%)			No (%)	Yes (%)		
Stickiness		100%	0%	Seed-coat fragments		75%	25%		

Table 24

2019

Country		Uganda		Growth: Uganda		Number of samples:		9	
Source of contamination				Degree of contamination (%)					
				Non-existent/ insignificant	Moderate	Serious			
1	Fabrics made of	- woven plastic	46	31	23				
2		- plastic film	46	31	23				
3		- jute/hessian	58	17	25				
4		- cotton	46	31	23				
5	Strings made of	- woven plastic	33	27	40				
6		- plastic film	46	31	23				
7		- jute/hessian	46	31	23				
8		- cotton	27	53	20				
9	Organic matter	- leaves, feathers, paper, leather etc.	36	43	21				
10	Inorganic matter	- sand/dust	80	20	0				
11		- rust	100	0	0				
12		- metal/wire	64	36	0				
13	Oily substances/chemicals	- grease/oil	80	20	0				
14		- rubber	100	0	0				
15		- stamp colour	80	20	0				
16		- tar	64	36	0				
Average of 1-16			60	27	14				
		No (%)	Yes (%)			No (%)	Yes (%)		
Stickiness		89%	11%	Seed-coat fragments		67%	33%		

Africa

Table 25

2019

Country Zambia		Growth: Zambia		Number of samples: 8		
Source of contamination			Degree of contamination (%)			
			Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	38	15	46	
2		- plastic film	29	29	43	
3		- jute/hessian	33	67	0	
4		- cotton	21	57	21	
5	Strings made of	- woven plastic	38	15	46	
6		- plastic film	20	40	40	
7		- jute/hessian	31	46	23	
8		- cotton	33	67	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	31	46	23	
10	Inorganic matter	- sand/dust	45	55	0	
11		- rust	100	0	0	
12		- metal/wire	78	22	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			56	29	15	
			No (%)	Yes (%)		
Stickiness			88%	13%		
			No (%)	Yes (%)		
Seed-coat fragments			50%	50%		

Table 26

2019

Country Zimbabwe		Growth: Zimbabwe		Number of samples: 7		
Source of contamination			Degree of contamination (%)			
			Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	40	60	0	
2		- plastic film	25	50	25	
3		- jute/hessian	100	0	0	
4		- cotton	50	20	30	
5	Strings made of	- woven plastic	27	73	0	
6		- plastic film	36	36	27	
7		- jute/hessian	36	36	27	
8		- cotton	36	36	27	
9	Organic matter	- leaves, feathers, paper, leather etc.	14	43	43	
10	Inorganic matter	- sand/dust	50	20	30	
11		- rust	67	0	33	
12		- metal/wire	50	20	30	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			58	25	17	
			No (%)	Yes (%)		
Stickiness			86%	14%		
			No (%)	Yes (%)		
Seed-coat fragments			57%	43%		

America, North

Table 27

2019

Country Mexico		Growth: Juarez		Number of samples: 6		
Source of contamination			Degree of contamination (%)			
			Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	44	22	33	
2		- plastic film	44	22	33	
3		- jute/hessian	63	0	38	
4		- cotton	63	0	38	
5	Strings made of	- woven plastic	44	22	33	
6		- plastic film	44	22	33	
7		- jute/hessian	100	0	0	
8		- cotton	63	0	38	
9	Organic matter	- leaves, feathers, paper, leather etc.	30	40	30	
10	Inorganic matter	- sand/dust	30	40	30	
11		- rust	63	0	38	
12		- metal/wire	63	0	38	
13	Oily substances/chemicals	- grease/oil	63	0	38	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			63	11	26	
			No (%)	Yes (%)		
Stickiness			67%	33%		
			No (%)	Yes (%)		
Seed-coat fragments			50%	50%		

Table 28

2019

Country Mexico		Growth: Laguna/elicias		Number of samples: 4		
Source of contamination			Degree of contamination (%)			
			Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	29	29	43	
2		- plastic film	13	50	38	
3		- jute/hessian	100	0	0	
4		- cotton	50	0	50	
5	Strings made of	- woven plastic	11	22	67	
6		- plastic film	13	50	38	
7		- jute/hessian	100	0	0	
8		- cotton	50	0	50	
9	Organic matter	- leaves, feathers, paper, leather etc.	50	0	50	
10	Inorganic matter	- sand/dust	29	29	43	
11		- rust	100	0	0	
12		- metal/wire	50	0	50	
13	Oily substances/chemicals	- grease/oil	50	0	50	
14		- rubber	100	0	0	
15		- stamp colour	60	40	0	
16		- tar	100	0	0	
Average of 1-16			56	14	30	
			No (%)	Yes (%)		
Stickiness			50%	50%		
			No (%)	Yes (%)		
Seed-coat fragments			75%	25%		

America, North

Table 29

2019

Country Mexico		Growth: Mexicali		Number of samples: 2		
Source of contamination			Degree of contamination (%)			
			Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	33	67	0	
2		- plastic film	33	67	0	
3		- jute/hessian	25	0	75	
4		- cotton	33	67	0	
5	Strings made of	- woven plastic	25	0	75	
6		- plastic film	25	0	75	
7		- jute/hessian	25	0	75	
8		- cotton	33	67	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	25	0	75	
10	Inorganic matter	- sand/dust	33	67	0	
11		- rust	100	0	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	33	67	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			52	25	23	
			No (%)	Yes (%)		
Stickiness			100%	0%		
			No (%)	Yes (%)		
Seed-coat fragments			100%	0%		

Country Mexico		Growth: Mexico-Others		Number of samples: 10		
Source of contamination			Degree of contamination (%)			
			Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	38	25	38	
2		- plastic film	29	35	35	
3		- jute/hessian	57	0	43	
4		- cotton	62	15	23	
5	Strings made of	- woven plastic	38	25	38	
6		- plastic film	29	35	35	
7		- jute/hessian	47	13	40	
8		- cotton	47	13	40	
9	Organic matter	- leaves, feathers, paper, leather etc.	16	53	32	
10	Inorganic matter	- sand/dust	50	29	21	
11		- rust	50	29	21	
12		- metal/wire	40	40	20	
13	Oily substances/chemicals	- grease/oil	47	13	40	
14		- rubber	57	0	43	
15		- stamp colour	62	15	23	
16		- tar	75	0	25	
Average of 1-16			46	21	32	
			No (%)	Yes (%)		
Stickiness			90%	10%		
			No (%)	Yes (%)		
Seed-coat fragments			60%	40%		

America, North

Table 30

2019

Country U.S.A.		Growth: Arizona		Number of samples: 10		
Source of contamination			Degree of contamination (%)			
			Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	67	33	0	
2		- plastic film	82	18	0	
3		- jute/hessian	100	0	0	
4		- cotton	82	18	0	
5	Strings made of	- woven plastic	100	0	0	
6		- plastic film	100	0	0	
7		- jute/hessian	100	0	0	
8		- cotton	82	18	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	43	57	0	
10	Inorganic matter	- sand/dust	54	46	0	
11		- rust	62	15	23	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	62	15	23	
14		- rubber	100	0	0	
15		- stamp colour	75	0	25	
16		- tar	75	0	25	
Average of 1-16			80	14	6	
			No (%)	Yes (%)		
Stickiness			90%	10%		
			No (%)	Yes (%)		
Seed-coat fragments			70%	30%		

Table 31

2019

Country U.S.A.		Growth: California		Number of samples: 20		
Source of contamination			Degree of contamination (%)			
			Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	82	18	0	
2		- plastic film	74	26	0	
3		- jute/hessian	90	10	0	
4		- cotton	90	10	0	
5	Strings made of	- woven plastic	90	10	0	
6		- plastic film	74	26	0	
7		- jute/hessian	78	9	13	
8		- cotton	90	10	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	74	26	0	
10	Inorganic matter	- sand/dust	82	18	0	
11		- rust	90	10	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	82	18	0	
14		- rubber	86	0	14	
15		- stamp colour	100	0	0	
16		- tar	90	10	0	
Average of 1-16			86	12	2	
			No (%)	Yes (%)		
Stickiness			85%	15%		
			No (%)	Yes (%)		
Seed-coat fragments			80%	20%		

America, North

Table 32

2019

Country		Growth:		Number of samples:		
U.S.A.		El Paso		3		
Source of contamination				Degree of contamination (%)		
				Non-existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic		100	0	0
2		- plastic film		50	50	0
3		- jute/hessian		100	0	0
4		- cotton		100	0	0
5	Strings made of	- woven plastic		50	50	0
6		- plastic film		50	50	0
7		- jute/hessian		100	0	0
8		- cotton		100	0	0
9	Organic matter	- leaves, feathers, paper, leather etc.		50	50	0
10	Inorganic matter	- sand/dust		50	50	0
11		- rust		100	0	0
12		- metal/wire		100	0	0
13	Oily substances/chemicals	- grease/oil		100	0	0
14		- rubber		100	0	0
15		- stamp colour		100	0	0
16		- tar		100	0	0
Average of 1-16				84	16	0
			No (%)	Yes (%)		
Stickiness			67%	33%		
			No (%)	Yes (%)		
Seed-coat fragments			100%	0%		

Table 33

2019

Country		Growth:		Number of samples:		
U.S.A.		Memphis Territory		42		
Source of contamination				Degree of contamination (%)		
				Non-existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic		78	4	18
2		- plastic film		65	23	12
3		- jute/hessian		100	0	0
4		- cotton		95	5	0
5	Strings made of	- woven plastic		77	17	6
6		- plastic film		72	16	12
7		- jute/hessian		91	9	0
8		- cotton		100	0	0
9	Organic matter	- leaves, feathers, paper, leather etc.		68	32	0
10	Inorganic matter	- sand/dust		83	17	0
11		- rust		100	0	0
12		- metal/wire		100	0	0
13	Oily substances/chemicals	- grease/oil		91	9	0
14		- rubber		100	0	0
15		- stamp colour		100	0	0
16		- tar		100	0	0
Average of 1-16				89	8	3
			No (%)	Yes (%)		
Stickiness			83%	17%		
			No (%)	Yes (%)		
Seed-coat fragments			79%	21%		

America, North

Table 34

2019

Country U.S.A.		Growth: Pima	Number of samples: 43		
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	89	4	7
2		- plastic film	71	24	6
3		- jute/hessian	95	5	0
4		- cotton	95	5	0
5	Strings made of	- woven plastic	65	7	27
6		- plastic film	74	20	6
7		- jute/hessian	87	0	13
8		- cotton	95	5	0
9	Organic matter	- leaves, feathers, paper, leather etc.	47	47	5
10	Inorganic matter	- sand/dust	79	21	0
11		- rust	100	0	0
12		- metal/wire	100	0	0
13	Oily substances/chemicals	- grease/oil	85	9	6
14		- rubber	100	0	0
15		- stamp colour	100	0	0
16		- tar	91	9	0
Average of 1-16			86	10	4
Stickiness		No (%)	Yes (%)		
		60%	40%	Seed-coat fragments	No (%)
					Yes (%)
					77%
					23%

Table 35

2019

Country U.S.A.		Growth: Rio Grande Val.	Number of samples: 2		
Source of contamination		Degree of contamination (%)			
		Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	100	0	0
2		- plastic film	100	0	0
3		- jute/hessian	100	0	0
4		- cotton	100	0	0
5	Strings made of	- woven plastic	100	0	0
6		- plastic film	100	0	0
7		- jute/hessian	100	0	0
8		- cotton	100	0	0
9	Organic matter	- leaves, feathers, paper, leather etc.	100	0	0
10	Inorganic matter	- sand/dust	100	0	0
11		- rust	100	0	0
12		- metal/wire	100	0	0
13	Oily substances/chemicals	- grease/oil	100	0	0
14		- rubber	100	0	0
15		- stamp colour	100	0	0
16		- tar	100	0	0
Average of 1-16			100	0	0
Stickiness		No (%)	Yes (%)		
		100%	0%	Seed-coat fragments	No (%)
					Yes (%)
					0%
					100%

America, North

Table 36

2019

Country U.S.A.		Growth: South Eastern		Number of samples: 14		
Source of contamination			Degree of contamination (%)			
			Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	100	0	0	
2		- plastic film	75	25	0	
3		- jute/hessian	100	0	0	
4		- cotton	87	13	0	
5	Strings made of	- woven plastic	87	13	0	
6		- plastic film	75	25	0	
7		- jute/hessian	75	25	0	
8		- cotton	87	13	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	56	44	0	
10	Inorganic matter	- sand/dust	65	35	0	
11		- rust	100	0	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	87	13	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			87	13	0	
			No (%)	Yes (%)		
Stickiness			86%	14%		
			No (%)	Yes (%)		
Seed-coat fragments			64%	36%		

Table 37

2019

Country U.S.A.		Growth: SouthEastern		Number of samples: 3		
Source of contamination			Degree of contamination (%)			
			Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	100	0	0	
2		- plastic film	100	0	0	
3		- jute/hessian	100	0	0	
4		- cotton	100	0	0	
5	Strings made of	- woven plastic	100	0	0	
6		- plastic film	100	0	0	
7		- jute/hessian	100	0	0	
8		- cotton	100	0	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	20	80	0	
10	Inorganic matter	- sand/dust	100	0	0	
11		- rust	100	0	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			95	5	0	
			No (%)	Yes (%)		
Stickiness			100%	0%		
			No (%)	Yes (%)		
Seed-coat fragments			33%	67%		

America, North

Table 38

2019

Country		Growth:		Number of samples:		
U.S.A.		Texas H. Plains		32		
Source of contamination				Degree of contamination (%)		
				Non-existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic		56	23	21
2		- plastic film		57	29	14
3		- jute/hessian		100	0	0
4		- cotton		81	11	8
5	Strings made of	- woven plastic		68	32	0
6		- plastic film		76	16	8
7		- jute/hessian		94	6	0
8		- cotton		100	0	0
9	Organic matter	- leaves, feathers, paper, leather etc.		49	31	20
10	Inorganic matter	- sand/dust		71	21	8
11		- rust		88	12	0
12		- metal/wire		100	0	0
13	Oily substances/chemicals	- grease/oil		86	6	9
14		- rubber		100	0	0
15		- stamp colour		100	0	0
16		- tar		100	0	0
Average of 1-16				83	12	6
			No (%)	Yes (%)		
Stickiness			84%	16%		
			No (%)	Yes (%)		
Seed-coat fragments			72%	28%		

Table 39

2019

Country		Growth:		Number of samples:		
U.S.A.		USA-Others		18		
Source of contamination				Degree of contamination (%)		
				Non-existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic		52	24	24
2		- plastic film		24	30	45
3		- jute/hessian		85	0	15
4		- cotton		64	36	0
5	Strings made of	- woven plastic		37	52	11
6		- plastic film		32	19	48
7		- jute/hessian		65	9	26
8		- cotton		89	11	0
9	Organic matter	- leaves, feathers, paper, leather etc.		48	40	12
10	Inorganic matter	- sand/dust		64	36	0
11		- rust		80	20	0
12		- metal/wire		89	11	0
13	Oily substances/chemicals	- grease/oil		68	18	14
14		- rubber		85	0	15
15		- stamp colour		89	11	0
16		- tar		89	11	0
Average of 1-16				66	20	13
			No (%)	Yes (%)		
Stickiness			67%	33%		
			No (%)	Yes (%)		
Seed-coat fragments			72%	28%		

America, South

Table 40

2019

Country		Growth:		Number of samples:		
Argentina		Argentina		11		
Source of contamination				Degree of contamination (%)		
				Non-existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic		83	17	0
2		- plastic film		57	43	0
3		- jute/hessian		64	14	21
4		- cotton		57	43	0
5	Strings made of	- woven plastic		69	31	0
6		- plastic film		69	31	0
7		- jute/hessian		64	14	21
8		- cotton		69	31	0
9	Organic matter	- leaves, feathers, paper, leather etc.		28	56	17
10	Inorganic matter	- sand/dust		100	0	0
11		- rust		100	0	0
12		- metal/wire		100	0	0
13	Oily substances/chemicals	- grease/oil		83	17	0
14		- rubber		100	0	0
15		- stamp colour		100	0	0
16		- tar		100	0	0
Average of 1-16				78	18	4
			No (%)	Yes (%)		
Stickiness			82%	18%		
					No (%)	Yes (%)
Seed-coat fragments					55%	45%

Table 41

2019

Country		Growth:		Number of samples:		
Brazil		Brazil		65		
Source of contamination				Degree of contamination (%)		
				Non-existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic		71	21	8
2		- plastic film		62	27	11
3		- jute/hessian		81	19	0
4		- cotton		66	30	4
5	Strings made of	- woven plastic		77	19	4
6		- plastic film		74	18	8
7		- jute/hessian		78	22	0
8		- cotton		71	29	0
9	Organic matter	- leaves, feathers, paper, leather etc.		41	59	0
10	Inorganic matter	- sand/dust		63	30	7
11		- rust		86	14	0
12		- metal/wire		85	11	4
13	Oily substances/chemicals	- grease/oil		72	24	4
14		- rubber		94	6	0
15		- stamp colour		94	6	0
16		- tar		91	9	0
Average of 1-16				75	21	3
			No (%)	Yes (%)		
Stickiness			65%	35%		
					No (%)	Yes (%)
Seed-coat fragments					55%	45%

America, South

Table 42

2019

Country		Growth:		Number of samples:		
Colombia		Acala		4		
Source of contamination			Degree of contamination (%)			
			Non- existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	60	40	0	
2		- plastic film	33	67	0	
3		- jute/hessian	60	40	0	
4		- cotton	33	67	0	
5	Strings made of	- woven plastic	50	0	50	
6		- plastic film	50	0	50	
7		- jute/hessian	100	0	0	
8		- cotton	33	67	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	33	67	0	
10	Inorganic matter	- sand/dust	100	0	0	
11		- rust	100	0	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			72	22	6	
		No (%)	Yes (%)			
Stickiness		75%	25%			
				No (%)	Yes (%)	
Seed-coat fragments				75%	25%	

Table 43

2019

Country		Growth:		Number of samples:		
Colombia		Coastal		2		
Source of contamination			Degree of contamination (%)			
			Non- existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	100	0	0	
2		- plastic film	33	67	0	
3		- jute/hessian	100	0	0	
4		- cotton	33	67	0	
5	Strings made of	- woven plastic	33	67	0	
6		- plastic film	33	67	0	
7		- jute/hessian	100	0	0	
8		- cotton	0	100	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	0	100	0	
10	Inorganic matter	- sand/dust	100	0	0	
11		- rust	100	0	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			71	29	0	
		No (%)	Yes (%)			
Stickiness		100%	0%			
				No (%)	Yes (%)	
Seed-coat fragments				50%	50%	

America, South

Table 44

2019

Country		Growth:		Number of samples:		
Paraguay		Paraguay		2		
Source of contamination				Degree of contamination (%)		
				Non-existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic		100	0	0
2		- plastic film		0	100	0
3		- jute/hessian		100	0	0
4		- cotton		0	100	0
5	Strings made of	- woven plastic		25	0	75
6		- plastic film		25	0	75
7		- jute/hessian		100	0	0
8		- cotton		0	100	0
9	Organic matter	- leaves, feathers, paper, leather etc.		0	100	0
10	Inorganic matter	- sand/dust		100	0	0
11		- rust		100	0	0
12		- metal/wire		100	0	0
13	Oily substances/chemicals	- grease/oil		100	0	0
14		- rubber		100	0	0
15		- stamp colour		100	0	0
16		- tar		100	0	0
Average of 1-16				66	25	9
Stickiness		No (%)	Yes (%)			
		100%	0%			
				Seed-coat fragments		
				No (%)	Yes (%)	
				0%	100%	

Table 45

2019

Country		Growth:		Number of samples:		
Peru		Pima		1		
Source of contamination				Degree of contamination (%)		
				Non-existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic		100	0	0
2		- plastic film		100	0	0
3		- jute/hessian		100	0	0
4		- cotton		100	0	0
5	Strings made of	- woven plastic		100	0	0
6		- plastic film		100	0	0
7		- jute/hessian		100	0	0
8		- cotton		100	0	0
9	Organic matter	- leaves, feathers, paper, leather etc.		100	0	0
10	Inorganic matter	- sand/dust		100	0	0
11		- rust		100	0	0
12		- metal/wire		100	0	0
13	Oily substances/chemicals	- grease/oil		100	0	0
14		- rubber		100	0	0
15		- stamp colour		100	0	0
16		- tar		100	0	0
Average of 1-16				100	0	0
Stickiness		No (%)	Yes (%)			
		100%	0%			
				Seed-coat fragments		
				No (%)	Yes (%)	
				100%	0%	

America, South

Table 46

2019

Country		Peru		Growth: Tanguis		Number of samples:		1	
Source of contamination				Degree of contamination (%)					
				Non-existent/insignificant	Moderate	Serious			
1	Fabrics made of	- woven plastic		100	0	0			
2		- plastic film		100	0	0			
3		- jute/hessian		100	0	0			
4		- cotton		0	0	100			
5	Strings made of	- woven plastic		100	0	0			
6		- plastic film		100	0	0			
7		- jute/hessian		100	0	0			
8		- cotton		0	100	0			
9	Organic matter	- leaves, feathers, paper, leather etc.		100	0	0			
10	Inorganic matter	- sand/dust		100	0	0			
11		- rust		100	0	0			
12		- metal/wire		100	0	0			
13	Oily substances/chemicals	- grease/oil		100	0	0			
14		- rubber		100	0	0			
15		- stamp colour		100	0	0			
16		- tar		100	0	0			
Average of 1-16				88	6	6			
				No (%)		Yes (%)			
Stickiness				100%	0%			Seed-coat fragments	
				No (%)		Yes (%)			
				0%		100%			

Table 47

2019

Country		Peru		Growth: Peru-Others		Number of samples:		2	
Source of contamination				Degree of contamination (%)					
				Non-existent/insignificant	Moderate	Serious			
1	Fabrics made of	- woven plastic		33	67	0			
2		- plastic film		33	67	0			
3		- jute/hessian		100	0	0			
4		- cotton		100	0	0			
5	Strings made of	- woven plastic		33	67	0			
6		- plastic film		33	67	0			
7		- jute/hessian		100	0	0			
8		- cotton		33	67	0			
9	Organic matter	- leaves, feathers, paper, leather etc.		25	0	75			
10	Inorganic matter	- sand/dust		33	67	0			
11		- rust		33	67	0			
12		- metal/wire		33	67	0			
13	Oily substances/chemicals	- grease/oil		25	0	75			
14		- rubber		25	0	75			
15		- stamp colour		33	67	0			
16		- tar		100	0	0			
Average of 1-16				48	38	14			
				No (%)		Yes (%)			
Stickiness				100%	0%			Seed-coat fragments	
				No (%)		Yes (%)			
				100%		0%			

Asia

Table 48

2019

Country		Growth:		Number of samples:		
Afghanistan		Afghanistan		8		
Source of contamination			Degree of contamination (%)			
			Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	29	29	43	
2		- plastic film	42	33	25	
3		- jute/hessian	55	18	27	
4		- cotton	50	0	50	
5	Strings made of	- woven plastic	5	20	75	
6		- plastic film	11	22	67	
7		- jute/hessian	55	18	27	
8		- cotton	55	18	27	
9	Organic matter	- leaves, feathers, paper, leather etc.	13	50	38	
10	Inorganic matter	- sand/dust	29	29	43	
11		- rust	42	33	25	
12		- metal/wire	42	33	25	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	78	22	0	
15		- stamp colour	100	0	0	
16		- tar	70	0	30	
Average of 1-16			48	20	31	
			No (%)	Yes (%)		
Stickiness			75%	25%		
			No (%)	Yes (%)		
Seed-coat fragments			75%	25%		

Table 49

2019

Country		Growth:		Number of samples:		
Australia		Australia		34		
Source of contamination			Degree of contamination (%)			
			Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	94	6	0	
2		- plastic film	82	11	8	
3		- jute/hessian	94	6	0	
4		- cotton	84	16	0	
5	Strings made of	- woven plastic	79	21	0	
6		- plastic film	89	11	0	
7		- jute/hessian	84	16	0	
8		- cotton	89	11	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	79	21	0	
10	Inorganic matter	- sand/dust	94	6	0	
11		- rust	100	0	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	89	11	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			91	8	0	
			No (%)	Yes (%)		
Stickiness			91%	9%		
			No (%)	Yes (%)		
Seed-coat fragments			82%	18%		

Asia

Table 50

2019

Country		Growth:		Number of samples:		
China		Anhui		1		
Source of contamination				Degree of contamination (%)		
				Non-existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic		100	0	0
2		- plastic film		0	100	0
3		- jute/hessian		100	0	0
4		- cotton		0	100	0
5	Strings made of	- woven plastic		100	0	0
6		- plastic film		100	0	0
7		- jute/hessian		100	0	0
8		- cotton		100	0	0
9	Organic matter	- leaves, feathers, paper, leather etc.		100	0	0
10	Inorganic matter	- sand/dust		100	0	0
11		- rust		100	0	0
12		- metal/wire		100	0	0
13	Oily substances/chemicals	- grease/oil		100	0	0
14		- rubber		100	0	0
15		- stamp colour		100	0	0
16		- tar		100	0	0
Average of 1-16				88	13	0
		No (%)	Yes (%)			
Stickiness		100%	0%	Seed-coat fragments		
				No (%)	Yes (%)	
				100%	0%	

Table 51

2019

Country		Growth:		Number of samples:		
China		Hebei		3		
Source of contamination				Degree of contamination (%)		
				Non-existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic		20	80	0
2		- plastic film		20	80	0
3		- jute/hessian		100	0	0
4		- cotton		50	50	0
5	Strings made of	- woven plastic		50	50	0
6		- plastic film		50	50	0
7		- jute/hessian		100	0	0
8		- cotton		100	0	0
9	Organic matter	- leaves, feathers, paper, leather etc.		50	50	0
10	Inorganic matter	- sand/dust		50	50	0
11		- rust		100	0	0
12		- metal/wire		100	0	0
13	Oily substances/chemicals	- grease/oil		100	0	0
14		- rubber		100	0	0
15		- stamp colour		100	0	0
16		- tar		100	0	0
Average of 1-16				74	26	0
		No (%)	Yes (%)			
Stickiness		100%	0%	Seed-coat fragments		
				No (%)	Yes (%)	
				100%	0%	

Asia

Table 52

2019

Country		Growth:		Number of samples:		
China		Henan		1		
Source of contamination				Degree of contamination (%)		
				Non-existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic		100	0	0
2		- plastic film		0	100	0
3		- jute/hessian		100	0	0
4		- cotton		0	100	0
5	Strings made of	- woven plastic		100	0	0
6		- plastic film		100	0	0
7		- jute/hessian		100	0	0
8		- cotton		100	0	0
9	Organic matter	- leaves, feathers, paper, leather etc.		100	0	0
10	Inorganic matter	- sand/dust		100	0	0
11		- rust		100	0	0
12		- metal/wire		100	0	0
13	Oily substances/chemicals	- grease/oil		100	0	0
14		- rubber		100	0	0
15		- stamp colour		100	0	0
16		- tar		100	0	0
Average of 1-16				88	13	0
		No (%)	Yes (%)			
Stickiness		100%	0%			
				No (%)	Yes (%)	
Seed-coat fragments				100%	0%	

Table 53

2019

Country		Growth:		Number of samples:		
China		Hubai		3		
Source of contamination				Degree of contamination (%)		
				Non-existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic		0	57	43
2		- plastic film		0	57	43
3		- jute/hessian		40	0	60
4		- cotton		17	33	50
5	Strings made of	- woven plastic		0	100	0
6		- plastic film		0	57	43
7		- jute/hessian		50	50	0
8		- cotton		50	50	0
9	Organic matter	- leaves, feathers, paper, leather etc.		0	57	43
10	Inorganic matter	- sand/dust		20	80	0
11		- rust		100	0	0
12		- metal/wire		20	80	0
13	Oily substances/chemicals	- grease/oil		50	50	0
14		- rubber		100	0	0
15		- stamp colour		50	50	0
16		- tar		100	0	0
Average of 1-16				37	45	18
		No (%)	Yes (%)			
Stickiness		100%	0%			
				No (%)	Yes (%)	
Seed-coat fragments				100%	0%	

Asia

Table 54

2019

Country		Growth:		Number of samples:		
China		Shandong		6		
Source of contamination				Degree of contamination (%)		
				Non-existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic		30	40	30
2		- plastic film		18	55	27
3		- jute/hessian		63	0	38
4		- cotton		30	40	30
5	Strings made of	- woven plastic		18	55	27
6		- plastic film		18	55	27
7		- jute/hessian		71	29	0
8		- cotton		50	50	0
9	Organic matter	- leaves, feathers, paper, leather etc.		18	55	27
10	Inorganic matter	- sand/dust		30	40	30
11		- rust		63	0	38
12		- metal/wire		100	0	0
13	Oily substances/chemicals	- grease/oil		71	29	0
14		- rubber		100	0	0
15		- stamp colour		100	0	0
16		- tar		100	0	0
Average of 1-16				55	28	17
Stickiness		No (%)	Yes (%)			
		100%	0%	Seed-coat fragments	No (%)	Yes (%)
					83%	17%

Table 55

2019

Country		Growth:		Number of samples:		
China		Xinjiang		18		
Source of contamination				Degree of contamination (%)		
				Non-existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic		33	67	0
2		- plastic film		16	75	9
3		- jute/hessian		71	29	0
4		- cotton		54	33	13
5	Strings made of	- woven plastic		37	52	11
6		- plastic film		33	67	0
7		- jute/hessian		80	20	0
8		- cotton		64	36	0
9	Organic matter	- leaves, feathers, paper, leather etc.		19	71	10
10	Inorganic matter	- sand/dust		42	46	12
11		- rust		89	11	0
12		- metal/wire		71	29	0
13	Oily substances/chemicals	- grease/oil		64	36	0
14		- rubber		89	11	0
15		- stamp colour		89	11	0
16		- tar		89	11	0
Average of 1-16				59	38	3
Stickiness		No (%)	Yes (%)			
		94%	6%	Seed-coat fragments	No (%)	Yes (%)
					78%	22%

Asia

Table 56

2019

Country China		Growth: China-Others		Number of samples: 1		
Source of contamination			Degree of contamination (%)			
			Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	0	100	0	
2		- plastic film	0	100	0	
3		- jute/hessian	100	0	0	
4		- cotton	0	100	0	
5	Strings made of	- woven plastic	0	100	0	
6		- plastic film	0	100	0	
7		- jute/hessian	100	0	0	
8		- cotton	0	100	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	0	100	0	
10	Inorganic matter	- sand/dust	100	0	0	
11		- rust	100	0	0	
12		- metal/wire	0	100	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			50	50	0	
			No (%)	Yes (%)	No (%)	Yes (%)
Stickiness			100%	0%	Seed-coat fragments 100% 0%	

Table 57

2019

Country India		Growth: DCH		Number of samples: 20		
Source of contamination			Degree of contamination (%)			
			Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	34	38	28	
2		- plastic film	36	18	45	
3		- jute/hessian	42	19	39	
4		- cotton	18	42	39	
5	Strings made of	- woven plastic	20	20	60	
6		- plastic film	29	35	35	
7		- jute/hessian	18	36	46	
8		- cotton	29	29	43	
9	Organic matter	- leaves, feathers, paper, leather etc.	7	57	36	
10	Inorganic matter	- sand/dust	22	38	41	
11		- rust	60	40	0	
12		- metal/wire	40	40	20	
13	Oily substances/chemicals	- grease/oil	40	40	20	
14		- rubber	58	31	12	
15		- stamp colour	50	29	21	
16		- tar	62	15	23	
Average of 1-16			35	33	32	
			No (%)	Yes (%)	No (%)	Yes (%)
Stickiness			85%	15%	Seed-coat fragments 60% 40%	

Asia

Table 60

2019

Country		India		Growth: LRA		Number of samples: 1	
Source of contamination				Degree of contamination (%)			
				Non-existent/insignificant		Moderate	Serious
1	Fabrics made of	- woven plastic	100	0	0		
2		- plastic film	100	0	0		
3		- jute/hessian	100	0	0		
4		- cotton	100	0	0		
5	Strings made of	- woven plastic	100	0	0		
6		- plastic film	100	0	0		
7		- jute/hessian	100	0	0		
8		- cotton	100	0	0		
9	Organic matter	- leaves, feathers, paper, leather etc.	0	0	100		
10	Inorganic matter	- sand/dust	0	0	100		
11		- rust	100	0	0		
12		- metal/wire	0	0	100		
13	Oily substances/chemicals	- grease/oil	0	0	100		
14		- rubber	0	0	100		
15		- stamp colour	0	0	100		
16		- tar	0	0	100		
Average of 1-16			56	0	44		
Stickiness		No (%)	0%	Yes (%)	100%		
Seed-coat fragments		No (%)	0%	Yes (%)	100%		

Table 61

2019

Country		India		Growth: MCU-5		Number of samples: 26	
Source of contamination				Degree of contamination (%)			
				Non-existent/insignificant		Moderate	Serious
1	Fabrics made of	- woven plastic	17	31	52		
2		- plastic film	20	32	48		
3		- jute/hessian	29	31	40		
4		- cotton	20	37	43		
5	Strings made of	- woven plastic	12	21	67		
6		- plastic film	18	35	47		
7		- jute/hessian	17	26	57		
8		- cotton	26	35	39		
9	Organic matter	- leaves, feathers, paper, leather etc.	9	34	57		
10	Inorganic matter	- sand/dust	20	37	43		
11		- rust	56	35	9		
12		- metal/wire	25	55	20		
13	Oily substances/chemicals	- grease/oil	42	42	16		
14		- rubber	46	38	16		
15		- stamp colour	46	38	16		
16		- tar	59	24	18		
Average of 1-16			29	34	37		
Stickiness		No (%)	92%	Yes (%)	8%		
Seed-coat fragments		No (%)	54%	Yes (%)	46%		

Asia

Table 62

2019

Country		India		Growth: Shankar-4/6		Number of samples: 42		
Source of contamination				Degree of contamination (%)				
				Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	22	20	59			
2		- plastic film	21	30	49			
3		- jute/hessian	32	38	30			
4		- cotton	19	40	41			
5	Strings made of	- woven plastic	19	24	57			
6		- plastic film	18	26	56			
7		- jute/hessian	20	32	48			
8		- cotton	25	29	47			
9	Organic matter	- leaves, feathers, paper, leather etc.	13	36	51			
10	Inorganic matter	- sand/dust	25	47	29			
11		- rust	59	30	11			
12		- metal/wire	38	30	32			
13	Oily substances/chemicals	- grease/oil	44	36	20			
14		- rubber	77	17	6			
15		- stamp colour	67	27	6			
16		- tar	72	16	12			
Average of 1-16			36	30	35			
Stickiness		No (%)	Yes (%)			Seed-coat fragments	No (%)	Yes (%)
		83%	17%				100%	0%

Table 63

2019

Country		India		Growth: India-Others		Number of samples: 11		
Source of contamination				Degree of contamination (%)				
				Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	32	21	47			
2		- plastic film	17	8	75			
3		- jute/hessian	24	19	57			
4		- cotton	14	45	41			
5	Strings made of	- woven plastic	18	27	55			
6		- plastic film	13	25	63			
7		- jute/hessian	9	52	39			
8		- cotton	19	38	43			
9	Organic matter	- leaves, feathers, paper, leather etc.	8	42	50			
10	Inorganic matter	- sand/dust	25	30	45			
11		- rust	53	27	20			
12		- metal/wire	64	14	21			
13	Oily substances/chemicals	- grease/oil	69	31	0			
14		- rubber	69	31	0			
15		- stamp colour	83	17	0			
16		- tar	100	0	0			
Average of 1-16			39	27	35			
Stickiness		No (%)	Yes (%)			Seed-coat fragments	No (%)	Yes (%)
		91%	9%				27%	73%

Asia

Table 64

2019

Country Israel		Growth: Pima		Number of samples: 4		
Source of contamination			Degree of contamination (%)			
			Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	100	0	0	
2		- plastic film	100	0	0	
3		- jute/hessian	100	0	0	
4		- cotton	100	0	0	
5	Strings made of	- woven plastic	100	0	0	
6		- plastic film	100	0	0	
7		- jute/hessian	100	0	0	
8		- cotton	100	0	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	60	40	0	
10	Inorganic matter	- sand/dust	60	40	0	
11		- rust	100	0	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			95	5	0	
			No (%)	Yes (%)		
Stickiness			75%	25%		
			No (%)	Yes (%)		
Seed-coat fragments			100%	0%		

Table 65

2019

Country Pakistan		Growth: AmSeed 1505		Number of samples: 1		
Source of contamination			Degree of contamination (%)			
			Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic	100	0	0	
2		- plastic film	100	0	0	
3		- jute/hessian	100	0	0	
4		- cotton	100	0	0	
5	Strings made of	- woven plastic	100	0	0	
6		- plastic film	100	0	0	
7		- jute/hessian	100	0	0	
8		- cotton	100	0	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	0	0	100	
10	Inorganic matter	- sand/dust	0	0	100	
11		- rust	100	0	0	
12		- metal/wire	100	0	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			88	0	13	
			No (%)	Yes (%)		
Stickiness			100%	0%		
			No (%)	Yes (%)		
Seed-coat fragments			100%	0%		

Asia

Table 66

2019

Country		Pakistan		Growth: AmSeed AFZAL		Number of samples:		3	
Source of contamination				Degree of contamination (%)					
				Non-existent/ insignificant	Moderate	Serious			
1	Fabrics made of	- woven plastic	100	0	0				
2		- plastic film	50	50	0				
3		- jute/hessian	40	0	60				
4		- cotton	20	80	0				
5	Strings made of	- woven plastic	100	0	0				
6		- plastic film	50	50	0				
7		- jute/hessian	40	0	60				
8		- cotton	50	50	0				
9	Organic matter	- leaves, feathers, paper, leather etc.	50	50	0				
10	Inorganic matter	- sand/dust	100	0	0				
11		- rust	50	50	0				
12		- metal/wire	100	0	0				
13	Oily substances/chemicals	- grease/oil	100	0	0				
14		- rubber	100	0	0				
15		- stamp colour	100	0	0				
16		- tar	100	0	0				
Average of 1-16			72	21	8				
Stickiness		No (%)	Yes (%)						
		100%	0%						
Seed-coat fragments		No (%)	Yes (%)						
		100%	0%						

Table 67

2019

Country		Pakistan		Growth: MNH93		Number of samples:		7	
Source of contamination				Degree of contamination (%)					
				Non-existent/ insignificant	Moderate	Serious			
1	Fabrics made of	- woven plastic	56	44	0				
2		- plastic film	36	36	27				
3		- jute/hessian	27	73	0				
4		- cotton	7	53	40				
5	Strings made of	- woven plastic	23	31	46				
6		- plastic film	14	43	43				
7		- jute/hessian	17	83	0				
8		- cotton	25	50	25				
9	Organic matter	- leaves, feathers, paper, leather etc.	6	38	56				
10	Inorganic matter	- sand/dust	17	83	0				
11		- rust	56	44	0				
12		- metal/wire	50	20	30				
13	Oily substances/chemicals	- grease/oil	75	25	0				
14		- rubber	100	0	0				
15		- stamp colour	75	25	0				
16		- tar	67	0	33				
Average of 1-16			41	41	19				
Stickiness		No (%)	Yes (%)						
		100%	0%						
Seed-coat fragments		No (%)	Yes (%)						
		43%	57%						

Asia

Table 68

2019

Country		Growth:		Number of samples:		
Pakistan		NAIB		6		
Source of contamination				Degree of contamination (%)		
				Non-existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic		44	22	33
2		- plastic film		30	40	30
3		- jute/hessian		20	80	0
4		- cotton		8	67	25
5	Strings made of	- woven plastic		17	33	50
6		- plastic film		7	29	64
7		- jute/hessian		9	91	0
8		- cotton		33	67	0
9	Organic matter	- leaves, feathers, paper, leather etc.		8	46	46
10	Inorganic matter	- sand/dust		20	80	0
11		- rust		50	50	0
12		- metal/wire		18	55	27
13	Oily substances/chemicals	- grease/oil		71	29	0
14		- rubber		100	0	0
15		- stamp colour		71	29	0
16		- tar		63	0	38
Average of 1-16				36	45	20
Stickiness		No (%)	Yes (%)			
		100%	0%			
Seed-coat fragments		No (%)	Yes (%)			
		67%	33%			

Table 69

2019

Country		Growth:		Number of samples:		
Pakistan		Pakistan- Others		6		
Source of contamination				Degree of contamination (%)		
				Non-existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic		8	67	25
2		- plastic film		8	67	25
3		- jute/hessian		30	40	30
4		- cotton		33	67	0
5	Strings made of	- woven plastic		9	91	0
6		- plastic film		8	46	46
7		- jute/hessian		9	91	0
8		- cotton		50	50	0
9	Organic matter	- leaves, feathers, paper, leather etc.		0	77	23
10	Inorganic matter	- sand/dust		30	40	30
11		- rust		71	29	0
12		- metal/wire		71	29	0
13	Oily substances/chemicals	- grease/oil		100	0	0
14		- rubber		100	0	0
15		- stamp colour		100	0	0
16		- tar		100	0	0
Average of 1-16				46	43	11
Stickiness		No (%)	Yes (%)			
		100%	0%			
Seed-coat fragments		No (%)	Yes (%)			
		50%	50%			

Asia

Table 70

2019

Country		Tajikistan		Growth: Long Staples		Number of samples:		2	
Source of contamination				Degree of contamination (%)					
				Non-existent/insignificant		Moderate		Serious	
1	Fabrics made of	- woven plastic		100	0	0			
2		- plastic film		0	100	0			
3		- jute/hessian		0	100	0			
4		- cotton		0	100	0			
5	Strings made of	- woven plastic		0	100	0			
6		- plastic film		0	100	0			
7		- jute/hessian		0	100	0			
8		- cotton		0	100	0			
9	Organic matter	- leaves, feathers, paper, leather etc.		0	100	0			
10	Inorganic matter	- sand/dust		0	100	0			
11		- rust		100	0	0			
12		- metal/wire		100	0	0			
13	Oily substances/chemicals	- grease/oil		0	100	0			
14		- rubber		100	0	0			
15		- stamp colour		0	100	0			
16		- tar		100	0	0			
Average of 1-16				31	69	0			
				No (%)		Yes (%)			
Stickiness				100%	0%	Seed-coat fragments		100%	0%

Table 71

2019

Country		Tajikistan		Growth: Medium Staples		Number of samples:		8	
Source of contamination				Degree of contamination (%)					
				Non-existent/insignificant		Moderate		Serious	
1	Fabrics made of	- woven plastic		7	93	0			
2		- plastic film		14	86	0			
3		- jute/hessian		60	40	0			
4		- cotton		33	67	0			
5	Strings made of	- woven plastic		6	59	35			
6		- plastic film		6	59	35			
7		- jute/hessian		33	67	0			
8		- cotton		13	50	38			
9	Organic matter	- leaves, feathers, paper, leather etc.		14	86	0			
10	Inorganic matter	- sand/dust		45	55	0			
11		- rust		33	67	0			
12		- metal/wire		33	67	0			
13	Oily substances/chemicals	- grease/oil		78	22	0			
14		- rubber		60	40	0			
15		- stamp colour		78	22	0			
16		- tar		78	22	0			
Average of 1-16				37	56	7			
				No (%)		Yes (%)			
Stickiness				88%	13%	Seed-coat fragments		63%	38%

Asia

Table 72

2019

Country Turkmenistan Growth: Long Staples			Number of samples: 1		
Source of contamination			Degree of contamination (%)		
			Non- existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic	100	0	0
2		- plastic film	0	100	0
3		- jute/hessian	100	0	0
4		- cotton	100	0	0
5	Strings made of	- woven plastic	0	100	0
6		- plastic film	100	0	0
7		- jute/hessian	100	0	0
8		- cotton	100	0	0
9	Organic matter	- leaves, feathers, paper, leather etc.	0	100	0
10	Inorganic matter	- sand/dust	0	0	100
11		- rust	100	0	0
12		- metal/wire	100	0	0
13	Oily substances/chemicals	- grease/oil	0	100	0
14		- rubber	100	0	0
15		- stamp colour	100	0	0
16		- tar	100	0	0
Average of 1-16			69	25	6
			No (%)	Yes (%)	
Stickiness			0%	100%	
			No (%)	Yes (%)	
Seed-coat fragments			0%	100%	

Table 73

2019

Country Turkmenistan Growth: Medium Staples			Number of samples: 3		
Source of contamination			Degree of contamination (%)		
			Non- existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic	20	80	0
2		- plastic film	20	80	0
3		- jute/hessian	50	50	0
4		- cotton	100	0	0
5	Strings made of	- woven plastic	20	80	0
6		- plastic film	0	100	0
7		- jute/hessian	20	80	0
8		- cotton	20	80	0
9	Organic matter	- leaves, feathers, paper, leather etc.	20	80	0
10	Inorganic matter	- sand/dust	100	0	0
11		- rust	20	80	0
12		- metal/wire	20	80	0
13	Oily substances/chemicals	- grease/oil	50	50	0
14		- rubber	100	0	0
15		- stamp colour	100	0	0
16		- tar	100	0	0
Average of 1-16			48	53	0
			No (%)	Yes (%)	
Stickiness			100%	0%	
			No (%)	Yes (%)	
Seed-coat fragments			0%	100%	

Asia

Table 74

2019

Country		Growth:		Number of samples:		
Uzbekistan		Medium Staples		2		
Source of contamination				Degree of contamination (%)		
				Non-existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic	0	100	0	
2		- plastic film	0	100	0	
3		- jute/hessian	100	0	0	
4		- cotton	100	0	0	
5	Strings made of	- woven plastic	0	100	0	
6		- plastic film	0	100	0	
7		- jute/hessian	0	100	0	
8		- cotton	0	100	0	
9	Organic matter	- leaves, feathers, paper, leather etc.	100	0	0	
10	Inorganic matter	- sand/dust	100	0	0	
11		- rust	0	100	0	
12		- metal/wire	0	100	0	
13	Oily substances/chemicals	- grease/oil	100	0	0	
14		- rubber	100	0	0	
15		- stamp colour	100	0	0	
16		- tar	100	0	0	
Average of 1-16			50	50	0	
		No (%)	Yes (%)			
Stickiness		100%	0%	Seed-coat fragments	No (%) Yes (%)	
				0%	100%	

Europe

Table 75

2019

Country		Greece		Number of samples:			20	
Source of contamination				Degree of contamination (%)				
				Non-existent/insignificant		Moderate	Serious	
1	Fabrics made of	- woven plastic	60	40	0			
2		- plastic film	60	40	0			
3		- jute/hessian	90	10	0			
4		- cotton	100	0	0			
5	Strings made of	- woven plastic	54	46	0			
6		- plastic film	54	46	0			
7		- jute/hessian	74	26	0			
8		- cotton	67	33	0			
9	Organic matter	- leaves, feathers, paper, leather etc.	27	55	18			
10	Inorganic matter	- sand/dust	58	31	12			
11		- rust	52	37	11			
12		- metal/wire	74	26	0			
13	Oily substances/chemicals	- grease/oil	64	24	12			
14		- rubber	86	0	14			
15		- stamp colour	82	18	0			
16		- tar	90	10	0			
Average of 1-16			68	28	4			
Stickiness		No (%)	Yes (%)			No (%)	Yes (%)	
		95%	5%	Seed-coat fragments		75%	25%	

Table 76

2019

Country		Spain		Number of samples:			9	
Source of contamination				Degree of contamination (%)				
				Non-existent/insignificant		Moderate	Serious	
1	Fabrics made of	- woven plastic	100	0	0			
2		- plastic film	100	0	0			
3		- jute/hessian	100	0	0			
4		- cotton	100	0	0			
5	Strings made of	- woven plastic	80	20	0			
6		- plastic film	64	36	0			
7		- jute/hessian	100	0	0			
8		- cotton	80	20	0			
9	Organic matter	- leaves, feathers, paper, leather etc.	20	80	0			
10	Inorganic matter	- sand/dust	50	50	0			
11		- rust	64	36	0			
12		- metal/wire	64	36	0			
13	Oily substances/chemicals	- grease/oil	64	36	0			
14		- rubber	100	0	0			
15		- stamp colour	80	20	0			
16		- tar	80	20	0			
Average of 1-16			78	22	0			
Stickiness		No (%)	Yes (%)			No (%)	Yes (%)	
		89%	11%	Seed-coat fragments		44%	56%	

Europe

Table 77

2019

Country Turkey		Growth: Antalya		Number of samples: 3	
Source of contamination			Degree of contamination (%)		
			Non-existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic	14	0	86
2		- plastic film	14	0	86
3		- jute/hessian	100	0	0
4		- cotton	100	0	0
5	Strings made of	- woven plastic	14	0	86
6		- plastic film	20	80	0
7		- jute/hessian	20	80	0
8		- cotton	100	0	0
9	Organic matter	- leaves, feathers, paper, leather etc.	0	25	75
10	Inorganic matter	- sand/dust	100	0	0
11		- rust	100	0	0
12		- metal/wire	100	0	0
13	Oily substances/chemicals	- grease/oil	100	0	0
14		- rubber	100	0	0
15		- stamp colour	100	0	0
16		- tar	100	0	0
Average of 1-16			68	12	21
			No (%)	Yes (%)	
Stickiness			100%	0%	
			No (%)	Yes (%)	
Seed-coat fragments			0%	100%	

Table 78

2019

Country Turkey		Growth: Cukurova / S. E.		Number of samples: 9	
Source of contamination			Degree of contamination (%)		
			Non-existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic	33	27	40
2		- plastic film	24	24	53
3		- jute/hessian	46	31	23
4		- cotton	50	50	0
5	Strings made of	- woven plastic	31	13	56
6		- plastic film	36	43	21
7		- jute/hessian	29	71	0
8		- cotton	46	31	23
9	Organic matter	- leaves, feathers, paper, leather etc.	5	50	45
10	Inorganic matter	- sand/dust	18	47	35
11		- rust	25	38	38
12		- metal/wire	33	27	40
13	Oily substances/chemicals	- grease/oil	50	50	0
14		- rubber	64	36	0
15		- stamp colour	50	50	0
16		- tar	80	20	0
Average of 1-16			39	38	23
			No (%)	Yes (%)	
Stickiness			78%	22%	
			No (%)	Yes (%)	
Seed-coat fragments			56%	44%	

Europe

Table 79

2019

Country		Growth:		Number of samples:		
Turkey		Izmir		10		
Source of contamination				Degree of contamination (%)		
				Non-existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic		33	67	0
2		- plastic film		33	67	0
3		- jute/hessian		33	67	0
4		- cotton		33	67	0
5	Strings made of	- woven plastic		43	57	0
6		- plastic film		43	57	0
7		- jute/hessian		43	57	0
8		- cotton		33	67	0
9	Organic matter	- leaves, feathers, paper, leather etc.		11	74	16
10	Inorganic matter	- sand/dust		33	67	0
11		- rust		100	0	0
12		- metal/wire		67	33	0
13	Oily substances/chemicals	- grease/oil		54	46	0
14		- rubber		82	18	0
15		- stamp colour		67	33	0
16		- tar		100	0	0
Average of 1-16				51	49	1
Stickiness		No (%)	Yes (%)	Seed-coat fragments		
		90%	10%	No (%)	Yes (%)	
				70%	30%	

Table 80

2019

Country		Growth:		Number of samples:		
Turkey		Turkey-Others		8		
Source of contamination				Degree of contamination (%)		
				Non-existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic		19	25	56
2		- plastic film		6	44	50
3		- jute/hessian		38	15	46
4		- cotton		20	40	40
5	Strings made of	- woven plastic		27	13	60
6		- plastic film		27	13	60
7		- jute/hessian		50	0	50
8		- cotton		42	33	25
9	Organic matter	- leaves, feathers, paper, leather etc.		5	32	63
10	Inorganic matter	- sand/dust		11	11	79
11		- rust		42	33	25
12		- metal/wire		29	29	43
13	Oily substances/chemicals	- grease/oil		55	18	27
14		- rubber		78	22	0
15		- stamp colour		78	22	0
16		- tar		100	0	0
Average of 1-16				39	22	39
Stickiness		No (%)	Yes (%)	Seed-coat fragments		
		75%	25%	No (%)	Yes (%)	
				25%	75%	

Press Release

ITMF's Cotton Contamination Survey 2022 reveals decreasing levels of contamination and stickiness

“ITMF’s Cotton Contamination Survey 2022 shows that the level of contamination of raw cotton by foreign matters and stickiness have decreased compared to 2019. At the same time the appearance of seed-coat fragments remained the same. The survey also reveals significant differences between cotton varieties.” These are the main conclusions from the “Cotton Contamination Survey 2022” which has just been released by the International Textile Manufacturers Federation (ITMF). This 16th edition covers 104 spinning mills located in 21 countries which evaluated 78 different cotton growths.

Contamination – decrease

The level of cottons moderately or seriously contaminated as perceived by the spinning mills from around the world dropped from 25% in 2019 to 22% in 2022. A closer look at the extent of the contamination shows that 6% of all cotton evaluated were seriously contaminated by some sort of foreign matter whereas 16% were only moderately contaminated. As the summary data are arithmetic averages of the different contaminants, the extent of contamination is fully illustrated by the results for the individual contaminants. They range from 5% of all cottons processed being moderately or seriously contaminated by “tar” to 43% of them being moderately or seriously contaminated by “organic matter”, i.e. leaves, feathers, paper, leather, etc. Other serious contaminants are “strings made of plastic film” (31%), “fabrics made of plastic film” (39%), “strings made of woven plastic” (30%) as well as “Inorganic matter - sand/dust” (29%). The 10 most contaminated cotton descriptions considered for the survey originated in India (India-Others, MCU-5, DCH, Shankar-4/6, J-34), Pakistan (NAIB, MNH93), Afghanistan, Togo and Tanzania (Coastal). The 10 least contaminated raw cottons were produced in Spain, China (Anhui, Shandong), Australia, U.S.A. (Memphis Territory, Pima, Arizona, South-Eastern) and Mexico (Juarez).

Stickiness – decrease

The presence of sticky cotton as perceived by the spinning mills has been decreasing for almost 10 years (i.e. 23% in 2013 vs. 12% in 2022) and remains at the lowest level since 1989. The 10 descriptions that were most affected by stickiness originated from Afghanistan, the U.S.A. (Pima, Arizona), Tajikistan (Medium Staples), Cameroon, Brazil, Argentina, India (DCH), Sudan (Barakat) and Zimbabwe. On the other end of the range, cottons from Pakistan (MNH93), China (Shandong, Anhui, Hebei), Greece, South Africa, Mozambique, Sudan (Sudan-Others), the U.S.A. (Memphis Territory) and Uganda were not or hardly affected by stickiness.

Seed-coat fragments – stagnation

The appearance of seed-coat fragments in cotton growths remains an issue for spinners around the world. 33% of all cotton growths consumed contained moderate or significant amounts of seed-coat fragments (same as 2019). The 10 origins most affected by seed-coat fragments are Afghanistan, Pakistan (MNH93, NAIB), India (MCU-5, DCH, Shankar-4/6), Tanzania (Coastal), Egypt (Egypt-Other), Türkiye (Türkiye-Other), and Togo. The 10 cotton growth with the least presence of seed-coat fragments are Sudan (Sudan-Other, Barakat), Cameroon, Australia, Greece, Spain, China (Shandong, Hebei, Anhui), and Mexico (Mexico-Other).

January 2023

Participation

Table I

2022

Participation in 2022 Survey			
Country	Number of respondents (participating companies)	Number of samples (evaluations)	Number of cotton growth evaluated *
Argentina	2	2	1
Bangladesch	8	100	38
Belgium	1	9	9
Brazil	3	3	1
China	24	181	47
Chinese Taipei	2	9	7
Egypt	7	26	10
Ethiopia	1	1	1
Germany	1	9	9
Greece	2	9	8
India	9	45	18
Indonesia	5	22	11
Italy	3	22	16
Korea, Rep.	4	19	10
Mexico	4	9	6
Pakistan	13	151	37
Peru	1	6	5
Portugal	1	6	6
Spain	1	3	3
Türkiye	5	35	23
U.S.A.	1	2	2
Uzbekistan	1	1	1
Vietnam	5	14	8
Total	104	684	-

* on a total of 78 cotton descriptions evaluated in this edition. 44 cotton description were evaluated by at least 5 respondents.

Main Results

Table IIa

2022

Country All Countries		Growth: All Growths		Number of samples: 684		
Source of contamination		Degree of contamination (%)				
		Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	73	17	10	
2		- plastic film	69	23	9	
3		- jute/hessian	78	16	6	
4		- cotton	76	19	5	
5	Strings made of	- woven plastic	70	21	9	
6		- plastic film	68	22	9	
7		- jute/hessian	77	18	5	
8		- cotton	79	19	2	
9	Organic matter	- leaves, feathers, paper, leather etc.	53	56	32	
10	Inorganic matter	- sand/dust	71	21	9	
11		- rust	89	7	4	
12		- metal/wire	78	17	5	
13	Oily substances/chemicals	- grease/oil	90	7	3	
14		- rubber	91	6	3	
15		- stamp colour	90	8	2	
16		- tar	95	4	1	
Average of 1-16			78	16	6	
		No (%)	Yes (%)			
Stickiness		88	12			
				Seed-coat fragments	No (%)	Yes (%)
					67	33

Table IIb

Summary 1989-2022					
Year	Degree of Contamination (%)			Stickiness (%)	Seed-coat fragments (%)
	Non-existent/ insignificant	Moderate	Serious		
1989	86	9	5	21	-
1991	85	11	4	27	34
1993	85	11	4	26	36
1995	82	13	5	20	39
1997	82	13	5	23	32
1999	79	15	6	20	38
2001	78	16	6	18	40
2003	73	18	8	21	44
2005	78	15	7	17	37
2007	78	15	7	21	37
2009	78	16	6	13	27
2011	77	16	7	20	38
2013	73	18	8	23	42
2016	77	18	5	16	32
2019	75	18	7	16	34
2022	78	16	6	12	33

Contamination

Table IIIa

2022

The Most Contaminated Descriptions						
Ranking	Description		Degree of Contamination (%) *			Number of Samples **
			Non-existent/ insignificant	Moderate	Serious	
1	India	India-Others	35	26	39	9
2	Pakistan	NAIB	42	47	11	8
3	Pakistan	MNH93	46	45	9	9
4	India	MCU-5	50	24	26	15
5	Afghanistan	Afghanistan	52	20	29	8
6	India	DCH	52	26	22	9
7	India	Shankar-4/6	55	20	25	22
8	India	J-34	63	28	10	5
9	Togo	Togo	65	31	4	10
10	Tanzania	Coastal	66	29	5	5
11	Sudan	Sudan-Others	68	17	16	6
12	Egypt	Egypt- Others	69	20	11	9
13	Benin	Benin	71	23	6	19
14	Egypt	Giza	72	19	9	27
15	Uganda	Uganda	73	23	4	6

* Average degree of contamination by each of the 16 pre-indicated contaminants

** Minimum: 5 Samples

Contamination

Table IIIb

2022

The Least Contaminated Descriptions						
Ranking	Description		Degree of Contamination (%) *			Number of Samples **
			Non-existent/ insignificant	Moderate	Serious	
1	Spain	Spain	95	4	1	9
2	China	Anhui	95	5	0	5
3	Australia	Australia	95	5	0	31
4	U.S.A.	Memphis Territory	93	5	1	23
5	U.S.A.	Texas H. Plains	92	8	0	23
6	U.S.A.	Pima	91	8	1	30
7	U.S.A.	Arizona	90	8	1	9
8	Mexico	Juarez	88	11	1	7
9	China	Shandong	88	10	2	7
10	U.S.A.	South Eastern	88	12	0	13
11	South Africa	South Africa	88	13	0	7
12	Greece	Greece	86	11	4	19
13	China	Hebei	84	15	1	6
14	Tanzania	Mwanza	84	15	1	8
15	Cameroon	Cameroon	84	13	3	15

* Average degree of contamination by each of the 16 pre-indicated contaminants

** Minimum: 5 Samples

Stickiness

Table IVa

2022

Descriptions Most Affected by Stickiness				
Ranking	Description		Affirmative replies (%)*	Number of Samples**
1	Afghanistan	Afghanistan	63	8
2	U.S.A.	Pima	40	30
3	Tajikistan	Medium Staples	40	5
4	Cameroon	Cameroon	33	15
5	Brazil	Brazil	28	54
6	Argentina	Argentina	23	13
7	India	DCH	22	9
8	U.S.A.	Arizona	22	9
9	Sudan	Barakat	20	5
10	Zimbabwe	Zimbabwe	20	5
11	Mexico	Mexico-Others	17	12
12	Benin	Benin	16	19
13	China	Xinjiang	15	20
14	Mexico	Juarez	14	7
15	Ivory Coast	Ivory Coast	13	23

* Percentage of replies indicating the existence of stickiness

** Minimum 5 samples

Stickiness

Table IVb

2022

Descriptions Least Affected by Stickiness				
Ranking	Description		Affirmative replies (%)*	Number of Samples**
1	Pakistan	MNH93	0	9
2	China	Shandong	0	7
3	China	Anhui	0	5
4	China	Hebei	0	6
5	Greece	Greece	0	19
6	South Africa	South Africa	0	7
7	Mozambique	Mozambique	0	6
8	Sudan	Sudan-Others	0	6
9	U.S.A.	Memphis Territory	0	23
10	Uganda	Uganda	0	6
11	India	J-34	0	5
12	India	India-Others	0	9
13	U.S.A.	South Eastern	0	13
14	Pakistan	NAIB	0	8
15	Tanzania	Coastal	0	5

* Percentage of replies indicating the existence of stickiness

** Minimum 5 samples

Seed-Coat Fragments

Table Va

2022

Descriptions Most Affected by Seed-Coat Fragments				
Ranking	Description		Affirmative replies (%)*	Number of Samples**
1	Afghanistan	Afghanistan	75	8
2	Pakistan	MNH93	67	9
3	India	MCU-5	67	15
4	India	DCH	67	9
5	India	Shankar-4/6	64	22
6	Pakistan	NAIB	63	8
7	Tanzania	Coastal	60	5
8	Egypt	Egypt- Others	56	9
9	Türkiye	Turkey-Others	50	10
10	Togo	Togo	50	10
11	Argentina	Argentina	46	13
12	U.S.A.	Arizona	44	9
13	India	India-Others	44	9
14	U.S.A.	Memphis Territory	43	23
15	Egypt	Giza	41	27

* Percentage of replies indicating the existence of stickiness

** Minimum 5 samples

Seed-Coat Fragments

Table Vb

2022

Descriptions Least Affected by Seed-Coat Fragments				
Ranking	Description		Affirmative replies (%)*	Number of Samples**
1	Sudan	Sudan-Others	0	6
2	Sudan	Barakat	0	5
3	Cameroon	Cameroon	7	15
4	Australia	Australia	10	31
5	Greece	Greece	11	19
6	Spain	Spain	11	9
7	China	Shandong	14	7
8	China	Hebei	17	6
9	Mexico	Mexico-Others	17	12
10	China	Anhui	20	5
11	Burkina Faso	Burkina Faso	20	20
12	Zimbabwe	Zimbabwe	20	5
13	U.S.A.	USA-Others	20	20
14	India	J-34	20	5
15	Benin	Benin	21	19

* Percentage of replies indicating the existence of stickiness

** Minimum 5 samples

Africa

Table 1

2022

Country	Benin		Number of samples: 19		
Growth: Benin			Degree of contamination (%)		
Source of contamination			Non-existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic	68	32	0
2		- plastic film	53	37	11
3		- jute/hessian	84	5	11
4		- cotton	84	16	0
5	Strings made of	- woven plastic	47	53	0
6		- plastic film	53	37	11
7		- jute/hessian	79	16	5
8		- cotton	79	21	0
9	Organic matter	- leaves, feathers, paper, leather etc.	42	42	16
10	Inorganic matter	- sand/dust	58	32	11
11		- rust	84	5	11
12		- metal/wire	74	21	5
13	Oily substances/chemicals	- grease/oil	84	5	11
14		- rubber	84	16	0
15		- stamp colour	84	16	0
16		- tar	84	16	0
Average of 1-16			71	23	6
Stickiness			No (%)	Yes (%)	
			84%	16%	
			Seed-coat fragments	No (%)	Yes (%)
				79%	21%

Table 2

2022

Country	Burkina Faso		Number of samples: 20		
Growth: Burkina Faso			Degree of contamination (%)		
Source of contamination			Non-existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic	85	10	5
2		- plastic film	70	25	5
3		- jute/hessian	90	5	5
4		- cotton	80	15	5
5	Strings made of	- woven plastic	70	30	0
6		- plastic film	80	20	0
7		- jute/hessian	95	5	0
8		- cotton	80	20	0
9	Organic matter	- leaves, feathers, paper, leather etc.	60	35	5
10	Inorganic matter	- sand/dust	75	25	0
11		- rust	90	5	5
12		- metal/wire	85	5	10
13	Oily substances/chemicals	- grease/oil	90	10	0
14		- rubber	95	5	0
15		- stamp colour	95	5	0
16		- tar	90	10	0
Average of 1-16			83	14	3
Stickiness			No (%)	Yes (%)	
			95%	5%	
			Seed-coat fragments	No (%)	Yes (%)
				80%	20%

Africa

Table 3

2022

Country	Burundi		Growth:	Burundi		Number of samples:			2	
Source of contamination						Degree of contamination (%)				
						Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic				100	0	0		
2		- plastic film				100	0	0		
3		- jute/hessian				100	0	0		
4		- cotton				100	0	0		
5	Strings made of	- woven plastic				100	0	0		
6		- plastic film				100	0	0		
7		- jute/hessian				100	0	0		
8		- cotton				100	0	0		
9	Organic matter	- leaves, feathers, paper, leather etc.				100	0	0		
10	Inorganic matter	- sand/dust				100	0	0		
11		- rust				100	0	0		
12		- metal/wire				100	0	0		
13	Oily substances/chemicals	- grease/oil				100	0	0		
14		- rubber				100	0	0		
15		- stamp colour				100	0	0		
16		- tar				100	0	0		
Average of 1-16						100	0	0		
			No (%)	Yes (%)					No (%)	Yes (%)
Stickiness			100%	0%		Seed-coat fragments			100%	0%

Table 4

2022

Country	Cameroon		Growth:	Cameroon		Number of samples:			15	
Source of contamination						Degree of contamination (%)				
						Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic				87	7	7		
2		- plastic film				67	27	7		
3		- jute/hessian				80	13	7		
4		- cotton				80	13	7		
5	Strings made of	- woven plastic				73	27	0		
6		- plastic film				73	27	0		
7		- jute/hessian				93	7	0		
8		- cotton				93	7	0		
9	Organic matter	- leaves, feathers, paper, leather etc.				73	27	0		
10	Inorganic matter	- sand/dust				87	7	7		
11		- rust				87	7	7		
12		- metal/wire				93	0	7		
13	Oily substances/chemicals	- grease/oil				87	13	0		
14		- rubber				93	7	0		
15		- stamp colour				87	13	0		
16		- tar				93	7	0		
Average of 1-16						84	13	3		
			No (%)	Yes (%)					No (%)	Yes (%)
Stickiness			67%	33%		Seed-coat fragments			93%	7%

Africa

Table 5

2022

Country	Central African Republic		Growth:	C. African Rep.	Number of samples:		3
Source of contamination	Degree of contamination (%)						
			Non- existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	67	0	33		
2		- plastic film	67	0	33		
3		- jute/hessian	67	33	0		
4		- cotton	67	33	0		
5	Strings made of	- woven plastic	100	0	0		
6		- plastic film	100	0	0		
7		- jute/hessian	100	0	0		
8		- cotton	100	0	0		
9	Organic matter	- leaves, feathers, paper, leather etc.	100	0	0		
10	Inorganic matter	- sand/dust	67	33	0		
11		- rust	67	33	0		
12		- metal/wire	67	0	33		
13	Oily substances/chemicals	- grease/oil	67	33	0		
14		- rubber	67	33	0		
15		- stamp colour	67	33	0		
16		- tar	67	33	0		
Average of 1-16			77	17	6		
Stickiness		No (%)	Yes (%)	Seed-coat fragments		No (%)	Yes (%)
		100%	0%			100%	0%

Table 6

2022

Country	Chad		Growth:	Chad	Number of samples:		3
Source of contamination	Degree of contamination (%)						
			Non- existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic	100	0	0		
2		- plastic film	100	0	0		
3		- jute/hessian	100	0	0		
4		- cotton	100	0	0		
5	Strings made of	- woven plastic	67	33	0		
6		- plastic film	33	67	0		
7		- jute/hessian	67	33	0		
8		- cotton	33	67	0		
9	Organic matter	- leaves, feathers, paper, leather etc.	67	33	0		
10	Inorganic matter	- sand/dust	100	0	0		
11		- rust	100	0	0		
12		- metal/wire	100	0	0		
13	Oily substances/chemicals	- grease/oil	67	33	0		
14		- rubber	100	0	0		
15		- stamp colour	100	0	0		
16		- tar	100	0	0		
Average of 1-16			83	17	0		
Stickiness		No (%)	Yes (%)	Seed-coat fragments		No (%)	Yes (%)
		67%	33%			67%	33%

Africa

Table 7

2022

Country		Growth:		Number of samples:		
Egypt		Giza		27		
Source of contamination				Degree of contamination (%)		
				Non-existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic		78	19	4
2		- plastic film		56	30	15
3		- jute/hessian		59	26	15
4		- cotton		70	30	0
5	Strings made of	- woven plastic		59	33	7
6		- plastic film		67	22	11
7		- jute/hessian		67	19	15
8		- cotton		93	7	0
9	Organic matter	- leaves, feathers, paper, leather etc.		41	41	19
10	Inorganic matter	- sand/dust		74	15	11
11		- rust		81	11	7
12		- metal/wire		67	30	4
13	Oily substances/chemicals	- grease/oil		89	4	7
14		- rubber		85	7	7
15		- stamp colour		74	11	15
16		- tar		96	4	0
Average of 1-16				72	19	9
		No (%)	Yes (%)			
Stickiness		93%	7%			
					No (%)	Yes (%)
				Seed-coat fragments	59%	41%

Table 8

2022

Country		Growth:		Number of samples:		
Egypt		Egypt- Others		9		
Source of contamination				Degree of contamination (%)		
				Non-existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic		89	11	0
2		- plastic film		78	11	11
3		- jute/hessian		67	0	33
4		- cotton		44	33	22
5	Strings made of	- woven plastic		56	33	11
6		- plastic film		67	22	11
7		- jute/hessian		56	11	33
8		- cotton		89	11	0
9	Organic matter	- leaves, feathers, paper, leather etc.		44	33	22
10	Inorganic matter	- sand/dust		67	22	11
11		- rust		67	33	0
12		- metal/wire		56	33	11
13	Oily substances/chemicals	- grease/oil		78	22	0
14		- rubber		67	33	0
15		- stamp colour		89	0	11
16		- tar		89	11	0
Average of 1-16				69	20	11
		No (%)	Yes (%)			
Stickiness		89%	11%			
					No (%)	Yes (%)
				Seed-coat fragments	44%	56%

Africa

Table 9

2022

Country	Ethiopia		Growth:	Ethiopia		Number of samples:			1	
Source of contamination						Degree of contamination (%)				
						Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic				0	0	100		
2		- plastic film				0	100	0		
3		- jute/hessian				100	0	0		
4		- cotton				100	0	0		
5	Strings made of	- woven plastic				100	0	0		
6		- plastic film				100	0	0		
7		- jute/hessian				100	0	0		
8		- cotton				100	0	0		
9	Organic matter	- leaves, feathers, paper, leather etc.				0	100	0		
10	Inorganic matter	- sand/dust				0	100	0		
11		- rust				100	0	0		
12		- metal/wire				0	100	0		
13	Oily substances/chemicals	- grease/oil				100	0	0		
14		- rubber				100	0	0		
15		- stamp colour				100	0	0		
16		- tar				100	0	0		
Average of 1-16						69	25	6		
			No (%)	Yes (%)					No (%)	Yes (%)
Stickiness			100%	0%		Seed-coat fragments			0%	100%

Table 10

2022

Country	Ghana		Growth:	Ghana		Number of samples:			2	
Source of contamination						Degree of contamination (%)				
						Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic				100	0	0		
2		- plastic film				100	0	0		
3		- jute/hessian				100	0	0		
4		- cotton				100	0	0		
5	Strings made of	- woven plastic				100	0	0		
6		- plastic film				100	0	0		
7		- jute/hessian				100	0	0		
8		- cotton				100	0	0		
9	Organic matter	- leaves, feathers, paper, leather etc.				100	0	0		
10	Inorganic matter	- sand/dust				100	0	0		
11		- rust				100	0	0		
12		- metal/wire				100	0	0		
13	Oily substances/chemicals	- grease/oil				100	0	0		
14		- rubber				100	0	0		
15		- stamp colour				100	0	0		
16		- tar				100	0	0		
Average of 1-16						100	0	0		
			No (%)	Yes (%)					No (%)	Yes (%)
Stickiness			100%	0%		Seed-coat fragments			100%	0%

Africa

Table 11

2022

Country	Ivory Coast		Growth:	Ivory Coast		Number of samples: 23		
Source of contamination						Degree of contamination (%)		
						Non-existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic				74	17	9
2		- plastic film				70	26	4
3		- jute/hessian				65	30	4
4		- cotton				78	17	4
5	Strings made of	- woven plastic				74	22	4
6		- plastic film				74	22	4
7		- jute/hessian				74	26	0
8		- cotton				78	22	0
9	Organic matter	- leaves, feathers, paper, leather etc.				52	43	4
10	Inorganic matter	- sand/dust				61	35	4
11		- rust				91	4	4
12		- metal/wire				78	17	4
13	Oily substances/chemicals	- grease/oil				96	0	4
14		- rubber				96	4	0
15		- stamp colour				91	9	0
16		- tar				96	4	0
Average of 1-16						78	19	3
			No (%)	Yes (%)		No (%) Yes (%)		
Stickiness			87%	13%		Seed-coat fragments 65% 35%		

Table 12

2022

Country	Kenya		Growth:	Kenya		Number of samples: 1		
Source of contamination						Degree of contamination (%)		
						Non-existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic				100	0	0
2		- plastic film				100	0	0
3		- jute/hessian				100	0	0
4		- cotton				0	100	0
5	Strings made of	- woven plastic				100	0	0
6		- plastic film				100	0	0
7		- jute/hessian				100	0	0
8		- cotton				100	0	0
9	Organic matter	- leaves, feathers, paper, leather etc.				100	0	0
10	Inorganic matter	- sand/dust				100	0	0
11		- rust				100	0	0
12		- metal/wire				100	0	0
13	Oily substances/chemicals	- grease/oil				100	0	0
14		- rubber				100	0	0
15		- stamp colour				100	0	0
16		- tar				100	0	0
Average of 1-16						94	6	0
			No (%)	Yes (%)		No (%) Yes (%)		
Stickiness			100%	0%		Seed-coat fragments 100% 0%		

Africa

Table 13

2022

Country		Mali		Growth:		Mali		Number of samples:		11	
Source of contamination						Degree of contamination (%)					
						Non-existent/ insignificant		Moderate		Serious	
1	Fabrics made of	- woven plastic				55	45	0			
2		- plastic film				55	36	9			
3		- jute/hessian				82	0	18			
4		- cotton				91	9	0			
5	Strings made of	- woven plastic				36	64	0			
6		- plastic film				36	64	0			
7		- jute/hessian				73	18	9			
8		- cotton				82	18	0			
9	Organic matter	- leaves, feathers, paper, leather etc.				36	55	9			
10	Inorganic matter	- sand/dust				73	18	9			
11		- rust				82	9	9			
12		- metal/wire				82	9	9			
13	Oily substances/chemicals	- grease/oil				100	0	0			
14		- rubber				100	0	0			
15		- stamp colour				91	9	0			
16		- tar				100	0	0			
Average of 1-16						73	22	5			
						No (%)	Yes (%)		No (%)	Yes (%)	
Stickiness						91%	9%		Seed-coat fragments	73%	27%

Table 14

2022

Country		Mozambique		Growth:		Mozambique		Number of samples:		6	
Source of contamination						Degree of contamination (%)					
						Non-existent/ insignificant		Moderate		Serious	
1	Fabrics made of	- woven plastic				50	50	0			
2		- plastic film				67	33	0			
3		- jute/hessian				83	17	0			
4		- cotton				100	0	0			
5	Strings made of	- woven plastic				17	67	17			
6		- plastic film				50	33	17			
7		- jute/hessian				83	17	0			
8		- cotton				67	33	0			
9	Organic matter	- leaves, feathers, paper, leather etc.				50	50	0			
10	Inorganic matter	- sand/dust				67	33	0			
11		- rust				100	0	0			
12		- metal/wire				100	0	0			
13	Oily substances/chemicals	- grease/oil				100	0	0			
14		- rubber				100	0	0			
15		- stamp colour				100	0	0			
16		- tar				100	0	0			
Average of 1-16						77	21	2			
						No (%)	Yes (%)		No (%)	Yes (%)	
Stickiness						100%	0%		Seed-coat fragments	67%	33%

Africa

Table 15

2022

Country	Nigeria		Growth:	Nigeria		Number of samples:			3
Source of contamination	Degree of contamination (%)								
	Non-existent/ insignificant		Moderate		Serious				
1	Fabrics made of	- woven plastic	33	33	33				
2		- plastic film	33	33	33				
3		- jute/hessian	33	33	33				
4		- cotton	33	67	0				
5	Strings made of	- woven plastic	33	0	67				
6		- plastic film	33	0	67				
7		- jute/hessian	33	67	0				
8		- cotton	33	67	0				
9	Organic matter	- leaves, feathers, paper, leather etc.	33	67	0				
10	Inorganic matter	- sand/dust	100	0	0				
11		- rust	100	0	0				
12		- metal/wire	100	0	0				
13	Oily substances/chemicals	- grease/oil	100	0	0				
14		- rubber	100	0	0				
15		- stamp colour	67	33	0				
16		- tar	100	0	0				
Average of 1-16			60	25	15				
Stickiness		No (%)	Yes (%)			Seed-coat fragments		No (%)	Yes (%)
		100%	0%					100%	0%

Table 16

2022

Country	Senegal		Growth:	Senegal		Number of samples:			2
Source of contamination	Degree of contamination (%)								
	Non-existent/ insignificant		Moderate		Serious				
1	Fabrics made of	- woven plastic	0	100	0				
2		- plastic film	0	100	0				
3		- jute/hessian	50	50	0				
4		- cotton	50	50	0				
5	Strings made of	- woven plastic	50	50	0				
6		- plastic film	50	50	0				
7		- jute/hessian	100	0	0				
8		- cotton	100	0	0				
9	Organic matter	- leaves, feathers, paper, leather etc.	50	50	0				
10	Inorganic matter	- sand/dust	50	50	0				
11		- rust	50	50	0				
12		- metal/wire	50	50	0				
13	Oily substances/chemicals	- grease/oil	100	0	0				
14		- rubber	100	0	0				
15		- stamp colour	100	0	0				
16		- tar	100	0	0				
Average of 1-16			63	38	0				
Stickiness		No (%)	Yes (%)			Seed-coat fragments		No (%)	Yes (%)
		100%	0%					50%	50%

Africa

Table 17

2022

Country	South Africa		Growth:	South Africa		Number of samples:		7		
Source of contamination	Degree of contamination (%)									
	Non-existent/ insignificant			Moderate		Serious				
1	Fabrics made of	- woven plastic	71	29	0					
2		- plastic film	86	14	0					
3		- jute/hessian	86	14	0					
4		- cotton	71	29	0					
5	Strings made of	- woven plastic	100	0	0					
6		- plastic film	100	0	0					
7		- jute/hessian	86	14	0					
8		- cotton	100	0	0					
9	Organic matter	- leaves, feathers, paper, leather etc.	100	0	0					
10	Inorganic matter	- sand/dust	86	14	0					
11		- rust	86	14	0					
12		- metal/wire	57	43	0					
13	Oily substances/chemicals	- grease/oil	100	0	0					
14		- rubber	86	14	0					
15		- stamp colour	100	0	0					
16		- tar	86	14	0					
Average of 1-16			88	13	0					
			No (%)	Yes (%)			No (%)	Yes (%)		
Stickiness			100%	0%			Seed-coat fragments	71%	29%	

Table 18

2022

Country	Sudan		Growth:	Acala		Number of samples:		4		
Source of contamination	Degree of contamination (%)									
	Non-existent/ insignificant			Moderate		Serious				
1	Fabrics made of	- woven plastic	100	0	0					
2		- plastic film	100	0	0					
3		- jute/hessian	100	0	0					
4		- cotton	75	25	0					
5	Strings made of	- woven plastic	75	25	0					
6		- plastic film	100	0	0					
7		- jute/hessian	100	0	0					
8		- cotton	75	25	0					
9	Organic matter	- leaves, feathers, paper, leather etc.	75	25	0					
10	Inorganic matter	- sand/dust	75	25	0					
11		- rust	100	0	0					
12		- metal/wire	100	0	0					
13	Oily substances/chemicals	- grease/oil	75	25	0					
14		- rubber	100	0	0					
15		- stamp colour	100	0	0					
16		- tar	100	0	0					
Average of 1-16			91	9	0					
			No (%)	Yes (%)			No (%)	Yes (%)		
Stickiness			75%	25%			Seed-coat fragments	75%	25%	

Africa

Table 19

2022

Country	Sudan		Growth:	Barakat		Number of samples:			5	
Source of contamination					Degree of contamination (%)					
					Non-existent/ insignificant	Moderate	Serious			
1	Fabrics made of		- woven plastic		40	20	40			
2			- plastic film		40	20	40			
3			- jute/hessian		100	0	0			
4			- cotton		100	0	0			
5	Strings made of		- woven plastic		60	40	0			
6			- plastic film		40	60	0			
7			- jute/hessian		100	0	0			
8			- cotton		100	0	0			
9	Organic matter		- leaves, feathers, paper, leather etc.		80	0	20			
10	Inorganic matter		- sand/dust		60	20	20			
11			- rust		80	0	20			
12			- metal/wire		80	0	20			
13	Oily substances/chemicals		- grease/oil		80	0	20			
14			- rubber		80	0	20			
15			- stamp colour		80	0	20			
16			- tar		100	0	0			
Average of 1-16					76	10	14			
			No (%)	Yes (%)				No (%)	Yes (%)	
Stickiness			80%	20%	Seed-coat fragments			100%	0%	

Table 20

2022

Country	Sudan		Growth:	Sudan-Others		Number of samples:			6	
Source of contamination					Degree of contamination (%)					
					Non-existent/ insignificant	Moderate	Serious			
1	Fabrics made of		- woven plastic		50	17	33			
2			- plastic film		50	17	33			
3			- jute/hessian		83	17	0			
4			- cotton		83	17	0			
5	Strings made of		- woven plastic		33	50	17			
6			- plastic film		50	33	17			
7			- jute/hessian		67	33	0			
8			- cotton		83	17	0			
9	Organic matter		- leaves, feathers, paper, leather etc.		33	33	33			
10	Inorganic matter		- sand/dust		67	0	33			
11			- rust		67	0	33			
12			- metal/wire		67	33	0			
13	Oily substances/chemicals		- grease/oil		83	0	17			
14			- rubber		83	0	17			
15			- stamp colour		83	0	17			
16			- tar		100	0	0			
Average of 1-16					68	17	16			
			No (%)	Yes (%)				No (%)	Yes (%)	
Stickiness			100%	0%	Seed-coat fragments			100%	0%	

Africa

Table 23

2022

Country	Togo		Growth:	Togo		Number of samples:			10
Source of contamination						Degree of contamination (%)			
						Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic				50	40	10	
2		- plastic film				50	40	10	
3		- jute/hessian				70	20	10	
4		- cotton				50	40	10	
5	Strings made of	- woven plastic				50	40	10	
6		- plastic film				50	40	10	
7		- jute/hessian				70	30	0	
8		- cotton				50	50	0	
9	Organic matter	- leaves, feathers, paper, leather etc.				30	60	10	
10	Inorganic matter	- sand/dust				70	30	0	
11		- rust				80	20	0	
12		- metal/wire				60	40	0	
13	Oily substances/chemicals	- grease/oil				80	20	0	
14		- rubber				90	10	0	
15		- stamp colour				100	0	0	
16		- tar				90	10	0	
Average of 1-16						65	31	4	
			No (%)	Yes (%)		No (%) Yes (%)			
Stickiness			90%	10%		Seed-coat fragments 50% 50%			

Table 24

2022

Country	Uganda		Growth:	Uganda		Number of samples:			6
Source of contamination						Degree of contamination (%)			
						Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic				67	33	0	
2		- plastic film				67	33	0	
3		- jute/hessian				67	17	17	
4		- cotton				50	33	17	
5	Strings made of	- woven plastic				50	33	17	
6		- plastic film				33	50	17	
7		- jute/hessian				50	50	0	
8		- cotton				67	33	0	
9	Organic matter	- leaves, feathers, paper, leather etc.				33	67	0	
10	Inorganic matter	- sand/dust				83	17	0	
11		- rust				100	0	0	
12		- metal/wire				100	0	0	
13	Oily substances/chemicals	- grease/oil				100	0	0	
14		- rubber				100	0	0	
15		- stamp colour				100	0	0	
16		- tar				100	0	0	
Average of 1-16						73	23	4	
			No (%)	Yes (%)		No (%) Yes (%)			
Stickiness			100%	0%		Seed-coat fragments 67% 33%			

Africa

Table 25

2022

Country	Zimbabwe		Growth:	Zimbabwe		Number of samples:		5	
Source of contamination	Degree of contamination (%)								
	Non-existent/insignificant			Moderate		Serious			
1	Fabrics made of	- woven plastic		60	20	20			
2		- plastic film		40	40	20			
3		- jute/hessian		80	20	0			
4		- cotton		80	20	0			
5	Strings made of	- woven plastic		60	40	0			
6		- plastic film		60	40	0			
7		- jute/hessian		80	20	0			
8		- cotton		80	20	0			
9	Organic matter	- leaves, feathers, paper, leather etc.		60	40	0			
10	Inorganic matter	- sand/dust		80	20	0			
11		- rust		80	20	0			
12		- metal/wire		80	20	0			
13	Oily substances/chemicals	- grease/oil		100	0	0			
14		- rubber		100	0	0			
15		- stamp colour		100	0	0			
16		- tar		100	0	0			
Average of 1-16				78	20	3			
Stickiness		No (%)	Yes (%)			No (%)	Yes (%)		
		80%	20%	Seed-coat fragments		80%	20%		

America, North

Table 26

2022

Country	Mexico		Growth:	Juarez		Number of samples:		7	
Source of contamination	Degree of contamination (%)								
	Non-existent/insignificant			Moderate		Serious			
1	Fabrics made of	- woven plastic		100	0	0			
2		- plastic film		86	14	0			
3		- jute/hessian		100	0	0			
4		- cotton		71	29	0			
5	Strings made of	- woven plastic		71	29	0			
6		- plastic film		71	29	0			
7		- jute/hessian		71	29	0			
8		- cotton		100	0	0			
9	Organic matter	- leaves, feathers, paper, leather etc.		86	14	0			
10	Inorganic matter	- sand/dust		86	0	14			
11		- rust		86	14	0			
12		- metal/wire		100	0	0			
13	Oily substances/chemicals	- grease/oil		86	14	0			
14		- rubber		100	0	0			
15		- stamp colour		100	0	0			
16		- tar		100	0	0			
Average of 1-16				88	11	1			
Stickiness		No (%)	Yes (%)			No (%)	Yes (%)		
		86%	14%	Seed-coat fragments		71%	29%		

America, North

Table 27

2022

Country	Mexico		Growth:	Laguna/elicias		Number of samples:			2	
Source of contamination						Degree of contamination (%)				
						Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of		- woven plastic			100	0	0		
2			- plastic film			100	0	0		
3			- jute/hessian			100	0	0		
4			- cotton			100	0	0		
5	Strings made of		- woven plastic			100	0	0		
6			- plastic film			100	0	0		
7			- jute/hessian			100	0	0		
8			- cotton			100	0	0		
9	Organic matter		- leaves, feathers, paper, leather etc.			100	0	0		
10	Inorganic matter		- sand/dust			100	0	0		
11			- rust			100	0	0		
12			- metal/wire			100	0	0		
13	Oily substances/chemicals		- grease/oil			100	0	0		
14			- rubber			100	0	0		
15			- stamp colour			100	0	0		
16			- tar			100	0	0		
Average of 1-16						100	0	0		
			No (%)	Yes (%)					No (%)	Yes (%)
Stickiness			100%	0%		Seed-coat fragments			100%	0%

Table 28

2022

Country	Mexico		Growth:	Mexicali		Number of samples:			3	
Source of contamination						Degree of contamination (%)				
						Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of		- woven plastic			100	0	0		
2			- plastic film			100	0	0		
3			- jute/hessian			100	0	0		
4			- cotton			100	0	0		
5	Strings made of		- woven plastic			100	0	0		
6			- plastic film			100	0	0		
7			- jute/hessian			100	0	0		
8			- cotton			100	0	0		
9	Organic matter		- leaves, feathers, paper, leather etc.			100	0	0		
10	Inorganic matter		- sand/dust			100	0	0		
11			- rust			100	0	0		
12			- metal/wire			100	0	0		
13	Oily substances/chemicals		- grease/oil			100	0	0		
14			- rubber			100	0	0		
15			- stamp colour			100	0	0		
16			- tar			100	0	0		
Average of 1-16						100	0	0		
			No (%)	Yes (%)					No (%)	Yes (%)
Stickiness			100%	0%		Seed-coat fragments			100%	0%

America, North

Table 29

2022

Country	Mexico		Growth:	Sinaloa/Senora		Number of samples:			3
Source of contamination					Degree of contamination (%)				
					Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of		- woven plastic		100	0	0		
2			- plastic film		100	0	0		
3			- jute/hessian		100	0	0		
4			- cotton		100	0	0		
5	Strings made of		- woven plastic		100	0	0		
6			- plastic film		100	0	0		
7			- jute/hessian		100	0	0		
8			- cotton		100	0	0		
9	Organic matter		- leaves, feathers, paper, leather etc.		100	0	0		
10	Inorganic matter		- sand/dust		100	0	0		
11			- rust		100	0	0		
12			- metal/wire		100	0	0		
13	Oily substances/chemicals		- grease/oil		100	0	0		
14			- rubber		100	0	0		
15			- stamp colour		100	0	0		
16			- tar		100	0	0		
Average of 1-16					100	0	0		
		No (%)	Yes (%)				No (%)	Yes (%)	
Stickiness		100%	0%		Seed-coat fragments		100%	0%	

Table 30

2022

Country	Mexico		Growth:	Mexico-Others		Number of samples:			12
Source of contamination					Degree of contamination (%)				
					Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of		- woven plastic		75	25	0		
2			- plastic film		92	8	0		
3			- jute/hessian		92	0	8		
4			- cotton		92	8	0		
5	Strings made of		- woven plastic		67	33	0		
6			- plastic film		75	25	0		
7			- jute/hessian		92	8	0		
8			- cotton		92	8	0		
9	Organic matter		- leaves, feathers, paper, leather etc.		58	25	17		
10	Inorganic matter		- sand/dust		50	50	0		
11			- rust		75	25	0		
12			- metal/wire		83	17	0		
13	Oily substances/chemicals		- grease/oil		83	0	17		
14			- rubber		75	8	17		
15			- stamp colour		83	17	0		
16			- tar		92	8	0		
Average of 1-16					80	17	4		
		No (%)	Yes (%)				No (%)	Yes (%)	
Stickiness		83%	17%		Seed-coat fragments		83%	17%	

America, North

Table 31

2022

Country	U.S.A.		Growth:	Arizona	Number of samples:			9
Source of contamination					Degree of contamination (%)			
					Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic			78	11	11	
2		- plastic film			78	22	0	
3		- jute/hessian			100	0	0	
4		- cotton			100	0	0	
5	Strings made of	- woven plastic			78	11	11	
6		- plastic film			78	22	0	
7		- jute/hessian			100	0	0	
8		- cotton			100	0	0	
9	Organic matter	- leaves, feathers, paper, leather etc.			67	33	0	
10	Inorganic matter	- sand/dust			78	22	0	
11		- rust			100	0	0	
12		- metal/wire			100	0	0	
13	Oily substances/chemicals	- grease/oil			89	11	0	
14		- rubber			100	0	0	
15		- stamp colour			100	0	0	
16		- tar			100	0	0	
Average of 1-16					90	8	1	
			No (%)	Yes (%)				
Stickiness			78%	22%	Seed-coat fragments			
					No (%)	Yes (%)		
					56%	44%		

Table 32

2022

Country	U.S.A.		Growth:	California	Number of samples:			13
Source of contamination					Degree of contamination (%)			
					Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic			62	31	8	
2		- plastic film			69	31	0	
3		- jute/hessian			85	15	0	
4		- cotton			85	15	0	
5	Strings made of	- woven plastic			69	23	8	
6		- plastic film			77	23	0	
7		- jute/hessian			85	15	0	
8		- cotton			85	15	0	
9	Organic matter	- leaves, feathers, paper, leather etc.			77	23	0	
10	Inorganic matter	- sand/dust			92	8	0	
11		- rust			92	8	0	
12		- metal/wire			77	23	0	
13	Oily substances/chemicals	- grease/oil			92	8	0	
14		- rubber			85	15	0	
15		- stamp colour			85	15	0	
16		- tar			100	0	0	
Average of 1-16					82	17	1	
			No (%)	Yes (%)				
Stickiness			92%	8%	Seed-coat fragments			
					No (%)	Yes (%)		
					69%	31%		

America, North

Table 33

2022

Country	U.S.A.		Growth:	El Paso	Number of samples:			2
Source of contamination	Degree of contamination (%)							
	Non-existent/ insignificant		Moderate	Serious				
1	Fabrics made of	- woven plastic	50	50	0			
2		- plastic film	100	0	0			
3		- jute/hessian	100	0	0			
4		- cotton	100	0	0			
5	Strings made of	- woven plastic	100	0	0			
6		- plastic film	100	0	0			
7		- jute/hessian	100	0	0			
8		- cotton	100	0	0			
9	Organic matter	- leaves, feathers, paper, leather etc.	50	50	0			
10	Inorganic matter	- sand/dust	100	0	0			
11		- rust	100	0	0			
12		- metal/wire	50	50	0			
13	Oily substances/chemicals	- grease/oil	100	0	0			
14		- rubber	100	0	0			
15		- stamp colour	100	0	0			
16		- tar	100	0	0			
Average of 1-16			91	9	0			
Stickiness		No (%)	Yes (%)			Seed-coat fragments	No (%)	Yes (%)
		100%	0%				50%	50%

Table 34

2022

Country	U.S.A.		Growth:	Memphis Territory	Number of samples:			23
Source of contamination	Degree of contamination (%)							
	Non-existent/ insignificant		Moderate	Serious				
1	Fabrics made of	- woven plastic	87	9	4			
2		- plastic film	83	13	4			
3		- jute/hessian	96	4	0			
4		- cotton	100	0	0			
5	Strings made of	- woven plastic	91	4	4			
6		- plastic film	87	13	0			
7		- jute/hessian	100	0	0			
8		- cotton	96	4	0			
9	Organic matter	- leaves, feathers, paper, leather etc.	78	17	4			
10	Inorganic matter	- sand/dust	100	0	0			
11		- rust	96	4	0			
12		- metal/wire	91	4	4			
13	Oily substances/chemicals	- grease/oil	100	0	0			
14		- rubber	96	4	0			
15		- stamp colour	91	9	0			
16		- tar	100	0	0			
Average of 1-16			93	5	1			
Stickiness		No (%)	Yes (%)			Seed-coat fragments	No (%)	Yes (%)
		100%	0%				57%	43%

America, North

Table 35

2022

Country	U.S.A.		Growth:	Pima	Number of samples:			30
Source of contamination					Degree of contamination (%)			
					Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic			93	3	3	
2		- plastic film			83	13	3	
3		- jute/hessian			100	0	0	
4		- cotton			93	7	0	
5	Strings made of	- woven plastic			90	7	3	
6		- plastic film			83	13	3	
7		- jute/hessian			90	10	0	
8		- cotton			80	20	0	
9	Organic matter	- leaves, feathers, paper, leather etc.			77	20	3	
10	Inorganic matter	- sand/dust			87	13	0	
11		- rust			100	0	0	
12		- metal/wire			93	7	0	
13	Oily substances/chemicals	- grease/oil			90	10	0	
14		- rubber			93	7	0	
15		- stamp colour			97	3	0	
16		- tar			100	0	0	
Average of 1-16					91	8	1	
		No (%)	Yes (%)		No (%)		Yes (%)	
Stickiness		60%	40%		Seed-coat fragments		77% 23%	

Table 36

2022

Country	U.S.A.		Growth:	Rio Grande Val.	Number of samples:			4
Source of contamination					Degree of contamination (%)			
					Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic			100	0	0	
2		- plastic film			100	0	0	
3		- jute/hessian			100	0	0	
4		- cotton			100	0	0	
5	Strings made of	- woven plastic			100	0	0	
6		- plastic film			100	0	0	
7		- jute/hessian			100	0	0	
8		- cotton			100	0	0	
9	Organic matter	- leaves, feathers, paper, leather etc.			100	0	0	
10	Inorganic matter	- sand/dust			50	50	0	
11		- rust			100	0	0	
12		- metal/wire			100	0	0	
13	Oily substances/chemicals	- grease/oil			100	0	0	
14		- rubber			100	0	0	
15		- stamp colour			100	0	0	
16		- tar			100	0	0	
Average of 1-16					97	3	0	
		No (%)	Yes (%)		No (%)		Yes (%)	
Stickiness		100%	0%		Seed-coat fragments		100% 0%	

America, North

Table 37

2022

Country	U.S.A.		Growth:	South Eastern	Number of samples:			13
Source of contamination					Degree of contamination (%)			
					Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic			85	15	0	
2		- plastic film			77	23	0	
3		- jute/hessian			100	0	0	
4		- cotton			100	0	0	
5	Strings made of	- woven plastic			77	23	0	
6		- plastic film			69	31	0	
7		- jute/hessian			85	15	0	
8		- cotton			85	15	0	
9	Organic matter	- leaves, feathers, paper, leather etc.			100	0	0	
10	Inorganic matter	- sand/dust			100	0	0	
11		- rust			92	8	0	
12		- metal/wire			69	23	8	
13	Oily substances/chemicals	- grease/oil			100	0	0	
14		- rubber			77	23	0	
15		- stamp colour			92	8	0	
16		- tar			100	0	0	
Average of 1-16					88	12	0	
			No (%)	Yes (%)				
Stickiness			100%	0%				
			No (%)	Yes (%)				
Seed-coat fragments			62%	38%				

Table 38

2022

Country	U.S.A.		Growth:	Texas H. Plains	Number of samples:			23
Source of contamination					Degree of contamination (%)			
					Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic			78	22	0	
2		- plastic film			83	17	0	
3		- jute/hessian			96	4	0	
4		- cotton			96	4	0	
5	Strings made of	- woven plastic			96	4	0	
6		- plastic film			83	17	0	
7		- jute/hessian			100	0	0	
8		- cotton			96	4	0	
9	Organic matter	- leaves, feathers, paper, leather etc.			78	22	0	
10	Inorganic matter	- sand/dust			83	17	0	
11		- rust			100	0	0	
12		- metal/wire			96	4	0	
13	Oily substances/chemicals	- grease/oil			96	4	0	
14		- rubber			100	0	0	
15		- stamp colour			91	9	0	
16		- tar			100	0	0	
Average of 1-16					92	8	0	
			No (%)	Yes (%)				
Stickiness			100%	0%				
			No (%)	Yes (%)				
Seed-coat fragments			78%	22%				

America, North

Table 39

2022

Country	U.S.A.		Growth:	USA-Others		Number of samples:			20	
Source of contamination						Degree of contamination (%)				
						Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic				75	20	5		
2		- plastic film				75	20	5		
3		- jute/hessian				90	10	0		
4		- cotton				95	5	0		
5	Strings made of	- woven plastic				70	25	5		
6		- plastic film				80	15	5		
7		- jute/hessian				85	15	0		
8		- cotton				90	10	0		
9	Organic matter	- leaves, feathers, paper, leather etc.				50	25	25		
10	Inorganic matter	- sand/dust				50	50	0		
11		- rust				85	15	0		
12		- metal/wire				95	5	0		
13	Oily substances/chemicals	- grease/oil				80	10	10		
14		- rubber				90	0	10		
15		- stamp colour				85	15	0		
16		- tar				95	5	0		
Average of 1-16						81	15	4		
			No (%)	Yes (%)				No (%)	Yes (%)	
Stickiness			95%	5%		Seed-coat fragments		80%	20%	

America, South

Table 40

2022

Country	Argentina		Growth:	Argentina		Number of samples:			13	
Source of contamination						Degree of contamination (%)				
						Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic				92	8	0		
2		- plastic film				85	15	0		
3		- jute/hessian				77	23	0		
4		- cotton				77	23	0		
5	Strings made of	- woven plastic				85	8	8		
6		- plastic film				85	8	8		
7		- jute/hessian				62	31	8		
8		- cotton				62	38	0		
9	Organic matter	- leaves, feathers, paper, leather etc.				46	38	15		
10	Inorganic matter	- sand/dust				46	54	0		
11		- rust				92	8	0		
12		- metal/wire				92	8	0		
13	Oily substances/chemicals	- grease/oil				92	0	8		
14		- rubber				100	0	0		
15		- stamp colour				92	8	0		
16		- tar				100	0	0		
Average of 1-16						80	17	3		
			No (%)	Yes (%)				No (%)	Yes (%)	
Stickiness			77%	23%		Seed-coat fragments		54%	46%	

America, South

Table 41

2022

Country		Growth:		Number of samples:		
Brazil		Brazil		54		
Source of contamination				Degree of contamination (%)		
				Non-existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic		80	19	2
2		- plastic film		74	26	0
3		- jute/hessian		85	15	0
4		- cotton		78	22	0
5	Strings made of	- woven plastic		81	17	2
6		- plastic film		74	26	0
7		- jute/hessian		83	17	0
8		- cotton		74	24	2
9	Organic matter	- leaves, feathers, paper, leather etc.		50	44	6
10	Inorganic matter	- sand/dust		76	22	2
11		- rust		89	9	2
12		- metal/wire		81	17	2
13	Oily substances/chemicals	- grease/oil		89	11	0
14		- rubber		94	6	0
15		- stamp colour		93	7	0
16		- tar		96	4	0
Average of 1-16				81	18	1
		No (%)	Yes (%)			
Stickiness		72%	28%			
		No (%)	Yes (%)			
Seed-coat fragments		69%	31%			

Table 42

2022

Country		Growth:		Number of samples:		
Paraguay		Paraguay		1		
Source of contamination				Degree of contamination (%)		
				Non-existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic		100	0	0
2		- plastic film		100	0	0
3		- jute/hessian		100	0	0
4		- cotton		0	100	0
5	Strings made of	- woven plastic		100	0	0
6		- plastic film		100	0	0
7		- jute/hessian		100	0	0
8		- cotton		100	0	0
9	Organic matter	- leaves, feathers, paper, leather etc.		100	0	0
10	Inorganic matter	- sand/dust		100	0	0
11		- rust		100	0	0
12		- metal/wire		0	100	0
13	Oily substances/chemicals	- grease/oil		100	0	0
14		- rubber		100	0	0
15		- stamp colour		100	0	0
16		- tar		100	0	0
Average of 1-16				88	13	0
		No (%)	Yes (%)			
Stickiness		100%	0%			
		No (%)	Yes (%)			
Seed-coat fragments		0%	100%			

America, South

Table 43

2022

Country		Peru		Growth:		Pima		Number of samples:		1	
Source of contamination						Degree of contamination (%)					
						Non-existent/ insignificant		Moderate		Serious	
1	Fabrics made of	- woven plastic		100		0		0			
2		- plastic film		100		0		0			
3		- jute/hessian		100		0		0			
4		- cotton		0		100		0			
5	Strings made of	- woven plastic		0		100		0			
6		- plastic film		100		0		0			
7		- jute/hessian		100		0		0			
8		- cotton		0		100		0			
9	Organic matter	- leaves, feathers, paper, leather etc.		100		0		0			
10	Inorganic matter	- sand/dust		100		0		0			
11		- rust		100		0		0			
12		- metal/wire		100		0		0			
13	Oily substances/chemicals	- grease/oil		100		0		0			
14		- rubber		100		0		0			
15		- stamp colour		100		0		0			
16		- tar		100		0		0			
Average of 1-16				81		19		0			
Stickiness		No (%)		Yes (%)		No (%)		Yes (%)			
		100%		0%		Seed-coat fragments		100%			
								0%			

Table 44

2022

Country		Peru		Growth:		Tanguis		Number of samples:		1	
Source of contamination						Degree of contamination (%)					
						Non-existent/ insignificant		Moderate		Serious	
1	Fabrics made of	- woven plastic		100		0		0			
2		- plastic film		100		0		0			
3		- jute/hessian		100		0		0			
4		- cotton		0		100		0			
5	Strings made of	- woven plastic		0		100		0			
6		- plastic film		100		0		0			
7		- jute/hessian		100		0		0			
8		- cotton		0		100		0			
9	Organic matter	- leaves, feathers, paper, leather etc.		100		0		0			
10	Inorganic matter	- sand/dust		100		0		0			
11		- rust		100		0		0			
12		- metal/wire		100		0		0			
13	Oily substances/chemicals	- grease/oil		100		0		0			
14		- rubber		100		0		0			
15		- stamp colour		100		0		0			
16		- tar		100		0		0			
Average of 1-16				81		19		0			
Stickiness		No (%)		Yes (%)		No (%)		Yes (%)			
		100%		0%		Seed-coat fragments		0%			
								100%			

America, South

Table 45

2022

Country	Peru		Growth:	Peru-Others		Number of samples:			3		
Source of contamination						Degree of contamination (%)					
						Non-existent/ insignificant		Moderate		Serious	
1	Fabrics made of		- woven plastic		0		67		33		
2			- plastic film		0		67		33		
3			- jute/hessian		67		0		33		
4			- cotton		100		0		0		
5	Strings made of		- woven plastic		0		67		33		
6			- plastic film		0		67		33		
7			- jute/hessian		67		0		33		
8			- cotton		100		0		0		
9	Organic matter		- leaves, feathers, paper, leather etc.		0		33		67		
10	Inorganic matter		- sand/dust		33		67		0		
11			- rust		33		67		0		
12			- metal/wire		33		67		0		
13	Oily substances/chemicals		- grease/oil		33		0		67		
14			- rubber		33		0		67		
15			- stamp colour		33		67		0		
16			- tar		100		0		0		
Average of 1-16					40		35		25		
						No (%)		Yes (%)			
Stickiness						100%		0%			
						No (%)		Yes (%)			
Seed-coat fragments						100%		0%			

Asia

Table 46

2022

Country	Afghanistan		Growth:	Afghanistan		Number of samples:			8		
Source of contamination						Degree of contamination (%)					
						Non-existent/ insignificant		Moderate		Serious	
1	Fabrics made of		- woven plastic		88		0		13		
2			- plastic film		50		25		25		
3			- jute/hessian		50		13		38		
4			- cotton		50		25		25		
5	Strings made of		- woven plastic		38		13		50		
6			- plastic film		25		25		50		
7			- jute/hessian		25		25		50		
8			- cotton		25		38		38		
9	Organic matter		- leaves, feathers, paper, leather etc.		25		25		50		
10	Inorganic matter		- sand/dust		25		25		50		
11			- rust		75		13		13		
12			- metal/wire		63		13		25		
13	Oily substances/chemicals		- grease/oil		63		38		0		
14			- rubber		75		13		13		
15			- stamp colour		75		13		13		
16			- tar		75		13		13		
Average of 1-16					52		20		29		
						No (%)		Yes (%)			
Stickiness						38%		63%			
						No (%)		Yes (%)			
Seed-coat fragments						25%		75%			

Asia

Table 47

2022

Country	Australia		Growth:	Australia		Number of samples:			31
Source of contamination	Degree of contamination (%)								
	Non-existent/ insignificant		Moderate	Serious					
1	Fabrics made of	- woven plastic	94	3	3				
2		- plastic film	97	3	0				
3		- jute/hessian	87	13	0				
4		- cotton	94	6	0				
5	Strings made of	- woven plastic	97	3	0				
6		- plastic film	97	3	0				
7		- jute/hessian	90	10	0				
8		- cotton	94	6	0				
9	Organic matter	- leaves, feathers, paper, leather etc.	84	13	3				
10	Inorganic matter	- sand/dust	87	13	0				
11		- rust	100	0	0				
12		- metal/wire	100	0	0				
13	Oily substances/chemicals	- grease/oil	100	0	0				
14		- rubber	100	0	0				
15		- stamp colour	100	0	0				
16		- tar	100	0	0				
Average of 1-16			95	5	0				
Stickiness		No (%)	Yes (%)			Seed-coat fragments		No (%)	Yes (%)
		100%	0%					90%	10%

Table 48

2022

Country	China		Growth:	Anhui		Number of samples:			5
Source of contamination	Degree of contamination (%)								
	Non-existent/ insignificant		Moderate	Serious					
1	Fabrics made of	- woven plastic	80	20	0				
2		- plastic film	100	0	0				
3		- jute/hessian	100	0	0				
4		- cotton	80	20	0				
5	Strings made of	- woven plastic	100	0	0				
6		- plastic film	100	0	0				
7		- jute/hessian	100	0	0				
8		- cotton	100	0	0				
9	Organic matter	- leaves, feathers, paper, leather etc.	100	0	0				
10	Inorganic matter	- sand/dust	80	20	0				
11		- rust	100	0	0				
12		- metal/wire	80	20	0				
13	Oily substances/chemicals	- grease/oil	100	0	0				
14		- rubber	100	0	0				
15		- stamp colour	100	0	0				
16		- tar	100	0	0				
Average of 1-16			95	5	0				
Stickiness		No (%)	Yes (%)			Seed-coat fragments		No (%)	Yes (%)
		100%	0%					80%	20%

Asia

Table 49

2022

Country		Growth:		Number of samples:		
China		Hebei		6		
Source of contamination				Degree of contamination (%)		
				Non-existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic		67	17	17
2		- plastic film		67	33	0
3		- jute/hessian		67	33	0
4		- cotton		83	17	0
5	Strings made of	- woven plastic		83	17	0
6		- plastic film		83	17	0
7		- jute/hessian		83	17	0
8		- cotton		83	17	0
9	Organic matter	- leaves, feathers, paper, leather etc.		67	33	0
10	Inorganic matter	- sand/dust		83	17	0
11		- rust		100	0	0
12		- metal/wire		83	17	0
13	Oily substances/chemicals	- grease/oil		100	0	0
14		- rubber		100	0	0
15		- stamp colour		100	0	0
16		- tar		100	0	0
Average of 1-16				84	15	1
		No (%)	Yes (%)			
Stickiness		100%	0%			
					No (%)	Yes (%)
				Seed-coat fragments	83%	17%

Table 50

2022

Country		Growth:		Number of samples:		
China		Henan		3		
Source of contamination				Degree of contamination (%)		
				Non-existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic		67	33	0
2		- plastic film		100	0	0
3		- jute/hessian		67	33	0
4		- cotton		100	0	0
5	Strings made of	- woven plastic		100	0	0
6		- plastic film		100	0	0
7		- jute/hessian		100	0	0
8		- cotton		100	0	0
9	Organic matter	- leaves, feathers, paper, leather etc.		67	33	0
10	Inorganic matter	- sand/dust		67	33	0
11		- rust		100	0	0
12		- metal/wire		100	0	0
13	Oily substances/chemicals	- grease/oil		100	0	0
14		- rubber		100	0	0
15		- stamp colour		100	0	0
16		- tar		100	0	0
Average of 1-16				92	8	0
		No (%)	Yes (%)			
Stickiness		100%	0%			
					No (%)	Yes (%)
				Seed-coat fragments	67%	33%

Asia

Table 53

2022

Country		Growth:		Number of samples:		
China		Shandong		7		
Source of contamination				Degree of contamination (%)		
				Non-existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic		71	29	0
2		- plastic film		57	29	14
3		- jute/hessian		100	0	0
4		- cotton		86	14	0
5	Strings made of	- woven plastic		86	14	0
6		- plastic film		86	0	14
7		- jute/hessian		100	0	0
8		- cotton		86	14	0
9	Organic matter	- leaves, feathers, paper, leather etc.		71	29	0
10	Inorganic matter	- sand/dust		100	0	0
11		- rust		100	0	0
12		- metal/wire		86	14	0
13	Oily substances/chemicals	- grease/oil		100	0	0
14		- rubber		100	0	0
15		- stamp colour		86	14	0
16		- tar		100	0	0
Average of 1-16				88	10	2
		No (%)	Yes (%)			
Stickiness		100%	0%			
					No (%)	Yes (%)
				Seed-coat fragments	86%	14%

Table 54

2022

Country		Growth:		Number of samples:		
China		Xinjiang		20		
Source of contamination				Degree of contamination (%)		
				Non-existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic		60	30	10
2		- plastic film		30	35	35
3		- jute/hessian		70	25	5
4		- cotton		80	10	10
5	Strings made of	- woven plastic		70	25	5
6		- plastic film		50	30	20
7		- jute/hessian		75	20	5
8		- cotton		75	25	0
9	Organic matter	- leaves, feathers, paper, leather etc.		55	40	5
10	Inorganic matter	- sand/dust		70	30	0
11		- rust		100	0	0
12		- metal/wire		60	40	0
13	Oily substances/chemicals	- grease/oil		100	0	0
14		- rubber		80	20	0
15		- stamp colour		100	0	0
16		- tar		100	0	0
Average of 1-16				73	21	6
		No (%)	Yes (%)			
Stickiness		85%	15%			
					No (%)	Yes (%)
				Seed-coat fragments	60%	40%

Asia

Table 55

2022

Country	China		Growth:	China-Others		Number of samples:			1
Source of contamination						Degree of contamination (%)			
						Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic				100	0	0	
2		- plastic film				100	0	0	
3		- jute/hessian				100	0	0	
4		- cotton				100	0	0	
5	Strings made of	- woven plastic				100	0	0	
6		- plastic film				100	0	0	
7		- jute/hessian				100	0	0	
8		- cotton				100	0	0	
9	Organic matter	- leaves, feathers, paper, leather etc.				100	0	0	
10	Inorganic matter	- sand/dust				100	0	0	
11		- rust				100	0	0	
12		- metal/wire				100	0	0	
13	Oily substances/chemicals	- grease/oil				100	0	0	
14		- rubber				100	0	0	
15		- stamp colour				100	0	0	
16		- tar				100	0	0	
Average of 1-16						100	0	0	
			No (%)	Yes (%)		No (%) Yes (%)			
Stickiness			0%	100%		Seed-coat fragments 0% 100%			

Table 56

2022

Country	India		Growth:	DCH		Number of samples:			9
Source of contamination						Degree of contamination (%)			
						Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic				44	11	44	
2		- plastic film				44	22	33	
3		- jute/hessian				44	44	11	
4		- cotton				11	78	11	
5	Strings made of	- woven plastic				44	33	22	
6		- plastic film				22	44	33	
7		- jute/hessian				33	33	33	
8		- cotton				44	44	11	
9	Organic matter	- leaves, feathers, paper, leather etc.				44	33	22	
10	Inorganic matter	- sand/dust				56	11	33	
11		- rust				78	11	11	
12		- metal/wire				56	22	22	
13	Oily substances/chemicals	- grease/oil				78	11	11	
14		- rubber				89	0	11	
15		- stamp colour				56	22	22	
16		- tar				89	0	11	
Average of 1-16						52	26	22	
			No (%)	Yes (%)		No (%) Yes (%)			
Stickiness			78%	22%		Seed-coat fragments 33% 67%			

Asia

Table 57

2022

Country	India		Growth:	H-4	Number of samples:			2
Source of contamination	Degree of contamination (%)							
	Non-existent/ insignificant		Moderate	Serious				
1	Fabrics made of	- woven plastic	50	0	50			
2		- plastic film	50	0	50			
3		- jute/hessian	100	0	0			
4		- cotton	100	0	0			
5	Strings made of	- woven plastic	50	50	0			
6		- plastic film	50	0	50			
7		- jute/hessian	100	0	0			
8		- cotton	100	0	0			
9	Organic matter	- leaves, feathers, paper, leather etc.	50	50	0			
10	Inorganic matter	- sand/dust	50	0	50			
11		- rust	100	0	0			
12		- metal/wire	100	0	0			
13	Oily substances/chemicals	- grease/oil	100	0	0			
14		- rubber	100	0	0			
15		- stamp colour	100	0	0			
16		- tar	100	0	0			
Average of 1-16			81	6	13			
Stickiness		No (%)	Yes (%)			Seed-coat fragments	No (%)	Yes (%)
		100%	0%				0%	100%

Table 58

2022

Country	India		Growth:	India-Others	Number of samples:			9
Source of contamination	Degree of contamination (%)							
	Non-existent/ insignificant		Moderate	Serious				
1	Fabrics made of	- woven plastic	22	22	56			
2		- plastic film	11	44	44			
3		- jute/hessian	22	44	33			
4		- cotton	11	22	67			
5	Strings made of	- woven plastic	22	0	78			
6		- plastic film	11	22	67			
7		- jute/hessian	22	33	44			
8		- cotton	22	22	56			
9	Organic matter	- leaves, feathers, paper, leather etc.	11	44	44			
10	Inorganic matter	- sand/dust	33	33	33			
11		- rust	56	22	22			
12		- metal/wire	11	56	33			
13	Oily substances/chemicals	- grease/oil	89	0	11			
14		- rubber	56	33	11			
15		- stamp colour	78	11	11			
16		- tar	78	11	11			
Average of 1-16			35	26	39			
Stickiness		No (%)	Yes (%)			Seed-coat fragments	No (%)	Yes (%)
		100%	0%				56%	44%

Asia

Table 59

2022

Country		India		Growth:	J-34	Number of samples:			5
Source of contamination						Degree of contamination (%)			
						Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic			40	20	40		
2		- plastic film			40	20	40		
3		- jute/hessian			60	40	0		
4		- cotton			60	40	0		
5	Strings made of	- woven plastic			40	40	20		
6		- plastic film			40	20	40		
7		- jute/hessian			60	40	0		
8		- cotton			60	40	0		
9	Organic matter	- leaves, feathers, paper, leather etc.			40	60	0		
10	Inorganic matter	- sand/dust			60	20	20		
11		- rust			80	20	0		
12		- metal/wire			60	40	0		
13	Oily substances/chemicals	- grease/oil			80	20	0		
14		- rubber			100	0	0		
15		- stamp colour			80	20	0		
16		- tar			100	0	0		
Average of 1-16					63	28	10		
		No (%)	Yes (%)				No (%)	Yes (%)	
Stickiness		100%	0%		Seed-coat fragments		80%	20%	

Table 60

2022

Country		India		Growth:	MCU-5	Number of samples:			15
Source of contamination						Degree of contamination (%)			
						Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic			33	27	40		
2		- plastic film			33	27	40		
3		- jute/hessian			33	47	20		
4		- cotton			27	47	27		
5	Strings made of	- woven plastic			40	7	53		
6		- plastic film			20	27	53		
7		- jute/hessian			33	40	27		
8		- cotton			60	33	7		
9	Organic matter	- leaves, feathers, paper, leather etc.			33	40	27		
10	Inorganic matter	- sand/dust			60	13	27		
11		- rust			80	7	13		
12		- metal/wire			53	27	20		
13	Oily substances/chemicals	- grease/oil			73	13	13		
14		- rubber			87	0	13		
15		- stamp colour			60	20	20		
16		- tar			80	7	13		
Average of 1-16					50	24	26		
		No (%)	Yes (%)				No (%)	Yes (%)	
Stickiness		93%	7%		Seed-coat fragments		33%	67%	

Asia

Table 61

2022

Country		India		Growth:	Shankar-4/6		Number of samples:			22		
Source of contamination						Degree of contamination (%)						
						Non-existent/ insignificant		Moderate		Serious		
1	Fabrics made of	- woven plastic			41		9		50			
2		- plastic film			59		14		27			
3		- jute/hessian			45		36		18			
4		- cotton			32		32		36			
5	Strings made of	- woven plastic			41		18		41			
6		- plastic film			41		18		41			
7		- jute/hessian			45		41		14			
8		- cotton			55		32		14			
9	Organic matter	- leaves, feathers, paper, leather etc.			32		27		41			
10	Inorganic matter	- sand/dust			45		18		36			
11		- rust			82		0		18			
12		- metal/wire			50		18		32			
13	Oily substances/chemicals	- grease/oil			77		14		9			
14		- rubber			68		23		9			
15		- stamp colour			77		14		9			
16		- tar			91		5		5			
Average of 1-16					55		20		25			
						No (%)	Yes (%)			No (%)	Yes (%)	
Stickiness						91%	9%			Seed-coat fragments	36%	64%

Table 62

2022

Country		Israel		Growth:	Acala		Number of samples:			1		
Source of contamination						Degree of contamination (%)						
						Non-existent/ insignificant		Moderate		Serious		
1	Fabrics made of	- woven plastic			100		0		0			
2		- plastic film			0		0		100			
3		- jute/hessian			100		0		0			
4		- cotton			0		0		100			
5	Strings made of	- woven plastic			0		0		100			
6		- plastic film			0		0		100			
7		- jute/hessian			100		0		0			
8		- cotton			100		0		0			
9	Organic matter	- leaves, feathers, paper, leather etc.			0		100		0			
10	Inorganic matter	- sand/dust			100		0		0			
11		- rust			100		0		0			
12		- metal/wire			100		0		0			
13	Oily substances/chemicals	- grease/oil			100		0		0			
14		- rubber			100		0		0			
15		- stamp colour			100		0		0			
16		- tar			100		0		0			
Average of 1-16					69		6		25			
						No (%)	Yes (%)			No (%)	Yes (%)	
Stickiness						100%	0%			Seed-coat fragments	100%	0%

Asia

Table 63

2022

Country	Israel		Growth:	Pima	Number of samples:			3
Source of contamination	Degree of contamination (%)							
			Non-existent/ insignificant	Moderate	Serious			
1	Fabrics made of	- woven plastic	100	0	0			
2		- plastic film	67	33	0			
3		- jute/hessian	100	0	0			
4		- cotton	100	0	0			
5	Strings made of	- woven plastic	67	33	0			
6		- plastic film	67	33	0			
7		- jute/hessian	100	0	0			
8		- cotton	100	0	0			
9	Organic matter	- leaves, feathers, paper, leather etc.	33	67	0			
10	Inorganic matter	- sand/dust	100	0	0			
11		- rust	100	0	0			
12		- metal/wire	100	0	0			
13	Oily substances/chemicals	- grease/oil	100	0	0			
14		- rubber	100	0	0			
15		- stamp colour	100	0	0			
16		- tar	100	0	0			
Average of 1-16			90	10	0			
			No (%)	Yes (%)		No (%)	Yes (%)	
Stickiness			100%	0%		Seed-coat fragments	67%	33%

Table 64

2022

Country	Pakistan		Growth:	MNH93	Number of samples:			9
Source of contamination	Degree of contamination (%)							
			Non-existent/ insignificant	Moderate	Serious			
1	Fabrics made of	- woven plastic	33	44	22			
2		- plastic film	11	89	0			
3		- jute/hessian	11	78	11			
4		- cotton	22	67	11			
5	Strings made of	- woven plastic	33	33	33			
6		- plastic film	22	67	11			
7		- jute/hessian	11	78	11			
8		- cotton	44	56	0			
9	Organic matter	- leaves, feathers, paper, leather etc.	22	67	11			
10	Inorganic matter	- sand/dust	11	56	33			
11		- rust	89	11	0			
12		- metal/wire	44	56	0			
13	Oily substances/chemicals	- grease/oil	89	11	0			
14		- rubber	100	0	0			
15		- stamp colour	89	11	0			
16		- tar	100	0	0			
Average of 1-16			46	45	9			
			No (%)	Yes (%)		No (%)	Yes (%)	
Stickiness			100%	0%		Seed-coat fragments	33%	67%

Asia

Table 67

2022

Country	Tajikistan		Growth:	Long Staples	Number of samples:			1	
Source of contamination					Degree of contamination (%)				
					Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic			100	0	0		
2		- plastic film			100	0	0		
3		- jute/hessian			100	0	0		
4		- cotton			0	100	0		
5	Strings made of	- woven plastic			0	100	0		
6		- plastic film			0	100	0		
7		- jute/hessian			100	0	0		
8		- cotton			0	100	0		
9	Organic matter	- leaves, feathers, paper, leather etc.			0	100	0		
10	Inorganic matter	- sand/dust			100	0	0		
11		- rust			100	0	0		
12		- metal/wire			100	0	0		
13	Oily substances/chemicals	- grease/oil			100	0	0		
14		- rubber			100	0	0		
15		- stamp colour			0	100	0		
16		- tar			100	0	0		
Average of 1-16					63	38	0		
			No (%)	Yes (%)				No (%)	Yes (%)
Stickiness			100%	0%	Seed-coat fragments			100%	0%

Table 68

2022

Country	Tajikistan		Growth:	Medium Staples	Number of samples:			5	
Source of contamination					Degree of contamination (%)				
					Non-existent/ insignificant	Moderate	Serious		
1	Fabrics made of	- woven plastic			80	20	0		
2		- plastic film			80	20	0		
3		- jute/hessian			80	20	0		
4		- cotton			40	60	0		
5	Strings made of	- woven plastic			60	40	0		
6		- plastic film			80	20	0		
7		- jute/hessian			80	20	0		
8		- cotton			80	20	0		
9	Organic matter	- leaves, feathers, paper, leather etc.			100	0	0		
10	Inorganic matter	- sand/dust			60	20	20		
11		- rust			100	0	0		
12		- metal/wire			60	40	0		
13	Oily substances/chemicals	- grease/oil			100	0	0		
14		- rubber			100	0	0		
15		- stamp colour			100	0	0		
16		- tar			100	0	0		
Average of 1-16					81	18	1		
			No (%)	Yes (%)				No (%)	Yes (%)
Stickiness			60%	40%	Seed-coat fragments			60%	40%

Asia

Table 69

2022

Country		Turkmenistan		Growth:	Long Staples	Number of samples:			1
Source of contamination						Degree of contamination (%)			
						Non-existent/ insignificant		Moderate	Serious
1	Fabrics made of	- woven plastic			100	0	0		
2		- plastic film			100	0	0		
3		- jute/hessian			100	0	0		
4		- cotton			0	100	0		
5	Strings made of	- woven plastic			100	0	0		
6		- plastic film			100	0	0		
7		- jute/hessian			100	0	0		
8		- cotton			100	0	0		
9	Organic matter	- leaves, feathers, paper, leather etc.			100	0	0		
10	Inorganic matter	- sand/dust			0	0	100		
11		- rust			100	0	0		
12	Oily substances/chemicals	- metal/wire			0	100	0		
13		- grease/oil			100	0	0		
14		- rubber			100	0	0		
15		- stamp colour			100	0	0		
16		- tar			100	0	0		
Average of 1-16					81	13	6		
		No (%)	Yes (%)				No (%)	Yes (%)	
Stickiness		0%	100%		Seed-coat fragments		100%	0%	

Table 70

2022

Country		Turkmenistan		Growth:	Medium Staples	Number of samples:			1
Source of contamination						Degree of contamination (%)			
						Non-existent/ insignificant		Moderate	Serious
1	Fabrics made of	- woven plastic			0	100	0		
2		- plastic film			0	100	0		
3		- jute/hessian			100	0	0		
4		- cotton			100	0	0		
5	Strings made of	- woven plastic			0	100	0		
6		- plastic film			0	100	0		
7		- jute/hessian			100	0	0		
8		- cotton			100	0	0		
9	Organic matter	- leaves, feathers, paper, leather etc.			0	100	0		
10	Inorganic matter	- sand/dust			100	0	0		
11		- rust			100	0	0		
12	Oily substances/chemicals	- metal/wire			100	0	0		
13		- grease/oil			100	0	0		
14		- rubber			100	0	0		
15		- stamp colour			100	0	0		
16		- tar			100	0	0		
Average of 1-16					69	31	0		
		No (%)	Yes (%)				No (%)	Yes (%)	
Stickiness		100%	0%		Seed-coat fragments		100%	0%	

Asia

Table 71

2022

Country	Uzbekistan		Growth:	Long Staples	Number of samples:			1
Source of contamination					Degree of contamination (%)			
					Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic			100	0	0	
2		- plastic film			100	0	0	
3		- jute/hessian			100	0	0	
4		- cotton			0	100	0	
5	Strings made of	- woven plastic			100	0	0	
6		- plastic film			100	0	0	
7		- jute/hessian			100	0	0	
8		- cotton			100	0	0	
9	Organic matter	- leaves, feathers, paper, leather etc.			100	0	0	
10	Inorganic matter	- sand/dust			0	0	100	
11		- rust			100	0	0	
12		- metal/wire			100	0	0	
13	Oily substances/chemicals	- grease/oil			100	0	0	
14		- rubber			100	0	0	
15		- stamp colour			100	0	0	
16		- tar			100	0	0	
Average of 1-16					88	6	6	
			No (%)	Yes (%)				
Stickiness			0%	100%	Seed-coat fragments			
					No (%)	Yes (%)		
					100%	0%		

Table 72

2022

Country	Uzbekistan		Growth:	Medium Staples	Number of samples:			2
Source of contamination					Degree of contamination (%)			
					Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic			50	50	0	
2		- plastic film			50	50	0	
3		- jute/hessian			50	50	0	
4		- cotton			50	50	0	
5	Strings made of	- woven plastic			50	50	0	
6		- plastic film			50	50	0	
7		- jute/hessian			50	50	0	
8		- cotton			50	50	0	
9	Organic matter	- leaves, feathers, paper, leather etc.			50	50	0	
10	Inorganic matter	- sand/dust			100	0	0	
11		- rust			100	0	0	
12		- metal/wire			50	0	50	
13	Oily substances/chemicals	- grease/oil			100	0	0	
14		- rubber			100	0	0	
15		- stamp colour			50	50	0	
16		- tar			100	0	0	
Average of 1-16					66	31	3	
			No (%)	Yes (%)				
Stickiness			100%	0%	Seed-coat fragments			
					No (%)	Yes (%)		
					100%	0%		

Europe

Table 73

2022

Country	Greece		Growth:	Greece		Number of samples: 19		
Source of contamination	Degree of contamination (%)							
	Non-existent/insignificant		Moderate	Serious				
1	Fabrics made of	- woven plastic	89	11	0			
2		- plastic film	68	32	0			
3		- jute/hessian	95	5	0			
4		- cotton	95	5	0			
5	Strings made of	- woven plastic	89	11	0			
6		- plastic film	79	21	0			
7		- jute/hessian	89	5	5			
8		- cotton	95	5	0			
9	Organic matter	- leaves, feathers, paper, leather etc.	58	26	16			
10	Inorganic matter	- sand/dust	74	16	11			
11		- rust	84	11	5			
12		- metal/wire	84	16	0			
13	Oily substances/chemicals	- grease/oil	89	0	11			
14		- rubber	89	0	11			
15		- stamp colour	89	11	0			
16		- tar	100	0	0			
Average of 1-16			86	11	4			
			No (%)	Yes (%)		No (%)	Yes (%)	
Stickiness			100%	0%		Seed-coat fragments	89%	11%

Table 74

2022

Country	Spain		Growth:	Spain		Number of samples: 9		
Source of contamination	Degree of contamination (%)							
	Non-existent/insignificant		Moderate	Serious				
1	Fabrics made of	- woven plastic	100	0	0			
2		- plastic film	78	22	0			
3		- jute/hessian	100	0	0			
4		- cotton	89	11	0			
5	Strings made of	- woven plastic	89	0	11			
6		- plastic film	78	22	0			
7		- jute/hessian	100	0	0			
8		- cotton	100	0	0			
9	Organic matter	- leaves, feathers, paper, leather etc.	89	11	0			
10	Inorganic matter	- sand/dust	100	0	0			
11		- rust	100	0	0			
12		- metal/wire	100	0	0			
13	Oily substances/chemicals	- grease/oil	100	0	0			
14		- rubber	100	0	0			
15		- stamp colour	100	0	0			
16		- tar	100	0	0			
Average of 1-16			95	4	1			
			No (%)	Yes (%)		No (%)	Yes (%)	
Stickiness			89%	11%		Seed-coat fragments	89%	11%

Europe

Table 75

2022

Country	Türkiye		Growth:	Antalya	Number of samples:			5
Source of contamination					Degree of contamination (%)			
					Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic			60	20	20	
2		- plastic film			80	0	20	
3		- jute/hessian			80	0	20	
4		- cotton			80	0	20	
5	Strings made of	- woven plastic			60	20	20	
6		- plastic film			80	0	20	
7		- jute/hessian			80	20	0	
8		- cotton			80	20	0	
9	Organic matter	- leaves, feathers, paper, leather etc.			40	20	40	
10	Inorganic matter	- sand/dust			60	40	0	
11		- rust			100	0	0	
12		- metal/wire			100	0	0	
13	Oily substances/chemicals	- grease/oil			100	0	0	
14		- rubber			100	0	0	
15		- stamp colour			100	0	0	
16		- tar			100	0	0	
Average of 1-16					81	9	10	
			No (%)	Yes (%)				
Stickiness			100%	0%				
						No (%)	Yes (%)	
					Seed-coat fragments	60%	40%	

Table 76

2022

Country	Türkiye		Growth:	Cukurova / S. E.	Number of samples:			3
Source of contamination					Degree of contamination (%)			
					Non-existent/ insignificant	Moderate	Serious	
1	Fabrics made of	- woven plastic			67	0	33	
2		- plastic film			100	0	0	
3		- jute/hessian			100	0	0	
4		- cotton			67	33	0	
5	Strings made of	- woven plastic			67	33	0	
6		- plastic film			100	0	0	
7		- jute/hessian			100	0	0	
8		- cotton			100	0	0	
9	Organic matter	- leaves, feathers, paper, leather etc.			33	0	67	
10	Inorganic matter	- sand/dust			33	0	67	
11		- rust			67	33	0	
12		- metal/wire			33	33	33	
13	Oily substances/chemicals	- grease/oil			67	33	0	
14		- rubber			67	33	0	
15		- stamp colour			100	0	0	
16		- tar			67	33	0	
Average of 1-16					73	15	13	
			No (%)	Yes (%)				
Stickiness			67%	33%				
						No (%)	Yes (%)	
					Seed-coat fragments	33%	67%	

Europe

Table 77

2022

Country	Türkiye		Growth:	Izmir	Number of samples: 12		
Source of contamination					Degree of contamination (%)		
					Non-existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic			83	8	8
2		- plastic film			100	0	0
3		- jute/hessian			92	8	0
4		- cotton			67	33	0
5	Strings made of	- woven plastic			83	17	0
6		- plastic film			100	0	0
7		- jute/hessian			92	8	0
8		- cotton			75	25	0
9	Organic matter	- leaves, feathers, paper, leather etc.			33	33	33
10	Inorganic matter	- sand/dust			67	25	8
11		- rust			83	17	0
12		- metal/wire			75	25	0
13	Oily substances/chemicals	- grease/oil			75	25	0
14		- rubber			100	0	0
15		- stamp colour			100	0	0
16		- tar			100	0	0
Average of 1-16					83	14	3
			No (%)	Yes (%)			
Stickiness			92%	8%			
			No (%)	Yes (%)			
					Seed-coat fragments		
					67%	33%	

Table 78

2022

Country	Türkiye		Growth:	Turkey-Others	Number of samples: 10		
Source of contamination					Degree of contamination (%)		
					Non-existent/ insignificant	Moderate	Serious
1	Fabrics made of	- woven plastic			80	0	20
2		- plastic film			90	0	10
3		- jute/hessian			60	40	0
4		- cotton			80	20	0
5	Strings made of	- woven plastic			90	0	10
6		- plastic film			80	0	20
7		- jute/hessian			60	30	10
8		- cotton			90	10	0
9	Organic matter	- leaves, feathers, paper, leather etc.			20	20	60
10	Inorganic matter	- sand/dust			40	20	40
11		- rust			90	0	10
12		- metal/wire			80	10	10
13	Oily substances/chemicals	- grease/oil			80	20	0
14		- rubber			90	10	0
15		- stamp colour			100	0	0
16		- tar			90	10	0
Average of 1-16					76	12	12
			No (%)	Yes (%)			
Stickiness			100%	0%			
			No (%)	Yes (%)			
					Seed-coat fragments		
					50%	50%	