



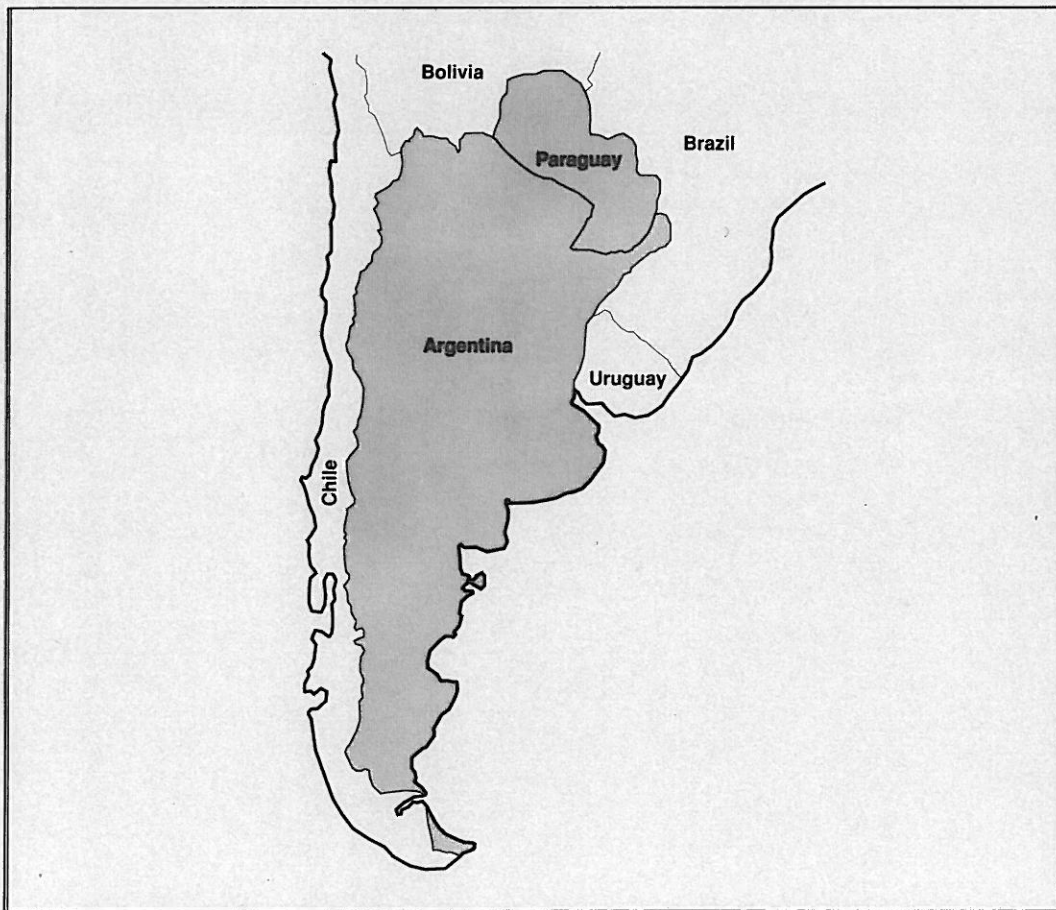
**International Textile Manufacturers Federation
Fédération Internationale des Industries Textiles
Internationale Vereinigung der Textilindustrie**

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Spinners Committee

Travel Report

Argentina / Paraguay



April 29 - May 4, 1990

From April 29 to May 4, 1990 6 members of the ITMF Spinners Committee visited Argentina and Paraguay: Tito Burgi (Italy), John Curran (UK), Emmanuel Duclert (France), Sebastian Otto (F.R. Germany - Committee Chairman), Alexander Roth (Austria) and Fritz Streiff (Switzerland). They were accompanied by the ITMF Director, Herwig Strolz.

The Committee met

in *Argentina* with

- *The Under Secretary of Agriculture*, Miguel Angel Ferré
- Norberto C. Pepe, *President* and members of the *Camara Algodonera Argentina* (Argentine Cotton Chamber)
- Representatives of the *Argentine Cotton Spinners Association*
- *Minister of Agriculture* of the Chaco Province, Raoul Bittel
- Aldo Ricciardi, *Director* and staff members of the *Instituto Nacional de Tecnologia Agropecuaria* (National Institute of Agricultural Research - INTA).

in *Paraguay* with

- Roberto Antebi, *President* and members of the *Camara Algodonera Paraguaya* (Paraguayan Cotton Chamber - Cadelpa)
- *Minister of Agriculture*, Hernando Bertoni.

In both Argentina and Paraguay the Committee visited numerous *ginning establishments* and cotton fields and held discussions with farmers, gin managers and operators.

The visit was widely covered by the local *radio* and *television networks*.

Acknowledgements

The ITMF Spinners Committee would like to put on record its appreciation to the Cotton Chambers of Argentina and Paraguay, their presidents and staff members for their assistance and guidance in the preparation and execution of this journey.

The Cotton Economies

With a planted area in 1989/90 of 560,000 and 430,000 hectares respectively for *Argentina* and *Paraguay*, both countries have cotton economies of *comparable size*. Paraguay makes up for the slightly smaller area with higher yield which resulted in identical production levels in both countries in the 1989/90 season (Table 1).

Table 1
The Cotton Economies 1989/90

	Argentina	Paraguay
Area ('000 ha)	560	530
Yield (kg/ha)	482	509
Production ('000 mt)	270	270
Consumption ('000 mt)	115	12
Exports ('000 mt)	164	250

Source: ICAC

Consumption

Whereas *Argentina consumes* about 60% of its cotton domestically, *Paraguay* has a small textile industry which uses not more than 5% of production, leaving a much higher surplus for *exports* than in Argentina in both relative and absolute terms.

Production

Production has varied widely in the years since 1980/81. Following a sharp contraction in 1986/87, output increased substantially in the following three years, reaching 270,000 metric tons in 1989/90 in both countries (Table 2).

Table 2
Cotton Production 1980 - 1990

	'000 m tons	
	Argentina	Paraguay
1980/81	84	79
1981/82	152	98
1982/83	111	79
1983/84	180	90
1984/85	171	160
1985/86	120	107
1986/87	100	84
1987/88	282	204
1988/89	195	218
1989/90	270	270

Source: ICAC

Yield

After lagging somewhat behind *Argentina* in the first half of the 80s, *Paraguay* achieved substantially better yields than its neighbour in the closing years of the decade (Table 3).

Table 3
Yield 1980 - 1990

		kg/ha
	Argentina	Paraguay
1980/81	296	223
1981/82	379	303
1982/83	324	244
1983/84	383	281
1984/85	383	381
1985/86	354	316
1986/87	366	305
1987/88	573	510
1988/89	379	497
1989/90	482	509

Source: ICAC

Exports

Cotton exports exhibited wide variations in *Argentina* (from 13,000 metric tons in 1987/88 to 164,000 in 1989/90). They were much less pronounced in *Paraguay* where the lowest level was recorded in 1986/87 with 74,000 metric tons and the highest in 1989/90 with 215,00 metric tons (Table 4).

Table 4
Cotton Exports 1980 - 1990

		'000 m tons
	Argentina	Paraguay
1980/81	33	75
1981/82	66	132
1982/83	18	74
1983/84	26	80
1984/85	69	120
1985/86	32	139
1986/87	13	74
1987/88	13	160
1988/89	123	170
1989/90	164	250

Source: ICAC

In 1989 *Paraguay* ranked as the *fifth largest cotton exporter* in the world after the United States, the USSR, Pakistan and Australia, *Argentina* occupying the *8th position* (Table 5).

Table 5
Largest Cotton Exporting Countries 1989/90

	'000 m tons
USA	1,676
USSR	734
Pakistan	435
Australia	316
Paraguay	250
China	200
India	182
Argentina	164

Source: ICAC

Farming on minifundios

Whereas in *Argentina* about 25,000 family farms cultivate cotton on 560,000 ha of land, giving an average *farm size* of approximately 22 *ha*, in *Paraguay* an estimated 160,000 families plant cotton on an average farm size of just over 2 *ha*. There, cotton provides the only income source for approximately 60% of the rural population. In *Argentina* cotton represents the *second* most important agricultural commodity after cereals.

The merchandising system

The upcountry dealer

In addition to the three main groups participating in the growing and marketing in both countries - growers, ginnerers and users - special mention must be made of the role played by the *upcountry dealer (acopiador)* who acts as *intermediate* between *grower and ginner*. He is a merchant, installed in a given production zone, who receives the seed cotton from his farmer clients to which he delivers in turn seed, insecticides, small tools and even cash payments.

His *link* to the *ginning company* is usually *not formalized* but becomes one of fact when he receives payment in advance of the crop. The position of the upcountry dealer must be seen not only in its historical context but even against present day conditions: much of the country-side remains isolated from the rest of the world, to which the *acopiador* provides the only link through his services as a banker, transporter, purveyor, tradesman, etc. Having lived with this system for generations, farmer families continue to prefer working with the upcountry dealer although it is difficult to correctly evaluate the prize he is charging for his services.

There is no place for the *acopiador* in a *cooperative system* where the farmer delivers the seed cotton directly to the gin or the cooperative to which he belongs.

The biggest *disadvantage* of the *upcountry dealer system* lies in the fact that the farmer receives little incentive to grow better quality cotton. Embedded in a system of loans, credits and barter deals, he is never really owner of the cotton he grows.

The ginner

In *Argentina*, of the 98 gins currently in operation, 36 belong to grower cooperatives, 53 to independent ginneries and 9 to integrated companies, 6 of which in the textile sector.

Of the 20 ginning companies active in *Paraguay* 6 of them alone process two thirds of the country's production. The only grower cooperative in Paraguay exists in the Mennonite community.

In view of the existing *over-capacity* in ginning, especially in *Argentina*, there is *intense competition* between ginning establishments which the upcountry dealer are often exploiting to their advantage.

Delivered by the *upcountry dealer* to the ginning factory, cotton is weighed and paid cash after deduction of the money advanced to him. At the gin, cotton is *classed* according to its *potential grade* aspect and ginned, seed being sold to the local oil mills and cotton to local manufacturers or international merchants for export.

Varietal development

Cotton is grown in the *subtropical* zones of both countries which have no clearly marked rainy and dry seasons. It may rain any day during every month of the year, although July and August are dryer whereas precipitation is more frequent from October to January and again in April and May.

The cotton season starts in the course of July or August by the clearing of fields and first preparations. In September, after second preparation, fields are ready for sowing. In November, December and January, weeding and insecticide application takes place. Thanks to a remarkably well preserved ecological environment, two or three treatments with insecticides are usually sufficient to provide a good protection of the crop.

In February where rain is, in normal years, still less frequent, the capsules open and harvesting starts. It continues through to May, depending on the sowing time which usually stretches from the beginning of October to the end of November.

Argentina

The average of the Argentine cotton corresponds to grade "C 1/2" according to the official commercial cotton standards, which is approximately equivalent to *strict low middling* in terms of US standards. *90% of the cotton produced in Argentina is rain-grown*. As a result of a survey conducted by INTA in 1963 with the local textile industry, new varieties were developed, changing from American upland to African types (Table 6).

Table 6
Argentina - Fibre Properties

	Length	Strength	Elongation	Fineness
	2,5% spun mm	T ₁ (1/8") g/tex	E ₁ (1/8") %	Micronaire
Chaco 510	29,4	21,8	6,3	4,8
Pora Inta	27,7	19,2	6,1	4,7
Guazuncho Inta	28,3	18,1	7,0	4,5
Guazuncho 2 Inta	27,9	18,3	6,0	4,5
Gringo Inta	28,5	20,8	6,1	4,6

Source: Inta, Average Results 1985/86, 1986/87, 1987/88

Paraguay

Till the middle of the 60s, little research work has been carried out on cotton seed development in Paraguay. This changed in 1966 when the government asked the French IRCT (Institut de Recherche du Coton et des Textiles Exotiques) to send a prospecting mission to Paraguay which proposed a research programme exclusively geared to the improvement of cotton seed varieties in the country. Ever since, the IRCT has been permanently represented in the country and received additional support by the appointment of two entomologists in 1980 and 1984.

Prior to the first IRCT mission, the only variety grown in Paraguay was a mixture of North American upland styles with bad properties (modest ginning outturn, insufficient maturity, low micronaire and strong sensitivity to bacteriosis).

Resulting from the genetic selection work of the IRCT in Africa since the early 50s, a new variety was introduced in Paraguay, the *Reba B 50*, a descendent of a *Stoneville 2 B* crossing with *Allen 50 T* as developed in Bambari, Central Africa.

Reba B 50 was replaced progressively by *Reba P 279*, the new variety being cultivated in all cotton growing zones since 1982. As from 1990 onwards, a third new variety developed under the temporary name of *Linea 100* will be introduced progressively (it is a crossing obtained in 1978 between a *Reba P 279* and the Argentine variety *Chaco 510*). The fibre characteristics of the four varieties grown in the country in the last 30 years are shown in Table 7.

Table 7
Paraguay - Fibre Properties

	1968 - 71 19 tests		1973 - 79 139 tests		1984 - 88 46 tests	
Properties	C.Queen	B50	B50	P279	P279	L100
Yield (kg/ha)	1,580	1,910	2,220	2,430	2,815	2,865
% Fibre	35,4	35,1	35,1	39,7	40,0	40,8
Precocity (%)					20,4	30,1
Length (mm)	27,7	29,6	28,6	28,5	27,8	28,8
Uniformity (%)	48,7	49,2	47,6	49,1	48,7	50,4
Strength (g/tex)	19,1	21,7	19,2	20,3	19,9	21,3
Elongation (%)	6,3	5,9	7,0	7,7	5,7	5,9
Micronaire	3,68	4,20	4,40	4,68	4,68	4,41
Pressley ('000 PSI)	82,6	92,7	90,7	90,9	88,7	91,7
% Mature Fibres			78,8	81,3	80,0	81,3
Maturity Ratio					0,919	0,956

Source: Cadelpa

Seed development and distribution in Paraguay is done through a central governmental office (OFAT). Seeds are treated with fungicides and insecticides and thus provide better germination and plant protection properties.

The Committee Message

Discussions with representatives of the various public and private institutions and organizations, cooperatives and companies took place against the background of the *Committee's objectives and recommendations* resulting from its deliberations and work since its inception in 1985.

Committee objectives

- ◆ Provide a *vehicle of communication* for the interchange of ideas between spinners themselves internationally and between spinners and other interested parties such as breeders, producers, ginners, merchants and machine manufacturers. Changes in manufacturing, machinery speed and automation has made it increasingly important for spinners to examine more closely cotton as a raw material.

Fibre requirements

- ◆ Need for *more mature* fibres in the cross section of the yarn and hence a change in emphasis in cotton development from coarser to *finer* fibres whilst maintaining *maturity* and *strength*
- ◆ Maintain fibre *strength* whilst improving *elongation* properties. Experience has shown that lower strength combined with higher elongation can give better yarn properties over a combination of higher strength and lower elongation
- ◆ Greater *evenness* in terms of strength, length, fineness and maturity and generally within any of the required fibre characteristics (narrower CV)
- ◆ less *short fibre* content and *neppiness*

Farming, ginning and handling

Ginning

The Committee pointed out on all occasions that whilst in the *past* "quality" was usually or could be related to *grade*, the advent of modern ginning methods has rather nullified this relationship in the quest to maintain or produce higher grades. The level of *short fibre content* and *neppiness* has *increased* whilst fibre *uniformity* has *decreased*. It recommended in particular that

- ◆ gins be run at *lower speeds* (*gentle ginning*)
- ◆ *excessive heat* is avoided
- ◆ the cotton is subject to the proper *humidification*
- ◆ *lint cleaning* is reduced as spinners are today far better equipped than ginners to clean cotton. A lower-grade cotton with higher trash content is often better suited for the production of quality yarn than higher grades with peppery leaves.

Farming/handling

- ◆ Referring to the increasing *automation* in spinning and the resulting absence of visual control and inspection, the Committee underlined the importance of strictly controlling *contamination and foreign matter*.
- ◆ It recommended the use of *cotton* for picking bags and as bale wrapping fabric, in preference to any other material.

Cotton classification

As the textile industry moves into an era marked by high speed processing technology and greater demand on product quality, *grade* as the main parameter of the *traditional classification/evaluation system* is *loosing* its significance to spinners.

- ◆ Spinners therefore require a *spinnability-oriented evaluation system* which provides information on individual *fibre properties* such as *fineness, maturity, strength, elongation* and *length* on a bale by bale basis. Against these, *colour* and *trash* are becoming parameters of *less* importance.
- ◆ Spinners are ready to *pay more* for cotton with superior fibre characteristics, if these are properly identified and substantiated.
- ◆ A spinnability-oriented evaluation system requires commensurate *testing facilities* which only *HVI lines* can provide in future. Although much remains to be done to standardize testing environments and procedures, spinners will need a learning period to adapt to the new system and to understand and manage the wealth of new data that HVI systems can provide.
- ◆ With a better identification of desired fibre properties spinners will be in a position to *compensate farmers* for growing the desired varieties and paying attention to a more *careful treatment* of the fibre.
- ◆ The Committee welcomes the efforts under way in the *United States* to *change* the *cotton marketing system* in line with its recommendations as outlined above. With the decision by the US Secretary of Agriculture to accept only HVI tested cotton into the loan beginning with the 1991 crop, a new landmark will be set on the road towards a more efficient cotton classification and marketing system in future.

Marketing

Identification of seed/gin location

Spinners are recommended to obtain in future more *information* on such parameters as *seed, origin* and *gin point* as a means of ensuring more evenness in cotton supply over a longer period of time.

Spreading the committee message

Contacts with cotton producing countries

Following its objectives as the spinning industry's spokesman in international affairs and as a vehicle of communication with the cotton breeding, growing, ginning and merchandising community, the Committee has started a *direct dialogue* with *cotton producing countries*, paying visits so far to the United States (1987), West Africa (1988), Pakistan (1989) and now Argentina and Paraguay.

Contacts with international cotton merchants

In order to involve more closely those trading the larger part of world cotton and convey to them its ideas, ITMF has regularly met, over the last 4 years, with representatives of leading international cotton merchants.

Discussions - Argentina

Ministry of Agriculture

Under-Secretary: Miguel Angel Ferré

High capacity ginning

On the Committee's request not to allow the importation of *high capacity gins* into the country, the Under-Secretary said that Argentina has an over-capacity in the range of 15-20% and that the importation of such type of machinery was therefore not considered. Gins presently installed in Argentina could run at a maximum speed of 12-15 bales per hour, but the average was in the vicinity of 7 to 8 bales.

Export Policy

Referring to the wide fluctuations in cotton exports in recent years, the Committee pointed to the detrimental effect of *government intervention*, especially to the tax levied on exports. The Under-Secretary recognized the situation as adverse to the interests of the country in the longer term and underlined his government's determination to eventually eliminate the tax completely. It had already fallen from 33% in August 89 to 15% now.

Contamination

In reply to the Committee's request for greater control of contamination, the Under-Secretary said that his government and all the public and private organisations involved in the cotton economy were very conscious of this problem. A broadly-based effort was under way to sensitize ginners, farmers and all those working in the fields through media campaigns in the television and radio networks and by way of financial incentives and penalties.

Varietal development

Regarding the changing cotton fibre requirements by spinners, the Under-Secretary referred to the research work carried out in recent years by the National Institute of Agricultural Technology (INTA) which had developed a number of varieties whose fibre characteristics were better suited to modern spinning machinery.

Argentine Cotton Spinners Association

President: Alejandro Sampayo

Fibre quality

The quality of cotton fibre has been a continuous concern to Argentine spinners in their on-going dialogue with INTA. These efforts are however being thwarted by the exporters/international merchants who in most cases buy up whatever is available, irrespective of quality and *then classify* before selling to their customers.

Committee members pointed out that they had bought in the past Argentine cotton on detailed specifications and others were following the example. Testing played an impor-

tant role in this field as it provided the only grounds on which to compensate farmers for growing better cottons.

HVI

There is *no interest* on the part of *Argentine producers* in HVI at this moment. The initiative for the installation of an HVI line outside of the private sector (where two machines are already working) would therefore have to come from the *authorities*.

Varietal development

The *Chaco 510* variety has now been replaced by *Gringo INTA* which has less of the bad *picking* characteristics but also less (yet still good) *strength* and *length* properties. Argentine spinners are financially supporting the varietal development work of INTA through the Federation of Argentine Textile Industries (FITA).

Gin/Seed Identification

There was consensus on the Committee's request for better gin and seed identification, especially for *quality-conscious* spinners. However, even if gins were properly identified, one could never be sure how many different seed varieties a bale would eventually contain as seed cotton delivered by the upcountry dealer may come from several farmers who may have sown different varieties.

The Committee emphasized the need for a *better organisation* of the *seed cotton delivery system* as the one presently in place largely *nullified* the efforts of varietal development.

Argentine Cotton Chamber

President: Norberto C. Pepe

In his opening remarks at the meeting with representatives of the Chamber, the *Chairman* of the *Spinners Committee* drew attention in particular to

- the rapid change in the *cotton evaluation system* from grade to *spinnability-oriented* parameters as exemplified by the change-over to HVI classing of the whole US crop beginning with 1991. The new classification system should help farmers to directly benefit from growing better quality cottons. To this effect merchants will have to pass some of the higher prices received from spinners on to farmers
- the *insufficient communication* between spinners, merchants and producers. The ITMF Spinners Committee has been set up to *promote the dialogue internationally*. It was important that this example was followed at national levels and that in particular the merchant community passed on the information of spinners requirements to ginners and farmers. Otherwise spinners would be compelled to seek closer contacts with farmers
- the need to develop *new varieties* with *shorter production cycles*, thus reducing the danger of part of the crop having to be harvested after the first rains

- to run *gins* at *low speeds* and not allow the importation of high capacity gins
- to adhere to a steady *export policy* undisturbed by erratic government intervention.

Varietal development

On the observation that despite the very scarce use of fertilizers, *micronaire* was observed to go up in certain instances, the Committee pointed out that this has happened in other countries such as Egypt and was obviously the result, amongst others, of *ageing* varieties.

Seed separation/identification

The Committee emphasized the growing *readiness* on the part of spinners to *pay more* for *better quality* cottons. An important step towards quality-oriented cotton production in the country would be the introduction of a better system of seed separation/identification. It would seem to make little sense to continuously develop new varieties if the problem of seed cotton mixing is not more resolutely attacked and solved.

On the latter point it was observed that although there are currently six varieties grown in the country, fibre parameters, with the exception of strength, are mostly identical as growing conditions are largely *homogeneous* (all varieties currently in use have been derived from the same African mother). New varieties have been developed with a view to *adapting to specific growing conditions* rather than to give different fibre characteristics.

Most of the problems relating to proper seed selection arise out of the specific structure of the Argentine cotton growing system and especially the role played by the *upcountry dealer*. This is a social phenomenon which has developed over decades and which will change only slowly.

Ginning

80% of the cotton is ginned in *conventional* gins with an average speed of *7 bales/hour*. These gins use not more than one cleaner and often no lint cleaner at all.

National Institute of Agricultural Research (INTA)

Director: Aldo Riccardi

INTA is the Institute where all cotton research in the country is taking place. On its administration board are representatives of official organisations (50%) and of producers (50%). *Basic research* is carried out in three institutes near Buenos Aires. *Applied research* is done in 15 regional agencies, each of which with responsibility for one or at the most two provinces. *Cotton research* is carried out in the experimental station of Saenz Peña in the Chaco province.

Funding of INTA is essentially through *extension programmes*. Three years ago the Institute entered into *joint ventures* with the *private sector* under which 20 programmes are

to be conducted in 1990. One of the *main objectives* for the future is to bring producers and spinners together and thus *improve communication*.

HVI

INTA management is convinced that HVI is the testing system of the future. The line which it will receive this year will serve to test cotton under *production*, not only *breeding* conditions. The Committee pointed out that it was important to ensure that with the progressive HVI testing of Argentine cotton, this information was passed on to the spinner by the international merchant.

Mechanical picking

In view of the relatively small average farm size, machine picking is in many instances not feasible. INTA has however the objective to develop a mechanical picker in the country at a target price of US \$ 50,000 (US and Russian-made pickers costing approx. \$ 150,000 and 120,000 respectively). To this effect INTA has a research and development agreement with the National Institute of Industrial Technology (INTI).

Ginning

As only less than 10% of total Argentine cotton production is *mechanically* picked, there is no need for aggressive lint cleaning. One of the main research objectives is to fix optimal ginning conditions.

Asked about a possible come-back of *roller ginning* for upland cotton, doubts were expressed as to the feasibility of this type of machinery in Argentina.

Concluding its discussions with the Research Institute, the Spinners Committee *urged* INTA to act as a *catalyst* in establishing a *permanent dialogue* between domestic spinners and producers and to ensure that farmers receive in future proper compensation for growing the qualities required by spinners.

Discussions - Paraguay

Paraguayan Cotton Chamber

President: Roberto Antebi

HVI

Cadelpa is currently in discussion with *Spinlab* and is hoping to acquire an HVI line in 1991.

Contamination

An all-out effort is under way to sensitize farmers and gin operators to the problem of contamination and foreign matter. Effective campaigns are carried out, using the local news media and through education of those working in the fields and gins.

Varietal development

The new variety provisionally called *Linea 100* has a *shorter production cycle* of approximately three weeks, a higher *ginning outturn* of +1% and *better fibre characteristics* on all parameters such as *fineness, length, strength, maturity* and *uniformity*, as requested by the Spinners Committee.

According to the processing experience of a spinning mill in the country which has spun the *Linea 100* over the last three years it can, with adjustments, spin up to Ne 60s combed and Ne 30s carded at speeds of 15,000 rpm.

The Spinners Committee pointed out that whilst it was *impressed* by the *new variety*, research work should continue with the objective of further lowering *micronaire* and improving *elongation*, the latter property being *more important* than strength in blending. The question was also asked whether one variety will be sufficient to keep the country competitive in world markets. Reference was made in this context to strong demand now in the market for cottons with a micronaire range of 3.8 to 4.2, 25/26 g/tex (Stelometer) and 1 3/16 " in length.

Whilst it is extremely unlikely that Paraguay would in future grow more than one variety - the main obstacle being the mixing of seed cotton through the particular way in which cotton was handled (upcountry dealer) - it was confirmed that research work was under way to develop a new variety with higher *ginning outturn* and improved *elongation* properties.

Upcountry dealer

The role of the upcountry dealer is more important in *Paraguay* than in *Argentina* because of the very small land holdings of farmers of only 2-3 hectares on average. The need to recoup the advances made by ginners to farmers in the form of seeds, pesticides, fertilizers and cash makes it imperative for ginners to get the seed cotton from the farmers, irrespective of its quality level.

Ministry of Agriculture

Minister: Hernando Bertoni

The Committee stressed the importance of *new varietal development* in Paraguay to suit the requirements of the modern spinning industry and emphasized the need for *structural changes* in the *cotton growing system*, designed to make the farmer aware of the need to grow more of the cottons now in demand by spinners. Reference was made to the relatively *slow pace* at which *new varieties* are introduced in the country and the need to consider the growing of *more* than one variety in future to satisfy foreign customers.

Herwig Strolz

May 1990

Argentina

Fighting Contamination



NO! AL YUTE **NO! AL YUTE**

LA BOLSA O LA VIDA

Bolsas e Hilos de Polipropileno
son Contaminantes que Amenazan la Vida del Algodón
UD. DECIDE
NO! AL POLIPROPILENO, SI! A LA VIDA DEL ALGODON

CASTORINA ALGODONERA ARGENTINA

No to jute! The bag or the life. Bags and strings of polypropylene are contaminants which threaten the life of cotton. You decide. No! to polypropylene. Yes! to the life of cotton

Argentine Cotton Chamber