Committee of Management

Proceedings

Porto, Portugal
October 22, 2019
Committee of Management members from the following countries attended the meeting:

- Austria
- Brazil
- China
- Chinese Taipei
- Egypt
- Germany
- India
- Indonesia
- Kenya
- Korea Rep.
- Portugal
- South Africa
- Spain
- Switzerland
- Turkey

ITMF Officials: Christian Schindler, Director General
Olivier Zieschank, Economist

In the Chair: Kihak Sung (Korea Rep.)
President of ITMF
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16 Report by the Fibres and Applications (F&A) Committee
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Attachments

document no. 1  Spinners Committee Travel Report Greece (2019)
document no. 2  JCC Meeting: Presentation “Re-Inventing the End of Life of Cotton Textiles to Design More Eco-Responsible Products” by Pascal Denizart, CETI, France
document no. 3  HTP Committee Meeting: Presentation “Global Home Textile Market Outlook” by Fibre2Fashion, India
document no. 4  HTP Committee Meeting: Presentation “Dearshiqiao Home Textile Market and International Cooperation” by Jialing Zhu, Dearshiqiao International Home Textiles, China
document no. 5  HTP Committee Meeting: Presentation “ITMF HTP Committee Satellite Office in Nantong, China” by Mr. Zhaohua Yang, CNTAC & China Home Textile Association,
document no. 6  F&A Committee Meeting: Presentation “Innovation in the Textile Apparel Value Chain” by Mr. Simon Whitmarsh-Knight, Hyosung, USA
document no. 7  F&A Committee Meeting: Presentation “Technical Textiles – Trends, Potentials and Challenges” by Michael Jaenecke, Messe Frankfurt, Germany
Opening Remarks by the President

The President of ITMF, Mr. Kihak Sung (Korea Rep.) welcomed the participants of the meeting and thanked everybody for attending the Federation’s Annual Conference 2019 in Porto/Portugal. He thanked especially the Associação Têxtil e Vestuário de Portugal (ATP) for successfully hosting the conference for the third time in Portugal.

Proceedings of the Last Meeting

The Proceedings of the last meeting of the Committee of Management of ITMF, held in Nairobi, Kenya, on September 7-9, 2018, were duly circulated on January 18, 2019 and were approved by way of correspondence.

Matters Arising of the Previous Meetings

There were no matters arising from the minutes other than those included in the agenda.

Appointment of Auditors, Solicitors and Bankers

The following appointments were confirmed:

- Auditors: Universe (AG für Unternehmensberatung und Revision), Zürich
- Solicitors: Dres. Pestalozzi Lachenal & Patry, Zürich
- Bankers: Credit Suisse, Zürich

Financial Report by the Honorary Treasurer

The report on the financial position of the Federation at the end of 2019 was presented by Mr. Heinz Michel (Switzerland), Honorary Treasurer of the Federation.

The Balance Sheet and the Income Statement as authorized by Universe, Zürich, were circulated to the Members of the Committee on June 3, 2019 and approved by way of correspondence.
Balance Sheet 2018

The Federation’s Assets stood at CHF 960,523 (-100,686).


Income Statement 2018

The Total income (without the conference gain) was CHF 642,608 (-133,247). The main reason for this decline was the poor performance of the ITMF-portfolio, which had dropped at the end of the financial year 2018 by -CHF 69'819 (-11%) to CHF 567'466. However, by mid-September 2019, the net asset value of the ITMF-portfolio had recovered to CHF 649,719, an increase of + 14.5% compared to the end of 2018.

The Total expenditures were CHF 788,216 (-116,498). The expenditures for ITMF’s Social Compliance Initiative amounted to CHF 68,603. Furthermore, travelling and representations expenses (including expenses for activities of different Sub-Committees as well as acquisition activities) reached CHF 101,307 (+41’299). On the other side, computer expenses dropped to CHF 21’578 (-24’114).

The conference gain was CHF 33,886 (-12,684).

The Federation’s Total loss amounted to CHF 111,722.

It is proposed that for 2020 the basis of calculation of Member Associations’ subscriptions remains unchanged:

- The minimum levy shall therefore remain CHF 4,000.
- The maximum levy shall therefore remain CHF 57,000.
- Subscription which fall between the upper and lower limits shall continue to be calculated according to the subscription formula based on an unaltered unit rate of CH 0.065064.
- No Member Association shall pay a subscription representing less than 60% of total national yarn production by the spinners, and consumption by the weavers, in the cotton-system sector.

It is also proposed that Associate Members’ levies shall for 2020 be as follows:

Textile Associations

CHF 15,000  Taiwan Textile Federation
CHF 5,000  Spinners & Weavers Association of Korea
CHF 5,000  Texprocil (India)

Cotton Associations

CHF 7,000 each  American Cotton Shippers Association (USA)
                Cotton Incorporated (USA)
                National Cotton Council of America (USA)
CHF 5,000 each  
  Bremen Cotton Exchange (Germany)  
  Cotton Egypt Association  
  International Cotton Association (UK)  
  Supima (USA)  
  XPCC Cotton Association (China)

CHF 3’000  
  Cotton Association of India

Textile Machinery Associations

CHF 15,000  
  German Textile Machinery Manufacturers Assoc. (VDMA)

CHF 13,000  
  Italian Textile Machinery Association (ACIMIT)

CHF 12,000  
  Swiss Textile Machinery Manufacturers Assoc. (Swissmem)

**Corporate Members** shall pay an annual levy based on turnover, the minimum amounting to CHF 3,000 for companies with a turnover not exceeding USD 50 million. For a turnover between USD 50 and 200 million, the annual levy will be CHF 5,000 and for a turnover in excess of USD 200 million it will be CHF 7,000 (maximum).

*The report by the Honorary Treasurer was unanimously approved by the Committee.*

**Report by the International Committee on Cotton Testing Methods**

The Chairman of the Executive Committee of the International Committee on Cotton Testing Methods (ICCTM), Mr. Axel Drieling (Germany), welcomed the participants of the meeting.

The meeting discussed the status of the recognition process of different testing instruments from Mesdan (for stickiness) or Branca (for moisture). At the next ICCTM-Meeting in March 2020 these two companies are applying for ITMF-ICCTM-Recognition.

The meeting discussed also the timeline and content of the next regular ICCTM-Meeting which will take place on the side lines of the International Bremen Cotton Conference in Bremen, Germany (March 25-27, 2020). Prior to the regular ICCTM-Meeting, meetings of the Executive Committee and the Steering Committee will take place.

It was agreed that the invitation to the various meetings will be circulated in from November onwards.

Also, in 2020, the ITMF together with IVGT, the Bremen Cotton Exchange and the Bremen Fiber Institute will organize on the side lines of the International Bremen Cotton Conference for the second time a “Spinning & Textile Seminar”. The meeting discussed possible topics.

During the meeting the status of the updated version of the ICCTM Testing Guidelines was discussed. Currently the Guideline includes only standardized high-volume testing, so stickiness is not yet a part of the guidelines.

As far as the ICCTM-Interpretation Guidelines are concerned the meeting suggested that the latest version should be circulated now so that the members can comment on them until
March when the final version should be approved by the ICCTM. Afterwards the final version should be translated in various languages.

At the meeting it was also discussed whether “traceability” should be a new area that the ICCTM should look into. There are many different traceability technologies based on different methods. It should be discussed at the next ICCTM in March 2020 whether the Committee can and should compare traceability technologies/methods.

The Chairman of the ICCTM informed the participants that there is an ISO Standard for the accreditation of round trial executing organizations: ISO 17043. With the change of the current ISO 17025 Standard for Laboratory Accreditation (2018), ISO 17025 now refers directly to ISO 17043, and hence some laboratories started asking about a given ISO 17043 accreditation of those organizations that conduct the CSITC Round Trials and the ICA Bremen Round Trials. Currently none of the executing organizations (Faserinstitut, Bremen Cotton Exchange, ICA Bremen, USDA-AMS, ICAC) is accredited, and to get such an accreditation is a timely and costly exercise for labs. Currently, just for one regional round trial in China, the according executing organization is accredited. Therefore, the question was discussed if it is necessary to accredit the Round Trials (Bremen and CSITC). The question will have to be discussed at ITMF-ICCTM as well as in the CSITC Task Force, as

- High costs are involved, and as it could be very complex because three organizations are involved (ICAC, USDA, FIBRE for CSITC, and ICA Bremen, BBB and FIBRE for the Bremen Round Tests).

- On the other side, some laboratories might move from these wide, international round trials to small, regional round trials.

It was agreed that the round trial participants will be asked about their demand for the ISO 17043 accreditation – and if they are willing to pay an according higher participation fee.

**Report by the Spinners Committee**

**Opening Remarks by the Chairman**

The Chairman of the Committee, Mr. Andrew Macdonald (Brazil), opened the meeting by thanking everyone for having taken the time to attend the ITMF Annual Conference and for the interest in the ITMF Spinners Committee. He informed the meeting of the passing of Mr. Robert Galmes (Australia) and recalled his extraordinary contribution to the Spinners Committee over many years.

The Committee endorsed the Chairman’s proposal to send a letter of condolences to his wife Dorothy.

**Membership**

The Chairman welcomes as a new Committee Member, Mr. S. K. Khandelia (Sutlej Textiles, India), who unfortunately was unable to be present at this meeting.
The Chairman of the Committee then proposed in recognition of Mr. B. K. Patodia’s (GTN Textiles, India) service and extensive contribution for the international spinning industry as a member of the ITMF Spinners Committee, that Mr. Patodia be appointed an Honorary Life Member of the Committee. The Committee endorsed the proposal.

Report from the Country Visit to Greece

From October 13-17, 2019, the ITMF Spinners Committee visited major cotton growing areas in Greece. A report about the visit was delivered by the Chairman. In the meantime, the ITMF Spinners Committee Travel Report to Greece (2019) was published and is attached (document no. 1). It is also available on the ITMF website under “Reports”:

https://www.itmf.org/reports/spinners-committee-travel-reports

Sanctity of Contract – A Spinner’s Perspective

The Members were called up to discuss the relevance of the principle of sanctity of the performance of international cotton contracts and its relevance to spinners. More specifically, the Chairman asked whether the spinners have a role to play to protect the principle of “Sanctity of Contract”.

The discussion showed that all fully endorsed the criteria that parties must abide by the rules of engagement in any business. Furthermore, the Committee emphasised that those spinners honouring contracts are at a disadvantage to those that are not. Therefore, the ITMF Spinners Committee should support the principle of “Sanctity of Contracts”.

Furthermore, it was suggested that ITMF investigates the possibility to develop a “Yarn Contract” based on the existing “Cotton Contract”. It was reminded that this was tried in the past but has proven at the time as very complex as there are so many different parameters to consider. Nevertheless, the Committee was asked to study the possibility.

Trading under HVI Testing

The meeting was called upon to discuss how trading under HVI-Testing has developed in the recent years and the way forward.

Cotton trading based on HVI is still not the norm today, traditional description of the cotton being the preferred criteria for the cotton merchants.

In order to move forward, it was suggested that the trade could apply the average results of an even running bale lot, instead of the individual bale readings. These individual readings tend to show small variations between tests. This is not due to the instruments, but since cotton is an agricultural product that has natural variations. Such small variations can even extend from plant to plant, boll to boll, whilst the HVI tests only a small percentage of each bale of 200 kilos. The Committee was of the opinion that this approach would increase the acceptance of HVI-results significantly, as well as providing more transparency for producers, traders and spinners, as well as much information that could be used more effectively by all the parties involved.

The Committee was in agreement with the strategy though accepting universal acceptance of the idea will take time.
International Committee of Cotton Testing Methods (ICCTM)

The Chairman of the ICCTM, Mr. Axel Drieling (Bremen Fibre Institute, Germany) informed about the activities of the ICCTM since its last biennial meeting in March 2018 in Bremen, Germany.

One area of activity was the update of the Guideline of “Interpretation and Use of Instrument Measured Cotton Characteristics”.

The ICCTM - Round Test on Stickiness Characterization is ongoing since 2018. The results of the round-trials are published on a regular basis and are available on the ITMF-ICCT-Website: https://www.itmf.org/committees/international-committee-on-cotton-testing-methods

At the next ITCCM-Meeting on March 23/24, 2020 on the side-lines of the International Bremen Cotton Conference 2020 in Bremen, Germany the results of the recent round trials will be presented and discussed.

On this occasion, he informed the meeting about the ITMF/IVGT-Spinners and Textile Seminar that will take place on the side-lines of the Conference on March 24, 2020.

Export Yarn Price Differences between Countries

The meeting will be informed about the findings for significant export yarn price differences between countries as per below table.

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<th>Source</th>
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<td>China</td>
<td>3.17</td>
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<td>India</td>
<td>2.50</td>
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<td>Indonesia</td>
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<td>Pakistan</td>
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<tr>
<td>Turkey</td>
<td>2.92</td>
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<tr>
<td>Index Group</td>
<td>2.73</td>
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<table>
<thead>
<tr>
<th>Quarterly average export prices (in USD dollars per kg FOB)</th>
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<tbody>
<tr>
<td>20's yarn</td>
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<tr>
<td>China</td>
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<td>Index Group</td>
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Source Cotlook

There was no time left to discuss this topic which will be taken up on the next occasion.

Next Activity

The Committee was invited to discuss its future activities, with the recommendation that the Committee visits either a cotton producing country and/or a man-made fibre producer in 2020.

It was suggested to consider visiting the cotton growing areas in Pakistan prior or after the ITMF Annual Conference 2020 which will be held in Seoul, Korea from October 20-22,
2020. In addition, it was suggested to visit a facility in Korea that is producing polyester staple fibre (PSF). The members of the Committee will be informed about the options in early 2020.

Next Meeting

It was proposed that the next Annual Meeting of the ITMF Spinners Committee will be held in conjunction with the ITMF Annual Conference 2020 in Seoul, Korea Rep.

Report by the Joint Cotton Committee (JCC)

Opening Remarks by the Chairman

The meeting was opened with a few introductory remarks by the Chairman of the Committee, Mr. Nick Earlam (UK).

Presentation on “Re-Inventing the End of Life of Cotton Textiles to Design More Eco-Responsible Products

Pascal Denizart, CETI, France (document no. 2)

Panel Discussion: Recycling of Textiles – Small Niche or Big Trend

Panellists:

Moderator: Nick Earlam, JCC-Chairman, Plexus (UK)
Ginner: Suresh Kotak, Kotak Ginning & Pressing Industries (India)
Spinner: Ernst Grimmelt, Bremer Baumwollbörse (Germany)
Spinner/Weaver: K.V. Srinivasan, Premier Mills (India)
Retailer: Calvin Woolley, IKEA (Turkey)

Earlam: May I please ask every one of you to give us a short history of who you are and what you do:

- Woolley: Hello everybody. It is nice to be here again. My name is Calvin Woolley. I am the Supply Development Leader for IKEA, working with textiles. It is not the first time I have been at an ITMF Annual Conference and I always enjoy coming back. I am on this panel, because my colleague will be arriving later today. He is responsible for the work we do at IKEA in recycling and renewable in textiles but hopefully I can answer some of the questions on behalf of Nils. If not, we can refer to him later.
- **Grimmelt**: Hello, my name is Ernest Grimmelt. I am Vice President of the Bremen Cotton Exchange and I have a spinning and a weaving mill in Germany. We consume mainly cotton in our spinning mill, producing open end yarns. With our weaving mill we are producing technical textiles.

- **Kotak**: I am Suresh Kotak. I am related to cotton not only as a business but cotton as a commodity and I believe that it has huge potential. I appreciate today’s presentation, but I would like to add my comments on that later on. Thank you.

- **Srinivasan**: I am Mr. Srinivasan from India and I come from the cotton textile industry. We are manufacturing cotton yarn and cotton home textiles. We have some experience in recycling and I will be happy to share my views on this.

**Earlam**: Maybe I can start with a question. Today we are moving so fast that if you are in a business, they say that the horizon is not far enough, you must jump over a precipice and build a plane on the way down. We are in a world today where the process of recycling is very small relative to the 110 million of fibre consumption we see in the world, same with organic cotton yet the major brands are promoting this as fast as they possibly. So perhaps Calvin, I can start with you, as IKEA, what is your thought process relating to recycling? Is it a niche business, is it a small business or is it a major trend and what sort of time span you see this happen in?

- **Woolley**: Like many of the other brands, we at IKEA are really looking to answer the needs of the customers today. And unfortunately, when it comes to recycling, we are not able to do that today and not at the speed as we would like to. Of course, change takes a lot of energy and we all know the complexities of, for example, the recycling of post-consumers goods whether it is the shortness of the fibres or the fibre blends. Another thing that we are doing currently is a project with H&M. We teamed up with H&M because they are facing the same struggles with regard to meeting their customers’ needs of recycled textiles. We did a study on recycled cotton. We took around 166 samples mostly of post-consumer but also of pre-consumers goods. We then did around 8000 tests on the chemical composition. Because as brands we are under heavy pressure not only from the customers but also of meeting the requirements of the legislations and all the different requirements that are put on us. Therefore, we wanted to do this test to know the chemical contents of these materials. We found some APO’s, toxins and things like that. But the good news is that we found what we believe is a good test methodology to start to work with identifying and doing testing chemicals. And this is going to be released into the industry as well in order to share the results with other brands as well. But we are really happy to work together with H&M on that. Going back to your question on when we believe it is important to achieve our goals. We are working on a 2030 goal of renewable and sustainable materials. Of course, recycled material has been part of it as well and I think we are not the only brand pushing that 2030 deadline. But we really want to move and push that forward. Of course, we know that there are many challenges to it, so I am hopeful that there are enough opportunities in this room who are interested to go on that journey because we have to respond to the needs of the customers today.
Earlam: Thank you very much. Mr Grimmelt, would you please express your view.

- Grimmelt: We see an increasing demand concerning recycled articles. As you know, my company Velener Textil has its own brand “WECYCLED” with a W. In a first step, we concentrated on the industrial waste that we see in the preparation. You have yarn left on the cones which we then separate in sheltered workshops. You then have two materials, the paper cones and then the raw material which we get back in the spinning mill and then open it to single fibres. The other component is what you have in the cutting section on the industrial side, not on the post-consumer side. In the cutting section there is a lot of waste which the customers throw away and even must pay money for. We collect and open the waste to single fibres and then make a very nice yarn out of it. Our aim is really to use 100% of the cotton with as little waste as possible. Now we are busy working with cutting waste of coloured fibres. This means that you do not need to do the finishing and dyeing. Hence, you save a lot of resources by using this waste. From the technical side, I would like to point out that when you open these yarns you always have short fibres that you have to mix with long fibres. To produce good products, you cannot only use recycled fibres. We are happy that we get good feedback for our products. Currently, we are busy working on an industrial process solution for post-consumer materials that we can offer our customers. But it is not so easy because of Lycra and all the other fibres you have inside like for example blends of polyester and cotton.

Earlam: Thank you. Mr. Kotak, would you please share your view with us.

- Kotak: The acceptance of the idea is all around. So, recycling is very relevant. There are two factors which have necessitated this thinking in the concept and in the business industry model. First, the resources of the world are limited which is a basic definition of economics and secondly, environmental issues are relevant for the human kind. So, this is a very important point but instead of the word recycle the word which is more important is upcycle. As a matter of fact, when you have come by Lufthansa today in Lufthansa magazine the first article itself is how they upcycle the whole aviation industry in a beautiful way with concepts built in. We in India are also thinking hard on the subject and we are also working because we have also realised that apart from cotton, the cotton has also a highest amount of residue. I would not call it waste. There are reusable residues that also need to be commissioned. In India – as far as I know – the agriculture residue is enormous. 20-25% could be related to cotton. Therefore, we are working on how best to reuse all parts of the cotton plant. That is why the topic is importance. We have also worked out how to recycle and upcycle and reuse. All those are important points for the consideration of resources. Furthermore, we have to change more fundamentally. For example, in India we have been successful in developing natural colour cotton. If we are able to succeed in this, we can definitively save a lot of resource. I agree with Andrew Macdonald that it is not correct to blame cotton when it comes to the environment. The Government of India agrees that the cotton residue has value too and that concept of recycling that was presented today is also one we are trying to adopt in our country. Several things are being worked on in India which I have referred to. I have even brought a sample of a garment made of natural coloured cotton. If anyone wants to see I can show them. Thank you.
Earlam: Thank you. Mr. Srinivasan, what is your position on recycling?

- Srinivasan: I would like to talk about an experience in our company. We have been working on recycled cotton in Premier Mills and we now have a small spinning plant that runs 100% on cotton waste. There is no virgin cotton involved in it. It is 100% cotton waste and apart from the raw material, the energy that we use is 100% wind energy, so it is 100% green energy with 100% recycled cotton. We have been doing this for over 10 years and we have been successful with that. Apart from us there are also other industries that are using recycled cotton. As Andrew Macdonald mentioned cotton is an important raw material and which we need to sustain. There are companies in India which use fabrics. They shred the fabric completely, take the fibre out and then spin it into yarn. They buy a certain colour of fabric and then produce dyed yarn out of the recycled fabric. The dyeing processes are eliminated completely which again adds to sustainability. These are examples of how cotton is recycled and how it is sustained. I would like to add another point. It was mentioned earlier on how important the concept of sustainability is. There is no doubt that recycling and sustainability is going to be very important and the textile industry has a big role to play in it. But at the same time, we should follow certain ethics and standards. I mean that there is only that much cotton or material that can be recycled and only that much cotton or products that can be made of recycled yarn. There was a situation a few years ago when there were more organic t-shirts than organic cotton grown. Now that does not speak well for recycling and I think it is very important that not only the manufacturers but right down the value chain everybody understands that there is a certain limit to sustainability and that this is respected and ethically followed. Thank you.

Earlam: Thank you very much. Perhaps I just open the floor for questions out there. Let me start with a question for Calvin. Looking at the goals which have been set by the major brands today, if I take someone like H&M and Zara, they have made goals that they are going to use 100% organic by 2023. Between them they consume over a million tons of cotton. There are 130’000 tons of organic cotton produced in the world. How do you get from there to where you want to be and the same relating to recyclable products? How do you get from there to where you want to be? How do you see that movement to the goals which are set by the major brands to achieve their goals and objectives? How can the industry help you achieve that?

- Woolley: I can’t answer of course on behalf of H&M and Zara and what their goals are and their specific directions. But what I can say is that for IKEA many years ago we started the BCI-Initiative in the very beginning as one of the founding members of it and it is something, we really believed in. Setting a goal to really eradicate the conventional way of cotton farming in countries like India or Pakistan. We have set out these goals and we wanted to make sure that 100% of our products were sourced with cotton from sustainable sources by 2015. We really did not know how we would go about it. We did not know the best way to do it. But here we are knocking on the door of 2020. Five years down the road we are proud of what we have achieved. All our cotton products are sustainably sourced, and we strongly believe that we are in the same predicament when it comes to recycling and recycled textiles. We know that it is not easy and probably even more challenging because of the degradation of the fibres if you recycle mechanically. But we strongly believe that we set certain goals and we find partners, many of them in this room as well, to really help us reach
those targets and goals. It is not just about what we want, it is the voice of the consumer we are talking about. And the customer is demanding, and the customer is putting this pressure on. I think it is important to reiterate again the thing that we did with BCI. We were adamant about not putting premiums on this product. This was not about the middlemen getting a premium or creating niche products out of it. It is about trying to create an affordable and sustainable product which anybody should be able to afford. Sustainability should not be a luxury of the few rich but should be for the many people and we have the same perspective regarding recycling.

*Earlam:* Would anybody else on the panel wish to comment on that as well? No, so perhaps we can open the floor up to questions to the Panel and to Mr. Denizart as well. Does anybody have any question?

- *Aziz Azkarow:* Hello my name is Aziz from Uzbekistan and we are also famous in the world for our cotton. I would like to support Mr. Andrew Macdonald about his comments because why cotton? Is the disposal of cotton now the problem, if we think about environment friendly issues? I think that synthetics are more important. Disposing of synthetics is more a problem if we think about the nature. Furthermore, I was also surprised is that industrial waste, for example in our country, I have a few friends who are using this industrial waste for reuse. They use it for nonwovens, they use it for making insulation materials, as it is cheaper than using virgin fibres. My question is: why we are not focusing on reusing synthetic garments because cotton is natural and biodegradable. But synthetics you have to collect them, you have to recycle them, etc. Maybe it would be cheaper to recycle synthetics. This is in support of Mr. Macdonald’s comments. The question: why is the recycling of cotton and not of synthetics the issue? Thank you.

- *Denizart:* I will make a short response to the question. I just want to comment on nonwovens. Nonwovens were the first area we looked at and continue to do so when it comes to downcycling the waste in nonwovens for insulation, acoustic and so on. It is true that it is easier to recycle. But where is the business model? Just have a look at the companies which are involved in such activities, what is their profitability? In a circular economy upcycling is perhaps the right way to have a business model that accelerates this strategy. Of course, for some markets we can also look at downcycling. It is interesting but it is also a very competitive market and I am not sure that the textiles have all the lobbies and all the organisations like the well-established fibres. You are right that synthetic fibres also need to be recycled. Is it easier? Perhaps it is because of the length of the fibres. I think that when it comes to manmade fibres the best options are bio-based manmade fibres. The unique question is: where is the market of the final product and is it profitable or not? Just remember the two pillars of sustainability: it is people, and economic profits. You cannot build a sustainable approach without thinking about the bottom line.

- *Grimmelt:* When you are working with industrial waste you can extend the life cycle because you can put the waste afterwards in the automobile industry.

*Earlam:* Is there anybody else who has a question?
- **Uday Gill:** I am Uday Gill from Indorama Ventures. I was just wondering how do we solve this big problem in an elegant manner? The complexity which these products cause to us, any garment, there are buttons, cotton fibres, viscose fibres, nylons, spandex, etc. All these are very complex issues to be resolved. Nature recycles everything. And nature does not do things mechanically and physically. Nature uses the bugs, the microorganisms, the enzymes and I was reading in one of the papers that even in nature there is a beginning evidence that there are microorganisms that have started digesting plastic. So, I am just asking Mr. Denizart, do we have a cutting-edge research on chemical or bio chemical recycling where we can use these enzymes, bugs and microorganisms as catalyst to discriminate and distinguish various polymers and fibres inside the fabric? We cannot just keep fighting and say that this is cotton and this is synthetic. No single fibre can deliver everything. So, we have to find a comprehensive solution using a more elegant technology than the physical.

- **Denizart:** Your remark is very pertinent regarding enzymes and microorganisms. We are also working on the separation of polymers. I think this approach is for midterm solutions. For the short-term, we have this initiative for mechanical recycling as a response to the huge amount of waste that we produce. But there is research going on in the UK, in Japan and in France using microorganism to recycle products. Therefore, the third pillar of sustainability is the planet. We should observe the planet and learn from it. I am in complete agreement with you. This approach is a midterm issue of around 5-10 years according to my observation of the research.

**Earlam:** We are coming to the end and I can take one more question

- **Gary Bell:** My name is Gary Bell and I am from Canada. Before I ask my question. Mr. Gill, I have eaten a mushroom which was grown by a researcher in the University of Montreal on a pile of plastic. So, in fact that research is being done and I am still standing here today, and I ate the mushroom about a year ago. The question is for Calvin. A bravo to IKEA for taking initiative on so many of the issues and one of the challenges the industry faces is when brands and retailers apply price pressure during these development processes. So, what is IKEA’s position, and can you speak in general on developing technologies and the challenges that they place on the suppliers that you have?

- **Woolley:** It is always a good question because it is the tough one when it comes to investment. But in IKEA we are really committed to finding solutions and if that means we would partner up to invest, we would invest in new technologies. The important thing is that we can scale that up as fast as possible. Of course, for us is to provide these sustainable solutions for everybody. It is not a niche perspective, it is not a niche part just for a few persons which can afford it. So, we are always interested to understand what technologies we can invest in and support investments to that we can scale them up so that as many people as possible can enjoy those solutions and they are asking for those solutions today. So, we welcome technology. If you have any ideas let me know!

**Earlam:** We have come to the end of the meeting. I would like to put all the panellists on the spot, if I could. Recyclables: niche, small or major trend? Please, one-word answer:
- **Srinivasan**: There is an example of where cotton waste has been used to print currency notes. That is niche.
- **Kotak**: Niche. The enzymes have also answered the point of Mr. Uday Gill that we are also able to use the cotton linters and residue for mushroom growing and the finest mushroom are grown out of that and that is niche.
- **Grimmelt**: I think it will be a trend. We see more and more customers and retailers discussing about recycled products and I think it is a trend.
- **Woolley**: It is happening. Happening is the word I would like to use, and it is here to stay and is just getting bigger. So, I encourage all of you to be part of it.
- **Denizart**: Major trend that needs to capitalize for the moment on niche successes.

**Earlam**: Please give a round of applause to Mr. Denizart and the Panellists. This concludes the meeting. Thank you.

## Report by the Home Textiles Producers (HTP) Committee

### Opening Remarks

The ITMF Economist, Mr. Olivier Zieschank (Switzerland), opened the meeting with a few introductory remarks.

### Presentation “Global Home Textile Market Outlook”

by Fibre2Fashion, India (document no. 3)

### Presentation “Dearshiqiao Home Textile Market and International Cooperation”

Jialing Zhu, Dearshiqiao International Home Textiles, China (document no. 4)

### Presentation “ITMF HTP Committee Satellite Office in Nantong, China”

Zhaohua Yang, CNTAC & China Home Textile Association, China (document no. 5)

### Activities in 2020

The next regular meeting of the HTP-Committee is planned to be held in January 2020 during “Heimtextil 2020” in Frankfurt, Germany. The ITMF Secretariat will inform about this activity in due time.
Report by the Fibres & Applications (F&A) Committee

Opening Remarks
The Chairman, Mr. Loek de Vries (Netherlands), opened the meeting with a few introductory remarks.

Presentation on Innovation in the Textile Apparel Value Chain
Simon Whitmarsh-Knight, Hyosung, USA (see attached document no. 6)

Presentation on Technical Textiles – Trends, Potentials and Challenges
Michael Jaenecke, Messe Frankfurt, Germany (see attached document no. 7)

Activities in 2020
The ITMF Secretariat will inform in due time about activities planned in 2020. The next regular meeting of the F&A Committee will be in conjunction with the ITMF Annual Conference 2020 which will be held from October 20-22, 2020 in Seoul, Korea.

Membership

Since the last meeting of the Committee of Management in September 2018 the following changes in the composition of the ITMF membership took place:

ENTRIES:
Associate Member:
Egypt         Cotton Egypt Association
Korea Rep.    Spinners & Weavers Association of Korea (SWAK)
Vietnam       VITAS

Corporate Members:
Bangladesh    Karnaphuli Shoes Industries Ltd.
Bangladesh    Karnaphuli Polyester Products
Bangladesh    Talisman Ltd.
Bangladesh    Youngone CEPZ
Bangladesh    Youngone Hi-Tech Sportswear Industries Ltd.
El Salvador   Textiles Opico S.A. de C.V
Korea Rep.    Hansae Fashion Worldwide
Korea Rep.    Samil Spinning Co., Ltd.
Korea Rep. Sung Kwang Co. Ltd.  
Korea Rep. Youngone Corporation  
Switzerland Rieter Management AG  
Switzerland SI.GA. Trading SA  
Turkey Sanko Tekstil  
USA Vanguard Pai Lung  
Uzbekistan Fe “Samarkand Apparel” LLC  
Vietnam Merkava Vietnam Co., Ltd.  
Vietnam Youngone Nam Dinh Co

WITHDRAWALS
Corporate Members:
China Jilin Qifeng Chemical  
China Yuyue Hometextiles  
Hong Kong, China Texhong  
India Birla Cellulose  
India Loyal Textiles  
India Sintex  
India Welspun  
Pakistan Al Karam

Date and Location of ITMF Annual Conference 2020

Mr. Sung informed the Committee of Management that the Federation’s next Annual Conference will be held in Seoul, Korea from October 20-22, 2020.

The Committee of Management welcomed this invitation very much and thanked the KOFOTI for having invited the ITMF membership to convene in 2020 in Seoul, Korea.

Concluding Remarks by the President

ITMF President, Mr. Kihak Sung (Korea) thanked the members of the Committee of Management for their trust and support during the past year. Finally, he invited everyone to convene for the ITMF Annual Conference 2020 in Seoul, Korea.

January 2020
From October 13-16, 2019 the ITMF Spinners Committee visited Greece on behalf of ITMF, as part of the on-going program of the Committee to visit cotton-producing countries around the world in an effort to strengthen the dialogue in the cotton pipeline between growers, ginners, seed breeders and cotton spinners.

The Committee would like to express its appreciation for the warm welcome and the interesting discussions and informative exchange of opinions with all the people the Committee visited and met on the different occasions in cotton fields, gins, mills, cotton organisations, and research institutions. The hospitality of all hosts was outstanding and made the whole visit not only very informative, but also very pleasant.

The Committee is very grateful to Mr. Damase Büchi, Senior Partner, Faircot, Geneva/Switzerland, and Mr. Yiannis Papadogiannis, Managing Director, Hecot, Athens/Greece, and Mr. Tasos Thomaidis, President, Hecot, Athens/Greece who had assisted the Committee with their in-depth expertise and experience of the Greek cotton industry in the detailed planning, preparation and execution of the visit, thus helping to make the visit an outstanding success.
Participants

Committee Members & Secretariat

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<thead>
<tr>
<th>Name</th>
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<tr>
<td>Andrew Macdonald</td>
<td>Brazil</td>
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<td>Enrique Crouse</td>
<td>South Africa</td>
<td>Prilla 2000</td>
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<td>Thomas Nasiou</td>
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<td>Uster Technologies</td>
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<td>Walter Simeoni</td>
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<td>WS International</td>
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<td>Christian Schindler</td>
<td>Switzerland</td>
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<td>Olivier Zieschank</td>
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Guests

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<tr>
<td>Yiannis Papadogiannis</td>
<td>Greece</td>
<td>Hecot</td>
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<tr>
<td>Tasos Thomaidis</td>
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</table>

F.l.t.r.: Walter Simeoni, Andrew Macdonald, Damase Büchi, Enrique Crouse, Thomas Nasiou, Christian Schindler, Olivier Zieschank, Yiannis Papadogiannis
Objectives of the visit

- To review the situation of cotton growing and ginning in Greece
- To evaluate current cotton quality in the fields and harvesting
- To evaluate the ginning today, based on world standards
- To evaluate and discuss the road to sustainably and traceability in cotton
- To evaluate the cotton classing systems
- To discuss the future of cotton programs in Greece

Program

The Committee started the country visit by meeting in Thessaloniki, the regional capital of the region of Macedonia. From there, it travelled by bus to the East to the cotton growing area around the city of Komotini in the region of Thrace, the region bordering Turkey. There, it visited cotton fields and gins. From Komotini the Committee travelled again westwards to the city of Serres in the region of Macedonia to stay overnight. On the second day, the Committee headed to the cotton growing area around Larissa in the region of Thessaly. It visited cotton fields and a gin in Platykampos. After staying for the night in Larissa, the Committee visited a spinning mill and gin in Farsala as well as a cotton classification and standardisation office in Karditsa. On its way back to Thessaloniki, the Committee met with a representative of a cotton seed company.
EXECUTIVE SUMMARY

Overall Comments/Impressions

Greek cotton industry – background and facts

Looking back, Greece’s peak cotton production was in the early 2000’s with a production of around 450’000 tons of ginned cotton. In 2006, the EU decided to separate the subsidies from the production and instead applying them to area, known as “decoupled”. This led to a decline in cotton production. Together with the decline in production the cotton quality also suffered, mainly due to this alteration of the incentives.

Greece is the 10th larger cotton producer and the 5th larger exporter of cotton in the world. During this season, Greece’s cotton production is expected to reach around 330’000 – 350’000 tons of ginned cotton. Especially this year, the weather conditions helped not only to reach a high yield (between 3’500kg/hectare to 5’000kg/hectare or more of seed cotton) but also a very good quality.

A characteristic of the Greek cotton production is that the farmers own or rent land and cultivate mainly relatively small fields (indicative size is 3 to 10 hectares). This inhibits large-scale cultivation practices. The farmers deliver the seed cotton to the gins and are paid at that time, based on the equivalent international cotton prices for the quantity and moisture content. From then on the ginners are the owners of the ginned cotton, and sell it either directly to spinning mills, or through international traders. This constellation makes the adoption of nation-wide programs easier as their implementation is centralized (through the ginners and their relations with the growers) and executed locally.

Greek cotton is mainly medium staple (28-29.5mm), with micronaire (3.9-4.5), strength averaging between, 30-31g/tex, and with good uniformity. Almost all the production is irrigated, but until now only a small percentage by drip irrigation, the cotton is machine-harvested, and saw ginned.
At harvest time the process of defoliation does not appear to be a standard practice due to various factors. This is because in general the Greek farmers are picking with their machines, twice even three times, an uncommon practice compared to other machine harvesting countries. With the slow maturing plants, they attempt, through the spindle settings and harvesting speed, to pick the mature bolls and leave enough bolls to open for the second picking. It is estimated that the first pick leaves about 20% behind for the second. Therefore, in those cases where it is applied, the defoliation is light to allow the plants to complete the cycle for the second picking. In most countries the cost of a second pick is too expensive, clearly in Greece this is not the case. Weather is also a consideration in this process of defoliation as they would be able to harvest only 12 days after the defoliation and with the unstable weather conditions this is an extra consideration, as to when, and if to decide to spray the application. However it was noted that if the farmers are producing seed cotton for sowing seed then they are obliged to defoliate to avoid as much trash as possible in the cotton seed.

Climate change has been a factor in many regions effecting the availability of water for irrigation. It has been observed that the salt content in the ground water increased in some areas close to the sea even when pumped from 200m depth. The average temperatures have also increased over time.

The ginning machinery in Greece is relatively new and of high production, but those visited working with reduced speeds and output to help preserve the good quality characteristics of the cotton. The production rate per gin stand varies between 5-10 bales per hour, and all bales weight around 220-230kg and are marked with a unique ID, indicating the production date, place and bale number, with a fibre outturn of between 33-36%.

Most of the cotton produced in Greece is for export and traded based on USDA-description. The main markets are Turkey and Egypt (together approx. 50%). Other markets are Bangladesh, China, Indonesia or Vietnam, with only about 2-3% of the production consumed by the local spinning mills.
In recent years, both the production as well as the yield and the quality of the cotton has improved. The main changes over the last 5 years are:

- Study and publication of the results of the various cotton seed varieties, in terms of yield and quality. Based on these, some of the ginners created premium schemes, called for example ‘Cotton+’ and ‘Best Fibre CFS’ for certain varieties. This process has helped to streamline and reduce the varieties cultivated, and today only about 10 varieties produce around 80% of the volume.

- Homogeneity and uniformity of the cotton, because of the fewer varieties used, as well as improvement of the farming practices and the irrigation of the cotton fields, the quality of the Greek cotton has improved also in this respect.

As far as the actual ginning of the cotton it was clear to the Committee from the gins visited that good cotton ginning practices are being followed, which goes a long way maintaining the excellent characteristics of the Greek cotton.

In the last couple of years, the Hellenic Cotton Association has been very active in many areas. One major initiative is the creation of the European Cotton Alliance, together with the Spanish cotton and textile association. The alliance’s aim is to give an identity to the cotton produced in the EU, to bring together all the cotton related industries and people from the EU and to promote the value of the product. The main dimensions of the cotton from EU are its sustainability (non-GMO, socially responsible produced cotton), quality, traceability and transparency.

Some ginners have implemented various incentive schemes to increase the value of the cotton also for the growers. An example of this has been the formation of CSF program (Certified Sustainable Fibermax), a program which in this case is set up in cooperation with BASF, and provides the farmers a full set of services including soil analysis, weather monitoring to optimize irrigation and the use of fertilizers as well as technical support from agronomic experts. The aim is to increase the yield in a sustainable way and to support the growers by offering higher prices for certain quality levels.

The other activity is the alignment of the official ‘production protocol’ in Greece with those ‘items’ used by BCI. It was understood that this will allow Greek cotton production to be included and certified under the BCI program. This is expected to take place soon, hopefully already in 2020 at a national level. BCI today being a recognised cotton sustainability program will benefit the ginners and through them, the farmers. The spinners facing requests from the retailers for BCI cotton products will also be benefited.

Another initiative is to provide incentives to encourage the growers to bring the seed cotton with the correct moisture to the gin.

**MEETINGS/VISITS**

**Sunday, 13 October 2019 (Thessaloniki)**

The country visit started with a meeting over dinner, with Mr. Vaislis Markou, President, Hellenic Cotton Association, and Mr. Antonis Siarkos, President, European Cotton Alliance & Vice President, Hellenic Cotton Association. Both gentlemen are ginners and very active members of the cotton industry in Greece and in the EU. Also present was Mr Josep Baderi – Violar Greek Cotton Trading company active in the international market.
Monday, 14 October 2019 (Komotini)

From Thessaloniki the Committee travelled by van to Komotini in the East of the country, where the members visited the Thrakika Ginning mills and met with Mr. Kouroudis. Mr. Kouroudis and his family are in cotton ginning business for two generations and are fully and passionately involved in the daily business. Mr. Kouroudis is a visionary person always trying to innovate. He has created the “Cotton +” brand (which comprises 30% of his production) and is orchestrating and supporting the CSF program (Certified Sustainable Fibermax) from the farmers and ginners side.

The main attributes of the “Cotton +” brand are:

- Restricted cotton seed varieties with known good quality characteristics and with high yields,
- Classification of seed cotton, for lot separation to optimize the ginning,
- Certification, traceability and sustainable production practices
- A remuneration incentives scheme for the farmers

The implementation, control and certification of this program is undertaken by 3rd parties and external agriculture auditors, namely AIFORIKI and QMSCERT. The program involved 240 growers in the last season and produced 9’300 cotton bales.

Mr. Kouroudis is involved in other initiatives to create win-win conditions for the whole ecosystem of cotton in the area of Komotini. He is also working with retailers with the objective to increase the level of sustainability of the Greek cotton.

This year, he was asked for the first time by a brand/retailer to use tracers/markers in the cotton bales he is producing. Currently a part of the production is working on a trial basis, using the tracer Tailorlux to enable the traceability of the cotton throughout the industrial chain.

The Committee visited an experimental cotton field adjacent to the gin which was ready for harvesting and all the varieties showed excellent quality, and potential for a good outturn.

The seed cotton currently in the patio showed no evident foreign matter and for machine cotton was remarkably clean.

During the visit the Committee had the opportunity to visit the cotton gin, four stands of Consulted Feed Master 96 with 164 saws, and using an impact lint cleaner. Clearly the gin is well managed, running at well below capacity with a soft roll in ensure the maximum preservation of the quality. The bales are HD pressed and covered in blue polyethylene
wrapper, which though better than woven polyester bagging still left the risk for contamination with the movement of the bales by fork lifters cutting the wrapping.

**Tuesday, 15 October 2019 (Larissa)**

The Committee travelled to Platykampos near Larissa where it visited the Karagiorgos ginning mills.

Mr. Karagiorgos is the second generation in cotton ginning business, operating in total 18 ginning mills in the Central and Northern parts of Greece and thereby is the largest cotton ginner in Greece, and leading trader of Greek cotton

Mr. Karagiorgos is also actively involved, as founder, in a special program called the “Best Fiber (BF)” program. Together with Ergonomia, an agronomic firm in Larissa and Mr. Ioannis Karastergios, they are in the second year of the implementation of an ambitious program. The program is providing support and advice to the growers and is aiming at:

- Sustainability through pest, irrigation and fertilizer management.

- Welfare of the growers by providing trainings for safety and health to the growers as well as checking frequently the conditions and the implementation of the rules

- Tests to guarantee the existence of non-GMO’s

- Labelling of the cotton through segregation and traceability from the yarn to the ginner/spinner with transparency

- Implementing Smart Farming Practices through continuous monitoring of conditions (weather, soil condition, statistical data)

The participating cotton growers can select between two options:

- In option 1, they need to fulfill the minimum quality criteria (36) and choose between 10 cotton seed varieties.

- In option 2, they need to choose between only 4 cotton seed varieties and comply with more criteria (70) to receive the certificate of EU Ecolabel, as well as the certification of producing according to the National production standard (which is harmonized with the EU agricultural production standard).

In both options, Ergonomia, as a 3rd party partner will visit and interact with the growers on a weekly basis during the growing and harvesting period.

Currently, there are 50 large scale growers participating in option 2 of the program.

The final target of the program is to create a cotton bale of good quality cotton, grown with sustainable practices, harvested and ginned with good and similar conditions and most importantly, with uniform characteristics.
During the visit to the gin, the cotton in the patio was found to be much more leafy than the visit the day before, and, though the gin (four stand LUMMUS with 170 saws each and again running at below capacity, with double lint cleaners with extensive precleaning) the ginned cotton was found to contain more than normal pin leaf, which the Committee felt was most likely the result of only partial defoliation.

This was confirmed when visiting cotton fields after leaving the gin. The committee saw fields to be harvested which had been defoliated but very lightly or with not such aggressive chemicals, since the dried leaf had not fallen of the plants as one would expect and there was some evidence of regrowth. This would be a challenge for the first picking, the fields awaiting the second picking had less evidence of dried leaf most having been removed during the first pick. The committee was assured that the second pick was ginned separately from the first.

**Wednesday, 16 October 2019 (Farsala)**

From Larissa, the Committee continued to travel to Farsala further south, where it visited Selected Textiles, a ginning and spinning mill and met with Mr. Apostolos Dontas, the CEO of the company.

Selected Textiles has 4 ginning mills and 4 spinning mills with a total capacity of 100’000 ring spindles. They gin the cotton mostly for their own requirements. Any cotton not spun at Selected Textiles is sold. If necessary, they also buy cotton.
The gin, a five stand Lummus was not running during the visit stopped for maintenance, but the was clear than cleaning the cotton was a number one priority. The vast array of precleaning equipment, with built in prototype Jossi contamination control system since 2003, which must be unique. After the gin, jet lint cleaners are installed (not impact) and a cleaning system normally associated with the blow room cleaning had been installed, which had been designed and adapted by Mr Dontas. An impressive configuration. Even so the spinning mills of the group are also equipped with Jossi contamination control

On the spinning side the customers of Selected Textiles yarns are mainly in Europe, and as are both weavers and knitters, they need to produce a wide range of counts, from Nec16 to Nec 60-70, carded and combed, conventional ring spun, as well as compact yarn. Currently, there are only 2 spinning mills in operation (50’000 spindles) and 2 OE machines which are mostly processing waste mixed with lower quality virgin cotton. The current production therefore is around 5 tons of yarn per day.

Mr Dontas informed the Committee that the spinning mills operate with a productivity of around 160 kg per employee per day (at an average Ne30), which is the limit for the mill and close to the break-even, considering the technology available and installed (machinery installed from 2000). According to Mr. Dontas, the production should raise to 280 kg per employee and per day to make the production financially profitable and this would be possible with investments in the newer machinery and technologies.

In the afternoon the Committee had a meeting with Mr. Mohammed Darawsheh in Karditsa at the Hellenic Agricultural Organization (DIMITRA).

The organization is testing 1% of the Greek cotton production (the ginners are shipping the samples for testing) in order to obtain an overview of the quality and its trend in a nation level.

At the same time, the organization is testing 10% of the cotton bales produced for cotton seed production. This gives the ability to compare the various varieties and their quality performance in various periods and geographies. Currently, the laboratory has a track record for more than 40 varieties and their quality characteristics over time. This data helps and supports the growers and the ginners to select those varieties that are better suited quality-wise and at the same time provide financially sustainable production yields. In the recent years, Mr. Darawsheh noticed a reduction of the cultivated varieties and he expects this trend to continue in the coming seasons.

Another insight from the data analysis shows that the cotton bales produced from the seed production programs are better in colour grade. This has to do with the handling of the seed cotton and its ginning in all aspects.

Another trend noticed is the reduction of micronaire with the use of newer varieties (all non-GMO) which is positive for the spinning industry.
Later in the day, the Committee also met with Mr. Tsoutsas, an agronomist with BASF to discuss the question how new cotton seed varieties are developed for the Greece market.

The new cotton varieties are developed in Texas by BASF and are then cultivated in pilot plants in Greece for 5-7 years to check their performance and produce the seeds for planting from the ideal plants.

According to Mr. Tsoutsas, the newer varieties in the last years resulted in higher yields, lower micronaire and better staple and strength.

The Committee returned to Thessaloniki well satisfied that during short stay in Greece they had learnt much about the industry and was impressed with the dynamic and positive attitude of all those met during the visit. The Committee felt that Greece was/is an example to most cotton growing countries in terms of maximum use of technology in all senses of the word, to advance the production of cotton in Greece.

December 2019

More information about the Greek cotton industry can be found on the following website:

https://thrakika.gr/en/greek-production

Statistical information about the Greek cotton industry as of October 2019:
Cotton Production in Greece

Cotton Greece as of October 2019

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Area Harvested (1000 Ha)

Cotton.Greece.Area Harvested for all Years.

Forecast Data reported on: 10/2019

Source: FAS USDA
Consumption (1000 480 lb bales)

Cotton Greece Use for all Years.

Forecast Data reported on: 10/2019

Source: FAS USDA
Exports (1000 480 lb bales)

Cotton Greece Exports for all Years.

Forecast Data reported on: 10/2019

Source: FAS USDA
“Reinventing the end of life of cotton textiles in order to design more responsible products.”

pascal.denizart@ceti.com
A unique place to innovate

The CETI is a center for technological research and development, covering, in 2018, a significant perimeter from TRL 3 to TRL 8 (Technology Readiness Level). CETI is providing proof of innovation from the idea to the industrial transfer but also helping in successful introduction on the market thanks to its tools of innovation valorization.

The proof of innovation by making it

- PERFORMANCE OF FIBREUS MATERIALS
  - TRI-COMPONENT SPINNING
  - ADVANCED FUNCTIONALIZED FIBRES AND NONWOVENS
  - MULTIPLES COMBINATIONS OF NONWOVENS TECHNOLOGIES
  - 3D NONWOVENS

- 4.0 DESIGN REVOLUTION
  - CO-CREATION WITH NEW CUSTOMERS EXPERIENCES
  - 2D & 3D CONCEPTION & ZERO WASTE DESIGN
  - 3D COLLABORATIVE PROTOTYPING AND VIRTUAL REALITY
  - DISRUPTIVES FUNCTIONALITIES MATERIALS AND PRODUCTS
  - PERSONALIZATION AND INTEGRATED SHORT CIRCUIT

- ECO-RESPONSIBLE DEVELOPMENT
  - ECO-CONCEPTION OF PRODUCTS
  - ECO-CONCEIVED FIBERS (BIO-BASED, NATURAL, ORGANIC)
  - CIRCULAR ECONOMY
  - END-OF-LIFE TREATMENTS FOR PRODUCTS
The present Context

- In the world, 80 billions of kg of textile articles are produced each year.
- In Europe, 660 million of kg of textiles are scrapped each year, from which 30% only are recycled.
- In France, 210 000 tons of used garments have been collected in 2017.
- 25% of pesticides consumed at world scale are used for cotton growing.
- About 10 000 l of water are necessary for the production of 1 kg of cotton fibres.
- 200 000 l of water on average, are necessary for the making of one ton of textile articles.

Key figures 2017

- 624 kT TLF placed on the market
- 210 kT Collected
- 184 kT sorted

Re-use 55%
Wiping 15%
Fraying 12%
Incineration 10%
Paper-Cardboard 8%
Reinventing the end of life of cotton textiles in order to design textile goods more responsible.

Cotton has a bad environmental footprint since growing it requires the use of pesticides and a large amount of water. However, it remains the favorite raw material of clothing manufacturers because of its softness and easy-care qualities. Circular recycling will help bring a true added value to cotton. The REWIND project is inscribed in the ethical circle of a circular economy and plans to deploy industrial installations that can collect, sort, fray and recycle post-consumer textile articles. Brands and clothing manufacturers will be able to use recycled materials that will, over time, considerably help reduce the volume of virgin materials and production costs while optimizing the cotton fibers’ environmental footprint.
The REWIND project objectives are:

- Automatization of sorting,
- Automatization of dismantling
- Recycling through spinning
- Validation by panels of users-customers of DECATHLON.
- Gradual inclusion of recycled cotton fibers in textile sport goods.

Building the upcycling pilot line
Building the upcycling pilot line
A pilot product development line resulting from the recycling of post-consumer textile and production waste

From fabric to frayed fibre
Passage from fibre to yarn

Sorting: a roadblock?

- Several constructors of machines are actually proposing different solutions:
  - Use of NIR to determine the nature of fibres
  - Use of image analysis to sort by color
  - Use of image analysis to sort by type of fabrics (Woven or knitted fabrics)

- Limitations
  - Surface analysis: multi-layered fabrics cannot be sorted correctly
  - Speed of sorting can be a bottleneck for productivity
Dismantling: a roadblock?

• Objectives
  • To detect hard points and contaminants: buttons, zips, seams, embroideries, ...
  • To extract them from the fabrics

• Solutions
  • Mechanical solutions: cutting in small pieces and use of the weight of the hard points
  • Detection of hard points or seams, cutting around them and extraction

• Limitations
  • Mechanical solutions: do not remove the fine seams
  • Detection mainly on one face of the fabrics, do not detect fine seams

Dyeing: a roadblock?

Objectives: to avoid a dyeing operation by mixing fibres of different colors
SHARING THE ADDED VALUE

Development of a recycled cotton product line operational for DECATHLON’s Solognac brand.

A pilot line "UPCYCLING" unique in Europe for product development. (sorting, fraying, spinning open end, weaving)

Development of a fraying activity and investment of a dedicated industrial line

Technical specifications for a future demonstrator for the automation of the demantling

RESULTS/ A 100% cotton yarn succeeding in knitting & weaving tests

30% Virgin fibre From organic cotton

Nm 50

70% Recycled fibre from 100% cotton used garment
ON SEPTEMBER, THE 19th CETI HAS OFFICIALLY INAUGURATED THE FRENCH DEMONSTRATOR FOR THE MECHANICAL RECYCLING OF SHORT FIBRES
The recycling of cotton textile articles will allow:

- To maximize the percentage of recycled fiber in new products to develop innovative products, and restore value to what otherwise would be destroyed.
- To reduce the volume of waste, preserve natural resources and limit pollution, and thus optimize the environmental footprint of cotton textiles.
- To revitalize jobs and create new jobs.
- To develop a local recycling network including the collection, sorting, material preparation and production of articles from recycled fibers in an economically viable model that is not widespread in France.

Give a sens to consumerism

A new and ambitious challenge for Brands & Major Companies involving the Global textile chain
Setting up a new business model

The circular fashion value chain

- Increased efficiency and reduced waste
- Enhanced product lifespan
- Improved customer engagement

Design innovation with us

Thank you

pascal.denizart@ceti.com
Global Home Textiles Market and Opportunities Ahead

<table>
<thead>
<tr>
<th>Region</th>
<th>2019 Market Share</th>
<th>2019 Market Size (Million)</th>
<th>2025 Market Share</th>
<th>2025 Market Size (Million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia Pacific</td>
<td>45.6%</td>
<td>$56,154.7</td>
<td>50.7%</td>
<td>$77,005.7</td>
</tr>
<tr>
<td>Europe</td>
<td>24.2%</td>
<td>$29,777.5</td>
<td>20.7%</td>
<td>$31,351.9</td>
</tr>
<tr>
<td>North America</td>
<td>23.3%</td>
<td>$28,681.1</td>
<td>21.5%</td>
<td>$32,627.2</td>
</tr>
<tr>
<td>RoW</td>
<td>7.0%</td>
<td>$8,587.1</td>
<td>7.1%</td>
<td>$10,840.3</td>
</tr>
</tbody>
</table>


Prepared by Fibre2Fashion.com

Source: TexPro

Driving Intelligent Data
## Major Home Textiles Markets and Its Growth Prospects (2020-2025)

### Market Size (Million)

<table>
<thead>
<tr>
<th>Region</th>
<th>2019</th>
<th>2025</th>
<th>CAGR (2020-2025)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bed Linen &amp; Bed Spread</td>
<td>$55,829.1</td>
<td>$72,088.1</td>
<td>4.3%</td>
</tr>
<tr>
<td>Kitchen Linen</td>
<td>$10,922.5</td>
<td>$12,365.3</td>
<td>2.0%</td>
</tr>
<tr>
<td>Bath &amp; Toilet Linen</td>
<td>$14,730.6</td>
<td>$17,992.5</td>
<td>3.4%</td>
</tr>
<tr>
<td>Floor</td>
<td>$16,961.1</td>
<td>$19,070.3</td>
<td>1.9%</td>
</tr>
</tbody>
</table>

### Market Share

<table>
<thead>
<tr>
<th>Region</th>
<th>2019 Share</th>
<th>2025 Share</th>
<th>CAGR (2020-2025)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bed Linen</td>
<td>45.3%</td>
<td>47.5%</td>
<td></td>
</tr>
<tr>
<td>Kitchen Linen</td>
<td>8.9%</td>
<td>8.1%</td>
<td></td>
</tr>
<tr>
<td>Bath &amp; Toilet Linen</td>
<td>12.0%</td>
<td>11.9%</td>
<td></td>
</tr>
<tr>
<td>Floor</td>
<td>13.8%</td>
<td>12.6%</td>
<td></td>
</tr>
</tbody>
</table>

## Major Product Categories and Its Way Forward
Home Textiles Major Product Categories:
Regional Outlook (2019-2025)

**Bed Linen & Bed Spread**

<table>
<thead>
<tr>
<th>Region</th>
<th>2019</th>
<th>2025</th>
<th>CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia Pacific</td>
<td>$29,885.6</td>
<td>$42,446.6</td>
<td>6.0%</td>
</tr>
<tr>
<td>Europe</td>
<td>$9,672.5</td>
<td>$10,524.0</td>
<td>1.4%</td>
</tr>
<tr>
<td>North America</td>
<td>$13,300.9</td>
<td>$15,448.9</td>
<td>2.5%</td>
</tr>
<tr>
<td>RoW</td>
<td>$2,970.0</td>
<td>$3,668.6</td>
<td>3.5%</td>
</tr>
</tbody>
</table>

- CAGR % (2020-2025)
- All values are in Millions

**Bath/Toilet Linen**

<table>
<thead>
<tr>
<th>Region</th>
<th>2019</th>
<th>2025</th>
<th>CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia Pacific</td>
<td>$10,282.1</td>
<td>$14,050.7</td>
<td>5.3%</td>
</tr>
<tr>
<td>Europe</td>
<td>$6,641.4</td>
<td>$7,028.1</td>
<td>1.0%</td>
</tr>
<tr>
<td>North America</td>
<td>$5,709.9</td>
<td>$6,503.1</td>
<td>2.1%</td>
</tr>
<tr>
<td>RoW</td>
<td>$2,123.6</td>
<td>$2,727.1</td>
<td>4.2%</td>
</tr>
</tbody>
</table>

**Kitchen Linen**

<table>
<thead>
<tr>
<th>Region</th>
<th>2019</th>
<th>2025</th>
<th>CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia Pacific</td>
<td>$4,766.8</td>
<td>$5,841.6</td>
<td>3.4%</td>
</tr>
<tr>
<td>Europe</td>
<td>$3,017.7</td>
<td>$2,957.8</td>
<td>-0.3%</td>
</tr>
<tr>
<td>North America</td>
<td>$2,283.5</td>
<td>$2,442.6</td>
<td>1.1%</td>
</tr>
<tr>
<td>RoW</td>
<td>$854.5</td>
<td>$1,123.3</td>
<td>4.6%</td>
</tr>
</tbody>
</table>

**Upholstery**

<table>
<thead>
<tr>
<th>Region</th>
<th>2019</th>
<th>2025</th>
<th>CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia Pacific</td>
<td>$8,379.7</td>
<td>$11,093.0</td>
<td>4.7%</td>
</tr>
<tr>
<td>Europe</td>
<td>$4,018.2</td>
<td>$4,185.5</td>
<td>0.7%</td>
</tr>
<tr>
<td>North America</td>
<td>$4,018.2</td>
<td>$4,185.5</td>
<td>0.7%</td>
</tr>
<tr>
<td>RoW</td>
<td>$1,081.6</td>
<td>$1,347.6</td>
<td>1.2%</td>
</tr>
</tbody>
</table>

**Floor**

<table>
<thead>
<tr>
<th>Region</th>
<th>2019</th>
<th>2025</th>
<th>CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia Pacific</td>
<td>$2,840.5</td>
<td>$3,573.9</td>
<td>3.8%</td>
</tr>
<tr>
<td>Europe</td>
<td>$6,427.6</td>
<td>$6,656.6</td>
<td>0.6%</td>
</tr>
<tr>
<td>North America</td>
<td>$6,135.7</td>
<td>$6,885.0</td>
<td>1.9%</td>
</tr>
<tr>
<td>RoW</td>
<td>$1,557.3</td>
<td>$1,954.8</td>
<td>3.8%</td>
</tr>
</tbody>
</table>

- CAGR % (2020-2025)
- All values are in Millions
Driving Factors of the Home Textiles in APAC

- ~60% of the global population lived in Asia-Pacific.
- Asia-Pacific is expected to see a ~54.0% increase in the global middle class families by 2020.
- Growing disposable income and lifestyle changes are also part of the driving factor.

Market Share:
By Category (2019)

<table>
<thead>
<tr>
<th>Category</th>
<th>Market Size ($ Mn)</th>
<th>CAGR 2020-2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bed Linen &amp; Bed Spread</td>
<td>$29,885.6 Mn</td>
<td>6.0%</td>
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<tr>
<td>Bath/Toilet Linen</td>
<td>$10,282.1 Mn</td>
<td>5.3%</td>
</tr>
<tr>
<td>Kitchen Linen &amp; Floor</td>
<td>$4,766.8 Mn</td>
<td>3.4%</td>
</tr>
<tr>
<td>Upholstery</td>
<td>$2,840.5 Mn</td>
<td>4.7%</td>
</tr>
<tr>
<td>Floor</td>
<td>$2,840.5 Mn</td>
<td>3.8%</td>
</tr>
</tbody>
</table>

Market Size: By Category ($ Million, CAGR 2020-2025)

Europe Home Textiles Outlook

- France is the largest market, accounting for ~24.2% of the global home textiles market.
- Russia is expected to see a significant slowdown in home textiles consumption due to economic conditions.
- Germany is the largest market, followed by Russia and U.K. with 12.8% and 12.4% respectively.
- Economic condition of the major economies in the region, a cause for worry.

European Home Textiles Market: Key Insights

- Bed linen segment, expected to be the fastest growing segment in the region.
United States accounted for 90.9% of the regional market. Bed Linen & Bed Spread contributed 46.4% towards regional markets followed by Floor with 21.4% in 2019. Latin American market accounted for 70.5% of the overall regional market in 2019.

North America (NA)
- United States accounted for 90.9% of the regional market.
- Bed Linen & Bed Spread contributed 46.4% towards regional markets.

Rest of World (RoW)
- Latin American market accounted for 70.5% of the overall regional market.
- Market Share: By Category (2019)
  - Bed Linen & Bed Spread
  - Bath & Toilet Linen
  - Upholstery
  - Kitchen Linen & Floor

NA & RoW Home Textiles Market: Key Insights
- Ongoing political tension with China might hamper the growth prospects of the U.S. home textiles market.
- Increasing middle class population in these developing nations.
- Strong economical growth in several African & Latin American nations.

North America & RoW Home Textiles Market Outlook

North America (NA)
- Market Size: $26,059.6 Mn
- CAGR: 2.1%

Canada
- Market Size: $2,034.4 Mn
- CAGR: 2.5%

Latin America
- Market Size: $6,053.9 Mn
- CAGR: 4.0%

RoW
- Market Size: $2,533.2 Mn
- CAGR: 3.6%

Rest of World (RoW)
- Market Size: $6,135.7 Mn
- CAGR: 1.9%

NA
- Market Size: $13,300.9 Mn
- CAGR: 2.5%

Canada
- Market Size: $5,709.9 Mn
- CAGR: 2.1%

Latin America
- Market Size: $5,035.9 Mn
- CAGR: 4.0%

RoW
- Market Size: $1,251.1 Mn
- CAGR: 1.2%

Market Size: By Category ($ Million, CAGR 2020-2025)
- Bed Linen & Bed Spread
- Bath & Toilet Linen
- Kitchen Linen
- Upholstery
- Floor

Designed to assist you for a strategic & informed decision making process in your business, TexPro is a one-of-a-kind user interface service. Serving as the go-to authority for market updates and trends, TexPro brings you with well-rounded information on raw material prices, export-import data, existing tariff rates of various countries, non-tariff barriers in place, trade agreements and government policies, amongst others.

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Driving Intelligent Data

Ask for a FREE DEMO Today

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Dearshiqiao Home Textile Market and International Cooperation

Craig Zhu
Oct 20th, 2019

Content

• Objective

• Introduction to Dearshiqiao
  • Unique Location
  • History
  • Market figures
  • Future Plan

• Project Cooperation
  • Background
  • Trade channel
  • Project mapping
  • Expected impacts

• Support Needed
Dearshiqiao International Textile Forum and International Textile Innovation Center are expected to be officially launched in May 2020. Under the theme of “Encouraging cooperation” with three key objectives:

**Unifying the Industry** — Provide industry leaders, workers, researchers or any textile related workers a platform to stimulate discussions and the sharing of experience in this field; Promote collaboration and communication among industry companies as a whole community.

**Inspiring Future Collaborations** — Increase the participation of companies in exchanging any information affecting the textile industry; Promote expansion of the textile industry by simulating more businesses.

**Raising Public Awareness** — Help to make a voice of the whole industry; Deepen public understanding of the textile world.

---

**Content**

- **Objective**
- **Introduction to Dearshiqiao**
  - Unique Location
  - Development
  - Market figures
  - Future plan
- **Project Cooperation**
  - Background
  - Trade channel
  - Project mapping
  - Expected impacts
- **Support Needed**
Unique Location

**Surrounded by Sea and River – A Treasure Land**

- a home place for textile industry
- Southeast of Jiangsu Province
- Hub of the Yellow Sea and Yangtze River
- “North Gate of Shanghai”

Development of Dearshiqiao

The home textile industry of Dearshiqiao has developed for **more than 100 years**. It is well-known both home and abroad as one of the largest home textile production base, sales place and logistics center in China and even in the world.
Market Figures

Product scale
- Market trade volume: ¥150,000,000,000
- Foreign trade turnover: $5,000,000,000
- Foreign trade exports: 10,000 TEUs
- E-commerce transaction volume: ¥15,000,000,000

Market scale
- Area: 1,500,000 m²
- Enterprises: 20,000
- Industrial employees: 500,000
- Covers: 200 sq. km

Business scale
- Products in China: covering > 50% of cities
- Exported to 130 countries covering 5 continents

Future Plan

Informatization
- Transforming the traditional offline business model into a new online system.

Digitalization
- Establishing a shared information center to improve the integration of data-based systems.

Intellectualization
- A smart city with a mature market supported by information technology, digitalization, Internet of Things, and blockchain technology.
**Content**

- Objective
- Introduction to Dearshiqiao
  - Unique Location
  - Development
  - Market figures
  - Future plan
- Project Cooperation
  - Background
  - Trade channel
  - Project mapping
  - Expected impacts

**Background**

👩‍💻 **A more Globalized Dearshiqiao …**

- Collaborating with domestic and international textile companies to **strengthen partnerships**
- Providing manufacturers, designers, brand operators, investors, a chance to **enter China’s big market**
Trade Channels

**The Belt and Road**
*(Border trade)*

- The trade market in Nanning for East Asia
- The trade market in Horgos for Central and Western Asia
- The trade market in Hekou County for Central and South Asia

---

**Next Steps**

- Approval
- Connection
- Formation
- Recognition of ITMF
- Receiving help from connecting with other Asian organizations
- Successfully establishing an international trade market in Asia-Pacific region

---

Project Mapping

**Dearshiqiao International Convention Center**

- **International Textile Forum Venue**
  - **10,000 People**
  - **30,000 Square Meters**

- **International Textile Forum System**
  - Eliminating language barriers during communications by using updated AI systems
- **Offline and online interaction**
  - Organizing regular seminars
  - Encouraging new innovations

**Cooperation with ITMF**

- ITMF events held in the center and inviting Chinese textile players to the events
- Initiating international panel discussions focusing on the hot issues of the world textile industry
- Supported with our digital information system and acting as an information provider for us all
Project Mapping

International Textile Innovation Center

1. Innovation center Venue
   - Area: > 10,000 sq. m
   - Special zones: 2
   - Exhibition hall: > 100
   - Real-time connection: 20,000

2. Branding and commercialization
   - Overseas professional designers
   - Creativity institutions
   - Professional design colleges
   - Supply chain of designing industry

3. Foreseeable practical Results
   - Authoritative international home textiles fairs
   - New product release conference
   - Popularity trending reports
   - Property rights management

Expected Impacts

Improving
- Companies can share experience, collectively create innovations to push the textile industry

Unifying
- Industry experts are gathering together to share, exchange and communicate with each other

Inspiring
- Letting the world hear the voice of textile, including cotton, fibers and etc.

Developing
- Pushing economic, social and cultural developments, in not only textile field but the whole market
Objective

Introduction to Dearshiqiao
- Unique Location
- History
- Market figures
- Future Plan

Project Cooperation
- Background
- Trade channel
- Project mapping
- Expected impacts

Support Needed

We hope that ITMF could share your valuable resources of excellent manufactures, retailers, designers, professors...to help Dearshiqiao go international and global, and to take Dearshiqiao as ITMF’s base in China for your events and meetings to increase your visibility in China.
THANKS

ITMF
In 2018, the revenue of above-designated sized home textile enterprises increased 4.55% year-on-year.

From Jan. to Aug. 2019, the revenue increased 3.05% year-on-year.
In 2018, exports of China’s home textile products was 42.086 billion USD, a year-on-year increase of 6.64%.

From Jan. to Aug. 2019, exports of China’s home textile products was 27.461 billion USD, an increase of 1.46%.

In 2018, domestic sales of above-designated sized home textile enterprises increased 5.07% compared to 2017.

From Jan. to Aug. 2019, domestic sales of above designated sized home textile enterprises increased 4.81% year on year.
行业景气指数提升 Business climate index of the industry goes up.

行业气候指数 64.57
Business Climate Index
企业预计三季度行业景气指数较二季度提升11.8个百分点
Expected business climate index of Q3 ↑11.8 points than Q2

生产指数 66.07
Production Index
企业预计三季度生产指数较二季度提升15.18个百分点
Expected production index of Q3 ↑15.18 points than Q2

2019年三季度 家纺行业景气指数表现良好
Good Business Climate Index of Q3 in 2019

新订单指数 72.73
New Order Index
企业预计三季度新订单指数较上季度提升21.75个百分点
Expected new order index of Q3 ↑21.75 points than Q2

数据来源：第37期中国纺织服装企业经营者问卷调查
Source: the 37th Survey on Chinese Textile and Apparel Entrepreneurs

我们面临的机遇 Opportunities

全球家纺市场启稳
Recovery of the World Home Textile Market

900亿美元的中国家纺内需市场
The Large Chinese Market with a 90 Billion USD Consumption Power

中美贸易取得阶段性成果
Progress Made in China-US Trade Negotiations.
全球家紡市場啟穩 Recovery of the World Home Textile Market

2017年，全球家紡品出口貿易額共計871.90億美元，同比增長4.88%，自2015年觸底以來逐步回升，趨勢向好。

The world home textile exports in 2017 was 87.19 billion USD, a year-on-year increase of 4.88%, rebounding from the lowest record in 2015.

我们面临的机遇 Opportunities

- 全球家紡市場啟穩
  Recovery of the World Home Textile Market
- 900亿美元的中国家紡內需市場
  The Large Chinese Market with a 90 Billion USD Consumption Power
- 中美貿易取得階段性成果
  Progress Made in China-US Trade Negotiations.
中国面临的挑战  Challenges

- 劳动力成本上升  Rising Labor Cost
- 印染加工费用增加  Rising Printing and Dyeing Cost
- 中美贸易摩擦的不确定性  Uncertainty Caused by China-US Trade Friction

ITMF中国办事处工作建议
Work Plan of ITMF HTP Committee Satellite Office in Nantong, China

1、加强协会间的合作  Cooperation with Associations
2、加强企业间的合作  Cooperation with Enterprises
3、开展多边交流  Multilateral Exchanges
1、加强协会间的合作 Cooperation with Associations

• 定期交流信息，完成年度家纺报告；
• 相互支持各协会举办的展览会和交流会

• regular exchanges of information to release the annual report on the development of home textile industry
• Mutual support to each other’s textile related events such as exhibitions and b2b meetings

2、加强企业间的合作 Cooperation with Enterprises

• 推动贸易从纱线向坯布和成品的转变 promote trade from yarn and grey fabrics to finished products
• 加强合作，开拓第三国市场 complementary cooperation to explore the third-party market
3、开展多边活动 Multilateral Exchanges

We are no longer competitors, we are partners!
我们不再是竞争者，我们是合作伙伴！

Better understanding and comprehensive cooperation will certainly contribute to the sustainable development of the world home textile industry.
Thank you!
INNOVATION IN THE TEXTILE APPAREL VALUE CHAIN

An industry with shared goals

1. NO POVERTY
2. END HUNGER
3. GOOD HEALTH AND WELL-BEING
4. QUALITY EDUCATION
5. GENDER EQUALITY
6. CLEAN WATER AND SANITATION
7. AFFORDABLE AND CLEAN ENERGY
8. DECENT WORK AND ECONOMIC GROWTH
9. INDUSTRY, INNOVATION AND INFRASTRUCTURE
10. REDUCED INEQUALITIES
11. SUSTAINABLE CITIES AND COMMUNITIES
12. RESPONSIBLE CONSUMPTION AND PRODUCTION
13. CLIMATE ACTION
14. LIFE BELOW WATER
15. LIFE ON LAND
16. PEACE, JUSTICE AND STRONG INSTITUTIONS
17. PARTNERSHIPS FOR THE GOALS

SUSTAINABLE DEVELOPMENT GOALS
Hyosung: a total solution provider

PREMIUM MATERIALS

9 LEADING PRODUCTION SITES

GLOBAL CUSTOMERS

Hyosung: story creation strategy

1. IDENTIFY UNMET CONSUMER/MARKET NEEDS
2. DEVELOP POV ON OPPORTUNITY
3. R&D/MARKETING DEVELOP PRODUCTS TO FIT NEEDS
4. FDC CREATES PRODUCT STORIES IN CONTEXT OF GLOBAL TRENDS
5. SALES ‘PUSH’ PRODUCT TO DIRECT MILL CUSTOMERS
6. MARKETING ‘PULLS’ PRODUCT THROUGH GLOBAL BRANDS & RETAILERS

“MARKET BACK” PROCESS

GLOBAL BRAND MARKETING TEAM
FASHION DESIGN CENTER

GLOBAL SALES TEAM
TECHNICAL SERVICES TEAM
RESEARCH & DEVELOPMENT TEAM
Hyosung: story execution

EXAMPLE 1
Multi-functional fibres being adopted in Intimate Apparel Segment

EXAMPLE 2
Sustainability finally becoming mainstream in Intimate Apparel

EXAMPLE 3
Consumers want garments to fit better and last longer – regardless of activity

Hyosung: value chain collaborations

TREND WORKSHOPS
MILL PARTNERSHIPS
INDUSTRY LEADER PARTNERSHIPS
BRAND/RETAILER PARTNERSHIPS
Sustainability: an industry with shared goals

93% of consumers consider Ingredient Brands that represent a business standard, a sustainable or ethical production, a certification or a secure transaction as more important for them in the future. We therefore predict a shift from performance driven first generation Ingredient Brands towards purpose driven next generation Ingredient Brands.

Tomas Vucurevic, Founder and Managing Director of BRAIND®
Ultimately: it’s all about people

THANK YOU
Technical Textiles –
Trends, Potentials and Challenges

Porto, 22 October 2019

Michael Jaenecke
Director Brand Development
Technical Textiles & Textile Processing
Messe Frankfurt Exhibition GmbH, Germany
MARKET GERMANY
Technical Textiles

• approx. 30,000 employees in 350 companies in technical textiles
• approx. 9 billion € turnover in 2018
• Technical textiles stand for over 50% of the turnover of the German textile industry
• growth rate approx. 5% per year
• 52% export rate

Source: IVM, IVGT
MARKET CHINA
Technical Textiles

- Technical textiles: output will be doubled between 2013 and 2020
- Production plus 4.2% in 2018
- Nonwovens: estimated to reach over 22 millions tons in 2020 (double that of 2013)
- Relatively high growth rates: textiles for medical + hygiene care, filtration + separation, geotextiles, construction + structural reinforcement
- maintains vast demand on technical textile imports

Source: The National Bureau of Statistics of the PRC / China Nonwoven and Industrial Textile Association

MARKET INDIA
Technical Textiles

- Expected growth to US$ 32 billion until 2023
- Demand is expected to stay steady between 2017 to 2020
- Government supports SMEs with a total of US$ 1 billion
- 8 Centres of Excellence have been set up
- Exemption in custom duty for raw materials used by the sector
- Major drivers: healthcare + infrastructure sectors
**MARKET RUSSIA**

Technical Textiles

- Plan until 2025: develop an integrated manufacture chain of synthetic fabrics including technical textile production
- Technical textiles considered a new innovative tool for developing the Russian textile industry
- Textile industry to grow by 5-7% annually
- Lack of raw materials for the production of technical textiles

Source: Report by the Ministry of Industry and Trade of Russian Federation

**MARKET USA**

Technical Textiles

- U.S. textile + apparel shipments totaled 76.8 billion $ in 2018
- Investments in new plants + equipment 22.8 billion $ from 2006 to 2017
- Largest application sectors: military, infrastructure, automotive
- Strong exports of technical textiles for industry, medicine, protective apparel and nonwovens

Potentials / applications

High-tech textile solutions for all applications

BUILDTECH

From carbon concrete to lightweight and membrane structures.
**CLOTHTECH**

Functional and smart textiles for fashion.

**MEDTECH**

High-tech medical and hygiene products such as fibre-based implants.
MOBILTECH

Lightweight structures and smart textiles for aircraft construction, automobile, railway and space travel.
Challenges

- Economic situation
- Situation in the different customer / user industries
- Independency from one single industry
- Growth of the business geographically
- Investments in

- Research + Development
- Technology + Equipment
- Money
- Time

- Staff

- Marketing

- Staff: education, training, new people
- Technology + Equipment: machinery, processes, quality control
- Time: short-, mid-, long-term objectives
- Money: for financing the different steps, buying companies who are already in the market for cooperations, etc.
- Marketing: sales, market research, after-sales service, pricing, observation of competitors, etc.

Thank you for your attention. See you at any of our shows.