

The Biella Merino Ambassador Programme



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1.0 Executive Summary

- Located in Northern Italy, the province of Biella has a strong presence in the international textile markets. The Biella district, with about 1500 units and 23,000 employees in this specialized sector it is one of the highest quality textile producers in the world.
- Biella's yarns and textiles are a synonym for quality and excellence with over 40% of textile products being exported.
- The textile mills are located in the hills surrounding Biella allowing the mills to use the soft/light water, in their production and for hydro-electric generation.
- The position of Cashmere and its international recognition as a luxury product is second to none, a position Merino fibre from New Zealand could emulate and this would assure our future.
- There is a great potential for Merino to be the driving force behind the 'Reinvention of traditional fabrics' where premiums for our fibre could be achieved over and above anything the outdoor apparel market could offer.
- Biella woollen mills are looking to increase their market share of the luxury textile market by producing unique and innovative fabrics.
- The mills in Biella are increasing their levels of spending on communication and marketing, giving us a window of opportunity to closer align NZ Merino with the Italian industry in the form of product development and branding.
- There is a growing focus on the Asian market with companies seeing a huge opportunity to develop new markets and products for this region.
- The attention to detail, quality, knowledge and passion in the woollen textile industry in Biella must be second to none and is truly inspirational.
- The development of industry programs such as the Biella Master of Noble Fibres shows a strong desire to ensure the long term viability of the industry in Biella.
- A majority of the businesses visited were family-run enterprises; the people working in them have long-term family associations in the industry. The handing down of knowledge & skills is considered part of their competitive advantage.
- We saw numerous luxury fibres that have unique characteristics; some from a limited area whose story was involved in the marketing of the final garment and fabrics, guaranteeing premiums.
- The quality of the raw material and the level of 'Clip preparation' can affect the processing of the fibre at every phase of the production cycle. We must never be complacent about the presentation of our wool, and always trying to improve it.
- Environmental and social awareness; many woollen mills are entering stringent assurance programs voluntarily and in some instances setting high standards for other processors to follow. This is becoming a huge issue in their production.
- More of growers' levies and commissions should be spent on communication rather than research to ensure that the consumer is aware of the benefits of NZ Merino wool. There is great opportunity for NZ Merino wool in Italy if relationships can be developed with mills including unique marketing stories.
- There is a need to review the use of the AWEX Line Description system.
- The high level of on-going investment in plant and equipment and also capital investment in buildings was evidence of the Italian commitment to the industry.

2.0 Introduction

The Biella Region:

Biella is renowned for producing the highest quality worsted fabric and the choice of raw materials is paramount in this. Raw materials are sourced from all around the globe and fibre blends include; wool, camel, mohair, cotton, silk, cashmere, vicuña, silk, yak, soy, bamboo and many more. Italian design is a general feature of the fabric.

Biella is situated in Northern Italy and it is the main city of the Biellese or Biella district, 75km Northeast of Turin or 130km Northwest of Milan. Biella city has a population of 46,000.

The Biella region has very soft/light water which is an important component in the processing of the woollen fibres producing fabrics with amazing handle and finish. The water also provides the opportunity for many of the textile processors to generate hydro-electric power.



A valley typical of the area where the mills are located in the Biella region

In the 16th century Biella and the Mosso valley was an important area for wool production which led to the development of a great concentration of textile companies. In the 1800s there were 340 textile factories with 4,500 looms, the first of these were imported from Belgium in 1816. This antique industry has now evolved into modern companies that have not lost their traditions and culture.

Recently a foundation called 'Biella the Art of Excellence' has been established which is a source brand that distinguishes worldwide the excellence of products from companies who meet rigorous ethical and qualitative criteria.



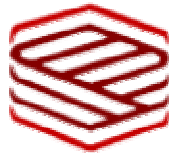
Biella ‘Old Town’

Biella yarns and fabrics are synonymous everywhere with prestige and excellence: over 40% of textile and textile machinery is destined for export. Statistics of the industry in Biella: 1350 businesses, 25,000 employees, and 4.3 billion Euros in sales revenue.

3.0 The Biella Textile Industry

3.1 Wool Scouring and Combing

3.3.2 Pettinatura Italiana – Combing Mill, Vigliano Biellese



**S.p.A.
Pettinatura
Italiana**

The first mill we visited was ‘Pettinatura Italiana’ in Vigliano Biellese which is the largest combing mill in Europe and was established in 1905. More than one-third of the tops produced at Pettinatura Italiana’s factory are finer than 19 microns, making superfine worsted Tops made here are for customers in the Italian market and overseas. Wools as fine as 13 microns are processed when requested.

At the mill we were shown around by Carlo Finotti who was the quality Control manager. The mill produces approximately 50T of Tops and Noil per day from approximately 500 bales of raw wool. The Tops are made into Bumps (50kgs) or Bobbins (10kgs). All of the Top making at ‘Pettinatura Italiana’ is produced on a commission only basis and all of the Noil (short fibre removed by combing) and waste that comes from the raw wool is returned to the customer along with the Tops.

Here we saw some Italian wool, the only Italian grown wool we were to see on the entire trip, it typically measures 25-35 microns and has a yield of 40%, no threat to our industry here!

Once the bales are received from their warehousing facility on site they are opened for inspection by their clients as a quality check, due to the cold in the winter the baled wool becomes very hard so they have to warm the wool for a week on the top floor of the building which has glass windows on all sides.



Once the tops are produced they go through a series of quality control checks looking for; burrs, straws, black & coloured fibre & nepps. Then the physical attributes are tested; length (including % of long & short fibres), if the top has too high percentage of square tops the top cannot be spun. A CV of 20% is best. We saw first hand the problems they can have with combing wool that has too many short or tender fibres.

The biggest concerns for the company are energy and water usage. There is a large water recycling plant on site which under EU legislation has very tight guidelines and quality checks before any treated water can re-enter water ways. Where-ever possible natural chemicals (v's synthetic) are used in the processing of the wool, as they break down and minimise the impact on the environment.

We discussed the move away from the traditional bale description system and Carlo emphasised to us that a full or traditional description was more desirable to ensure that consistent lots were being blended. The quality of wool they are seeing from New Zealand is now superior to Australia.

3.2 Spinning

3.2.1 Loro Piana – Woolen Spinning Mill, Roccapietra

Loro Piana has its own spinning mill located in Roccapietra. We visited this mill with Mr. Schiapparelli and two of the students Elisa and Tommaso. Loro Piana produces products for the luxury end market, thus the raw materials are the most exclusive. These include Angora, Camel, Cashmere, Vicuna and Merino Wool. Mohair is another fibre type they use, however it is always blended with other fibres as it has little crimp thus no elasticity.

Loro Piana has its own hydro electricity plant as electricity is very expensive in Italy. They also use some electricity from the national grid, but this power is used at night when the saving from the off-peak rate out-weighs the extra cost of the night shift wages.



An interesting contrast to other mills visited was the wooden floors in the factory. They believe the floors are cleaner and more comfortable to stand on. There are three main steps in the woolen spinning method; drafting, twisting and winding onto a cop (the yarn that is wound around a spindle shaft).

At Loro Piana they have been analyzing many different natural and synthetic fibres by magnifying them under a microscope to evaluate the surface of the fibres or scales to better understand how to process them. They have a vast catalogue of photos of these magnified fibres so they can reference them against each other. The height of a scale on a wool fibre is 0.8microns, other natural fibres scale height can be about half of this giving them a softer hand.



A magnified photo of a wool fibre.

3.2.2 Filatura di Trivero – Worsted Spinning Mill, Gaglianico



Filatura di Trivero is located near Biella in a small town called Gaglianico. This spinning mill has been operating for 70 years and begun in 1932 near Trivero. It moved its

production to Gaglianico in 1951. The company specializes in worsted and woolen yarns.

The company went from producing 100% wool yarns to concentrate on noble fibres such as Cashmere, Alpaca, Angora, Kid Mohair, Linen and Silk and concentrated on the luxury end of the market, however some wool is still used. They use many raw materials for their yarns and have a variety of blends in the product ranges. These include Cashmere/Silk, Cashmere/Silk/Wool, Wool/Silk, Camel and Wool. The company does not work on commission; instead they buy the raw materials and produce yarn, which in turn they sell to clients. They sell their ranges through established clients as well as trade fairs. Their equipment is set up to process cashmere whose fibres are generally shorter than wool so when wool is processed it is not as efficient as other spinning companies which explains why only a small portion of their product range has wool in it.

The process of taking the raw fibre through to the end-yarns requires a large number of steps and a large investment in machinery, technology and expertise. The worsted process begins with a fibre that is 65-70mm in length because the longer the fibre is, the stronger and more regular the yarn is. Oil is added to eliminate any electrostatic charge that the fibre may have in processing. The sliver (the product of carding and combing, an untwisted ribbon of fiber) is put through four steps to draw it out even more to further align the fibres and reduce its thickness. Firstly it is put through a drafting machine, which draws the sliver out, then through a fast and slow roller, again drawing it out, then through a course yarn machine which produces a thin yarn with no twist. Then it is rubbed horizontally to give structure and substance to the yarn. The yarn is now about 10 times lighter than the original sliver.

The average number of fibres in a yarn cross section= $\frac{927000}{d^2 \times Nm}$

In worsted yarn the limit is about 30 fibres in a cross section.

Therefore, to spin the finest yarn now in production, say 150 Nm, we have

$$30 = \frac{927000}{d^2 \times 150}$$

$$d = \frac{927000}{30 \times 150}^{1/2}$$

$$D = 14.4 \text{ microns}$$

The cost of 14.9 micron top is 38 Euro.

Ring spinning costs are more than 3 times higher in comparison with a more usual worsted yarn of Nm80.

The next step, which is spinning, produces a yarn that is 20 times lighter than the original that the previous yarn. There are approximately 1160 twists per meter of yarn and in this instance 1 kilo of yarn equates to 150kilometers.

Wool is the preferred worsted cloth, opposed to cashmere due to its scale structure. The yarn is then cleaned to remove impurities and a high tech machine that cuts out the thick parts and thin parts of the yarn.

The machines have sensors on them which stop the yarn when an irregularity is detected. The yarns are then brought together and twisted to produce yarns termed 2 ply, 3 ply, 4 ply etc. Yarns with high twist are suitable for weaving. The twist is set into the yarn by steaming it at 70-80 degrees for 25-30 minutes.

The company, like others, has a laboratory set up to carry out various tests to ensure the yarns will meet the expectations of its market. China is the main origin of the Cashmere fibres used in their production and they go directly to China to ensure quality is of the up-most standard and to keep control of the entire process.

Along with every other manufacturer in this field, they have to keep innovating to keep ahead of their competition and continue to evolve with the world's market needs. An interesting yarn we saw being developed was the addition of polymers to the surface of the fibres. This gives the fibre protection, warmth and antistatic properties. It was emphasized to us that the percentage cost of processing the material is not so important in proportion to the cost of the raw material in relation to the final product.

3.3 Weaving Mills

3.3.1 REDA S.p.A.



3.3.1.1 Overview

REDA S.p.A. is located in Vallemosso, about a half hour drive from Biella. It is a fully vertical mill and specializes in the production of high quality worsted fabrics specifically for the menswear market. The mill produces six million meters (full capacity of the mill is eight million meters) of fabric a year with an annual turnover of approximately €65 million, and employs 372 people in the factory. REDA processes Merino fibre from 14.5 microns upwards. Clients include well-known brands such as Giorgio Armani, Dolce and Gabbana and even the High Street chain Zara for its high-end men's suits.

It is situated in the hills like many other mills in this area. This is because of two reasons for REDA. The first reason, and more common reason, is for the fresh water that flows into rivers that come from the mountains. The mill uses 150 litres of water per kilogram of wool processed to get it to the fabric stage, more water is used in the fabric finishing process. However, water volume is a real concern in recent times due to global warming and therefore a big threat to the mill. The second and most important reason for the location of the mill to REDA is that the factory workers all live up in the hills. They have come from generations of factory workers and have all the necessary skills for production.

The mill is owned by the Botto family and is in the 4th generation and at present Francesco Botto is the C.E.O. On our first day's visit to the mill we were taken around the entire mill by Mr Botto.

The REDA mill owns three Merino properties in New Zealand, Otamatapaio, Rugged Ridges and Holbrook. They acquired these properties so they could start at the very beginning of the production chain and produce the best wool possible to suit their requirements for making the worsted cloth. Involvement in New Zealand wool production was thought to be a good investment as land was relatively cheap at the time of investment, and also the best wool is produced here which is their passion. The risk of entering the retail sector which includes developing a store format, brand and designs could be as high as ten million Euros. Also, for their customers it would be seen as going into competition with them and they may get their supply from elsewhere.

They also started, (along with Vitale Barberis Cononico S.p.A.), a wool buying company in Australia called New England Wools. This company was founded in 1990 and was set up to source the best wools to suit their particular needs. It was also to provide a communication link between the Italian Mill owners and the Australian and New Zealand fine wool growers. Further to this they also own in partnership with Barberis, a Top making facility. There are many departments within the mill:

Flow Chart of Production

Buying the raw materials – New England Wools (Australia)



Scouring/Combing



Design



Yarn Dyeing



Spinning



Warping



Weaving



Mending

- ▼
- Laboratories - Quality Control
- Research and Development
- Finishing
- ▼
- Final Mending
- ▼
- Sample Room
- ▼
- Packaging and Coding

By looking at the production flow chart it is apparent how many steps are required to produce the worsted cloth. It takes great skill and knowledge to produce the cloth and every department is vital to the production.



The modern Reda Mill

3.3.1.2 Design Department

The design department in the REDA mill employs 5 designers. We met with the head designer and his assistant took us through the many ranges and the design process. REDA produce two ranges a year for summer and winter. Every season they produce the same number of designs. The ranges come under specific types eg .a ceremonial range, which is designed for special occasions, such as tuxedos for weddings etc. These fabrics are lustrous and usually black.

There are many types of weaves involved in the design process from plain weave, to twill weaves, to high-twist weaves and a micro effect weave that has a unique woven pattern in it. To gather ideas for new designs trend forecasting books are purchased. We looked at one developed by ‘Alberto and Roy’. All the mills invest in these forecasting books which could be considered a limitation because the mills can come up with similar designs. The design process is cyclical and many ideas are developed from vintage fabrics. One of the fabrics in the trend forecasting book we saw was a historic REDA design.

Special computer software is used to develop the pattern in the weave and sample fabrics are produced called 'blankets'. This blanket is one design woven in many different colours so the designers can choose which colour way to develop into cloth. The warp is unlimited in the colour ways it can have but the weft can only use four colours.

REDA sell their fabrics at the Idea Biella Fabric Fair as well as the Milano Fair. They do not attend Premiere Vision in Paris as they believe that if the customer wants the best superfine worsted fabrics they will come straight to Milano.

3.3.1.3 Quality Control / Research and Development

Before the worsted cloth is made up into large volumes it is imperative that the fabric performs well under certain conditions and will meet the standards of which the market demands. One of Biella's advantages is the use of some very technologically advanced quality testing machines. There are a number of tests that the laboratory performs on sample fabrics.

These include:

- Dimensional Stability - To ensure the fabric will not shrink when fused or pleated.
- Formability – To ensure the fabric can be easily moulded and manipulated into seams. Therefore it should not pucker once sewn into seams.
- Extension – To ensure the fabric has enough elongation and stretch to ensure check matching and overfeeding are achievable.
- Bending – Does the fabric have enough drape to meet the demands of the market?
- Shear – To ensure the fabric is easy to lay up for cutting etc.
- Pilling – A test to determine if the fabric will pill.
- Weight – The weight of the fabric
- Press Test Angle
- Abrasion

These tests are performed on every fabric and a sheet of data and information collected is attached to the fabric for the client.

3.3.1.4 Mending Department

There are two mending departments within the factory. The fabric is run over an inclined or vertical translucent plate which is illuminated from face to back

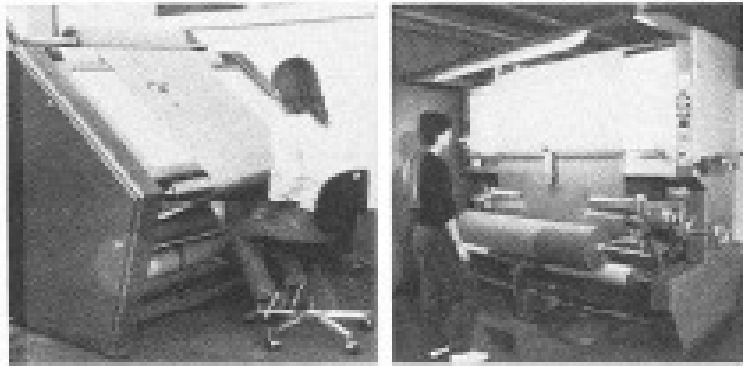
Grey mending: prior to submitting pieces for finishing treatments the pieces are examined and mended. Only women work in the mending department as their eye for faults and ability to mend the fabrics is superior. The menders training takes 3 years. Historically there may have been as many as 30 to 40 faults per piece but now with technology improvements there is typically only 10 faults per piece.

Not all of this process is done on site; a proportion of this work is contracted out. To ensure a fair deal REDA will have one employee timed to see how long it takes to mend one piece (50m) of fabric. This then forms the basis for the mending contract of the remainder of this particular fabric batch.

The fault could be black hairs (impurities), weaving faults or a broken thread. It became very apparent when observing the mending processes how important it is to provide contamination free raw materials as the mills spend a lot of money extracting the impurities. The women then have to mend by hand the fabric that is faulty.

Fine Mending:

This is conducted halfway through the finishing cycle where all the pieces are re-checked and all impurities present are eliminated through nipping (removal with tweezers). Any additional possible defects caused by the preceding processing cycles will be reported to the supervisor.



Inspections of fabric being made on a perch.

The final inspection of the fabric is then carried out on a perch. Serious faults are marked with tags in the selvedge (the edge of the piece of fabric). At this final inspection mending, spot cleaning, and downgrading are done as required. This requires consistent standards of inspection both individually and between inspectors. Upon conclusion of this final inspection the fabric is cut by precision equipment into 50m lengths ready for delivery to clients. The delivery contract between the manufacturer and the consumer will specify the allowable number of faults per 100 meters, and fabrics in excess of this will incur a penalty, eg one meter of extra fabric per fault.

3.3.1.5 Weaving Department

The weaving process begins with the yarn being selected from the storage room. The yarn has already been dyed and stored in a large ten storied warehouse containing approximately 300,000kgs of yarn. The warping process comes next and it is a very intricate process. The warp yarns are threaded, 200 at a time by hand, and wound onto a large warping machine, similar to a large reel. Yarns are selected for the warp (forming the fabrics length), and weft (forming the fabrics width). The creel contains a number of

spools for the unwinding of the individual yarns onto warp beam. The creel ensures the yarn is wound onto the warp beam with a constant tension and length. The prepared warp beam is then transferred to the weaving room. This set up, or warping process, is very labour intensive and as a result is very expensive (€750 per loom).



A modern loom.

The weaving department contains 112 weaving looms, the noise generated by looms is quite deafening. There are approximately 10 older machines still in production which are slower and are used primarily for sample production. The looms beat incredibly fast (up to 600 weft picks per minute) whilst passing the weft yarn through to create the design. There is a computer attached to each loom giving it instructions for the weave design. In weaving the machines have two different methods of insertion of the weft; rapiers or projectile. When a thread breaks the loom stops automatically and a worker will come and tie a knot in the yarn, this is later cut in the mending department.



Once the fabric is finished the roll of fabric is taken to the first quality control check, called grey mending. Each roll equates to 50 meters so this is the minimum a client can order. When laying up the loom they can make up to 10,000 meters but this is always cut to 50 meter rolls.

3.3.1.6 Communication and Marketing

REDA are investing €800,000 into communication and marketing this year for the first time. Hercules Botto is the marketing manager. This is a new concept for REDA as they have never spent money in this area before. They are re-branding with new logos and a

new image. When we visited REDA Hercules was in the process of organizing a large product launch in Shanghai to increase their level of market awareness there.

3.3.2 Tralbaldo Togna S.p.A.

This visit was arranged through Mr. Roberto Botto and was not part of our arranged course but organized through Christina's family connections. We visited with Mr. Stefano Tralbaldo Togna, a fifth generation member. The Tralbaldo Togna S.p.A. mill is located near Biella in a town called Pray.

The evolution of the Tralbaldo Togna mill began in 1840 when Quirico Tralbaldo Togna entered the textile industry in Trivero and imported the first power looms from England. Since then the company has grown and changed dramatically where today it is being operated by the fifth generation of the family, Stefano, Luca and Elisabetta.

Tralbaldo Togna S.p.A. has a vertical production cycle which begins with the combing and spinning of the wool, onto the warping and weaving of the yarn to create the worsted fabric, through to finishing, quality control, darning and then finally quality inspection.

The mill combs one million kilos of raw wool every year into 700,000 kilos of worsted wool tops, which is then spun into 24 million meters of yarn making up two million meters of fabric. The company turns over €34 million a year and has 250 employees.

While we visited with Stefano he showed us in great detail their plans for renovating the mill. Construction was underway while we visited, to create a mill that could be run more efficiently and set up so every operation follows on to the next one. This would make production more fluent and reduce time and costs, giving the ability to ensure even humidity when processing. They also plan to give the front of the main building a facelift with a modern look and have commissioned a well known Italian architect to create this. This investment (approximately €14 million) will be made over the next three years and is a significant amount when you consider the turnover of the company.

Even with the continuing introduction of new technologies coming onto the market, Stefano believes the strength of his company comes from the craft handed down through generation to generation. The father to son knowledge rivals any new machines or innovations. He believes the human element still plays a huge role in his company.

We were very impressed by their range of fabrics and what they had to offer the market. It was one of the first mills that we had visited that catered to the women's wear market. They offered a range diverse in its design as well as colour. It was also more driven by trends rather than volume.

They offered many blended worsted fabrics such as wool/silk, wool/cotton and wool mohair as well as 100% Merino wool fabrics in varying weights and microns.

The mill is very conscious of the effect of pollution on the environment and has obtained the Ecolabel certificate, the European acknowledgement of eco-compatibility in textile production.

Trabaldo Togna pride themselves on their age old traditions yet emphasized that to survive in a highly competitive market they must keep innovating through new technology and offering unique product ranges.



Christina, Stefano Trabaldo Togna, & Paul.

3.3.2.1 Estrato

In particular they have created a branded worsted fabric termed ‘estrato’. This trademarked brand is called the ‘bio elastic system’. The fabric has exceptional elasticity of between 12-14% and doesn’t use synthetic fibres such as Lycra to create this elasticity. Estrato is a result of a careful selection of wools used in combination with state of the art manufacturing techniques. It is also the result of a long study on the raw materials and the spinning process used. The fabrics include a range of raw fibres and also blended yarns. This elasticity appeals to the market and meets consumer demands as cloth becomes lighter and performs better during tailoring as well as providing the wearer with a more comfortable wearing experience.

3.3.2.2 Trabaldo Togna – Factory/Outlet Store

Trabaldo Togna has two factory stores. One in Romagnano Sesia, which we went to, and another in Merisio. The company produces a variety of products for these stores ranging from men’s suits, jackets, knitwear and accessories such as ties, bags, shirts and belts. They offer a menswear range as well as a women’s wear range. The stores are located beside main highways in a relatively unpopulated area. They do not want to compete with their clients in the bigger centres. They also sell end of run fabrics in their outlet stores.

They are creating an entire Trabaldo Togna experience for their clients. Innovation is blended with tradition to satisfy the demand for true style and exquisite taste. The store was large with different sections for men and women with the men’s wear range being more dominant.

A modern approach to advertising and their seasonal campaigns was evident throughout the store. They are obviously trying to create a modern, contemporary product but at the

same time offering exceptional quality and style. We believed this was a very strong mix and Trbaldo Togna was one of the more contemporary mills we visited.

3.3.3 Botto Guiseppe S.p.A.

Established in 1876, Lanificio Botto Giuseppe & Figli has a continual innovation that has given the company the experience necessary to combine tradition with the spirit of research.

A meticulous selection of the most highly prized raw materials, and care and commitment to detail in every phase of the production process is once again their mantra. This is all enhanced by the quality contribution of highly qualified personnel. Tradition combined with research, experimentation and creativity form innovative and modern articles, many of which with exclusive finishes. Such as the fabric brand below 'Multicontrol Weather'.



There is a need to ensure there is a delicate balance between the classic and the innovative. Tradition has successfully carried on by a family that has handed down the art of weaving from father to son for over 125 years, and that has contributed to making Italian fashion what it is today. Botto Giuseppe use lycra in some of their fabrics to enhance thier stretch.



3.3.4 Piacenza S.p.A.

Established in 1733, the first factory created jobs that lead to the development of a village – so much so that in 1750 the municipality of Pollone sold the company water rights in perpetuity. Initially wool was the most prominent fibre used until World War II when other animal fibres came to the fore. The company today is run by the eleventh generation of the Piacenza family.

Piacenza fabrics are used by the likes of Hugo Boss, Windsor, Versace and Gianfranco Ferre. 70% of the fabric produced is womens' collection; the mens' collections are a niche market where they work exclusively for specialists, creating ecological materials.

These are rare and precious raw materials made with cutting edge finishing techniques. Their mission statement is; 'For the modern man who will not forgo luxury'. They consider pure Cashmere to be peerless in style and elegance.



Offices in Beijing and Tokyo have been established to cater for these emerging markets and many fabrics are produced solely with these markets in mind. Fabrics with a glittery finish are produced for the Korean market and were some of the most unusual we saw on the trip.

Sea Island Cotton

This cotton is grown in the Caribbean and is considered a rare and priceless cotton whose quality and characteristics distinguish it from all other types of cotton. It produces a fibre more than 50mm long, with a particularly homogenous structure and extraordinary fineness. These properties make it extremely resistant, as glossy as silk and incomparably soft. The Sea Island Cotton is then blended with Mohair, Cashmere or wool to give a unique fabric.

Sea Island cotton is a very good example where an Italian company has utilized a marketing story. Piacenza has differentiated cotton, a traditional fibre, through 'telling a story' in order to enhance the exclusiveness of the end product. Could New Zealand Merino form the next range telling its own unique story?

3.4 Fabric Finishing

3.4.1 Mario Bona Lectures

3.4.1.1 Introduction

Mario Bona is the past president of the Technical Committee of the IWTO; he is the author of numerous publications dealing with textile technology, research, and control. His main area of expertise is in the sector of applied research, education, and technology transfer. He conducts this work at Citta degli Studi in Biella.

In lectures given by Mario Bona (fortunately in English!) we learnt of the critical importance of finishing in the production of wool fabrics to ensure they have consistent and predictable quality. We looked closer at the processes to understand the technological principles and control methods used in finishing. We have elected not to include all the finer points of fabric finishing we covered in the lectures as they are very detailed and would require lengthy explanation.

3.4.1.2 The Principles of Fabric Finishing

Fabric finishing is regarded as the most important part of the production process. It is this process that sets the Biella fabrics apart from others. When a grey fabric (fabric that comes straight off the loom) is compared to a fabric that has been finished there are huge differences in drape and handle.

The objective of finishing is to provide a valuable product both from an aesthetic and functional point-of-view to satisfy the technical requirements of the making-up industry. There are essentially three functions to be performed:

1. Elimination of foreign matter.
2. Development of the 'finish' in the essential components of hand & aspect.
3. To give the fabric properties that ensures optimum behaviour in tailoring and during wear.

The fabric undergoes a complex series of operations which vary considerably according to the article. Principally there are three typical finishing routines, which all depend on the end use of the fabric:

1. Clear finish: a clear finish in that its appearance perfectly reveals the pattern, usually applied to summer weight fabrics.
2. Milled (Melton) finish: the milling of the fabric gives it a felted appearance as some of the pile is not visible, typical of woollen fabrics.
3. Raised (pile) finish: the surface of the fabric contains a pile. Eg blanket.

There are two fundamental sub-cycles which are wet finishing and dry finishing. Wet finishing can include piece dyeing and lays the foundation for fabric quality and handle; dry finishing develops and improves them. Additional desired aesthetics such as stretch or water proofing finish can be achieved in finishing.

3.4.1.3 The Properties of Wool

To better understand the steps in the finishing process we were given an overview of the properties of wool. Wool has a very complex morphological structure with the main components being the cuticle and cortex.

The **cuticle** is very important as it is permeable (allows dyeing) and it has scales which provide surface friction providing the sensation of 'hand' and influences the way the fibres are drafted and will affect yarn evenness. In the future it is possible that there may be more focus on the modifications that can be made to the fibres rather than the quality of the raw fibre itself. This means that poorer quality fibres may be altered in a fashion that will enable them to be processed in the same fashion as high quality fibres.

The **cortex** makes up 90% of the fibre and has a bilateral structure, the paracortex and orthocortex, which due to its mechanical properties, places itself in the convex portion of the fibre resulting in the crimp of the fibre.

Wool is composed of 18 amino acids which in union produce a proteinic substance, keratin. The chemical properties of keratin react in a number of different ways when finishing treatments are applied to them. Physical properties include; wools elastic behaviour, setting phenomena, and visco-elastic behaviour. Wool is characterised by very good elastic recovery (superior to all other natural fibres), even from very large elongations, which greatly helps its processing ability.

3.4.2 Studying Fabric Finishing – REDA S.p.A.

At REDA we spent one and a half days in the finishing department observing the finishing machines and learning what effects they produce on the final product. On average they process 500 pieces per day or 25,000meters (each 'piece' of fabric is 50m long and 1.5m wide).



A rope scouring and milling machine used in fabric finishing.

In terms of all the facilities we visited REDA appeared to have the most modern fabric finishing facilities we saw in Biella. Modern finishing machinery is equipped with computer systems which display processing details on touch screens display/control to ensure replication of finish. The modern developments help to maintain quality between orders and also reduce operator error. These machines are generally made in Europe with Italy and Germany being leading producers of these highly technologically advanced machines which cost in excess of €300,000. In the finishing department at REDA there were over fifteen different finishing machines each subjecting the fabric to a different action. This equates to a vast capital investment in plant, and as a result of this investment processing efficiency is vital to ensure the machines are run at their optimum. Some machines contain up to 130m of fabric in it at any one time, so it is important to

consider order size in production. Fabrics that all require the same processes in finishing are all put together end on end in one run to make processing more efficient, regardless of colour.

3.5 Knitwear

3.5.1 Ragna S.p.A.

Our visit to Ragna S.p.A. was once again organized by Mr. Roberto Botto. We thought it would be interesting to go to a knitwear mill that specializes in knitwear production instead of worsted cloth production.

The company was established in 1879, and produces underwear, corsetry, pyjamas, and men's and women's knitwear. Their brands are Ragna (meaning Spider) and Zephir by Ragna and are produced for the Italian and international markets.

The headquarters we visited was in Prato Sesia. Here they do not make the knitted cloth; this is done at another plant owned by the group. These headquarters were the logistics and distribution centre. Everything from design, marketing, cutting, sampling, packaging and distribution is done at this facility. At Ragna they do all their own cutting and have state of the art cutting machines, but the actual construction of the garments is done outside of this factory.

We met with Lincoln Germanetti whose family company Tollegno 1900 took over Ragna in 1998. At the point of takeover Ragna was a struggling company but under Mr. Germanetti's control the brand has grown due to an extensive investment in re-branding and marketing, also their packaging and labeling was very impressive. They had very impressive point of sale material in posters and catalogues to assist the sale and provide an image for the product lines they produce.

Some Italian football stars who play for AC Milan started wearing their woolen under garments and now the whole team wears these which has proved to be very rewarding for the company as they now feature these football stars in their promotional material, this has generated vast sales and brand recognition.

Other innovative opportunities with different ranges Mr. Germanetti is developing were; 'Undersexy' a luxury range of women's underwear, and a vintage range of woolen undergarments with a new twist. This vintage range was particularly interesting as it was a unique way of using super fine wools and was targeting wealthy consumers.

3.6 Cut Make and Trim Factory

3.6.1 Zegna – Suit Making Factory



The Zegna suit making factory we visited is situated in Novara where it takes 125 steps to produce a suit from fabric to finished product. At this facility it takes 150 employees to produce 330 jackets a day. In each section of the factory there are tally clocks so the staff can map their progress and ensure targets are met. 20-30% of production here is for Zegna. Of the 70,000 suits made each year 10-15% are repaired in some form and approximately 100 are unrepairable. Zegna also has a suit making factory in Switzerland employing 800 people. Garment making requires many people and only a few different machines this is the opposite of the fabric finishing process.

Technological advances in machinery have increased output, where in the past 10 people were required to finish a pocket now there is a machine that can complete the same task in a fraction of the time. The level of investment in plant in the factory was immense, with some sewing machines used for detail sewing costing 60,000 euros new, this machine can produce characteristics similar to that of a tailor. At the end of the production cycle many small details are added such as buttons on cuffs. A summer weight jacket has half the amount of lining but it is more complex and expensive to make as it requires a greater degree of internal finishing. A suit made for Tom Ford cost between €400 & €500 to tailor as he has a number of small touches that identify his brand.

Zegna is renowned for craftsmanship that is accurate, precise, and always correct. Much of Zegna's strength lies in its manufacturing process. All Zegna suits were made-to-measure until 1968 when the company launched a line of ready-made suits for commercial sale. The company is vertically integrated, buying its own raw materials, making its own fabrics, designing its clothes, and running its own boutiques.

Zegna is successful in a highly competitive sector. The 1994 market for men's suits costing over \$1,000 (USD) was considered one million units per year; Zegna capturing 30-percent of the market. To maintain and grow in this sector, their marketing has been subtle—like sponsoring a yacht race in Portofino, Italy, with no loud banners or posters, just models walking through the crowd wearing Zegna blazers with the small white EZ logo. Then there are the seat covers for Saab 9000 cars, where Saab salesmen were drilled in the virtues and qualities of Zegna fabrics so they would pass the information on to buyers. Zegna has also mailed sample swatches and possible combinations of jackets, ties, and shirts to their best customers.



Ermenegildo Zegna has a yearly output of over two million meters of fabric, 350,000 suits, one million pieces of sportswear and 1.5 million neckties. Zegna employs 4,500 workers worldwide. Forty percent of the company's sales are in the Americas, 40 percent in Europe and 25 percent in Asia. Most Zegna suits cost in the US\$2,000 - \$3,000 range, similar to competitors such as Gucci, Prada, Versace and Armani.

3.7 Fashion Marketing

3.7.1 Leo Rogna – Ermenegildo Zegna

Mr Leo Rogna is a fashion consultant and designer to Ermenegildo Zegna, with whom we discussed a range of topics from the Biella textile industry to his experience in the textile trade in China. Mr Rogna talked candidly about his experience in the industry and where he thought the future of the industry was heading.

Suits:

Mr Rogna suggested there is a need to find a middle ground between the cheap €50 and €5,000 gap between formal and casual style. Production in his mind should remain local as it's crazy to send material all around the world. He believes that simple ideas such as the chain 'Suit Supply' in Holland are the way of the future. This chain sells over 250,000 suits per year in retail outlets that are positioned on motorways. The suits are made in China from Italian fabric at a cost of €60 and retail for €300. It takes an immense amount of time and money to develop a new label.

Made in Italy:

Mr Rogna does not believe the 'Made in Italy' brand is important, products could just be 'styled in Italy' and he sees in the future the Made in Italy label will lose some of its dominance. Italy should remain the centre of creativity. Mr Rogna believes there is a lot of talk about innovation and Research Development but very little is being done in Italy. There is an evolution of thinking where people may choose to 'help' Africa for instance by purchasing goods from that region as a way of helping the nation develop an industry. The origin of fibres is important, and suggested that as New Zealand is a renowned wool producer it puts us in a strong position.

Asia:

Talked about the opportunity in China and the emerging wealth in India. In China there are over 1,000 companies producing fibre products but only 5 producing pure wool.

products. These emerging nations require education and information to show them that wool is a special fibre with unique characteristics. It is very difficult to teach people how to approach life; you can't transfer to a sophisticated way of life in months. The Chinese live day by day and tend not to think too long term, they tend to always want to save money and at times to the detriment of quality and image.

The Chinese have a way to come on quality; they tend to have a mentality of constantly trying to save money not only for themselves but also the customer often to the detriment of product quality. Mr Rognia illustrated this point with an example where he had commissioned a processor to produce some fabric based on a sample they had completed for him; the final product did not match the sample in quality as the processor had taken less care. A change in thinking is required to overcome this mentality.

Consumers:

Product mixes: some consumers will always have to have products as they contain something new, maybe a renovated existing product, eg it could include a special lining, new pocket, different performance, gold button. There is real potential to place an emphasis on the way of producing the final product, the consumer is happy to be educated. The consumer is not buying for need but for pleasure, an individual could have up to 25 suits.

Future:

The fact that wool only makes up 3% of the worlds' fibre should be emphasised. There is too much confusion in the detail, eg what is micron? There is a need to simplify as the consumer can only handle so much information. The evolution of the future is difficult to predict. Innovation needs to be applied to traditional fabrics rather than just sports wear. The producer will have to consider whether you are looking to create a new product or change an existing one, then promote the project with a special name. It is very difficult to personalise products and make them different. To have real elegance is to do so without any recognisable sign.

3.8 Store Visits

3.8.1 Ermenegildo Zegna – Milan

Milan is arguably the fashion capital of the world; this trip was to observe how the worsted superfine cloth was being used in garments. We visited the Ermenegildo Zegna Boutique store located in the fashion hub of Milan on a street running off the famous fashion street of Via Montenapoleone. Milan is arguably the fashion capital of the world; this trip was to observe how the worsted superfine cloth is being used in garments. Zegna are moving to another retail space, at present being renovated, on Via Montenapoleone an internationally recognized fashion street later this year.

Ermenegildo Zegna is run by its fourth generation. This family-run empire has a growing global presence in Europe, as well as two dozen shops in China, with its second store opening in the virtually untapped mens-wear market in India.

Zegna specialise in menswear and are a leading multinational company in the men's luxury clothing industry. Their products are distributed to more than 60 countries worldwide. They distribute through 460 mono-brand stores, 187 of which are directly operated by the Zegna group.



The interior of a Zegna Boutique.

The Zegna brand encompasses many products within their stores but they are specifically famous and well known for their superb quality suits. The vast range of product types such as shoes, sunglasses, bags, belts, ties etc. give the customer the ultimate shopping experience. Not only can he buy the suit he can purchase an entire outfit/look within the one store.

Zegna use a variety of raw materials for their superfine worsted fabrics. These include wool, cashmere, mohair, and more recently Zegna are blending these fibres with other fibres as bamboo. Zegna is regarded as one of the most important buyers of raw materials in the world. They offer volume purchase and continuity in their purchases. They buy only the best products from the best producers in the world.

Zegna have a variety of wool fabrics to choose from;

15 mil mil 15 is a worsted fabric made from 15 micron Merino wool.

This has limited production and has excellent softness, body and elasticity.

Trofeo is a classic Zegna worsted fabric, made from 17 micron Merino wool.

Traveler is made from yarns that are highly twisted and give the fabric a unique clean appearance and a crisp handle. Garments are resistant to creasing thus making it ideal for travelling.

These are just a sample of fabrics from their vast range and there are many, many more fibre mixes, types etc. Technology is a strong driving force behind the company and its products. A large amount of money, time and resources are put into developing new

mixes and ranges to keep ahead of their competition and compete with the Chinese market.

The store in Milan has 4 floors, each dedicated to a specific brand type. For example the top floor provides a “made to measure” service for its elite customer. Customers can come to the store and select from a range of six different styles, they can then select the best fabrics available. The customer can individualise their suits down to the buttons. A nice feature of this floor is the large glass window that customers can look through to see the tailor at work. The firm has always been forward-looking, yet steeped in tradition; it uses the most advanced databases to maintain and update customer measurements, purchases, and personal details, and uses CAD (computer-aided design) programs to adjust patterns.

The second floor houses the Couture Collection. A couture suit is hand made by a tailor and is extremely well made. It is the most expensive suit type available.

The first floor houses the remaining brands. Zegna Sport, Z Zegna and Ermenegildo Zegna. **Zegna Sport** is a range of casual clothing targeted at the more active outdoor market and has a more weekend feel to it. They also have a vast range of accessories under this brand name including sneakers, beachwear, belts, shirts etc. The most interesting innovation we saw within this brand was the **ijacket**. Zegna and ipod have joined forces to come up with this unique innovation. This jacket is equipped with a remote control to activate your ipod. The sleeve has a panel which allows the user to control the ipod from the outside.

Z Zegna is a casual wear label targeted at the youth market and the **Ermenegildo Zegna** range is the ready to wear brand of suits and is more price pointed for the larger portion of the market.



Finally the ground floor is where the sales counter is. On this floor there are point of sale merchandise such as their signature fragrances, sunglasses and bags.

In summary Zegna is a world recognized brand and use the best raw materials in the world where they epitomise style, quality and sheer elegance.

3.8.2 Luciano Barbera – Milan

Visit to Luciano Barbera fashion store in central Milan.



In 2003, the first Luciano Barbera Flagship store opened in Milano, at Via Santo Spirito 22. It showcases clothing for men and women, along with an exclusive golf and sportswear collection. The collections hang elegantly on different levels, surrounded by sophisticated decor and bright open spaces. Comfortable armchairs and sofas are draped in precious Barbera fabrics. There is also a corner devoted to the sartorial men's collection where clients can select from the exclusive Carlo Barbera fabrics for their bespoke clothes, demonstrating the superiority of hand-tailored clothing over industrial production.

Luciano Barbera was once called 'the most elegant man in Italy' and his shop aims to reflect this. "The way of dressing of a man or a woman should perfectly aim accordingly to their way of life. Nothing ever obvious or extreme, but a style which is discreet and moderate and becomes part of their personality, just like the voice is, the look, the smile." Luciano Barbera.

In 1971 he started producing the Luciano Barbera collection, with a specific philosophy: "Clothing for people who believe in individuality and intelligence". Luciano believes that the care in the small details is what creates the ultimate refined garment. In 1992 Barbera USA was founded to better serve the American market, still producing all garments exclusively in Italy.

The Barbera lines are exclusively made in Italy. The fabrics made in the family's "Carlo Barbera" wool mill are central to the Collections. These extremely fine and exclusive fabrics which are skillfully transformed with techniques that determine their wear ability, particular lightness and durability. Family again are a huge part of the business, Luciano's daughter Carola is the company's CEO, and his son Corrado, head of the group's public relations office.

A modern philanthropist, Barbera began to think about a master's program that would enable talented young people ("university graduates and not heirs to family empires", he points out) to learn the entire textile-apparel business inside out. The idea first emerged in summer 1986, and three years later in 1989 the Biella Master's program specializing in textile production was a reality. Now the idea has been transformed into a Foundation which has about 100 prestigious sponsors. "Thanks to these sponsors, we can attract about three or four talented young people to our sector each year", Mr Barbera explains. They receive grants which fund their work in some of the most important companies in the world." The idea is to safeguard Italian textile production.

3.8.3 Giorgio Armani Exhibition - Milan

We were lucky enough to attend the Giorgio Armani Exhibition in Milan. Giorgio Armani is one of the world's most recognized and influential designers, and is one of the iconic designers of the twentieth and twenty-first centuries. The exhibition showcased the evolution of the Giorgio Armani label over the last 30 years.



The entrance to the exhibition

The Giorgio Armani label uses the best quality fabrics in the world and wool was prevalent throughout the exhibition. Giorgio Armani was born in Piacenza, a small town near Milan. He worked for a variety of companies, namely Nino Cerruti, a large menswear company in Italy and then become a freelance designer.

Armani's philosophy towards design has always been minimalist. He believes fashion should be clean, pure and simple. He draws inspiration from many ethnic cultures such as North Africa, India, Pakistan etc. He has dressed many celebrities and stars and part of the exhibition showcased these designs.

The exhibition was a highlight as it was the best of the best of Armani's ranges. Wool was prevalent throughout the collection and it was inspiring to see it used in extraordinary and unique ways. The tailoring of his suits was exquisite while giving something a little different compared to a large brand suit maker.

3.8.4 Outlet Stores

The outlet stores in the region have transformed themselves into boutiques which offer along with high quality textiles, a range of accessories offering an attention to detail only found in exclusive shops.

3.8.4.1 Loro Piana

The Loro Piana Outlet store is located, like many other mill outlet stores, in Romagnano Sesia, a short distance from a large highway. It is a very large store with an impressive array of products, but it was the concept that impressed us the most. The majority of the shop houses the 'outlet' product, in a separate room there is also a full price 'Loro Piana' store as well as a bar/café located between the two. There was also a games room for children which was a nice touch.



An interesting observation was the fact that there was actually a lot of product in the 'outlet' store that was also being sold in the main store. It is believed that the 'outlet stores' bring in a large amount of income for the big branded players and the product is not in fact last season's as was previously thought.

Overall we were impressed with the store and its layout. The store was very elegant with clean lines and simple design.

3.8.4.2 AGNONA

Agnona is one of the most exclusive brands of prestigious textile and clothing items in the world. It has made a name for itself on the international market producing luxury fabrics for the highest segment of the market for woman's clothing. Agnona Spa is a fully vertically integrated company employing 270 people worldwide, with retail outlets in Italy, Japan and USA. In 1999 the company was purchase by the Ermenegildo Zegna

group where the Agnona brand is to remain autonomous from Zegna due to its brand differentiation.

Fibres used by the company include:

Vicuña, whose fleece is called the "fibre of the gods", measuring just 12 microns. This fibre comes from Peru whose government has created an international consortium to distribute vicuña fibres.

An adult vicuña produces just 250 grams of wool every two years of which only 120 grams from the inner coat is used. Between 25 and 30 animals are shorn to produce one vicuña overcoat. Every four years Inca hunters would form an enormous circle around the groups of vicuña. As the circle tightened, the animals were pushed into enclosures where they were shorn and then set free. The colours of the fleece vary from golden brown to the pale white found below the neck. This is the finest and most sought-after wool.

Alpaca whose most valued fleeces are in various shades of white, while other fleeces can be black, reddish-brown, mixed (white and black) or speckled. Adult females produce annually about 2.5 kilograms of wool, while adult males produce about 4 kilograms.

Cashmere is the most highly-prized fibre of all comes from goats that live in the harsh & testing climate of the plateau of Chinese Inner Mongolia. The worldwide annual production of cashmere is only 5 million kilograms. Cashmere is low yielding and having a limited number of grower's means that it is a particularly rare and precious fibre.

Inner Mongolian cashmere is distinguished by the fineness of its fibres (between 14 and 15 micron), their length and uniformity, and by their particularly soft hand. Each animal provides about 200 grams of fibre in all, but only half of this can actually be used to make cashmere yarns. Today, 60 percent of the world's fibre production comes from China.

In 1985, Zegna inaugurated the yearly Cashmere Trophy, awarded to the breeder who produced the most beautiful cashmere. In Mongolia, shepherds live in extreme isolation, which explains why the main prize was a jeep!

Mohair is a remarkably compact fiber that has evolved in extremely damp climates; therefore mohair is exceptionally pliable and water-repellent, making it ideal for both winter and summer wear. The finest fabrics are made from Kid mohair, usually obtained from the first shearing at 6 months of age.

Lanificio Ermenegildo Zegna is by far the largest purchaser of this particular type of fibre, buying about 50% of all Kid mohair intended for the manufacture of woven fabrics. Kid mohair fibres are translucent white in color, with a diameter of between 30 and 25 microns. Kid mohair makes up only 30-35% of the annual South African output, and Lanificio Ermenegildo Zegna acquires the finest varieties (25 microns) at annual auctions.

3.8.4.3 Cerruti



Cerruti 1881 is a high-end luxury Milan based brand of clothing and fragrance by Nino Cerruti (who trained Giorgio Armani). It has boutiques in London, Paris, and New York.

At the age of 20, Nino Cerruti became the head of the family woolen business. Nino's grandfather had founded the textile mill in Biella in 1881. Drawing from his experience in producing excellent fabric, Cerruti ventured into the production of clothing in the late 1950s. His first men's collection, Hitman, was shown in 1957 and was considered a revolution in men's wear at the time. Eventually, in 1967, the Cerruti menswear line was launched which was to be followed by a womens-wear collection a year later.

Over the years, Cerruti offered womens-wear and menswear, the *Cerruti 1881* diffusion line, a luxury ready-to-wear collection named *Cerruti Arte*, *Cerruti Jeans*, the *Cerruti Brothers* business collection for men, *Cerruti 1881 Shapes* for the Asian market. Cerruti has always been known for its classic wool suits.



In October 2000, in an effort to secure global expansion, Nino Cerruti sold 51% of his company to Fin.Part, an Italian industrial group, whom in the next year would own the company completely.

By 2004, the company was in a deep crisis and restructuring plans proved unsuccessful and it was declared bankrupt in 2005. Cerruti was sold to an American private equity firm who is successfully revitalizing the company.

The history of this company is interesting as it highlights how these companies have changed markedly since their inception and that they have taken different routes to achieve similar outcomes.

4.0 **Discussion Points**

Mulesing:

A topic we were only to discuss if instigated by a person we were visiting with, and as a result it only arose once. Mills are looking to provide an incentive for producers to stop mulesing; this was likened to when nylon wool packs were first introduced. No mill was producing mules free fabric that we saw during our trip. There is a train of thought that the pressure coming from animal welfare groups is backed by companies that produce synthetic fibres to help maintain/increase their market share. The New Zealand policy is the right and only thing to do.

CMI

A company set up by a group of Italian worsted fabric industry members to safeguard their industry against fakes or imitation products. It does this by every member buying suits when they believe they are not the quality that is stated on the garments label and these garments are then tested to check if label claims are correct. They then give the store the opportunity to remove the garments from their display or face some legal action. They have found fake items in Italy, and around the world including Korea. This is a way of protecting their livelihood and ensuring that the consumer is not deceived or put off purchasing a woollen product as it does not meet their expectations.

Labels on Fabrics Produced and on the Final Garments:

Customers with strong brands have no need to include labels referring to the quality of the fabric or type of wool in the garment. The vast majority of customers of the worsted fabric makers know about the technical aspects of the fabrics. The final consumer of the product does not understand the technical makeup of fabrics and therefore it is not used as a marketing tool. We saw no country of origin fabrics other than at Loro Piana, and in most instances you have to look very hard to find if the product was made of wool.

China

China is seen as an opportunity as the affluent Chinese want to differentiate themselves and therefore a suit that has fabric made in Italy is perceived as a luxury item. China and India are the only two nations in the world that have Textile Ministers. We noted that a number of companies are developing fabric and clothing lines with the Asian market in mind. Also, companies were making large investments in marketing and communications in China and in some instances opening offices there.

India

India is a closed market at this point in time, there is only one company involved in the distribution of fabric in India. There is also a 90% tariff on imports of woollen fabrics making this a very difficult market to enter under this legislation.

Adding Value

In a number of instances we saw and heard of textiles companies looking to shift their production further into the luxury market. They are looking to add further value to their product range by:

- Producing better fabrics
- Becoming more efficient at producing fabric
- Differentiating with new fabrics with unique qualities
- Using unique noble fibres.

The move to spend more on communications, investing capital and in some instances using renowned designers, photographers, and architects in their promotions. This shows the professionalism and seriousness they take in maintaining the Italian added value.

Wool bale description:

It was suggested that the move away from the traditional bale descriptions to the AWEX system has been a mistake. This change has made the buyer's job more difficult and it has carry-on affects further down the processing chain.

Clip preparation:

Had been improving but recently the quality is declining. We must not lose sight of excellence in clip preparation even in times of a suppressed market. At every stage we could see the problems that short and tender fibres can cause on processing efficiency and quality. High levels of vegetable matter causes considerable costs in carbonising which is a process that can decrease the length and strength of the wool fibre

Purchasing of raw wool:

The greasy wool purchased this year could take as long as seven years to reach the finished fabric stage. It could spend a large amount of time in the form of Tops or yarn. Therefore the only thing mills can bank on is buying quality wool as a cover against price fluctuations. The basic theory of supply and demand will continue to be the over-riding feature of the auction system, and they believe that this is the most transparent system and one that has served them well historically. It will take a vast change in thought process and a commitment for the Italians to change to a contract based purchasing system.

Research

Any wool processing based research should be based and funded within that part of the industry (eg in Biella) where it will be up taken and further developed. They could not understand why farmers are subsidizing this research as potential benefit is limited. They also believed that the levies should be spent on communication rather than research. This investment in communication should be used to educate the consumer creating more demand for the product thus driving the prices up.

Company relationships

We heard of instances where various companies exchange ideas and technology to maintain a competitive advantage. For example one company may share advances in finishing technologies with another company and also in turn it may share spinning knowledge with yet another company.

Exclusive Merino fabrics from New Zealand fibre

There was very little branding of fabrics other than the retail brand. This was quite a defining point in what we saw and we were both surprised at this. We believe after meeting people there and seeing how they are adding value at the moment there is plenty of potential for Merino fibre from New Zealand. We could become involved in increasing its profile, and ensure NZ Merino is made into exclusive fabrics rather than outdoor apparel. There is huge potential in the worsted cloth market in Italy for our wool yet, as we believe this market wasn't being tapped into properly and the outdoor market in America is taking precedence.

Black wool @ Loro Piana

When we visited a Loro Piana retail outlet in Milan, we were confronted with numerous cashmere products. When we reached the 'Made to Measure' section various woolen fabrics were displayed. Here we saw Australian and Tasmanian fabrics alongside New Zealand Merino Fabrics. The New Zealand Fabrics included fabrics made from the finest bale for the years 1999 to 2004. These fabrics had amazing handle, and were fantastic to see on display in Italy.



Fabric made from the 1999 record bale 13.1 microns.

We were then shown some Merino fabric that was made from black or dark coloured Merino fibre from New Zealand. This range is called 'Pecora Nera', and therefore is promoted as being chemical free as it is not dyed. The sheep are described as returning to their 'genetic heritage'. The fleeces are individually hand sorted into the 4 different colour groupings.

Cashmere

Cashmere appeared to command a premium consideration where-ever we went. It is a great story of a natural fibre being positioned at the very top end of the textile industry with a huge international recognition that only wool and in particular New Zealand

Merino could hope to emulate. In the high end retail outlets Cashmere is a prominent feature, and it appeared to sell itself. However, we did hear of impressive promotions of Cashmere such as the “Wild about Cashmere” campaign at SAKS Fifth Avenue retail stores in America. This promotion included huge displays about cashmere on an entire floor of the store and it was very elaborate and successful. This way the consumer is exposed to the benefits and luxuriousness of the fibre.

The Italian Way

You have to take into account the Italian way – a combination of flare and theatrics. It is a story of an entire family with a passion for work and an uncompromising commitment to quality. It is an art which is passed from generation to generation, but an art which can also be learned.

The Biella Advantage

A working excellence founded on human creativity, is a common reason why the companies do not consider the possibility of moving production away from Biella. People from the hills in the region seem to have a work ethic second-to-none in that they are more professional in what they do and take a real pride in their work. They have a great knowledge of what they are doing as their families have been involved in the industry for many generations. A parallel could be drawn here with the New Zealand Merino industry. Research and Technology is used at the service of creativity.



The area surrounding the REDA mill.

"BIELLA The Art of Excellence."

The principal goal of the Foundation Biella The Art of Excellence is to enhance and promote the experience and excellence of the Biella area's know-how. It is an absolute guarantee for the customer and the environment.

It's more than a quality brand.

It's the ability to interpret tastes and trends.

It's the art of creating excitement.

Today Biella can boast the title of world capital in quality



woolen textiles.

Italy will remain the centre of creativity with its company's ability to keep pace, and in many instances they set trends. These trends are based on the Italian origins of timeless, elegant and ageless high-end fashion;

True modern classics
Pure core value and image
A cosmopolitan touch.

Keeping pace with fluctuating trends whilst never losing sight of innovations is what the future is about for Biella and New Zealand Merino Industry.

5.0

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