



CASE STUDY 2 : WOOL SUPPLY CHAIN¹

Synopsis

This is a story about a joint venture arrangement in a wool supply chain, from Australian woolgrower to European weaver. The arrangement operated from 1994 until 1999. A wool scientist, a couple of woolgrowers with interest in the wool supply chain beyond the farm gate, and a financier set up a business entity called Premium Wools Australia, with the primary aim of exploiting potential cost savings in the wool pipeline and capitalize on intrinsic qualities of the fibre. While this case study is based on fact, the real names of the organizations involved in the case are not disclosed.

There are several key elements to emerge from the case.

- The infrastructure and market mechanisms of the wool trade have evolved over 150 years. The current system is underpinned by good infrastructure. The sheds, stores, sampling, testing, handling, assembly and distribution generally are very good.
- The wool fibre is capable of producing vastly superior product by segregating fleeces from sheep to garment, but to do so is expensive.
- A brand is needed to get premiums.
- Dealing with and relying solely on one partner leaves venturers into the wool chain vulnerable.
- Risk has to be managed, and financed, at every point along the processing pipeline.
- Wool processing and marketing takes a long time- from wool-buying to garment on a shelf takes 18 months.

Student Learning Objectives

As a result of analysing the case study, you will gain an understanding of:

- the key elements central to the development of the wool supply chain.
- some of the pitfalls associated with the supply marketing chain

¹ Authors of the case are Peter Small (wool producer), Bill Malcolm and Peter McSweeney (The University of Melbourne). A case commentary is has been written by Dr Bob Richardson. The work is copyright. Apart from any use as permitted under the *Copyright Act 1968*, no part may be reproduced by any process without the prior written permission from the Australian Wool Education Trust.



Case Background

The founders of *Premium Wools Australia* had a good grasp of wool production, and an understanding of the scientific literature, that indicated that wool of a particular micron and that was relatively lower priced but with particular characteristics, could 'spin 2 counts finer' than other wools of the same micron; i.e. 21 micron wool with the desired qualities could produce a quality yarn for the weaver similar to an "average" 19 micron wool.

If this could be achieved commercially, a potentially significant cost advantage would be gained in the cost of the raw material, greasy wool. Furthermore, it was believed that processing efficiencies could be achieved through faster throughput and reduced technical faults. In addition, the wools identified by *Premium Wool Australia* should exhibit superior characteristics in the finished product, i.e. dyeing efficiencies, sheen, and softness.

At the same time as *Premium Wools Australia* was forming, a British weaver and dyer, who we will call *Ilkley Fields Plc Ltd* was seeking cost savings in the wool supply chain, prompted by a report from the International Wool Secretariat (IWS) that claimed to have identified scope for significant cost savings along the wool pipeline. *Ilkley Fields* was keen to explore this possibility. A chance meeting between the Chairman of *Premium Wool Australia* and the Chairman of *Ilkley Fields* led to the establishment of a partnership determined to exploit both the processing advantages of wools identified by *Premium Wool Australia* and the pipeline savings identified by IWS.

Ilkley Fields was looking for some business improvement because during this period there was a weakening of manufacturing in general in Europe. Retailers went offshore, for example, to China, to obtain product because the relatively low costs of labour.

The joint venture between *Premium Wools Australia* and *Ilkley Fields* started in 1992. *Premium Wools Australia* visited the UK in 1994 for a trial. By 1997 500,000 kgs of wool was combed in Australia, with spinning done in Italy and China.

Premium Wool Australia is still operating and has refocused its business to be a wholesaler retailer of knitwear. They design a range of knitwear items, and have a network of agents around Australia. *Premium Wools Australia* get orders and then make the product. They wholesale to other retailers, and retail as well.

The first step for *Premium Wools Australia* was to prove the concept commercially. *Ilkley Fields* agreed that *Premium Wools* should select a parcel of these speciality wools for a commercial trial. However, it was quickly realised *Ilkley Fields* only had relationships with their yarn supplier, who was not interested in the trial as such, nor in revealing the technical specifications of the yarn that they had traditionally supplied to their client. Likewise, *Premium Wools* as woolgrowers traditionally had relationships with Australian Wool Brokers and Exporters. The supply chain partners in this project, located at each end of the long wool-processing pipeline, quickly realised they had to develop relationships and product specifications for each step in the pipeline.

A glossary of terms used in the wool supply chain is provided in the Appendix to Case Study 1 Supply chain innovation.

Consequently, the first challenges were to specify the product, and find top makers and spinners as partners, who were willing to co-operate in the project, possibly at the cost of fracturing some of their traditional relationships.



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For the project to succeed fully it had to achieve the following:

- deliver yarn of the required quality.
- achieve the cost savings thought to be achievable in the supply chain.
- gain the price advantage of the raw material through buying two counts stronger.
- result in an enhanced finished product!

Problems With The Traditional Supply Chain

Traditionally the way the wool textile pipeline works is that spinners sell yarn to weavers and knitters. Spinners reveal the minimum necessary specifications. The attitude seems to be that the less the weaver knows about the technical specifications of the yarn the better. Spinners provide all sorts of terms for supply contracts that allow their weaver to have a tonnage/price contract that the weaver can draw on, sometimes for quite extended periods. Naturally, the spinner likes the weaver to be as dependent as possible on them, which helps protect them from competition.

If the spinner is not a vertically integrated mill, then the spinner issues product specifications to the top maker for the delivery of tonnage at a contracted price. The top maker has to deliver the tops within certain tolerances to the specifications. The top maker only takes instructions from his client the spinner. The top maker then issues orders to the Australian exporter(s) with whom they deal to buy quantities of wool with particular technical and price specifications. Australian wool exporters work on very small margins and to very tight specifications. Volume is essential for them to be profitable, and business is won and lost often on a few cents a kilogram.

Client relationships through the chain, between weaver and spinner, spinner and top maker, top maker and exporter, are guarded jealously. This is not an easy commercial environment to enter, starting from scratch. It is not a simple matter to find like-minded partners and then develop product specifications through the chain.

Characteristics Of The Premium Wools / Ilkley Fields Chain

By working together assiduously through the chain, *Premium Wools Australia* and *Ilkley Fields Plc* put together a linked set of specifications for the wool for each stage of the processing pipeline. In addition, they located like-minded partners who commissioned and processed the wool at each point in the chain. The product and the relationships were managed from the Australian end but done so in a close relationship with their UK partner.

There were two key outcomes from the joint venture.

- From an initial container of greasy wool in 1994 the business grew to a peak of around one container of yarn per week in 1998.
- The anticipated advantages in wool processing were achieved consistently, however the supply chain efficiencies identified as being 'there for the taking' never materialised in reality.

The cost advantage of buying 21-micron wool to spin a 19.5-micron yarn also never materialised. Other factors like strength and breakages may be more important that count in affecting processing cost. Choice 21-micron wools were often not much cheaper than a blended to price average 19.5-micron wool, put together in trade lots. Some of the potential greasy price advantage from buying 21 micron wool instead of 19.5 micron was lost in volumes being too small relative to overheads,

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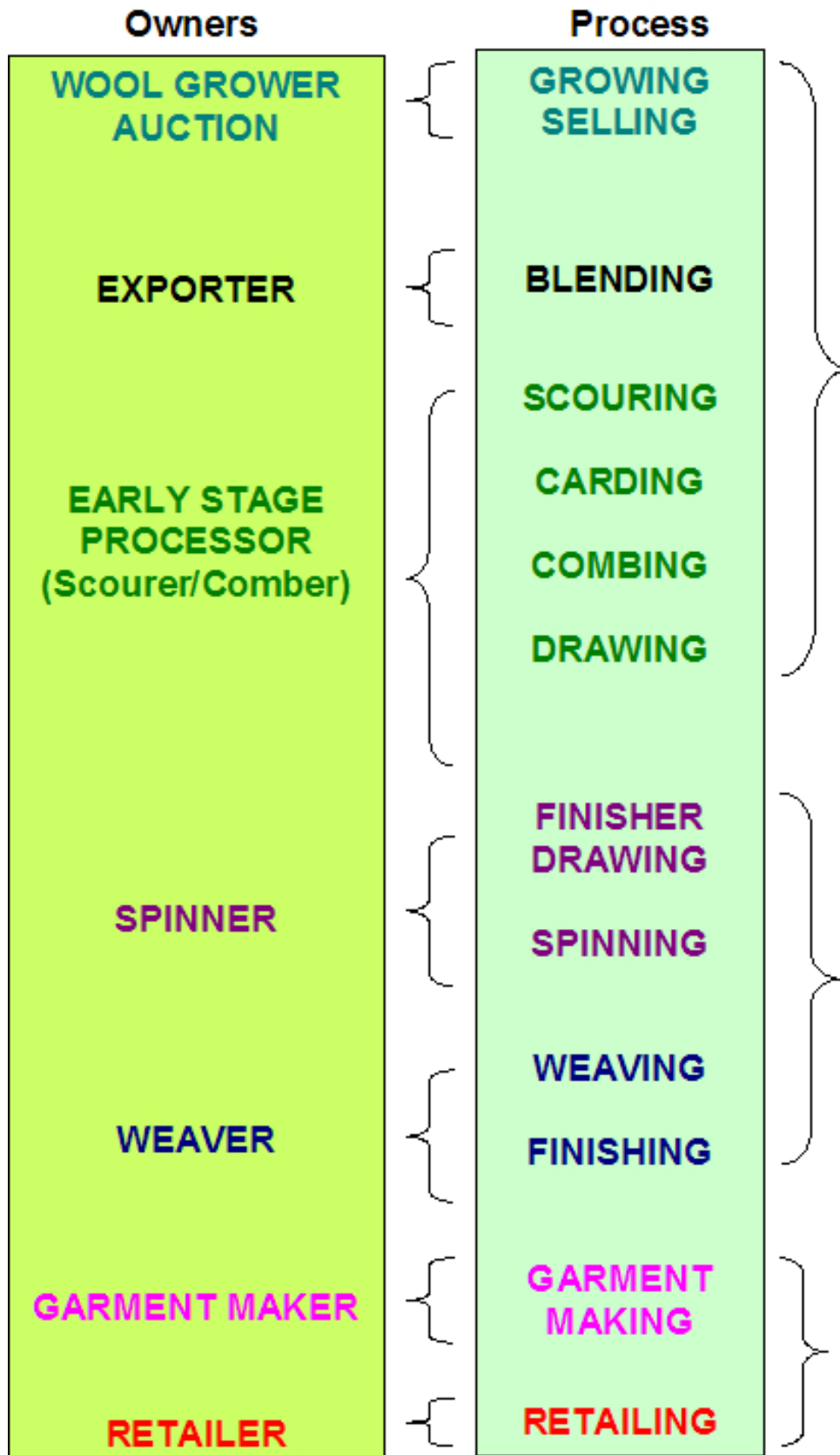
and also from not buying every sale day over the selling season, which is a mechanism the trade use to spread their risk and 'average' the price.

On average the yarn that resulted from the *Premium Wools Australia* and *Ilkley Fields Plc* collaboration was always about \$1US per kilogram more expensive than commercial yarn of the same count, and even though the fabric had distinctive qualities and was inherently superior, the lack of a strong brand failed to extract any premium from a market driven, as it is, by the relentless pressure of retailers on price and margins. Eventually, the venture proved unprofitable.

Even if the potential cost advantage could have been achieved, in the face of increasing globalization of capital and labour, and rapidly developing capacity in textile manufacturing of low labour cost countries, the venture based on weaving in the UK was doomed. In the end, the UK firm *Ilkley Fields* was sold to another company and then closed.



Figure 1 : Supply Chain For Premium Wools Australia And Ilkley Fields Plc





Lessons From The Experience

There were two major lessons from the experience:

- If you are going to take exposure to another single firm, ensure that firm has good prospects, and
- Have a good look at the 'big picture' reasons why a partner might be interested in forming an alliance. If the reasons are to do with major and economic forces that will not be changed by the joint venture activity, then do not do it.

Flaws In The Supply Chain Design

For business relationships along a supply chain to succeed, product has to be specified at each stage of processing and thus throughout the chain. With suppliers of product at each stage only having a relationship with the next stage, a supplier of raw material specifying a product throughout the whole chain can create difficulties.

It is often logistically difficult to establish relationships through a supply chain with more than a small number of 'partners'. However, establishing relationships in the supply chain with only a small number of firms leaves a business vulnerable to the failure or change of objectives of a supply chain partner.

Product Branding And Volume Requirements

Even if a product is supplied that has superior qualities, a return to these superior features will not be able to be extracted through the chain unless the product is identified and differentiated, such as by brand name.

A major threat and constraint to any differentiated product is the ease of substitutability with competing products and the number of potential substitutes.

Volume of throughput to defray overheads per unit is essential. Small runs of product are profitable only when the price point of the product is markedly above alternatives.

Risk Management

Distribution and magnitude of risks is a critical determinant of eventual success or failure. Retaining ownership through the chain and contracting each stage of processing exposes the owner of the wool to risks associated with production errors. It is often difficult when commission processing to recoup additional costs incurred, and additional problems arise of salvaging damaged product.

In addition, sourcing wool from a relatively few growers from the same geographical region can present problems if seasonal conditions adversely effect the quality of the wool and therefore its processing capabilities i.e. a drought can impact on a clip through poor tensile strength, and a decrease in microns and an excellent season can adversely effect vegetable matter and an increase in micron.



Discussion Questions

1. Why did this joint venture not succeed?
2. Which parts of the supply chain encountered the main sources of difficulty?
3. Comment on the similarities between the supply chain experiences in Case Study 1 (Tasmanian Quality Wool) and the Premium Wools experience.

Case Commentary

Written by Dr Bob Richardson, Formerly Dean of the Faculty of Land and Food Resources, The University of Melbourne.

Like Case Study 1, this case focuses on the particular characteristics of the traditional Western European wool textile pipeline. This case involves vertical coordination from greasy wool supply through to the worsted fabric stage.

The two major lessons from the experience are noted. They partly explain, along with relatively high labor, environmental and other costs, why the traditional horizontal company structure in Western Europe is in decline. The system is highly flexible but too costly in terms of price and contract coordination between companies to compete with vertically integrated structures that are emerging globally, particularly in China.

Even within the structure described, the relationship between combers and worsted spinners is normally more complex than suggested with as many as nine technical specifications in a contract (including mean and coefficient of variation of both micron and fibre length, number of dark fibres and neps). CSIRO research has demonstrated how objective measurement of samples of greasy, top and yarn can be used to reliably predict performance in subsequent stages of processing or manufacture for given commercial machine settings. Objective measurement of the performance of fabric is also commercially available, based on CSIRO research. So far, such commercial measurement technology has not led to sale by description of complete specification of intermediate materials. In addition to these issues, it is important to note that fabric weight (in grams per metre) is a key determinant of the market for worsted fabric.

Aside from these technical/commercial issues, this case study highlights the risks of operating through the traditional industry structure. It is questionable whether larger volumes or product branding would have done much to alter the outcome of this case. Apart from annual fabric fairs held in numerous cities in Europe, there is limited brand differentiation at the worsted fabric stage. Cost effective promotion by woolgrowers could only be sustained if part of a large-scale effort of the kind mounted by the International Wool Secretariat in the 1980's.