Buying and consignment preparation of Australian wool

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MacWool

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1. Introduction

The role of the exporter is varied and complex and ranges from customer relations to the physical purchase of wool, financing of purchases and acceptance of market risk, and management of shipping and freight functions required in the delivery of wool to overseas customers. In brief, the exporter's functions and responsibilities include:

- daily contact with wool users and clients on a worldwide basis to provide market information and intelligence
- performing a marketing role in promoting the use of Australian wool through expert advice and assistance in wool selection
- negotiating and concluding firm contracts of sale
- acting as an agent in the purchase of wool on an indent basis
- accepting full market risk as required between the time of a negotiated firm sale and shipment
- negotiating forward foreign currency exchange as required
- providing capital funding for the period of the sales contract
- managing the administration of the shipping parcel
- negotiating documents through the banking system
- accepting liability for substantiated claims.

In tracing the route of wool trading and wool export in a historical sense, it was until the 1870s that the vast majority of the Australian wool clip was sent to London to be sold on a consignment basis. This was normally done by:

- the producer/grower in their own right, or
- local merchants and traders who purchased the wool from the producer and shipped it to London for their own account or, at times, acted as consignment agent for the producer.

Quite quickly, the picture changed in the 1880s with the introduction of electronic means of communication which made it possible for overseas processors to have direct representation at local Australian auctions, with purchasing instructions electronically issued to their representatives.

By the conclusion of the century, the majority of the Australian production was being traded through the local auction system, and exported on a commission basis by the agents and representatives of the overseas companies.

Auctions then continued until suspended from 1916 to 1920 during the First World War, with the Australian Government acquiring the clip for eventual disposal to Britain. Auctions resumed in 1920 and continued until the Second World War, resuming again in 1946. It was during this time that a system was introduced to standardise wool descriptions and categories for the Australian clip into a 'type' form. This so-called Australian Type was used as a common language between industry participants as a way to universally recognise and understand the various kinds of wool made available for sale. This was eventually adopted by the Australian Wool Board and subsequently the Australian Wool Corporation (AWC) and revised over time with the last version published in July 1987 (see

Attachment 1), prior to the abolition of the AWC Reserve Price Scheme in 1991. This system was widely used to report on auction statistics, market quotes, and purchasing.

In the late 1980s, the Joint Wool Selling Organisation (JWSO) a committee of the AWC, implemented a trial to supplement the Australian Type, to be known as Industry Description. It was considered to be a method which could possibly incorporate all measured and non-measured characteristics of wool to more adequately complete the description. Following the closure of the AWC, the Australian Wool Exchange (AWEX) was founded based on industry representation to facilitate wool marketing functions. As part of its role, AWEX revised the Industry Description, which became known as the AWEX-ID (see Attachment 2). This is now the public method for auction market quoting and reporting as issued by AWEX. Private companies have quite often also developed their own in-house description systems, but it is fair to say that the aforementioned two typing systems were well understood by the industry in general, and used to some degree in many and varied circumstances.

Throughout the above time, the role of the exporter has seen some very significant change. In the 1870s, the role of the producer and local merchants could be seen as the forerunner of today's exporter in terms of arranging for the consignment of wool to London for auction. In the 1880s, with the advent of substantial local auctions came the role of direct representation on behalf of overseas merchants and processors. People from many countries came to Australia to act as buyer and exporter for these overseas companies. The method was on the basis of commission or indent buying (that is, fee for service), with virtually no financial risk attached at the local end, as all purchases were for account the parent company. The buyer/agent was paid a commission according to quantities purchased, and was responsible for making arrangements to ship the wool bought at auction to particular overseas destinations. This also gave rise to an increased role for local traders and merchants, who similarly offered their services to act as buyer and agent for the overseas clients, again on fee for service basis (commission or indent).

The 1950s and 60s saw the introduction of forward sales or firm offer, where some overseas clients were looking to purchase wool on a 'fixed price' basis. This method brought massive change to the role of the exporter/buyer, as it meant all market risk was now to be borne by the exporter, along with the burden of financing the purchases through to the time of payment from the client, quite often on an 'arrival of goods' basis or beyond.

During this time, many overseas companies were using a mixture of both indent and firm offer buying to make their purchases. However, the firm offer method eventually grew substantially to become the clearly preferred method of purchase, so that by the 1980s, it was by far the most commonly used system.

In more recent times, indent buying has seen an increase from some quarters, although firm offer would still remain the predominant choice.

2. Purchase options

In most instances, growers will have their sheep shorn on an annual basis, with the wool being classed in the on-farm wool shed by a qualified woolclasser. After the clip is classed into lines of similar wool, the bales can then be sent to a broker's wool store or local dealer (acting as selling agent for the grower), where the wool is received and weighed, and samples are taken for testing.

There are then several options available to the grower for the disposal of the wool clip. These include:

- public auction
- private sale
- grower direct sale.

Of the above options, public auction remains the preferred method. Historically, the percentage of the Australian wool clip sold through auction is approximately 80%, with this figure at times varying to some small degree, but that percentage figure is relatively constant over time. It is also true that some wool sold initially by other means, such as private treaty, can ultimately find its way back to finally be sold again by auction.

It is the objective of the exporter to gain access to as many of the above options as possible to maximise purchasing opportunities.

2.1 Auction

The auction system can be described as a 'free' or 'open-cry' system, which means the woolgrower offers wool for sale through an agent (the wool broker) at public auction to the highest bidder (see Attachment 3). A reserve price may be placed by the seller on any sale lot of wool. This gives the opportunity to offer the wool again at a later date if the bidding fails to achieve the reserve price.

Auctions ceased in Australia during last century's two World Wars, but since then have again continued to be the principal method by which exporters source their wool supply. Prior to the 1970s, bales of wool were marshalled together by the wool broker into sale lots in an area known as the show floor. In this era, before measurement, buyers examined the wool in the bales to subjectively assess all of the characteristics important in processing and make decisions on the value of each sale lot. Little change was introduced into the system until the advent of objective measurement in the 1970s, which allowed for improved wool handling and display techniques, coupled with the significant advantage of having objectively measured wool characteristics reported for the first time in the sale catalogue. Initially, the characteristics reported were those of mean fibre diameter, yield, and vegetable matter content. Since that time, further measurements have been introduced into the system, principally those of greasy staple length, staple strength and position of break.

The previous method of displaying wool (now described as traditional showing), was a very costly function due its labour-intensive nature (see Attachment 4). The objective measurement of wool allowed for the introduction of the concept now known as 'sale by sample'. This is a far less costly method of displaying the wool, as the physical handling of wool bales onto and from the show floor was eliminated and replaced by a representative sample (see Attachment 5). As of today, this method has an almost 100% adoption rate.

Another feature of sale by sample was that it allowed for a system known as 'sale by separation', where instead of the exporters having to constantly travel to any one of 13 selling centres situated around Australia to attend the wool sales (see Attachment 6), the

samples could be sent to a more central location and offered for sale in a place quite separate from where the bales were physically located. The number of selling centres has gradually been reduced to three main centres: Sydney in New South Wales, Melbourne in Victoria and Fremantle in Western Australia, with a small number of infrequent sales held in Newcastle, New South Wales and Launceston, Tasmania (see Attachment 7).

In total, there has been a very significant change in the sale of wool over time, from wool being bought on an entirely subjective basis in up to 13 different selling centres around Australia to today, where the majority of wool is offered in just three centres and where objective measurement plays a very large role in the determination of the value of wool and its processing potential. Objective measurement can also form the basis of order specifications and contracts.

To prepare the wool for auction, the woolgrower sends the wool clip to a chosen wool broker, who receives the wool into store and completes the sampling and weighing procedures. Every bale in every lot to be sold by sample goes through the same procedure of bale weighing, coring and grab sampling according to IWTO standards. The bales are then sent to a storage area to await post-sale delivery instructions from the buyer. The grab sample is then automatically sub-sampled for tufts of staples, and this sub-sample, along with the core sample, is dispatched to the AWTA Ltd testing laboratory for measurement of fibre diameter, yield, vegetable matter content, staple length, staple strength, and position of break. These test results are then electronically transmitted by AWTA to the wool broker, who records them in the sale catalogue (see Attachment 8).

The representative grab sample is placed into a numbered box on a show floor, corresponding to entries in the sale catalogue. The exporters then examine each box of wool on the show floor, using the test information from the catalogue in conjunction with their visual appraisal of the non-measured characteristics to determine their interest in each lot from which they derive a valuation and buying price.

The exporter companies then attend the wool auction at a time and place organised by the wool brokers according to selling arrangements facilitated by the Australian Wool Exchange Ltd (AWEX). The auction sale is attended by the buyers, who compete with each other in this open-cry system, where bids are called for by the broker on each sale lot in sequential catalogue order. The bids are made in advances of no less than one cent per kilogram for each lot until no higher bids are made. At this point the wool broker auctioneer names the highest bidder and final bid price, thereby effecting immediate change of ownership (provided the reserve price or higher has been achieved). The selling rate or speed of the auction is dependant upon several factors but, on average, approximately 250 to 300 separate lots are sold per hour. This rapid rate of selling demands particular skills by the buyer in the sale room, who must progressively keep account of all purchases made, then calculate all remaining purchasing requirements as the sale proceeds, as well as continually bidding for those sale lots of particular interest to the buying company.

The auction is a public auction; the results are fully transparent and are available as the auction progresses, either to those in attendance at the auction, or by electronic means to those in remote locations. Prices for each particular kind of wool are then made obvious, as are emerging price trends. At the end of each auction day, AWEX makes available a daily sale report. In addition, each exporter company would also provide to all of their clients and customers their own report detailing price movements on both a general and client specific basis. This public auction is the only means by which wool prices and market trends can be made available to all interested parties.

2.2 Private sale

Private selling can take many forms, including on-farm, private treaty and electronic private sale.

- On-farm – The grower has the option to sell all or part of the wool to a private buyer by private arrangement while the wool is still on-farm. The buyer may offer a price based wholly on subjective assessment or on a guidance test result coming from a hand-core taken at an earlier time. In this instance, the buyer may be a private treaty buyer, a representative of an exporting company or a processor.

  The grower also might be prepared to sell the wool forward 'on the sheep's back'. This involves an agreement with the buyer (local processor, broker or exporter) to pay a price on an agreed micron basis, so that when the shorn wool eventually becomes available and the test result proves to be either finer or broader than the contracted micron, premiums and discounts would apply accordingly on an agreed scale. This can also include other wool characteristics.

- Private treaty – The private treaty buyer may offer wool previously purchased from the grower and subsequently tested by AWTA Ltd to the exporter trade on a sale by sample system from within the buyer's own store on a negotiated price basis, or send it to auction, or offer it as sale by tender on an electronic basis (fax or computer generated). The sale by tender system operates on the basis of submitted prices for each lot offered, with the result normally on a 'progressive bidding' principle, where the winning bid for each lot is taken to be one cent higher than the second highest bid, even though the actual submitted bid price may be greater.

  It can also happen that a grower can ask a private treaty buyer to sell the wool through the private treaty store on a commission basis, so the private treaty operator acts as the grower's selling agent and is paid on an agreed fee-for-service basis. The grower can nominate a minimum price at which the wool might be sold (or otherwise withdrawn from sale) or sell it without reserve.

- Electronic private sales – A number of companies (principally wool brokers or private consortiums) are now operating electronic selling systems, where wool is drawn from lots previously passed-in at auction or made available for sale by the growers before being offered at auction, or is the preferred selling method chosen by a grower. The usual practice is to offer it via a computer screen on a continuous basis, with test results shown on each lot and with an asking price listed against each lot offered. It is normal that the buyer has the option to examine a sample after purchase with an existing subsequent right to cancel the sale depending on the sample inspection. The volumes traded using this method have grown in recent years but still remain relatively small in comparison with the open-cry auction.

2.3 Grower direct

Growers have traditionally looked for a way to sell their wool direct to a processor for a variety of reasons ranging from price-related issues to those involving a clearer understanding of end-user wool requirements. Such sales are not a matter of public record, so it is always difficult to quantify, and it is usually a matter of hearsay or word of mouth as to the frequency or size of such transactions. In past years, it was known that occasional sales and deliveries were agreed with an overseas processor, but often on a 'trial basis' to test the logistics or examine alternative wool preparation methods and the resulting processing performance. In more recent times, some success was had by selling to local processors, but that opportunity is today far more restricted given the significant reduction in early stage processing in Australia. There continues to be serious grower interest to more

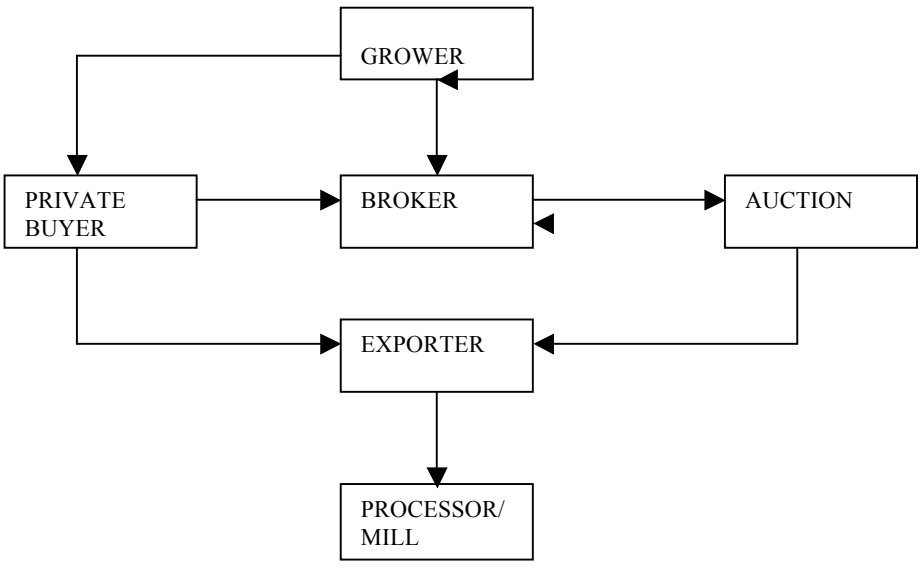
fully examine the possibility of this direct selling approach. In previous times, one of the drawbacks was always seen to be the lack of sufficient quantity involved, given that production runs within processing mills can be from approximately 200 bales minimum to at least 1000 bales at any one time. So grower co-operatives have been formed (mostly on a local basis) with a view to maximising available quantities of similar and suitable types into a combing parcel and then seeking those selling opportunities, at times looking to assistance from wool brokers or exporters who have the necessary understanding of the financial implications, infrastructure requirements for transport and handling, and overseas mill contacts. It is difficult to say exactly how much wool is shipped via this method, but it could be fair to say that the quantities at this stage are still relatively small. Many grower groups have grown to understand the difficulties involved in this direct system, with finance, materials handling, consignment restrictions and requirements, all adding to the complexity of working outside the existing and already well established formal trading system.

With all of the purchase options available, the exporter must seek to be involved in as many as can be properly and successfully managed. This might be through direct involvement, typically at auction, or by arrangement with people acting as agents, which might more readily apply to purchasing opportunities in country locations. Over the years, some exporter companies have developed considerable country-wide networks of employees and agents, which provide the necessary access to all purchasing opportunities, whether they be auction, private sale or tender.

It should be noted that the role each industry group or participant plays in the exchange of ownership has changed quite significantly over the years.

Traditionally, each participant had a single function to perform. There were exceptions to the rule but basically it was a simple and straight-forward procedure in that the grower offered his wool for sale at auction via his agent (the wool selling broker) to be purchased at auction by the exporter on behalf of a processor or mill. Sale by auction has always been the main selling method although a smaller percentage has been sold via a private buyer or dealer. However, the role of each participant was generally well defined and simple to understand.

Fig 1 Traditional Industry Structure



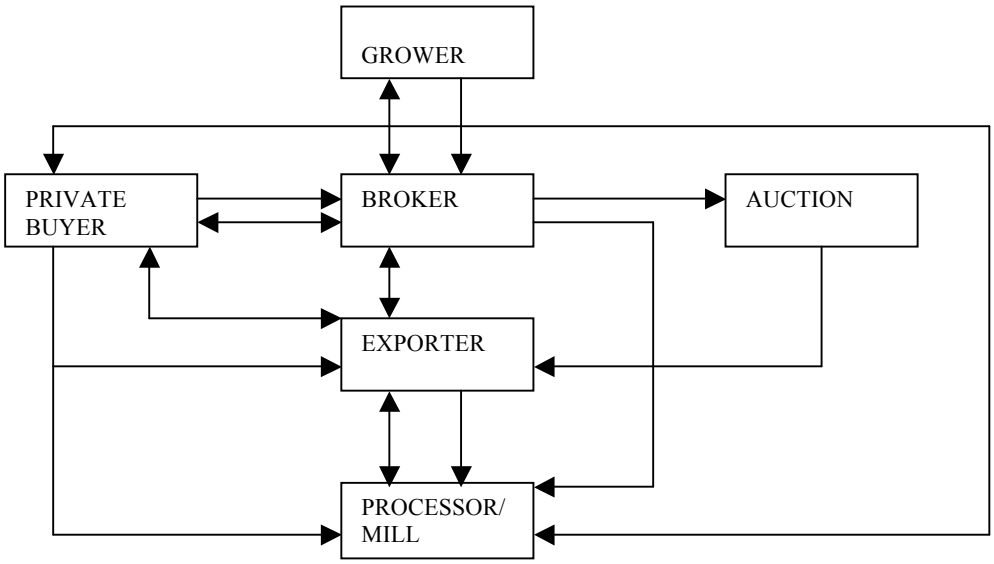
In more recent times these roles have tended to ‘merge’ and it is quite normal for those involved to be ‘multi-functional’.

Growers: continue to sell via auction or to a private buyer but many also look at ways of selling directly to processors or mills, using either a grower co-operative as a vehicle or by themselves.

Brokers: continue to offer their services to growers as auction agents although they are prepared to offer a price direct to the grower (becoming a defacto private buyer) for eventual sale back through the auction system. They might also become traders (exporters) in their own right and sell direct to processors or mills. Some have established direct partnerships and relationships within the processing industry.

Exporters: continue to purchase wool at auction in a firm offer, indent or stock-taking role. In addition, they often have direct links with brokers, or in some cases, have become brokers and/or private dealers in their own right. Some exporters also have direct involvement in processing.

Fig 2 Contemporary industry structure



The end result is a far more complex and multi-functional industry structure than existed in the past.

3. Purchase methods

The exporter must establish very solid links and associations with the overseas clients on a vast range of subjects, not the least being the method by which the client has chosen to purchase wool via the exporter. All matters must be clearly understood and mutually agreed and, if necessary, part of a private and binding contract.

The two principal methods of purchase are:

- firm offer (or forward sale)
- indent (or commission buying).

Firm offer involves the exporter delivering a specific parcel of wool to the client for an agreed price at an agreed date to a particular location nominated by the client.

Indent involves the exporter buying specific kinds of wool on behalf of the client for an agreed commission.

3.1 Firm offer

In making an arrangement to deliver wool on a 'firm offer' basis, it has to be very clearly defined what is to be delivered in terms of quantity, which kind of wool, at what price, on what yield basis, in what time frame and on what terms.

On a global basis, there is no such thing as a 'standard' arrangement or contract, as it is entirely a matter of a binding agreement between two private parties – the exporter and the client. At times, there have been certain contracts particular to certain areas or locations where the economy has been centrally controlled, but in essence, it is normally up to the two parties involved to come to a mutual agreement. In that context, a contract can therefore contain whatever is considered appropriate to that sale as long as it is agreed by both parties.

A small distinction in terms within the realms of firm offer / forward sale might be where the exporter can make a firm sale from wool they are already holding in stock, as opposed to a forward offer where they have to source all or part of the delivery from the time of the sale being agreed. In any event, firm offer / forward sales still involve very similar and very specific requirements, including:

- an agreed quantity of wool
- an agreed fixed price
- an agreed currency
- a nominated type or kind of wool with specific parameters
- date and destination of the delivery
- specified payment terms and conditions.

To have reached the point of having begun negotiations for a firm or forward contract requires the exporter to have undertaken a number of functions, including:

- daily contact with wool users and clients on a worldwide basis in order to provide market information and intelligence
- regular communication with clients to ensure a clear understanding of their particular requirements

- to perform a marketing role in order to promote the use of Australian wool through expert advice and assistance in wool selection
- to monitor the client's requirements in ongoing business to maintain the necessary level of mutual confidence and co-operation

It is then up to the exporter and client to agree on a sale with specific terms and conditions.

It is the exporter's role to:

- negotiate and conclude the firm contract of sale. This is in the majority of instances for greasy wool, but it can also be for scoured wool, carbonised wool or wool top. This will include all appropriate wool specifications and performance parameters, and include conditions particular to the client's requirements
- accept full market risk between the time of negotiation and shipment
- negotiate forward foreign currency exchange as wool is often traded in currencies other than the Australian dollar (the US dollar being the principal currency of choice)
- provide capital funding at bank rates for the period of the contract, often from three to six months
- select, purchase, pay for and assemble the delivery parcel appropriate to the client's particular specifications and requirements
- manage the administration of the shipping parcel, including the dumping and container loading
- prepare the necessary shipping, export and banking documentation
- arrange for the most appropriate shipping opportunities to meet the client's arrival dates
- negotiate documents through the banking system
- organise final destination customs clearance and cartage through to the client's chosen location
- accept full liability for any substantiated claims resulting from shortfalls in processing outcomes and/or unforeseen faults.

Once the firm sale has been agreed and the contract signed, the only remaining involvement for the client is to arrange payment on the due date. Other than that, it is entirely a matter for the exporter alone to manage and conclude the sale according to the contracted terms and conditions.

3.2 Indent

Indent purchasing had its origins in the very early days when overseas companies elected to send their representatives to Australia to make purchases exclusively on their behalf. From this beginning came the advent of non-exclusive arrangements, where local traders and merchants also bought wool on this indent basis (commission or fee-for-service). It is still possible today for some overseas companies to have their own staff resident in Australia using, however, mostly Australian nationals and working for the parent company from within an Australian registered firm. In most instances, these companies have also expanded their role so that not only are their staff buying wool for them on an indent basis, but they are buying wool for other companies on a firm offer or forward sale arrangement and even, at times, on a separate indent arrangement.

The majority of exporters would be involved in both firm sale and indent buying. Indent buying requires close and ongoing communication between the buyer and the client and is quite often done on an 'arrangement' basis, as distinct from a firm offer, where a legally binding contract is in place for each and every sale. So, it is important that a clear and well defined working relationship is firmly established.

Indent buying happens when the exporter buys wool on behalf of a client at an agreed rate of commission. This commission can be taken as a set dollar value per bale or as a percentage of the wool value. Again, this is by private agreement between the exporter and client. The client determines the type of wool to be bought, the quantity required and the price at which it is to be acquired. The exporter appraises the wool prior to auction, normally advises the client of the selection available in that type, then bids on the wool at auction and subsequently arranges all of the appropriate documentation, finance and shipping. It is also possible to supplement those purchases by buying 'privately', provided the client has no objection.

The conditions under which indent buying can operate would include:

- agreed terms and conditions of financing
- the costs and charges which are to be met by each the client and the exporter
- the client's wool type specifications
- any guarantees of the greasy wool and/or top specifications
- the exporter rate of commission
- an agreed understanding of the client price limit (either set at a maximum price or market price)
- quantities to be bought on a daily or weekly basis
- daily communication on price trends, buying limits and ongoing quantities.

Each and every indent arrangement can be different and involve different cost sharing, but it would be relatively normal for the following to be charged to the client:

- the cost of the greasy wool bought
- delivery charges from broker's store to dump
- dumping and container loading charges
- bank interest incurred and documentation charges
- insurance
- freight and port charges
- buyer commission.

From the commission earned, the exporter would be expected to cover:

- wool valuing and buying costs
- office and staff overheads
- staff travel costs
- all communication costs.

In general, there are two distinctly different types of indent orders.

The more traditional version was one where the client would place an order for a specific kind of wool at a set price, which was understood to be the maximum price the exporter could pay. At the end of each day, the exporter would communicate to the client the current market conditions, quantity bought and price paid (at the maximum limit if nothing cheaper could be bought or, on a falling market, perhaps at a reduced price). The client would then give instructions for the next day to increase or decrease the limit according to market conditions, and the required quantity. In this instance, the exporter played a passive role and it was the client who determined the price and the quantity to be bought if it could be managed. It is of course quite possible with this kind of arrangement that the market simply may not allow the exporter to buy all or part of the required quantity at the client`s price limit, as the market may be rising above that price. In this instance, the client either has to increase the buying limit or cancel the order for that week and look to the following week for further purchases.

The second and more radical version of the indent order is for the client to decide on a type to be bought and quantity, but to advise the exporter that the order is to be completed within a given time frame at the lowest price possible, regardless of where the market might move. The client may still advise a price idea or limit to start, but then instruct the exporter to 'move with the market' until the order is completed within the specified time frame. It is relatively common to 'spread' indent purchases over the selling week to take advantage of any possible irregularities in the market, but on a rapidly rising market this strategy may well change. In this version, it is the exporter who takes the more active role, as the client leaves the purchasing decisions to the buyer. Needless to say, there is a high degree of co-operation, understanding and trust required between the two parties to operate on this particular basis.

An arrangement somewhere in the middle of these two options might be where any between-country time differences allow for communication as the sale progresses. For example, should the client be from a country where the time difference is only a matter of several hours from where the sale is taking place, the exporter can directly telephone or e-mail the client during the day and within the normal working hours to advise of any changed market conditions, so the client can authorise a price change (increase or decrease) to the indent order to become immediately effective for the remainder of that auction day. This is normally not possible from Europe or the UK, where the time difference with Australia is significantly greater than say from the Asian area.

However, in all above instances, the exporter is acting as an agent on behalf of the client and would seek to fulfill the indent order to the mutual benefit of both parties. As distinct from a firm sale, where the exporter exclusively plays the active role in concluding the purchase and delivery and the client takes a passive position, the indent order is very much dependent on a well established and trusting partnership, with both parties prepared to share responsibility and take an active role.

4. Purchasing

4.1 Auction catalogue

In the case of auction buying, the purchase activity begins in reality with the sale catalogue. The catalogue is produced by the wool selling broker, whose role it is to collate all of the necessary information and designate positions within the catalogue appropriate to the grower's clip structure and kind of wool offered for sale. For example, a broker would mostly choose to list and display all merino fleece in one section, pieces and bellies in another, crossbreds in another, and all carding wool (locks, crutchings and lambs wool) in another.

This catalogue is then printed and a hard copy made available at the show-floor for use by those attending the sale. It is also available pre-sale electronically (at cost) so that exporters can load it into their computer systems. This information can then be supplemented with the injection of the exporter's pre-sale wool appraisal (or type) for each lot, and used as a basis for calculating a buying price at auction. Most exporters use a computer system that allows them to enter their clean price buying limits according to client order and client type and then match the catalogue information, their pre-sale type appraisal and client's clean cents per kilogram price basis to calculate their at-auction buying price, expressed as greasy cents per kilogram.

The sale catalogue contains all of the known information available about each individual sale lot (see Attachment 8). It includes:

- all of the grower supplied information such as the property or clip name, location of the property according to a district code, bale or lot description allocated by the classer and/or grower, and number of bales in each lot
- the sale lot number allocated by the broker, an indication of storage location, the type of classing certificate (professional classer, bulk class, interlot and so on), and the broker applied AWEX-ID type (which is later subject to audit by AWEX staff)
- all core-test details of yield, micron and vegetable matter content
- all staple test details of mm greasy length (and CV%), Newtons per kilotex strength, and position of break – tip middle and base
- a dark fibre risk indication where available.

With all of this information available pre-sale, it is then possible for exporters to derive specific wool selection reports for their own internal use, or also to advise clients before the sale of the availability of certain kinds of wool, particularly in the case of indent orders.

This kind of catalogue lay-out is also frequently used by private treaty brokers, who similarly make this available by hard copy or electronically by fax or computer to their exporter clients, as it is a well known, familiar and user-friendly system for providing all relevant information.

4.2 Yield/price-cost comparisons:

The clean yield of wool plays a very significant and important role in determining price and costs. The yield is used initially to calculate the greasy price to be paid in sale transactions, and then to quantify the clean cost associated with the sale of any lot or batch of wool (for instance the clean cost of wool purchased, or the clean cost to be used as a quote).

For example:

Yield basis ACOF Dry, clean price 880 cents per kilogram,

then

70% yield x 880 clean cents = 616 cents per kg greasy

and in reverse,

616 cents per kg greasy – 70% yield = 880 clean cents.

So, the grower is paid in greasy cents per kilogram, but the mill customer deals in clean cents per kilogram (that is on a clean weight basis).

The clean yield is also an indicator of the weight of clean wool in a lot or batch of wool. However, this is very much dependent on the type of yield used. The yields displayed in the sale catalogue are:

- Australian Carbonising Yield
- Japanese Clean Scoured Yield
- IWTO Schlumberger Dry Top and Noil Yield
- IWTO Scoured Yield 17% Regain.

It is important to note that all of these yields are calculated in testing from the one base, which is the Wool Base (the dry weight of wool free of impurities expressed as a percentage of the weight of the greasy core sample). It is also important to note that while tested yield is widely accepted as part of the basis for trading purposes, it is a 'predicted' yield, and can possibly result in actual differences between mills and between different kinds of wool. To that end, it is possible for mills to continually monitor and collate within-plant results and then factor any proven and consistent differences into their pricing structures, which can be applied in-house or even passed on to their exporter suppliers to more accurately reflect the final predicted cost.

The choice of yield is that of the client, but in a general sense:

- Schlumberger Dry Top and Noil Yield is normally associated with western Europe
- IWTO Scoured Yield 17% Regain is associated with eastern Europe and low VM carding wool
- Japanese Clean Scoured Yield (JCS) 16% Regain is associated with Japan in the first instance
- Australian Carbonising Yield (ACY) is associated with high-VM carding wool
- the principal yield used in trade with China is not printed in the sale catalogue, but is the IWTO Scoured Yield 16% regain.

Note: As a valuable reference document, the AWTA Ltd *Wool Testing Handbook* contains the complete yield calculation procedures and core test yield conversion tables.

In brief:

- Schlum Dry predicts the clean weight amount of top and noil that might be combed from the greasy wool
- JCS predicts the clean weight with VM deducted but with no processing fibre loss allowed

- IWTO Scoured 17% predicts the clean weight including all VM and also with no processing fibre loss allowed
- IWTO Scoured 16% is the same as the above yield, but with a 16% regain factor
- ACY predicts the clean weight at 17% regain with an allowance for expected processing losses during carbonising.

To note price comparisons, at 1% VM:

70% Schlum Dry = 71.3% JCS

70% Schlum Dry = 73.1% Scrd 16%

70% Schlum Dry = 73.7% Scrd 17%

and, for example, if a price of 616 cents greasy has been paid for a five-bale sale lot of 900 kg greasy weight, then:

616 cents greasy – 70.0 % Dry	= 880 cents (x 630 kg clean weight)
616 cents greasy – 71.3 % JCS	= 864 cents (x 642 kg clean weight)
616 cents greasy – 73.1% Scrd 16%	= 843 cents (x 658 kg clean weight)
616 cents greasy – 73.7 % Scrd 17%	= 836 cents (x 663 kg clean weight).

With such large ‘apparent differences’ in cost, it is therefore very important that these ‘expressions of price/cost’ are well understood between the client and the exporter supplier, for both quoting and purchasing functions. In essence, and for combing wool, there is really only one true cost and that is determined by the final within-mill processed top and noil weight, regardless of which yield basis is chosen for trading purposes.

However, even though the above examples can illustrate significant price/cost and clean weight differences, they are all in effect, exactly the same. It is simply a case of how each is expressed. It is therefore very important in the client/exporter relationship to be perfectly clear on which yield basis is to be applied in quoting, purchasing and delivery so there can be no serious misunderstandings.

4.3 Exporter bareme

In purchasing, it is important to be able to quantify all known costs associated with the buying and delivery functions. The exporter can then predict the total costs that might be involved for any given time frame, including forward shipment. These anticipated costs are then collated into various baremes, which can then be applied to particular orders and particular clients, all with their own unique costing structures. For example, the exporter must anticipate how long the wool might need to be held after purchase before appropriate shipment can be arranged, and then how long it will be before the client pays for the delivery according to the contract conditions. All of this could well involve bank finance, which is just one item to be factored into a bareme.

There is no such thing as a ‘standard bareme’, as each exporter company would develop their own system as needs demand and, generally, different baremes could be used for different markets such as Europe, Japan, China, due to different cost structures. However, it is possible to generalise for illustrative purposes.

The following items might need to be included in a theoretical bareme:

- broker delivery charge – Each broker passes on a post-sale per bale delivery fee, which includes the cost of taking the wool from storage and delivering it to the nearest dump of the exporters choice. This delivery charge can vary between brokers
- storage – There is a broker charge applied per bale to store wool after purchase and before delivery. This charge can vary between brokers in actual cost and time
- dump and countermark – These per-bale charges can vary between dumps
- land freight (if wool is to be transported from (say) Adelaide to Melbourne for shipment)
- sea freight (plus any port charges)
- certificates, including health, origin and AWTA combination
- any fixed bank document and courier fees
- marine insurance
- in-store insurance
- credit insurance
- bank interest on funds
- exporter margin.

These items can then be broken down into those which are dollar-per-bale costs, dollar-per-item cost and a percentage amount.

If we are to build a theoretical bareme, it might include:

- Dollar per bale –
    - delivery A$15.50 (an estimated average cost)
    - storage A$ 1.20 (an estimated average cost)
    - dump and countermark A$ 14.50 (average)
    - exporter margin A$10 (an example only).
- Dollar per item –
    - sea freight A$1000 per container (an example only)
    - certificates A$ 150 (estimated average)
    - bank and courier A$50 (estimated average).
- Percentage –
    - marine insurance 0.3 (estimated average)
    - credit insurance 0.5 (estimated)
    - in-store insurance 0.05 (estimated)
    - bank interest 7.75% (estimated). To cater for a situation which includes (say) needing to hold the wool for three weeks prior to shipment, and then payment

conditions of 'on arrival' with a shipment period of 26 days ie a total of 47 days interest x 7.75% = 0.9979%.

- Total –
    - dollar per bale: A$41.20
    - dollar per item: A$1200
    - percentage: 1.8479%.

These estimated costs can then each and separately be incorporated into a bareme, which would be known in this particular instance as a CIF bareme (CIF = cost, insurance and freight). Given that nearly all exporters now use computer systems for the majority of their tasks, they can put together as many client baremes as might be required, which can be easily maintained and adjusted according to changes in costs as they occur. Alternatively, they can work from one or more general baremes and allow premiums or discounts in price calculation according to circumstance.

A bareme is then a vehicle through which anticipated costs are factored together, so that when a client provides a price idea for a type or an order, the exporter can work the price through a bareme specific to the client's conditions to calculate a buying price at auction or in private sales.

It then becomes only a matter of deciding and agreeing on client terms as to what might be incorporated. It is through such a bareme that exporters can 'talk the same language' with their clients in terms of price, which take all client terms and conditions into account. For example, it might be that payment could be different to 'on arrival of goods'; maybe a specified time after arrival, or on arrival of documents rather than the wool. Any such change would simply require a change to the bareme to reflect these terms and subsequent differences in costs.

Some of the descriptive terms associated with these matters include:

- ACOF – Australian cents, clean on the floor. This needs no bareme for price calculation as, put simply, the greasy price divided by the yield gives the clean cost of the wool as it stands with absolutely no consideration to any on-costs
- AFOB – Australian cents, free on board. This takes all costs into account to the point of the wool being loaded onto the vessel
- AC&F – Australian cents, cost and freight; that is, all costs minus insurance
- ACIF – Australian cents, cost, insurance and freight; that is, all costs.

If we are to apply the theoretical bareme as illustrated above, an example would be:

ACOF: 616 cents greasy –70% schlum dry = 880 cents acof dry

ACIF: 616 cents greasy – 70% schlum dry = 939 cents acif dry.

So, the ACIF bareme has applied the costs as illustrated, and the difference (939 minus 880) of 59 cents provides the anticipated clean cents per kilogram costs for delivery to the client over and above the ACOF price, according to the client's specific terms and conditions. In this way, it is made possible for the client and exporter to talk price on a clearly understood basis.

4.4 Wool description/valuing

It is always vital that the exporter and client have a perfectly clear understanding of what is required by the client in terms of the greasy wool to be delivered and, where necessary, processing outcomes. This is to be covered in more specific terms in the following section, but in general, most exporter companies have over the years developed their own in-house systems of how to describe and value the greasy wool. This could be using the so-called Australian type as maintained during the time of the Australian Wool Corporation, the Awex-ID as provided by some brokers in the sale catalogue, or something quite different, as long as it provides the basis to suit their own particular requirements for descriptive and quoting purposes. These descriptive systems could be related purely to the greasy wool characteristics for either combing or carding wool or, in the instance of combing wool, it could be a system using some greasy characteristics combined with particular top characteristics (for example, predicted top fibre length), or even perhaps a system related primarily to top. Regardless of which system is chosen, these in-house systems can normally be used to 'translate' a client's particular wool requirements for valuing and quoting purposes.

Similarly, over the years, most mills and overseas users of greasy wool have also developed their own descriptive systems or 'types'. These are often provided on a widely circulated basis so that industry people are aware of what a particular mill's main wool requirements might be. This would assist in gaining maximum exposure to possible business opportunities, as potential suppliers are given this wool indication in advance.

It is recognised that it is also an extremely valuable exercise for exporters to frequently visit overseas clients to maintain a close understanding of their wool needs. This can then be used to advantage in delivery, as the purpose is to deliver exactly what the client needs and not be either 'under' or 'over' the delivery standards or specifications. For example, it is possible to deliver wool with a top length too long for the intended purpose. So, to have a system in place that is well understood is of mutual benefit. Similarly, it is relatively common for clients to make visits to wool sales in Australia with one purpose being to inspect the greasy wool with their exporter suppliers to ensure a common understanding of wool requirements. Hence, the descriptive systems in place can be well enhanced with discussion and wool inspections on the spot, be it 'over the bale' at sale or during a mill visit.

For quoting purposes ex auction, it is a function of AWEX to quote the market on an ACOF basis via the AWEX-ID, whereas most exporter companies would provide quotes on a client specific basis in terms of agreed wool type or description, currency of choice, and terms (for example, US$ per kg, CIF).

4.5 Price establishment

There is no one answer to this question: What is the price of wool? It may be any one of multiple choices, according to definition. For example, it is relatively common for woolgrowers to talk of price in greasy cents per kilogram terms, as this is the price paid at the point of sale (auction or private) and is the method by which they are paid for their wool; that is, greasy cents per kilogram x greasy weight. At the other end of the scale, greasy price means absolutely nothing to an overseas mill or merchant, as they are primarily interested in how much the wool costs delivered to their door on a clean basis and the clean weight of wool they will receive. So, this also is the language of the exporter, as they must be able to discuss 'price' with their clients.

If we again look at the example of a greasy price paid of 616 cents per kilogram, we can see how the differences might appear:

616 cents – 70.0% acof dry	= 880 cents clean acof dry
616 cents – 70.0% acif dry	= 939 cents clean acif dry
616 cents – 71.3% acif jcs	= 922 cents clean acif jcs
616 cents – 73.1%acif scrd	= 899 cents clean acif scrd 16%
616 cents – 73.7% acif scrd	= 892 cents clean acif scrd 17%.

Each of the above prices is correct, apparent differences notwithstanding, as the only thing separating them is the way 'price' is expressed, even though all come from the exact same wool and same greasy sale price.

One point of clarification might be to define price and cost as commonly applied in the industry. The greasy price paid to the grower is commonly referred to as 'price', the resulting (calculated) clean price is often referred to by exporters as the 'cost'; this same cost is then again referred to as 'price' in communication with the client.

A different way to look at 'price' is to go to the opposite end and take an example of price in terms of top. The question then is: What is the greasy wool cost (or price) to make a top of certain characteristics? The answer is that there is no such thing, as it will depend entirely on what the top maker and comber decide to include in the delivery to meet the top specifications, and this will depend in part on the previous experience relevant to that particular mill. Are they prepared to include both sound and tender fleece wool, some short fleece wool? Are they prepared to include some skirtings? Every time you alter the mix you change the price, but you still might make a similar top from any of those wools in certain proportions. For example, if you are looking to make a top with the basic specifications of 20.3 / 70 mmH , and 45% CVH, a practical estimation of the market price for the various possible components at 20.0 micron greasy might be:

sound fleece	860 acif		
short fleece	835 acif		
tender fleece	820 acif		
best brokens/pieces	800 acif		
Example 1 –	100% sound fleece	cost	860 acif
Example 2 –	60% sound fleece		860 acif
	10% short fleece		835 acif
	10 % tender fleece		820 acif
	20% bkns/pcs		800 acif
	(100%) average cost		841 acif.

Note: An allowance is made for the difference in micron between the greasy and top measurements, as it is believed that some of the shorter and finer fibres are removed as noil in processing, resulting in a top reading that is normally broader than the greasy micron.

With proper wool selection and appropriate greasy wool blending prior to processing, each of the above examples would as a minimum produce the required specification of 20.3 / 70 mmH and 45% CVh, but the basic wool cost varies by nearly 20 cents per kilogram.

It always remains difficult to answer the question: What is the price (and/or cost) of wool? It can and will vary according to each and every individual circumstance. The only way to know is to understand everything about the actual prevailing terms and conditions that apply to one specific example.

5. Specifications/consignments

In order for an exporter to deliver a consignment by either firm sale or indent, the client's wool requirements and needs must be well defined and clearly specified.

5.1 Customer order

The customer order, as a minimum, will normally include:

- specified clean weight, the number of bales, or FCLs, for the consignment
- time frame for delivery
- price and currency
- terms and conditions of payment
- greasy wool specifications
- top specifications, as and if required.

The order can be passed by the client in any form to the supplier, as long as the essential points are clear and defined.

5.2 Specification/delivery requirements

As could be expected when dealing on a global basis, there is absolutely no such thing as a 'standard format' for the wool specification for deliveries, whether it be by firm sale or indent. This is entirely up to the client and their exporter suppliers, based on either the client's own unique and specific requirements or determined by discussion and agreement between the two parties. To this combination of factors can be added the roles of the top maker and the comber.

By definition:

- the topmaker is the person responsible in the first instance for establishing the batch of greasy wool for combing
- the comber is the person who physically converts the greasy wool to top.

Therefore, it may also be that:

- the (mill) client is both the top maker and comber or, at times,
- the exporter is the top maker and the (mill) client the comber.

That is, in the first instance, all decisions on the composition of the delivery are those of the mill, as opposed to the latter situation, when the exporter, who by agreement with the client, undertakes to determine what wool is to be delivered in order to produce a (client) specific outcome in processing.

Among these various options, the mill might chose to have the exporter deliver any of the following:

- a 'straight' delivery, that is, all fleece according to quite specific guidelines or 'straight skirtings' similarly defined. These different deliveries of 'straight' types can then go into production as they stand for a particular top order or into a 'stock position', from which the mill can then chose blending components to make different tops according to their clients' different and changing needs

- a delivery that the mill has decided will meet a certain top specification, and will order accordingly. This may be decided by proportions of different types or kinds of wool, for example, 75% sound fleece, 10% tender fleece and 15% skirtings. This would have been decided according to previous experience of what to include to meet that certain top requirement 'at a price'
- by discussion and agreement, the exporter becomes the top maker on behalf of the mill and delivers a parcel to meet a specific top requirement within basic guidelines but with the blend composition left mostly to the experience of the exporter. For example, if coloured fibre is an issue for a particular top, the exporter may choose to eliminate skirtings from the delivery (as skirtings might be seen to hold a dark fibre risk) or at least choose some lots 'with extreme care'. The key point is to deliver greasy wool at a price to meet a very specific top outcome as required by the client.

The wool specifications for combing wool can be expressed in any number of ways. They may be:

- primarily greasy wool related
- a mixture of greasy wool and top specifications
- primarily top related.

Similarly, for carding wool, the specifications may be all greasy wool related, or have reference to scoured characteristics such as clean colour.

For non-wool characteristics, it is possible to also include in the specifications, factors such as:

- type of classing certificate included/excluded (for example, bulk class or interlot are sometimes not allowed)
- whether private purchases are allowed
- reference to purchases from particular selling centres.

There is no single method for the specification of wool deliveries. There are, however, some parameters that are commonly included and can be regarded as important in determining the wool to be purchased. These include:

- average Mean Fibre Diameter (MFD) for the whole delivery
- allowable micron range (eg +/- 0.5) or the maximum micron allowed for any one lot
- average maximum vegetable matter content allowed for the delivery
- allowable maximum VM content for any one lot
- average greasy mm staple length (SL)
- minimum and maximum greasy SL for any one lot
- average greasy staple strength (NKT) allowed for the delivery
- minimum NKT for any one lot
- kind of wool required, for example, fleece/style, pieces, bellies
- allowable (classing) certificates which can be included/excluded; for example, bulk class lots, interlots, OML

- the type of vegetable matter allowed, particularly if seed and shive is considered a problem in processing.

In recent times, additional items have included:

- theoretical TEAM predicted Hauteur (predicted top length, mmH)
- theoretical TEAM predicted Coefficient of Variation of Hauteur (cvH)
- theoretical TEAM predicted Romaine
- position of break, middle, relating to staple strength.

The above have been included in some specifications at either the consignment level or even at the single lot level. Specifications at the single sale lot level can be extremely restrictive and at times counterproductive, as each time a specification becomes increasingly more 'tight', it tends to markedly reduce the quantity of wool available for selection and lead to upward price penalties. Inclusion at the consignment level might assist in the delivery specification, but at the lot level may be considered an over use of the information.

The following examples illustrate the range of possible specifications that might be employed.

Example 1

A wool type and other greasy wool characteristics; for example, the type might be the client's own version of a type (known to the supplier) or an Australian type such as type 62, known to represent fleece wool / best topmaking style / average length, to which can then be added other defining characteristics, as follows:

- type 62 (best topmaking)
- 21.0 micron average (+/– 0.5 mic)
- 68% schlum dry yield minimum, any one lot (AOL)
- 1.5 % vegetable matter (2.0% maximum AOL). No shive
- 85 mm greasy staple length (minimum75, maximum 95 AOL)
- 35 nkt staple strength (30 nkt minimum AOL)
- 50% position of break, middle (65% AOL)
- no unscourable colour.

This would provide sufficient information for delivery of greasy wool to the client`s standard, as each of the main wool characteristics is defined in both the average required for the delivery as a whole and the minimum and maximum ranges at the lot level allowed for each characteristic. This is a very 'straight' specification; all fleece and all greasy wool parameters are strictly controlled.

Example 2

A slightly looser version might be something like the following:

- Similar to type 79
- 22.0 mic average (+/- 0.7 mic)
- 3% vm maximum (+/– 1.0%)

- 75 mm gsy staple length minimum
- 20% tender allowed
- 10% unscourable colour allowed
- 10% brokens /pieces allowed (similar type 159B).

This would be a delivery deliberately aimed at producing a top ‘at a price’. There is an ‘indication’ of what may be delivered (similar type 79 and 159B), but with far less restrictive specifications to accompany it. However, there is sufficient information for the exporter supplier to understand what is required. It would also be more than likely that previous experience with the client would have allowed a good understanding of the requirements to go with the specifications.

Example 3

A specification with reference to both greasy and top characteristics might be something like the following:

- similar type 62
- 21.5 mic gsy (+/– 0.5 mic)
- 1.0% VM (1.5% maximum AOL)
- 75 mm gsy staple length mimimum AOL
- 72 mmH top fibre length minimum
- 45% cvH maximum.

This specification is now attempting to cover both the kind of greasy wool to be delivered and some of the top measurements required, which are likely to be subject to exporter guarantee. It is possible that some of the greasy characteristics can now be excluded as the top requirements essentially govern what should or should not be included. For example, even though staple strength is not specifically mentioned, the fact that 72 mmH is the minimum requirement in top, and cvH is 45% maximum, the exporter would need to be very careful to make sure that tender wool does not put those requirements at risk. Of course, it would be quite possible for the specification to include reference to greasy staple strength if it might be considered ‘safer’ to do so.

It should be mentioned that with each further restriction or specification applied, the risk is that the amount of wool available for that order becomes increasingly reduced, and the price might subsequently be increased as the parameters become too tight or ‘over specified’. There is little point in having a set of specifications that will produce a top far in excess of the minimum required. The key is to have a working relationship between the client and supplier, so that any specification sets the minimum deliverable standard required, the maximum selection is available to the exporter and the price is kept to a minimum to the advantage of all concerned.

Example 4

Another specification might contain reference to greasy characteristics and predicted top measurements to replace actual top results that might have to be guaranteed by the exporter.

If using the TEAM predicted top measurements, there are several factors to be taken into account.

- the use of either the TEAM 2 or TEAM 3 formula, which can produce quite different predicted outcomes

- use of the predicted values at the consignment level or the lot level, or both. It is recognised that the TEAM predictions were established for use at the consignment level, and to use them for another purpose might only result in 'over specification'. If applied at the lot level, as is known to happen, then the predicted results can be very restrictive as many lots quite suitable for inclusion at the 'batch level' could be subject to exclusion from the delivery. A more suitable option may be to apply TEAM predictions at the consignment level and control the processing outcomes with greasy specifications that may have a bearing on any particular top characteristic, for example, the position of break/middle may have an influence on cvH and/or romaine, so it could be preferable to set upper limits for this at the lot level, rather than TEAM prediction values, as lots quite suitable for inclusion will not be eliminated without due cause. However, the TEAM predictions remain to apply at the consignment level.

A specification using all parameters might be as follows:

- similar to type 62
- 21.5 mic greasy maximum (+/- 0.5 mic)
- 1.0% VM maximum (1.5 % maximum AOL)
- 85 mm gsy staple length (75 min`m, 95 maximum AOL)
- 35 nkt staple strength (28 nkt minimum AOL)
- 55% position of break, middle (65% maximum AOL)
- 72 mmH predicted TEAM top length (68 mmH minimum AOL)
- 45% predicted TEAM cvH (48% maximum AOL).

This specification comes close to 'covering all bases' but, as indicated, can be relatively restrictive in terms of what wool can and cannot be included. So, while the mill can anticipate quite closely just what wool they will receive, it should be understood that selection might be quite restricted at times and the price may indeed be higher due to those restrictions placed on the delivery.

Example 5

A specification that is primarily top related might be something like the following:

- 21.5 / 75 (i.e. 21.5 mic maximum in top / 75 mmH minimum)
- 45% cvH maximum
- romaine 8% maximum
- dark and coloured fibre <3 per 100 g top maximum
- short fibre <30 mm 10% maximum
- good fleece 1.0 % VM maximum.

From this, the exporter would know that they need to deliver good style fleece around 21.2 mic greasy to meet 21.5 mic in top, mostly sound wool to meet the 75 mmH minimum, 45% cvH, and romaine of 8%. Care would also need be taken to keep coloured fibre to less than 3 per 100 grams of top, but this is much less restrictive than having specifications for every characteristic plus TEAM predictions at the lot level.

It should also be noted that the relationship between greasy micron and top micron can generally be regarded as approximately 0.3 micron, (with top micron the coarser of the two) but it is really up to each and every mill to quantify the difference over time and establish that specific mill factor so they know what greasy micron to order to obtain a particular top micron.

Example 6

A different specification might be something like the following:

- 19.0 / 58 (19.0 mic in top / 58 mmH)
- 52% cvH maximum
- romaine 12% maximum
- dark and coloured fibre < 15 per 100 grams top maximum
- short fibre <30 mm 16% maximum
- good pieces and bellies, 4% VM maximum.

From this specification, it might be judged to deliver around 18.7 to 18.8 micron greasy, good to average length pieces, and maybe some very good bellies, provided there is minimal risk of dark fibre. The cvH and romaine should be achievable from good skirtings, aside from quite tender and/or short wools, which would also contribute to short fibre content if included.

It is the exporter's risk to guarantee all such deliveries through to top, so the exporter must be able to 'read' the specifications and have good understanding what needs to be delivered to meet those requirements.

None of the above examples is intended to be a template for order specifications, but to illustrate the wide differences that exist between mills and countries in order specifications and delivery requirements. The range of possibilities and methods employed are virtually endless, and are only restricted by perceived limits.

It is the exporter's job to interpret and work with any set of specifications that might be in place. It is then also at the exporter's risk to ensure all relevant limits are achieved But the best arrangement by far is for the exporter and client to work closely together in the first instance to determine the most appropriate set of specifications that will meet the particular delivery requirements while continuing to maintain the lowest risk option of ensuring the specifications are comprehensive and relevant to each delivery.

5.3 Prediction – TEAM 2, TEAM 3 – certification

'Prediction' itself needs definition, as it can mean different things to different people.

In the days before objective measurement, the buyer/exporter was required to deliver greasy wool to customers according to greasy wool characteristics and/or yield. The wool could be sold as a 'type', which on arrival would be sorted into qualities as determined by that type. So the exporter was required by guarantee to assess, predict and then deliver the correct 'qualities' by weight. The yield also had to be predicted and guaranteed. At that time it was common for the exporter to receive from the client, the full greasy wool sorting result and the combed top and noil or scoured processed result. If either were deficient in any regard, the client would submit a claim to the exporter.

With the introduction of objective measurement, for fibre diameter, VM and yield, it became a common method for processors and merchants to request deliveries on the basis

of those greasy wool measured results, but still very often with an exporter estimated and guaranteed top length. One of the tasks then also facing the processor was to determine the relationship between the greasy micron and the measured top micron, so you could predict top micron from the pre-sale measurement. At this time, the common method for the measurement of micron in both greasy wool and top was by the airflow method. It was considered relatively common for that relationship between greasy and top to change according to diameter, with less difference for the finer wools, graduating to a greater difference for (say) the broader wools such as crossbreds. For example, a greasy 18 micron wool might result in a top of 18.1 micron, whereas for the broader wools, 30 micron might result in 30.4 in top. But that difference needed to be established in fact by each individual mill according to its own circumstance to better predict top micron. Some mills, especially mills in the USA, at times used a projection microscope for top measurements, so their relationship was different again, but as with other mills, this could be established through the analysis of proper mill laboratory records over time.

As previously mentioned, the pre-sale measurement for yield is a predicted yield and the relationship between it and actual processed yield can change due to different kinds of wools, changes to within mill practices, and also between mills. It is therefore incumbent on each mill to establish that relationship, predicted yield to actual, according to the ongoing analysis of results over time so that they can better predict actual processing outcomes.

The next measured greasy wool characteristics to be introduced into the system on a routine pre-sale basis were those of staple length, staple strength, and position of break, to become known as additional measurements. In time these measurements gained acceptance, and were gradually included in some mill specifications, with upper or lower limits applied as parameters to certain types or orders. These measurements then formed the basis of what were known as the TEAM Trials, where mill consignments were fully measured and the combing results analysed to see whether formulae could be established from greasy wool measurements to predict certain top values.

The first such project, called TEAM 1, was conducted from 1981 to 1984. A further trial, TEAM 2, was established in 1986 on a larger scale to expand on the database. The final report contained information on 545 consignments from 20 mills in 12 countries.

From these trials, formulae were produced to predict the values of Hauteur, Coefficient of Variation of Hauteur, and Romaine (noil). The latter two formulae were considered to be not as robust as that for the prediction of Hauteur, and should be used for guidance purposes only.

Note: A valuable reference document is the *Report on Trials Evaluating Additional Measurements 1981–1988*, published in December 1988.

Hauteur has long been regarded as a very important top value. The introduction of the TEAM formula made it possible for mills to include reference to TEAM-predicted Hauteur in specifications. The formula was established on the basis of mill consignments and was not intended to be applied at the sale lot level, although as previously mentioned, it is known that some specifications are today attempting to use it in this manner. A more appropriate use might be to apply it as was intended, at the batch or consignment level, and largely control the outcome with parameters on the greasy wool measurements which contribute to the formula.

In July 2000, the method for the pre-sale measurement of fibre diameter was changed from airflow to Laserscan. This meant that the greasy-to-top micron relationship was possibly subject to change, and mills were once again required to begin to monitor that relationship on this new basis so as to re-establish the predictive values. It might be estimated that a general difference from greasy to top, could be approximately plus 0.2 micron if using the Laserscan method for both, and maybe 0.3 if using airflow for top. But it is certainly up to

individual wool users to establish that value according to their own circumstance and the method used to measure the top.

A further TEAM Trial undertaken recently has resulted in the release of TEAM 3.

Note: A valuable reference document is the TEAM 3 Report on Trials Evaluating Additional Measurements, March 2001-March 2004.

For the trial, 34 mills around the globe contributed 647 consignments comprising 159,000 bales.

From the results gained, there have been some quite significant changes in the formulae TEAM 2 to TEAM 3:

- for Hauteur

  TEAM 2: 0.52L + 0.47S + 0.95D – 0.19M* - 0.45V – 3.5

  TEAM 3: 0.43L + 0.35S + 1.38D – 0.15M – 0.45V – 0.59CVD – 0.32CVL + 21.8

- for CV Hauteur

  TEAM 2: 0.12L – 0.41S – 0.35D + 0.2M* + 49.3

  TEAM 3: 0.30L – 0.37S – 0.88D + 0.17M + 0.38CVL + 35.6

- for Romaine

  TEAM 2 – 0.11L – 0.14S – 0.35D + 0.94V + 27.7

  TEAM 3 – 0.13L – 0.18S – 0.63D + 0.78V + 38.6.

Note:

L = staple length

S = staple strength

D = diameter

M = position of break, middle

V = vegetable matter content

CVD = CV diameter

CVL = CV staple length.

All of the above formulae have been developed from the average results of all participating mills. It therefore stands to reason that some mills would get results greater than those predicted by the formulae, and others lower. It might also be that over time, mills find different kinds of wools consistently produce results different from those the formulae predict. So it is essential that each mill closely monitors the predicted to actual relationships, so they may in time, come to the position where they can apply a Mill Adjustment factor to any one of the formulae. For example, if they consistently obtain 3 mm greater in Hauteur compared to the TEAM 3 formula, they simply add 3 to the existing 21.8 factor (3+21.8) to make it 24.8. This becomes their own unique mill formula for predicting Hauteur.

Similarly, another mill might notice over time a consistent difference between different kinds of wool. For example, the predicted to actual results for all fleece may consistently

produce a result different compared to all skirtings. It might be that the fleece result is very close to the formula, but skirtings produce on average 3 mm less. In this case the Mill Adjustment would be to take 3 from the formula 21.8 – 3 =18.8, and this would become their unique mill formula to predict Hauteur for skirtings. So, in this instance, the mill would use the two different formulae, the standard formula for fleece and the adjusted formula for skirtings, depending on the wool to be processed.

The choice now is for mills to select between TEAM 2 and TEAM 3 as to which formulae they wish to apply. In the case of Hauteur, the predicted results may be quite different. The following example takes some measured results and applies them to the two formulae:

21.0 mic / 22% CVD

87 mm SL / 16% CVL

36 nkt SS / 45% PofB/M

1.0% VM

TEAM 2 = 69.6 mmH

TEAM 3 = 75.5 mmH.

There is quite a significant difference between the two. However, a mill can relate to both if they so chose or, for simplicity, may pick one or the other and apply the specific Mill Adjustment factor accordingly.

To look at the effect that greasy characteristics can have on predicted Hauteur, we can change some values and apply them to the TEAM 3 formula as follows:

Reduce the nkt from 36 to 32, and increase the PofB / M from 45% to 65%

TEAM 3 = 71.1 mmh.

In this case, it can illustrate that if a mill is looking to produce a 70 mm Hauteur top in that micron range, then maybe they can afford to buy an average of 32 nkt and 65% mid break wools rather than 36 nkt and 45% mid break which gives a predicted value of 75.5 mmH. It is quite possible that the price could be less given the ‘lower’ greasy wool measured results. And as is always the case, the aim is to buy the cheapest available wool to produce the minimum top requirements. Over specification is one way to possibly increase costs.

Similarly, the same exercise can be done with the formula for cvH.

If we take the same greasy measured results as were taken for the Hauteur example:

TEAM 2 = 46.6% cvH

TEAM 3 = 43.6% cvH.

Again, if we change nkt to 32 and Pof B/M to 65% for TEAM 3:

cvH = 47.0%.

The same for Romaine:

TEAM 2 = 6.7%

TEAM 3 = 8.4%.

Change the nkt to 32 for TEAM 3:

Romaine = 9.1%.

So, it is possible not only to predict and relate to the processing outcomes of Hauteur, cvH and Romaine, but also to look at the effects each individual greasy wool measurement can have. It, therefore, enables the topmaker to predict important top characteristics and also control the effect through the different pre-sale measurements.

By illustration, the above examples for TEAM 3 in summary are:

21.0 mic / 22% CVD

87 mm SL / 16% CVL

36 nkt SS / 45% Pof B/M

1.0% VM

TEAM 3 = 75.5 mmH, 43.6% cvH, 8.4% Romaine.

Change the nkt to 32 and the Pof B/M to 65%, and:

TEAM 3 = 71.1 mmH, 47.0% cvH, 9.1% Romaine.

As illustrated, two relatively different tops can then be produced by making what might be considered comparatively small changes to the greasy measurements. It is all really a case of knowing what the top maker wants the comber to produce and working to adjust the specifications accordingly. Similar exercises can be done with all three formulae and with all of the greasy wool characteristics that contribute to the formulae, to find and measure the differences in prediction which then follow.

The examples are endless, but the principle is that each top maker and mill now has the tools to more accurately control and predict processing outcomes and, using these tools sensibly, can assemble deliveries at minimum cost to meet minimum top specifications. There is an expression which says that it is not the first cost that is important, but the last cost, which means that greasy wool can look cheap for price when first purchased, but can turn out to be quite expensive after processing if it produces disappointing outcomes such as insufficient length and a poor romaine.

Top makers and combers can quite legitimately and deliberately buy, for example. tender wool, high mid-break wool or any other kind of wool that might suit a purpose, or is aimed at producing only an ‘average industry yarn’, but if a mill is looking to improve the quality of certain tops, the application of these prediction techniques can certainly assist.

A further piece in the puzzle to follow appropriate and relevant greasy wool specifications, careful wool selection and the use of every available tool in prediction of processing outcomes, is that of approved certification.

Each pre-sale tested lot of greasy wool is accompanied by an AWTA Ltd IWTO Test Certificate. The certificates are for both the core test values and staple test values (see Attachments 9 and 10). The most important certificate is the Combined Certificate, which provides the details for each individual lot in a delivery in addition to the combined values (see Attachments 11 and 12). The Combined Certificates are documents that should accompany each and every delivery of greasy wool as they provide all of the test information that is vital in the delivery of wool from exporter to mill client.

5.4 Consignment building

To put a consignment together requires a considerable amount of planning and administration. This will vary according to the type of order in force, but most will follow a pattern.

In the case of an Indent Order, it is normal that the client places the order in the expectation of the wool being purchased almost immediately. The key requirement is then to buy the wool within a given time frame (often one to two sale weeks) and then have the wool ordered out of the brokers store dumped and shipped as quickly as possible so as to keep all costs to an absolute minimum. The exporter needs to have the wool moved quickly to minimise storage and interest charges, which are for the client's account.

In the case of a Firm Sale, it can be a quite different exercise, as often the wool is sold forward for distant delivery. The price is fixed, so all costs incurred over what is normally a longer time frame, are for the exporter's charge. The exporter then needs to take this different set of considerations into account, and carefully manage the associated functions, which can include the following.

- Given that delivery may not commence for quite some time, the exporter needs to calculate and make allowance for any storage and interest charges that could be incurred during purchase. This could be in the form of a cents per kilogram per week cost, which is additive according to how many weeks exist prior to shipment and needs to be deducted from his calculated buying price. The closer to shipment, the less the deduction.
- The exporter needs to take account of the anticipated wool selection in terms of both quantity and type of wool available. For example, the best superfine offerings are sometimes restricted to certain selling centres and certain times of the year, so the exporter needs to take all such matters into account in managing the purchases.
- If buying from multiple locations, distance and timing can be an issue, plus possible additional transport costs to get the wool to a common dump for shipping. Again, all such extra costs need to be taken into account.
- Market risk and risk management associated with forward sales are a separate subject to be covered later in the document, but price and market trends can also influence the buying strategy. Regardless of how the market risk is managed, if the exporter is convinced that the market will move in a certain direction during the life of any particular forward sale, the buying can be brought forward if the market is believed to be on the rise, or delayed accordingly if the opposite view is taken.

In essence, for an Indent Order the consignment building process is normally concentrated into a particular selling centre over a much reduced time span, whereas for Firm Sales, the purchasing is more normally spread over multiple locations and possibly a greater time span.

To illustrate some points in consignment building, the following exercise will look at some 'dummy orders / firm sales', but using actual lots offered at a particular auction and using the actual prices received for each lot, so that any price differences and discounts/premiums are real and can be viewed as being a live example of how a consignment can be built according to a client's wool technical parameters, complete with market prices.

For the purpose of the exercise, the following could be taken to apply to either an indent order or a firm sale, the important point being that of the requirement to purchase the wool according to a given set of (client) wool specifications and parameters.

To illustrate the above, we need to have established:

- the client ID
- the client bareme
- the agreed wool descriptions (or types)
- the client order specifications
- the order pricing structure, at the client's direction for an indent, or at the exporter`s discretion for a firm sale.

There is not one single method employed by exporters in purchasing. Given that there are discounts and premiums in the marketplace for most characteristics, such as micron, staple strength and vegetable matter, some companies would choose to price the order by taking those discounts and premiums into account on a sliding scale lot-by-lot basis and then adjust for any further market variations as they might occur, while some other companies might deliberately choose to attend the sale room with a basic flat price for each order and make all of the necessary adjustments in bidding for the wool as the sale proceeds. However, all companies analyse the market in considerable detail so all of the various discounts and premiums are known and can be accounted for in quoting, selling and buying.

As previously indicated, in the case of an indent order, it is relatively common to buy the order in the space of one to two sale weeks, whereas with firm sales, if shipping is for a distant month, the exporter can choose to sit and wait until closer to that time, or begin to 'pick up' some quantity at auction or by buying privately while taking the additional costs such as storage and interest into account in the buying price, market conditions permitting. If the market starts to rise, it would be common for the exporter to begin some purchases in order to at least partly cover the sale.

In the following example, we will look at two deliveries, each with different specifications. One purpose is to illustrate that each (daily) purchase can be significantly different in price and wool composition, and that it is only the final batch averages which should be regarded as important along with the wool that can be put together to produce a required outcome.

Example

- The client ID will be IFC (International Fibre Centre).
- The client bareme will be as previously illustrated in 4.3 (ACIF).
- For the purpose of the exercise we will introduce an example in-house descriptive system for types (an example client type):

  MFB merino fleece / best style

  MFG merino fleece / good style

  MFS merino fleece / short

  MFT merino fleece / tender (24 NKT minimum, 30% Pof B/M maximum)

  MFG/B merino fleece / high VM (4.5% maximum, burr no shive)

  PB&PG best to good brokens and pieces.

The example specifications are:

- IFC 1 2 containers / price 927 acif dry

  top 19.8 mic / 75 mmH mininum TEAM 3 / 45% cvH maximum TEAM 3

  good to best fleece (100 mm gsy SL maximum)

  19.5 mic greasy (+/- 0.5 mic)

  1.0% VM maximum (2.5% maximum aol)

  15% tender allowed (MFT)

  10% short allowed (MFS)

  10% bkn/pcs allowed (PB&PG)

- IFC 2 2 containers / price 753 acif dry

  top 23.3 mic / 78 mmH minimum TEAM 3 / 42% cvH maximum TEAM 3

  good to best fleece / no pieces (105 mm gsy SL maximum)

  23.0 mic greasy (+/- 0.5)

  1.5% VM max`m (4.5% maximum aol)

  10% tender allowed (MFT)

  10% short allowed (MFS)

  15% high VM flc allowed (MFG/B).

To use the pricing system that takes account of the then current market discounts and premiums (pricing basis / Schlum Dry ACIF):

IFC 1	**mic**	**MFB**	**MFG**	**MFS**	**MFT**	**PB&PG**
	19.0	1040	1020	1005	990	880
	19.5	955	935	920	905	845 (av. 927 acif @ 19.5 mic x type)
	20.0	870	850	835	820	810

Note: The exporter computer buying systems used today automatically calculate prices between the given values; for example, at 19.1 mic, type MFB would have a clean price applied of 1023 acif. Also, the above illustrates the discount/premium system in applying clean prices according to the prevailing market conditions, for example, tender fleece (MFT) is discounted by 30 cents from good fleece (MFG) and 50 cents from best fleece (MFB). However, these values are not constant and change over time and between microns.

IFC 2	mic	MFB	MFG	MFS	MFT	MFG/B (2.1–3.0%)	MFG/B (3.1–4.5%)
	22.5	775	770	760	755	740	720
	23.0	765	760	750	745	730	710 (753 acif @ 23.0 mic x type)
	23.5	755	750	740	735	720	700

Note: The discounts and premiums for this micron are different to those at the finer level. Generally, the discounts will increase for finer microns and become less for broader types.

For the purpose of the exercise, we will restrict the purchasing to three days. At the end of each day, the exporter would produce a daily purchase summary which would provide all relevant details of the purchases for that day. As the purchases build up over successive days, the exporter would keep a careful tally of each type for each order and continually run the averages for each order to be aware of exactly what is needed to be bought to complete the order. This summary can be called the weekly purchase summary and can be produced through the computer system for purchases made on two or more days.

The intent now is for the exporter to start the purchases at the average price indicated (either as an indent or a firm sale) according to the selection available and within the wool parameters as provided. Each day can be very different in terms of the kinds of wool available for purchase and fluctuating prices according to market trends. Therefore, the purchases from any particular day for the same order may also be different in all aspects, provided they are all within the guidelines, and ultimately meet the overall specifications. Each order and each specification can be different, but in these examples, the characteristics the exporter needs to be continually taking into account during purchase are:

- quantity — bales (for two FCL)
- micron — mean average and per lot (+/– 0.5)
- VM — mean average and per lot maximum
- component types — quantity of bales by allowed percentage
- TEAM 3 — minimum top length and maximum cvH at the consignment level (controlled by the measured characteristics).

As indicated, a summary of purchases can be produced for each day and collective days, as the purchasing progresses. See the following attachments:

Attachment 13 – Daily purchase summary, day 1

Attachment 14 – Daily purchase summary, day 2

Attachment 15 – Weekly purchase summary, days 1 and 2

Attachment 16 – Daily purchase summary, day 3

Attachment 17 – Weekly purchase summary, days 1, 2 and 3 (final order summaries)

In summary, the example purchases bought over three days for the two orders taken from an actual sale were as follows:

	B/S	Mic	VM	SL mm	SS Nkt	PoB/M	Clean cost	TEAM3 mmH	TEAM3 cvH
IFC 1									
Day 1	72	19.56	06	86	39	36	926	76.3	41.9
		(19.2–20.0)	(0.2–0.9)	(67–96)	28–49)	(10–66)	(822–998)	(66–86)	(35–51)
Day 2	74	19.34	0.7	88	34	29	938	76.0	43.5
		(19.0–19.9)	(0.3–2.3)	(80–94)	(24–44)	(14–57)	(827–1047)	(66–83)	(41–49)
Day 3	74	19.64	1.0	88	38	37	905	77.3	42.4
		(19.1–19.9)	(0.3–1.6)	(69–100)	(26–44)	(18–62)	(859–994)	(68–83)	(32–50)
Total	220	19.50	0.8	88	37	34	923	76.5	42.6
		(19.0–20.0)	(0.2–2.3)	(67–100)	(24–49)	(10–66)	(822–1047)	(66–86)	(32–51)

	B/S	Mic	VM	SL mm	SS Nkt	PoB/M	Clean cost ACIF	TEAM3 mmH	TEAM3 cvH
IFC 2									
Day 1	73	22.93	1.1	90	38	29	767	82.9	39.4
		(22.6–23.5)	(03–2.4)	(83–100)	(31–48)	(11–42)	(744–786)	(78–90)	(34–46)
Day 2	73	23.15	2.0	90	35	38	732	80.1	41.2
		(22.7–23.5)	(0.5–4.4)	(76–101)	(26–43)	(3–69)	(689–755)	(73–85)	(37–48)
Day 3	75	22.83	1.2	88	38	32	762	81.2	38.9
		(22.5–23.2)	(0.4–2.4)	(73–95)	(32–45)	(9–60)	(752–770)	(69–84)	(28–44)
Total	221	23.0	1.4	89	37	33	754	81.4	39.8
		(22.5–23.5)	(0.3–4.4)	(73–101)	(26–48)	(3–69)	(689–786)	(69–90)	(28–46)

The above orders illustrate how it is possible to buy the required types gradually over time, with each day's purchase being significantly different to the next, all times being aware on a daily basis of what is required to complete the batch, finally drawing the purchases together to meet the final order specifications.

IFC 1

Order target		Bought	Range
2 FCL	Approx. 220 b/s	220 b/s	
Price	927 acif	923 acif	822–1047
Gsy Mic	19.5 (+/– 0.5)	19.5	19.0–20.0
VM	1.0 (2.5 maximum)	0.8	0.2–2.3
SL/mm	100 maximum	88	67–100
SS/nkt	24 minimum	37	24–49
TEAM 3 mmH	75	76.5	66–86
TEAM 3 cvH	45	42.6	32–51
65% sound flc	143 b/s	144	
15% tdr flc	33 b/s	31	
10% short flc	22 b/s	20	
10% bkns/pcs	22 b/s	25	

IFC 2

Order target		Bought	Range
2 FCL	Approx. 220 b/s	221 b/s	
Price	753 acif	754 acif	689–786
Gsy Mic	23.0 (+/– 0.5)	23.0	22.5–23.5
VM	1.5 (4.5 maximum)	1.4	0.3–4.4
SL/mm	105 maximum	89	73–101
SS/nkt	24 minimum	37	26–48
TEAM 3 mmH	78	81.4	69–90
TEAM 3 cvH	42	39.8	28–46
65% sound flc	143 b/s	143	
10% tdr flc	22 b/s	22	
10% short flc	22 b/s	22	
15% high VM flc	33 b/s	34	

It is possible to put batches together with apparent wide ranges, provided there are sensible and appropriate specifications in place and the wool selection is careful. For example, the effect of low Nkt tender wool can be minimised by controlling the position of break. High VM fleece wool with burr and not shive should not cause undue problems in top cleanliness. Apparent wide ranges in certain characteristics can be controlled by the comber with careful and appropriate blending before processing. Much of the ordering factor in consignments is of course subject to whether the end-use in top is considered critical or non-critical. From that point on, the task should be aimed specifically to produce that outcome, with the relevant wool specifications to suit. A joint approach between client and exporter can certainly assist to achieve the required outcomes.

Putting a consignment together requires significant attention to detail, and from the exporter's viewpoint, brings together at one time all of the necessary management, administrative and wool technical skills.

Attachment 1
Australian Wool Corporation (AWC) type lists

AUSTRALIAN WOOL CORPORATION — TYPE LIST — JULY 1987

MERINO COMBING FLEECE

Grade	CHOICE			SUPERIOR			SPINNERS			BEST T/M			GOOD T/M			AVERAGE T/M			INFERIOR T/M			Grade
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	
100/90s	1PP	9PP																				
90s up	1P	9P	14P	18P	25P	31P	34	43PP	49PP													
80s up	1	9	14	18	25	31	35	43P	49P	54PP	60PP	65PP	70PP	76PP	82PP	87PP	92PP	97PP	E87PP	E92PP	E97PP	17.5-17.9
74s up	2	10	15	19	26	32	36	43	49	54P	60P	65P	70P	76P	82P	87P	92P	97P	E87P	E92P	E97P	18.0-18.5
18.6-19.5	3	11	16	20	27	33	37	44	50	54	60	65	70	76	82	87	92	97	E87	E92	E97	18.6-19.5
19.6-20.5							39	45	51	55	61	66	71	77	83	87A	92A	97A	E87A	E92A	E97A	19.6-20.5
20.6-21.5							40	46	52	56	62	67	72	78	84	88	93	98	E88	E93	E98	20.6-21.5
21.6-22.5							41	47	53	57	63	68	73	79	85	89	94	99	E89	E94	E99	21.6-22.5
22.6-23.5							42	48		58	64	69	74	80	86	90	95	100	E90	E95	E100	22.6-23.5
23.6-24.5							42A	48A		59	64A	69A	75	81	86A	91	96	101	E91	E96	E101	23.6-24.5
Micron	FREE			FREE			FNF-B			FNF-B-C			FNF-B-C-D									Micron

MERINO SKIRTINGS

Micron	Best Style Lth.	Good Lth.	Av. Lth.	Av. Short Lth.	Short	Very Short	Micron
18.5 up	140P	146PP	156	161P	165P	169P	18.5 up
18.6-19.5	140	146P	157	161	165	169	18.6-19.5
19.6-20.5	141	146	158	162	166	170	19.6-20.5
20.6-21.5	142	147	159	163	167	171	20.6-21.5
21.6-22.5	143	148	159A	163A	167A	172	21.6-22.5
22.6-23.5	144	149	160	164	168	172A	22.6-23.5
23.6-24.5	145	150	160A	164A	168A	173	23.6-24.5
Micron	FNF-B-C-D						Micron

MERINO FRENCH COMBING FLC.

Grade	Best Style Lth.	Good/ Av. Lth. Style	Short	Very Short	Grade
80s up	118P	121PP	124PP	127PP	80s up
18.0-18.5	118	121P	124P	127P	18.0-18.5
18.6-19.5	118A	121	124	127	18.6-19.5
19.6-20.5	119	122	125	128	19.6-20.5
20.6-21.5	119A	122A	125A	128A	20.6-21.5
21.6-22.5	120P	123P	126P	129P	21.6-22.5
22.6-23.5	120	123	126	129	22.6-23.5
23.6-24.5	120A	123A	126A	129A	23.6-24.5
Micron	F-B-C	FNF-B-C-D			Micron

CROSSBRED FLEECE

Micron	Choice Style Lth.	Super Style Lth.	Best Style Lth.	Good Style Lth.	Av. Style Lth.	Inf. Style Av. Lth.	Good Style Medium Lth.	Av./ Short Lth.	Short	Very Short	Micron
19.5 up	400PP	410PP	420PP	430PP	440PP	E440PP	650PP	660PP	670PP	680PP	19.5 up
19.6-20.5	400P	410P	420P	430P	440P	E440P	650P	660P	670P	680P	19.6-20.5
20.6-21.5	400	410	420	430	440	E440	650	660	670	680	20.6-21.5
21.6-22.5	401	411	421	431	441	E441	651	661	671	681	21.6-22.5
22.6-23.5	402	412	422	432	442	E442	652	662	672	682	22.6-23.5
23.6-24.5	402A	412A	422A	432A	442A	E442A	652A	662A	672A	682A	23.6-24.5
24.6-25.5	403	413	423	433	443	E443	653	663	673	683	24.6-25.5
25.6-26.5	403A	413A	423A	433A	443A	E443A	653A	663A	673A	683A	25.6.26.5
26.6-27.5	404	414	424	434	444	E444	654	664	674	684	26.6-27.5
27.6-28.5	404A	414A	424A	434A	444A	E444A	654A	664A	674A	684A	27.6-28.5
28.6-30.5	405	415	425	435	445	E445	655	665	675	685	28.6-30.5
30.6-32.5	406	416	426	436	446	E446	656	666	676	686	30.6-32.5
32.6-34.5	407	417	427	437	447	E447	657	667	677	687	32.6-34.5
34.6-36.5	408	418	428	438	448	E448	658	668	678	688	34.6-36.5
36.6 down	409	419	429	439	449	E449	659	669	679	689	36.6 down
Micron	FNF		F-B-C	FNF-B-C-D							Micron

CROSSBRED SKIRTINGS

Micron	Best Style Lth.	Good Lth.	Av. Lth.	Short	Very Short	Micron
19.5 up	467PP	476PP	484PP	491PP	498PP	19.5 up
19.6-20.5	467P	476P	484P	491P	498P	19.6-20.5
20.6-21.5	467	476	484	491	498	20.6-21.5
21.6-22.5	468	476A	484A	492	499	21.6-22.5
22.6-23.5	469	477	485	492A	499A	22.6-23.5
23.6-24.5	469A	477A	485A	493	500	23.6-24.5
24.6-25.5	470	478	486	493A	500A	24.6-25.5
25.6-26.5	470A	478A	486A	494	501	25.6-26.5
26.6-27.5	471	479	487	494A	501A	26.6-27.5
27.6-28.5	471A	479A	487A	495	502	27.6-28.5
28.6-30.5	472	480	488	495A	502A	28.6-30.5
30.6-34.0	473	481	489	496	503	30.6-34.0
34.1 down	474	482	490	497	504	34.1 down
Micron	FNF-B-C-D					Micron

DOGGY FLEECE

	Micron	Gd./Av. Lth. Style	Inf. Lth. Style
Mer.	22.5 up 22.6-24.5	340P 340	341P 341
XBD	28.5 up 28.6 down	342P 342	343P 343
		F-B-C-D	

OVERGROWN AND DOUBLE

	Micron	FLEECE Ogwn	FLEECE Dbl	SKTS Ogwn	SKTS Dbl
Mer.	24.5 up	344	345	346	347
XBD	28.5 up 28.6 down	348 349		350 351	
		F-B-C-D			

DOWNS

DOWNS	Micron	Good	Average	PCS/BLS Lms etc.
FINE	26.5 up	392	395	398
MEDIUM	26.6-30.5	393	396	399
COARSE	30.6 down	394	397	399A
		F-B-C-D	F-B-C-D-K	F-B-C-D-Y-K

COTTED WOOL

	Micron	FLEECE Soft	FLEECE Med.	FLEECE Hard	SKTS Md./Hd.
Mer.	22.5 up 22.6-24.5	329 329A	330 330A	331 331A	335 335A
XBD	28.5 up 28.6 down	332 332A	333 333A	334 334A	336 336A
		F-B-C-D-K			

MERINO WEANERS AND LAMBS

COMBING						CARDING						
Grade	Choice	Best Lth. Style	Good Lth. Style	Av. Lth.	Short	Choice	Super	Good	Av.	Short	Very Short	Grade
80s up	206	211PP	213PP	215P								80s up
18.0-18.5	207	211P	213P	215	219	243	247	251	255			18.0-18.5
18.6-19.5	208	211	213	216	220	244	248	252	256	259	265	18.6-19.5
19.6-20.5	209	212P	214P	217	221	245	249	253	257	260	265A	19.6-20.5
20.6-21.5	210	212	214	218	222	246	250	254	258	261	266	20.6-21.5
21.6-23.5	210A	212A	214A	218A	222A	246A	250A	254A	258A	261A	266A	21.6-23.5
Micron	FNF	F-B-C	— FNF-B-C-D —			FNF	FNF-Y	— FNF-Y-C-K —				Micron

XBD WEANERS AND LAMBS

COMBING				CARDING				
Micron	Best Style Lth.	Gd./Av. Style Lth.	Short	Best	Av.	Short	Very Short	Micron
19.5 up	515PP	521PP	527PP	547PP	551PP	555PP	559PP	19.5 up
19.6-20.5	515P	521P	527P	547P	551P	555P	559P	19.6-20.5
20.6-21.5	515	521	527	547	551	555	559	20.6-21.5
21.6-23.5	516	522	528	547A	551A	555A	559A	21.6-23.5
23.6-25.5	517	523	529	548	552	556	560	23.6-25.5
25.6-27.5	518	524	530	549	553	557	561	25.6-27.5
27.6-28.5	518A	524A	530A	549A	553A	557A	561A	27.6-28.5
28.6 down	519	525	531	550	554	558	562	28.6 down
Micron	F	FNF-B-C-D		FNF.Y.	— FNF-Y-C-K —			Micron

XBD CARBO FLEECE P&B

Gd. Lth. Colour	Short Fair Colour	Micron
533	539	22.6-23.5
534	540	23.6-25.5
535	541	25.6-28.5
536	542	28.6-29.5
538	544	29.6 down
— K —		Micron

MERINO CARBO

Flc.	Gd. Length P.B.	Short P.B.	Micron
198	202	204	22.5 up
199	203	205	22.6-24.5
— K —			Micron

WIGGINGS AND SHANKS

Merino	Crossbred
24.5 up	
309	604
— F-Y-C-K —	

MERINO LOCKS

Micron	Good Bulk & Colour	Good Bulk Fair Colour	Av. Bulk Fair Colour	Inf. Bulk Colour	Dags
18.5 up	279P	282P			
18.6-21.0	279	282	285	288	
21.1-23.0	280	283	286	289	
23.1-24.5	281	284	287	289A	290
Micron	— FNF-Y-C-K —				

MERINO CRT

Good Bulk & Colour	Good Bulk Fair Colour	Av. Bulk Fair Colour	Inf. Bulk Colour	Micron
				18.5 up
296	299	303		18.6-21.0
297	300	304	306	21.1-23.0
298	301	305	307	23.1-24.5
— FNF-Y-C-K —				Micron

BRANDS

Merino	Crossbred	
24.5 up	28.5 up	28.6 down
326	327	328
— F-B-C-D-K —		

CROSSBRED LOCKS

Micron	Good B&C	Good B Fair Col.	Average B&C	Inferior B&C
25.0 up	563	567	571	575
25.1-27.5	564	568	572	576
27.6-31.0	565	569	573	577
31.1 down	566	570	574	578
Micron	— FNF-Y-C-K —			

CROSSBRED CRT

Good B&C	Good B Fair Col.	Av. B Fair Col.	Micron
583	587	591	25.0 up
584	588	592	25.1-27.5
585	589	593	27.6-31.0
586	590	594	31.1 down
— FNF-Y-C-K —			Micron

PLUCKED AND DEAD

	Micron	Good	Av.	Carbo.
Mer.	24.5 up	311	313	316
XBD	28.5 up	611	613	615
	28.6 down	612	614	
		— F-B-C-D—		K

MERINO COMBING STAIN

Micron	Gd. Lth.	Av. Lth
22.5 up	194	196
22.6-24.5	195	197
Micron	— FNF-B-C-D—	

MERINO CARDING STAIN

Gd. Lth. Med. Stain	Gd.Lth. Heavy Stain	Av. Lth. Med. Stain	Av. Lth. Heavy Stain	Short Med. Stain	Short Heavy Stain
267	268	270	273	275	277
267A	268A	271	274	276	278
— FNF-Y-C-K —					

CARPET WOOL

	STYLE	LENGTH	V.M.	TYPE	GRADE
FLEECE	BEST	BEST	FNF-Y	700	AV. 38
	GD./AV.	GD./.AV	FNF-Y	701	AV. 36
	GD./AV.	PREM	FNF-Y	702	AV. 36
	INF.	AV.	FNF-Y-C-K	703	AV. 36
	INF.	SHORT	FNF-Y-C-K	704	AV. 36
	COTTS	AV.	FNF-Y-C-K	705	AV. 36
LMS.	GD./AV.	GD.	FNF-Y	730	AV. 36
	GD./AV.	SHORT	FNF-Y	731	AV. 36
	INF.	AV./SHT.	FNF-Y-C-K	732	AV. 36
SKTS.	GD.	GD.	FNF-Y	760	AV. 36
	AV.	AV.	FNF-Y	761	AV. 36
	INF.	AV.	FNF-Y-C-K	762	AV. 36
	INF.	SHORT	FNF-Y-C-K	763	AV. 36
	COLOUR	BULK	V.M.		
LKS./CRT.	FAIR	GD.	FNF-Y-C-K	780	AV. 36
	AV./INF.	AV./INF.	FNF-Y-C-K	781	AV. 36
STAIN	-	AV.	FNF-Y-C-K	790	AV. 36 MICRON

XBD COMBING STAIN

Micron	Good Lth.	Av. Lth.
23.6-25.5	505	510
25.6-28.5	506	511
28.6-29.5	507	512
29.6 down	508	513
Micron	— F-B-C-D —	

XBD CARDING STAIN

Micron	Medium	Heavy	Dags
23.6-25.5	595	597	
25.6-28.5	595A	597A	
28.6-29.5	596	598	
29.6 down	596A	598A	600
Micron	— F-Y-C-K —		

BLACK AND GREY

MERINO FLEECE		PCS./BLS.	CROSSBRED FLEECE			PCS./BLS.
Good	Average	Lms. etc.	26.5 up	26.6-30.5	30.6 Down	Lms. etc.
24.5 up	24.5 up	24.5 up				
320	321	322	606	607	608	609
— F-B-C-D —		B-C-D-Y-K	— F-B-C-D —			B-C-D-Y-K

GREASY MM. LENGTHS for PARTICULAR AUSTRALIAN COMBING WOOL TYPES OFFERED with ADDITIONAL MEASUREMENT

AWC
JULY 1989

(for AWC RESERVE PRICE APPLICATION PURPOSES)

Key:
M = Minimum
Max = Maximum

MERINO COMBING FLEECE

Micron	Spinners			Best Topmaking			Good Topmaking			Average Topmaking			Inferior Topmaking			Micron
17.0-17.4	34 *M 85*	43PP *84-76*	49PP *75-67*													17.0-17.4
17.5-17.9	35 *M 86*	43P *85-77*	49P *76-68*	54PP *M 85*	60PP *84-76*	65PP *75-68*	70PP *M 83*	76PP *82-74*	82PP *73-66*	87PP *M 81*	92PP *80-72*	97PP *71-66*	E87PP *M 79*	E92PP *78-69*	E97PP *68-57*	17.5-17.9
18.0-18.5	36 *M 87*	43 *86-78*	49 *77-68*	54P *M 86*	60P *85-77*	65P *76-68*	70P *M 84*	76P *83-75*	82P *74-66*	87P *M 82*	92P *81-73*	97P *72-66*	E87P *M 80*	E92P *79-70*	E97P *69-57*	18.0-18.5
18.6-19.5	37 *M 89*	44 *88-79*	50 *78-68*	54 *M 88*	60 *87-78*	65 *77-68*	70 *M 86*	76 *85-76*	82 *75-66*	87 *M 84*	92 *83-74*	97 *73-66*	E87 *M 82*	E92 *81-71*	E97 *70-57*	18.6-19.5
19.6-20.5	39 *M 91*	45 *90-81*	51 *80-69*	55 *M 90*	61 *89-80*	66 *79-69*	71 *M 88*	77 *87-78*	83 *77-67*	87A *M 86*	92A *85-76*	97A *75-67*	E87A *M 84*	E92A *83-73*	E97A *72-57*	19.6-20.5
20.6-21.5	40 *M 93*	46 *92-82*	52 *81-70*	56 *M 92*	62 *91-81*	67 *80-70*	72 *M 90*	78 *89-79*	84 *78-68*	88 *M 88*	93 *87-77*	98 *76-68*	E88 *M 85*	E93 *84-74*	E98 *73-58*	20.6-21.5
21.6-22.5	41 *M 94*	47 *93-83*	53 *82-71*	57 *M 93*	63 *92-82*	68 *81-71*	73 *M 91*	79 *90-80*	85 *79-69*	89 *M 89*	94 *88-78*	99 *77-69*	E89 *M 86*	E94 *85-75*	E99 *74-59*	21.6-22.5
22.6-23.5	42 *M 95*	48 *94-84*		58 *M 94*	64 *93-83*	69 *82-72*	74 *M 92*	80 *91-81*	86 *80-70*	90 *M 90*	95 *89-79*	100 *78-70*	E90 *M 87*	E95 *86-76*	E100 *75-60*	22.6-23.5
23.6-24.5	42A *M 96*	48A *95-85*		59 *M 95*	64A *94-84*	69A *83-73*	75 *M 93*	81 *92-82*	86A *81-71*	91 *M 91*	96 *90-80*	101 *79-71*	E91 *M 88*	E96 *87-77*	E101 *76-61*	23.6-24.5

MERINO WEANERS AND LAMBS

Micron	Choice	Best Lth./Style	Good Lth./Style	Av. Length	Short	Micron
80's up	206 *M 66*	211PP *M 66*	213PP *M 61*	215P *M 55*		80's up
18.0-18.5	207 *M 66*	211P *M 66*	213P *M 61*	215 *M 56*	219 *55-46*	18.0-18.5
18.6-19.5	208 *M 67*	211 *M 67*	213 *M 62*	216 *M57*	220 *56-46*	18.6-19.5
19.6-20.5	209 *M 68*	212P *M 68*	214P *M 63*	217 *M 58*	221 *57-48*	19.6-20.5
20.6-21.5	210 *M 69*	212 *M 69*	214 *M 64*	218 *M 59*	222 *58-48*	20.6-21.5
21.6-23.5	210A *M 70*	212A *M 70*	214A *M 65*	218A *M 61*	222A *60-50*	21.6-23.5

MERINO FRENCH COMBING FLEECE

Micron	Best Lth./Style	Good/Av. Lth./Style	Short	Very Short
80's up	118P *67-62*	121PP *65-57*	124PP *56-47*	127PP *Max 46*
18.0-18.5	118 *67-62*	121P *65-57*	124P *56-47*	127P *Max 46*
18.6-19.5	118A *67-62*	121 *65-57*	124 *56-47*	127 *Max 46*
19.6-20.5	119 *68-62*	122 *66-57*	125 *56-47*	128 *Max 46*
20.6-21.5	119A *69-63*	122A *67-58*	125A *57-48*	128A *Max 47*
21.6-22.5	120P *70-64*	123P *68-59*	126P *58-49*	129P *Max 48*
22.6-23.5	120 *71-65*	123 *69-60*	126 *59-50*	129 *Max 49*
23.6-24.5	120A *72-66*	123A *70-61*	126A *60-51*	129A *Max 50*

MERINO SKIRTINGS

Micron	Best	Good Lth.	Av. Length	Av./Sht. Lth.	Short	Very Short	Micron
18.5 up	140P *M 82*	146PP *M 79*	156 *78-73*	161P *72-66*	165P *65-57*	169P *Max 56*	18.5 up
18.6-19.5	140 *M 83*	146P *M 80*	157 *79-73*	161 *72-66*	165 *65-57*	169 *Max 56*	18.6-19.5
19.6-20.5	141 *M 84*	146 *M 81*	158 *80-74*	162 *73-67*	166 *66-58*	170 *Max 57*	19.6-20.5
20.6-21.5	142 *M 85*	147 *M 82*	159 *81-74*	163 *73-67*	167 *66-58*	171 *Max 57*	20.6-21.5
21.6-22.5	143 *M 86*	148 *M 83*	159A *82-75*	163A *74-68*	167A *67-59*	172 *Max 58*	21.6-22.5
22.6-23.5	144 *M 87*	149 *M 84*	160 *83-75*	164 *74-68*	168 *67-59*	172A *Max 58*	22.6-23.5
23.6-24.5	145 *M 88*	150 *M 85*	160A *84-76*	164A *75-69*	168A *68-60*	173 *Max 59*	23.6-24.5

MERINO CARBO

Micron	Flc.	Good Length P & B	Short P & B
22.5 up	198 -	202 *M 76*	204 *Max 75*
22.6-24.5	199 -	203 *M 76*	205 *Max 75*

MERINO DOGGY FLEECE

Micron	Good/Av. Lth./Style	Inf. Lth./Style
22.5 up	340P *M 80*	341P *Max 79*
22.6-24.5	340 *M 81*	341 *Max 80*

MERINO COMBING STAIN

Micron	Good Length	Av. Length
22.5 up	194 *M76*	196 *Max 75*
22.6-24.5	195 *M 76*	197 *Max 75*

CROSSBRED FLEECE

Micron	Choice	Super	Best	Good	Av.	Inf.	Micron	Gd. Style Medium Lth.	Av./Short Lth.	Short	Very Short	Micron
19.5 up	400PP *M 97*	410PP *M 97*	420PP *M 92*	430PP *M 87*	440PP *M 80*	E440PP *M 80*	19.5 up	650PP *86-72*	660PP *79-61*	670PP *60-48*	680PP *Max 47*	19.5 up
19.6-20.5	400P *M 99*	410P *M 99*	420P *M 94*	430P *M 89*	440P *M 82*	E440P *M 82*	19.6-20.5	650P *88-74*	660P *81-63*	670P *62-48*	680P *Max 47*	19.6-20.5
20.6-21.5	400 *M 100*	410 *M 100*	420 *M 95*	430 *M 90*	440 *M 83*	E440 *M 83*	20.6-21.5	650 *89-75*	660 *82-64*	670 *63-49*	680 *Max 48*	20.6-21.5
21.6-22.5	401 *M 101*	411 *M 101*	421 *M 96*	431 *M 91*	441 *M 84*	E441 *M 84*	21.6-22.5	651 *90-76*	661 *83-65*	671 *64-50*	681 *Max 49*	21.6-22.5
22.6-23.5	402 *M 102*	412 *M 102*	422 *M 97*	432 *M 92*	442 *M 85*	E442 *M 85*	22.6-23.5	652 *91-77*	662 *84-66*	672 *65-51*	682 *Max 50*	22.6-23.5
23.6-24.5	402A *M 105*	412A *M 103*	422A *M 98*	432A *M 93*	442A *M 86*	E442A *M 86*	23.6-24.5	652A *92-78*	662A *85-67*	672A *66-52*	682A *Max 51*	23.6-24.5
24.6-25.5	403 *M 108*	413 *M 104*	423 *M 99*	433 *M 94*	443 *M 87*	E443 *M 87*	24.6-25.5	653 *93-79*	663 *86-68*	673 *67-53*	683 *Max 52*	24.6-25.5
25.6-26.5	403A *M 110*	413A *M 105*	423A *M 100*	433A *M 95*	443A *M 88*	E443A *M 88*	25.6-26.5	653A *94-80*	663A *87-69*	673A *68-54*	683A *Max 53*	25.6-26.5
26.6-27.5	404 *M 112*	414 *M 107*	424 *M 102*	434 *M 97*	444 *M 90*	E444 *M 90*	26.6-27.5	654 *96-82*	664 *89-71*	674 *70-56*	684 *Max 55*	26.6-27.5
27.6-28.5	404A *M 115*	414A *M 110*	424A *M 105*	434A *M 100*	444A *M 93*	E444A *M 93*	27.6-28.5	654A *99-84*	664A *92-72*	674A *71-57*	684A *Max 56*	27.6-28.5
28.6-30.5	405 *M 117*	415 *M 112*	425 *M 107*	435 *M 102*	445 *M 95*	E445 *M 95*	28.6-30.5	655 *101-86*	665 *94-73*	675 *72-58*	685 *Max 57*	28.6-30.5
30.6-32.5	406 *M 120*	416 *M 115*	426 *M 110*	436 *M 105*	446 *M 98*	E446 *M 98*	30.6-32.5	656 *104-88*	666 *97-74*	676 *73-59*	686 *Max 58*	30.6-32.5
32.6-34.5	407 *M 122*	417 *M 117*	427 *M 112*	437 *M 107*	447 *M 99*	E447 *M 99*	32.6-34.5	657 *106-90*	667 *98-75*	677 *74-60*	687 *Max 59*	32.6-34.5
34.6-36.5	408 *M 125*	418 *M 120*	428 *M 115*	438 *M 110*	448 *M 100*	E448 *M 100*	34.6-36.5	658 *109-90*	668 *99-75*	678 *74-60*	688 *Max 59*	34.6-36.5
36.6 down	409 *M 130*	419 *M 125*	429 *M 120*	439 *M 115*	449 *M 100*	E449 *M 100*	36.6 down	659 *114-90*	669 *99-75*	679 *74-60*	689 *Max 59*	36.6 down

CROSSBRED SKIRTINGS

Micron	Best	Good Lth.	Av. Lth.	Short	Very Short	Micron
19.5 up	467PP *M 86*	476PP *M 82*	484PP *81-74*	491PP *73-67*	498PP *Max 66*	19.5 up
19.6-20.5	467P *M 87*	476P *M 83*	484P *82-75*	491P *74-68*	498P *Max 67*	19.6-20.5
20.6-21.5	467 *M 88*	476 *M 84*	484 *83-75*	491 *74-68*	498 *Max 67*	20.6-21.5
21.6-22.5	468 *M 89*	476A *M 85*	484A *84-76*	492 *75-69*	499 *Max 68*	21.6-22.5
22.6-23.5	469 *M 90*	477 *M 86*	485 *85-77*	492A *76-69*	499A *Max 68*	22.6-23.5
23.6-24.5	469A *M 91*	477A *M 87*	485A *86-78*	493 *77-70*	500 *Max 69*	23.6-24.5
24.6-25.5	470 *M 93*	478 *M 89*	486 *88-79*	493A *78-70*	500A *Max 69*	24.6-25.5
25.6-26.5	470A *M 95*	478A *M 91*	486A *90-80*	494 *79-71*	501 *Max 70*	25.6-26.5
26.6-27.5	471 *M 96*	479 *M 92*	487 *91-81*	494A *80-72*	501A *Max 71*	26.6-27.5
27.6-28.5	471A *M 97*	479A *M 93*	487A *92-82*	495 *81-73*	502 *Max 72*	27.6-28.5
28.6-30.5	472 *M 98*	480 *M 94*	488 *93-83*	495A *82-74*	502A *Max 73*	28.6-30.5
30.6-34.0	473 *M 99*	481 *M 95*	489 *94-84*	496 *83-75*	503 *Max 74*	30.6-34.0
34.1 down	474 *M 100*	482 *M 96*	490 *95-85*	497 *84-76*	504 *Max 75*	34.1 down

XBD WEANERS AND LAMBS

Micron	Best Style/Lth.	Good/Av. Style/Lth.	Short
19.5 up	515PP *M 67*	521PP *M 57*	527PP *56-50*
19.6-20.5	515P *M 69*	521P *M 59*	527P *58-50*
20.6-21.5	515 *M 70*	521 *M 60*	527 *59-51*
21.6-23.5	516 *M 73*	522 *M 63*	528 *62-56*
23.6-25.5	517 *M 75*	523 *M 65*	529 *64-56*
25.6-27.5	518 *M 78*	524 *M 68*	530 *67-56*
27.6-28.5	518A *M 80*	524A *M 70*	530A *69-61*
28.6 down	519 *M 83*	525 *M 73*	531 *72-61*

XBD DOGGY FLEECE

Micron	Good/Av. Lth./Style	Inf. Lth./Style
28.5 up	342P *M 95*	343P *Max 94*
28.6 down	342 *M 97*	343 *Max 96*

XBD COMBING STAIN

Micron	Good Length	Av. Length
23.6-25.5	505 *M 79*	510 *Max 78*
25.6-28.5	506 *M 82*	511 *Max 81*
28.6-29.5	507 *M 83*	512 *Max 82*
29.6 down	508 *M 84*	513 *Max 83*

XBD CARBO

Micron	Good Length Colour	Short Fair Colour
22.6-23.5	533 *M 77*	539 *Max 76*
23.6-25.5	534 *M 79*	540 *Max 78*
25.6-28.5	535 *M 82*	541 *Max 81*
28.6-29.5	536 *M 83*	542 *Max 82*
29.6 down	538 *M 84*	544 *Max 83*

N.B. This list is to be used in conjunction with the complete JULY 1987 AWC TYPE LIST.

Attachment 2
AWEX-ID

Australian Wool Exchange Ltd

AWEX - ID Version 2.1

(Non - measured Characteristics)

Version 2.1 Effective 01/07/2001 Updated 01/07/2002

PRIME						QUALIFIERS				
MANDATORY	WHERE APPLICABLE	MANDATORY	MANDATORY	MANDATORY	MANDATORY	CONDITIONAL (NON - AM)	CONDITIONAL (NON - AM)		WHERE APPLICABLE	
BREED	WOOL SUB – CATEGORY	WOOL CATEGORY	STYLE	VM TYPE	FULL STOP	GREASY LENGTH INDICATOR (F/P/B/C)	STRENGTH INDICATOR (Combing)	QUALIFER (Not scaled)	QUALIFIERS (Scaled)	
			FLC							
AS (Australian Superfine)	W (Combing Weaners & Lambs)	F (Fleece)	1 (Choice)	B (Burr)	*	10 (6 - 15)	W1 (Part Tender)	M (Scourable Colour)	H (Unscourable Colour)	
M (Merino)	L (Carding Lambs)	P (Pieces)	2 (Superior)	E (Seed)		20 (16 - 25)	W2 (Tender)	E (Necks)	N (Water Stain)	
X (Crossbred)	U (Plucked & Dead)	B (Bellies)	3 (Spinners)	S (Shive)		30 (26 - 35)	W3 (Very Tender)	G (Doggy)	S (Dark Stain)	
D (Downs)	K (Shorn from Skins)	Z (Locks)	4 (Best)	N (Noogoora/Ring)		40 (36 - 45)			Q (Dags)	
T (Carpet)	M (Fellmongered)	C (Crutchings)	5 (Good)	T (Bathurst)		50* (46 - 55)			C (Cotts)	
	O (Overgrown)		6 (Average)	M (Moit)		60* (56 - 65)			J (Jowis)	
	N (Non-conforming lot)		7 (Inferior)	F (Bogan Flea)		70* (66 - 75)			K (Shanks)	
			PCS / BLS	WHERE APPLICABLE		80* (76 - 85)			A (Dermatitis)	
			3 (Spinners)	L (Clumpy)		90* (86 - 95)			V (Skin Pieces)	
			4 (Best)			100 (96 - 105)			R (Brands)	
			5 (Good)			110 (106 - 115)			D (Mud)	
			6 (Average)			120 (116 - 125)			Y (Black & Grey)	
			7 (Inferior/Stain)			130 (126 - 135)			P (Kemp)	
			LKS / CRT			Etc			SCALE	
			4 (Best)						1 (Light/odd)	
			5 (Good)						2 (Medium)	
			6 (Average)						3 (Heavy/line of ...)	
			7 (Inferior/Stain)			* 5 mm increments on ASF Styles 1 & 2 ONLY				

Australian Wool Exchange Ltd

AWEX - ID Version 2.1

VALID COMBINATIONS

Effective 01/07/2001

Updated: 1 July 2002

PRIME CHARACTERISTICS								QUALIFIERS		
BREED	SUB CATEGORY	CATEGORY	STYLE	VM TYPE	-	GREASY LENGTH	STRENGTH	Qualifiers (No scale)	Conditional One only	Qualifiers (Scaled)
AS	-	F	1,2	All	-	10 +*				
AS	-	F	3	All	-	10 +	W1	E		
AS	-N	F	4	All	-	10 +	W1,W2	E,G[2]		All
AS	W	F	1,2	All	-	50 +		E		
AS	W	F	3	All	-	50 +	W1	E,G[2]		All
AS	W,N	F	4	All	-	50 +	W1,W2	E		
AS	L	F	1,2	All	-	10 - 50		E		
AS	L	F	3	All	-	10 - 50	W1*	E		
AS	L,N	F	4	All	-	10 - 50	W1,W2* *If length 50 only	E		
AS	-W[4],L	P,B	3	All	-	10 +	W1*	E		
AS	-N,W[4],L	P,B	4	All	-	10 +	W1,W2*	E		
AS<18.6µm	*W 50+ only					**+ ≥ 5 mm**	*If length 50+ only			
M,X	-	F	1,2	All	-	10 +				
M,X	-	F	3	All	-	10 +	W1	E		
M,X	-U,K,M,N	F	4,5,6,7	All	-	10 +	W1,W2,W3	M,E,G		All
M,X	W,O	F	1,2	All	-	50 +		E		
M,X	W,O	F	3	All	-	50 +	W1	E,G[2]		All
M,X	W,O	F	4,5,6,7	All	-	50 +	W1,W2,W3	M,E,G		All
M,X	L	F	1,2	All	-	10 - 50		E		
M,X	L	F	3	All	-	10 - 50	W1*	E		
M,X	L	F	4,5,6,7	All	-	10 - 50	W1,W2,W3* *If length 50 only	M,E,G		All
M,X	-	P,B	3	All	-	10 +	W1	E		
M,X	-U,K,M,N	P,B	4,5,6	All	-	10 +	W1,W2,W3	E,G[1]		All excluding S2, S3
M,X	-U,K,M,N	P,B	7	All	-	10 +	W1,W2,W3	E,G[1]		S2, S3, all remaining excl H1-3
M,X	W,O	P,B	3	All	-	50 +	W1	E		
M,X	W,O	P,B	4,5,6	All	-	50 +	W1,W2,W3	E,G[1]		All, excluding S2, S3
M,X	W,O	P,B	7	All	-	50 +	W1,W2,W3	E,G[1]		S2, S3, all remaining excl H1-3
M,X	L	P,B	3	All	-	10 - 50	W1*	E		
M,X	L	P,B	4,5,6	All	-	10 - 50	W1,W2,W3*	E,G[1]		All excluding S2, S3
M,X	L	P,B	7	All	-	10 - 50	W1,W2,W3* *If length 50 only	E,G[1]	*E,G on Pieces only	S2, S3, all remaining excl H1-3
M,X	-	Z,C	4*,5	All	-	-50,60,70	W1,W2,W3[#]			All, excluding C1-3, S2, S3*
M,X	-U,N	Z,C	6	All	-					All, excluding C1-3, S2, S3
M,X	-U,N	Z,C	7	All	-	-50,60,70	W1,W2,W3[#] *If length 50+ only			S2, S3, all remaining excl H1-3
	*Not used on Locks		*No Qualifiers							* No Qualifiers on Style 4
D,T	-	F	4	All	-	10 +	W1,W2	E		
D,T	-U,K,M,N	F	5,6,7	All	-	10 +	W1,W2,W3	E,G[2]		All
D,T	W,O	F	4	All	-	50 +	W1,W2	E		
D,T	W,O	F	5,6,7	All	-	50 +	W1,W2,W3	E,G[2]		All
D,T	L	F	4	All	-	10 – 50	W1,W2*	E		
D,T	L	F	5,6,7	All	-	10 – 50	W1,W2,W3* *If length 50 only	E,G[2] *G on Breed T only		All
D,T	-	P,B	4	All	-	10 +	W1,W2	E		
D,T	-U,K,M,N	P,B	5,6	All	-	10 +	W1,W2,W3	E		All, excluding S2, S3
D,T	-U,K,M,N	P,B	7	All	-	10 +	W1,W2,W3	E		S2, S3, all remaining excl H1-3
D,T	W,O	P,B	4	All	-	50 +	W1,W2	E		
D,T	W,O	P,B	5,6	All	-	50 +	W1,W2,W3	E		All, excluding S2, S3
D,T	W,O	P,B	7	All	-	50 +	W1,W2,W3	E		S2, S3, all remaining excl H1-3
D,T	L	P,B	4	All	-	10 – 50	W1,W2*	E		
D,T	L	P,B	5,6	All	-	10 – 50	W1,W2,W3*	E		All, excluding S2, S3
D,T	L	P,B	7	All	-	10 – 50	W1,W2,W3* *If length 50 only	E		S2, S3, all remaining excl H1-3
D,T	-	Z,C	4*,5	All	-	-50,60,70	W1,W2,W3[#]			All, excluding C1-3, S2, S3*
D,T	-U,N	Z,C	6	All	-					All, excluding C1-3, S2, S3
D,T	-U,N	Z,C	7	All	-	-50,60,70	W1,W2,W3[#] *If length 50+ only			S2, S3, all remaining excl H1-3
	*Not used on Locks		*No Qualifiers							* No Qualifiers on Style 4
Mandatory One only	(- = null) One only	Mandatory One only	Mandatory One only	Mandatory One plus opt. L	Mand.	Conditional 10 mm inc.	Conditional One only	Optional M not with H1-3		Optional C1-3 not with J1-3

Colour codes (M, H1-3) not required on Stain lines, ie S2, S3 Q2, Q3, N2, N3

Attachment 3
Auction room

Attachment 4
Traditional show floor

Attachment 5
Sale by sample show floor

Attachment 6
Map of Australia – 13 selling centres

Attachment 7
Map of Australia – Five selling centres

Attachment 8
Catalogue page and AWEX standard layout

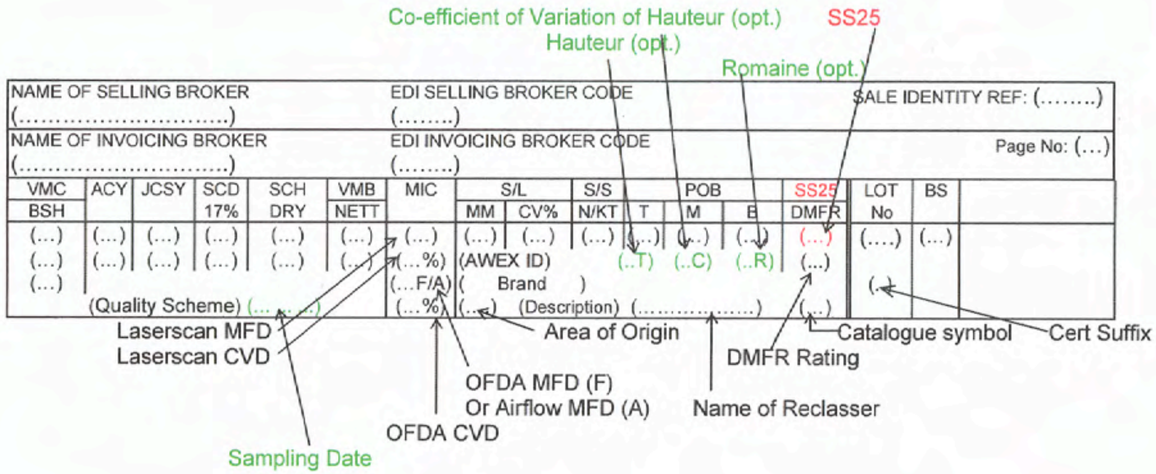
Name Of Selling Broker: **LANDMARK LTD** | EDP Broker Code: **DALG** | Sale Identity Reference: **M45G**

Name of Invoicing/Delivery Broker: **LANDMARK LTD** | EDP Broker Code: **DALG** | Page No: **7**

VMC 123	ACY	JCSY	SCD 17%	SCH DRY	VMB NET	MIC	S/L MM	S/L CV%	S/S N/KT	POB T	POB M	POB B	COL DMFR	LOT No	BS	
	67.4	71.3	72.9	70.4	.3	**19.5**	90	16	24	9	54	37		G 102	3	
.3	375	396	405	391	556	23.1%	MF4E.							P		
							RUTLANDS/VV									
							V25 AAM									
.1	66.1	69.9	71.8	68.8	.6	**19.0**	85	16	28	5	73	22		G 103	7	
.5	817	864	887	850	1236	20.5%	MF4E.						ND	P		
							AAAM									
	67.7	71.6	73.3	70.6	.4	**20.3**	86	18	27	7	56	37		G 104	3	
.4	328	347	356	342	485	20.7%	MF4E.						ND	P		
							AAAM									
1.8	56.0	59.6	65.0	56.9	3.7	**19.9**	77	16	34	66	29	5		G 105	5	
1.9	534	568	619	542	953	21.6%	MF5S.						NA	P		
							DHURAGOON									
							N38 AAAM									
.1	63.1	66.6	71.6	64.2	3.3	**18.3**	90	13	32	26	63	11		G 106	2	
3.2	173	182	196	176	274	22.4%	MF5S.						1	P		
							WILLOW/GRANGE									
							V07 AAM									
1.2	55.3	58.7	65.2	55.8	4.6	**18.7**	70	16	40	63	29	8		G 107	9	
3.4	883	937	1041	891	1596	24.6%	MF6S.						ND	P		
							FS/FAIRFIELD									
							N29 AAAM									
	65.8	69.6	71.4	68.6	.5	**18.9**	103	12	34	18	76	6		G 108	4	
.5	467	494	507	487	710	21.2%	MF5E.						ND	P		
							LH/CA									
							V05 AAAM									
.3	60.9	64.8	67.3	63.2	1.2	**18.1**	80	16	22	16	81	3		G 109	5	
.9	552	588	610	573	907	22.1%	MF5E.						ND	P		
							SAS/LAVEROCK									
							V07 AAAM									
	66.7	70.5	72.9	69.1	1.1	**20.9**	93	11	33	11	83	6		G 110	14	
1.1	1807	1910	1975	1872	2709	20.1%	MF5S.						ND	P		
							AAAM									
	68.1	71.9	74.0	70.7	.8	**21.9**	96	12	37	5	93	2		G 111	8	
.8	1021	1078	1109	1060	1499	21.0%	MF5E.H1						ND	P		
							AAAM									
.6	67.1	70.6	75.1	68.5	2.8	**16.2**	58	16	52	36	57	7		G 112	2	
2.2	146	154	164	149	218	21.0%	MF5S.						2	P		
							JS/CLIFFORD									
							V07 EXSUPAAA									
.3	68.5	72.1	75.9	70.3	2.2	**17.5**	73	19	36	59	39	2		G 113	9	
1.8	1049	1105	1163	1077	1532	20.6%	MF5S.						2	P		
.1																
							SUPAAAFM									
.1	64.8	68.5	71.8	66.7	1.8	**20.9**	80	22	18	2	89	9		G 114	3	
1.7	383	405	424	394	591	22.5%	MF5S.						1	P		
							PDF/FRANEEN									
							N28 AAA									
.1	60.6	64.3	67.8	62.4	2.0	**20.5**	92	18	19	6	71	23		G 115	12	
1.9	1448	1536	1620	1491	2389	21.0%	MF5S.H1						2	P		
							AAA									
	64.0	67.7	70.6	66.1	1.5	**21.2**	89	18	15	5	85	10		G 116	10	
1.4	1276	1349	1407	1317	1993	21.7%	MF5S.						2	P		
.1																
							AAA									
	63.1	66.9	69.5	65.3	1.3	**21.3**	91	16	19	2	95	3		G 117	9	
1.3	1092	1158	1203	1130	1731	21.6%	MF5S.						2	P		
							AAA									
.4	65.9	69.4	73.6	67.9	2.5	**22.1**	95	21	28	8	71	21		G 118	10	
.9	1255	1322	1402	1293	1905	20.8%	MF5T.						2	P		
1.2							**GLENLEIGH**									
							N31 AAAM									

we know wool AWEX

AUSTRALIAN PUBLIC CATALOGUE: STANDARD LAYOUT



Green text = Optional

Modification	Release/Effective Date
Replace Col (Y-Z) with SS25 (Avg. Staple Strength of the lowest 25% of staples measured for strength.)	24th July 2006

Attachment 9
Pre-sale core test certificate

AUSTRALIAN WOOL TESTING AUTHORITY LTD

Reg'd. Office: 70 Robertson Street, Kensington, Victoria 3031 P.O. Box 240, North Melbourne 3051 Tel: (03) 9371 4100 Fax: (03) 9371 4191

IWTO TEST CERTIFICATE **ORIGINAL**

3-07858222-P2 *CLASSED GROWER LOT TEST METHODS IWTO-19,12

PAGE 1

AUSTRALIAN WOOL NETWORK PTY LTD MELBOURNE 13 BALES *KOOLOMURT *AAAM

REF. M39M 101 *KOOLOMURT *AAAM

297673

TOTAL BALE WEIGHTS:

TEST HOUSE GROSS 2 442 KG TARE 26 KG NETT 2 416 KG

BALE NO.	GROSS	*TARE	NETT	BALE NO.	GROSS	*TARE	NETT
1	192	2	190	11	196	2	194
2	191	2	189	12	168	2	166
3	189	2	187	14	191	2	189
4	176	2	174	16	192	2	190
6	201	2	199	17	202	2	200
8	189	2	187	19	177	2	175
9	178	2	176				

GROSS 2 442 KG TARE 26 KG NETT 2 416 KG

TEST RESULTS:
1. WOOL BASE - 2 SUBSAMPLES 57.16 %
2. MEAN FIBRE DIAMETER - 4 SPECIMENS 19.5 MICRONS
3. COEFFICIENT OF VARIATION OF DIAMETER 21.5 %
4. VEGETABLE MATTER BASE 1.6 %
   INCLUDING **** % HARD HEADS-TWIGS

CALCULATED COMMERCIAL YIELDS & CLEAN MASSES:

5. IWTO SCHLUM DRY T&N YIELD (1.0%TFM) 65.6 % 1 585 KG
6. IWTO SCOURED YIELD at 17% REGAIN 70.3 % 1 698 KG
7. JAPANESE CLEAN SCOURED YIELD 67.3 % 1 626 KG
8. AUSTRALIAN CARBONISING YIELD 63.6 % 1 537 KG

SPECIMEN ONLY

ADDITIONAL INFORMATION:
9. MEAN FIBRE CURVATURE 64 DEG/MM
10. COMFORT FACTOR 98.8 %
11. VEGETABLE MATTER COMPOSITION
    (B) 0.0 (S) 1.6 (H) 0.0
12. *DARK & MEDULLATED FIBRE RISK 2

CHARGE: $ 38.90 GST @ 10% : $ 3.89 TOTAL CHARGE: $ 42.79
THIS CERTIFICATE HAS BEEN COMBINED IN 2-07490881-J1

CONTINUED ON NEXT PAGE
TEST CONDUCTED AT MELBOURNE LABORATORY
BALES SAMPLED AT MELBOURNE ON 14.03.2006
AWTA LTD SERVICE TIME 3.3 DAYS
ISSUED ON 17.03.2006, PRINTED ON 02.05.2006

08.1278 08 8246 0000 34497885 34479699 KATS 1

AWTA Ltd A.B.N. 43 006 014 106 · IWTO Licensed · I.W.T.O. · NATA · ILRT MEMBER · NCS INTERNATIONAL CERTIFIED QUALITY MANAGEMENT SYSTEM

The **ORIGINAL** and any **OFFICIAL COPY** of this Certificate are issued in accordance with the stated Test Method(s) and any directly associated Regulations. By authorising the application of the AWTA Ltd Seal, we hereby certify that the test results are within the precision limits of the Test Method declared. As far as is permissible by law, no other warranty is expressed or implied. On request, AWTA Ltd will make available sampling, weighing and/or testing details to any bona fide bearer or transferee of this Certificate. Photocopies and other reproductions are **NOT** recognised as Certificates. **THIS CERTIFICATE SHALL BE RENDERED VOID IF AMENDED OR ALTERED.**

***DECLARED: AWTA Ltd does not certify or provide any warranty whatsoever in regard to declared information.**

For and on behalf of Australian Wool Testing Authority Ltd

MICHAEL A. JACKSON B.Sc (Hons)
MANAGING DIRECTOR

DR. GEORG R. BEILHARZ Dip.App.Sc., M.Sc., Ph.D.
GENERAL MANAGER – LABORATORY OPERATIONS

AUSTRALIAN WOOL TESTING AUTHORITY LTD A.C.N. 006 014 106 COMMON SEAL

CLIENT USE ONLY

Attachment 10
Pre-sale staple test certificate

AUSTRALIAN WOOL TESTING AUTHORITY LTD

Regd. Office: 70 Robertson Street, Kensington, Victoria 3031 P.O. Box 240, North Melbourne 3051 Tel: (03) 9371 4100 Fax: (03) 9371 4191

ORIGINAL

IWTO STAPLE TEST CERTIFICATE

TEST METHODS IWTO-7,30 PAGE 1

3-07858630-L6 *AAAM *KOOLOMURT *AAAM

AUSTRALIAN WOOL NETWORK PTY LTD MELBOURNE 13 BALES

REF. M39M 101 *KOOLOMURT									
			BALE NO.	GROSS	*TARE	NETT	BALE NO.	GROSS	*TARE	NETT
			1	192	2	190	11	196	2	194
			2	191	2	189	12	168	2	166
	297673		3	189	2	187	14	191	2	189
TOTAL BALE WEIGHTS:			4	176	2	174	16	192	2	190
TEST HOUSE GROSS 2 442 KG TARE 26 KG NETT 2 416 KG			6	201	2	199	17	202	2	200
			8	189	2	187	19	177	2	175
			9	178	2	176				
TEST RESULTS:			GROSS	2 442 KG	TARE	26 KG	NETT	2 416 KG		

1. MEAN STAPLE LENGTH - 62 STAPLES 78 MM
2. COEFFICIENT OF VARIATION OF STAPLE LENGTH 11 %
3. MEAN STAPLE STRENGTH - 59 STAPLES 25 NEWTONS/KTEX
4. DISTRIBUTION OF POSITION OF BREAK:
   - BROKE IN THE TIP REGION 42 %
   - BROKE IN THE MIDDLE REGION 58 %
   - BROKE IN THE BASE REGION 0 %

ADDITIONAL INFORMATION:

SPECIMEN ONLY

CHARGE: $ 25.50 GST @ 10% : $ 2.55 TOTAL CHARGE: $ 28.05
THIS CERTIFICATE HAS BEEN COMBINED IN 2-07490882-J9

NO FURTHER PAGES
TEST CONDUCTED AT MELBOURNE LABORATORY

08.127808 29004 0100 57.16 1.60 307858222 34512684 34479699 ISSUED ON 17.03.2006, PRINTED ON 02.05.2006 KATS 2

AWTA Ltd A.B.N. 43 006 014 106

IWTO Licensed No. 7

I.W.T.O.

NATA

ILRT MEMBER

NCS INTERNATIONAL

CERTIFIED QUALITY MANAGEMENT SYSTEM — ISO 9001 —

CLIENT USE ONLY

This ORIGINAL and any OFFICIAL COPY of this Certificate are issued in accordance with the stated Test Method(s) and any directly associated Regulations. By authorising the application of the AWTA Ltd Seal, we hereby certify that the test results are within the precision limits of this Test Method declared. As far as is permissible by law, no other warranty is expressed or implied. On request, AWTA Ltd will make available sampling, weighing and/or testing details to any bona fide bearer or transferee of this Certificate. Photocopies and other reproductions are NOT recognised as Certificates. THIS CERTIFICATE SHALL BE RENDERED VOID IF AMENDED OR ALTERED.

*DECLARED: AWTA Ltd does not certify or provide any warranty whatsoever in regard to declared information.

© AUSTRALIAN WOOL TESTING AUTHORITY LTD 01/01/05

For and on behalf of Australian Wool Testing Authority Ltd

MICHAEL A JACKSON B.Sc. (Hons) MANAGING DIRECTOR

DR. GEORG R. BELHARZ Dip.App.Sc. M.Sc., Ph.D. GENERAL MANAGER - LABORATORY OPERATIONS

WOOL TESTING AUTHORITY LTD AUSTRALIAN

Attachment 11
Combined core test certificate

AUSTRALIAN WOOL TESTING AUTHORITY LTD

Regd. Office: 70 Robertson Street, Kensington, Victoria 3031 P.O. Box 240, North Melbourne 3051 Tel: (03) 9371 4100 Fax: (03) 9371 4191

IWTO COMBINED CERTIFICATE

ORIGINAL

2-07490881-J1

TEST METHOD IWTO-31

PAGE 1

225 BALES

TEST NUMBER	BALES	NETT	YIELD	VM	LSCAN	AIRFLOW	*DMFR
2-06738938-P3	4	617	58.2	0.3	19.2		
JW/MITTA/BET				*AAAE			
2-07097251-P4	9	1764	74.1	0.6	19.8		ND
*GIRRAWEEN/A				*BBB			
2-07175216-P2	5	908	71.9	1.4	19.0		ND
*AVON				*AAAA			
2-07237516-P1	2	310	75.2	0.7	19.0		ND
*JM/YASS				*AAA			
2-07327055-P1	8	1519	69.8	0.4	19.0		2
*GERALDRA/COOTA				*AAA M			
2-07403162-P2	1	165	67.8	0.7	19.1		ND
*MERIGAN				*AAAM			
2-07429050-P9	9	1653	70.0	0.9	19.2		ND
*MERIGAN				*AAAAM			
2-07438687-P7	5	945	73.1	0.3	19.6		1
*AVOCA				*AAA			
2-07445601-P9	3	582	64.9	0.9	19.4		ND
*TYRONE				*AAA M			
2-07450100-P4	5	942	78.8	0.7	19.5		ND
*B-PD/KILLIANMORE				*AAAM			
2-07459763-P0	6	1135	65.7	1.7	20.0		ND
*EJN/CORADGERY				*AAAM			
2-07460918-P7	12	2076	70.8	1.7	19.6		ND
*MP/MURRA				*AAA M			
2-07461733-P9	6	997	72.4	1.7	20.0		ND
*TIMBLETON/NORTH				*AAAM			
2-07470886-P4	6	1080	73.7	1.9	19.6		2
*DANGELONG				*AAAM			
2-07474297-P0	7	1298	75.5	0.7	19.1		ND
*F/BLANGY/TRAFROCK				*QA AAA			
2-07476030-P3	2	370	70.7	0.6	19.8		1
*FUWACO/DUNNELONG				*AAM			
2-07476486-P7	1	176	68.5	1.0	19.0		1
*GILDLEY				*AAM			
2-07476939-P5	9	1713	63.8	1.7	19.7		NA
*MERINO DOWNS/ARAMAC				*AAAMNR			
2-07477045-P0	2	301	65.2	0.8	20.0		ND
*BENWERRIN				*AAA M			

CONTINUED ON NEXT PAGE

TEST RESULTS:

1. WOOL BASE - 70 SUBSAMPLES 58.24 %
2. MEAN FIBRE DIAMETER - 139 SPECIMENS 19.5 MICRONS
3. COEFFICIENT OF VARIATION OF DIAMETER 21.5 %
4. VEGETABLE MATTER BASE 1.0 %
   INCLUDING **** % HARD HEADS-TWIGS
   CALCULATED COMMERCIAL YIELDS & CLEAN MASSES:
5. IWTO SCOURED YIELD at 16% REGAIN 70.4 % 29 308 KG

ADDITIONAL INFORMATION:

6. VEGETABLE MATTER COMPOSITION (B) 0.1 (S) 0.9

VM BASE RANGES FROM 0.2 TO 2.0 %
LASERSCAN MEAN RANGES FROM 19.0 TO 20.0 MICRONS
ISSUED ON 30.03.2006, PRINTED ON 02.05.2006

REF. 06X138AU

TOTAL BALE WEIGHTS:

TEST HOUSE GROSS 42 104 KG TARE 450 KG NETT 41 654 KG

SPECIMEN ONLY (H) 0.0

CHARGE: $ 44.40 GST @ 10% : $ 4.44 TOTAL CHARGE: $ 48.84

NOTE - YIELDS = CLEAN WEIGHTS AS % OF NETT ROUNDED TO 1 DECIMAL

05.0930 0220 4747240 4697222

The **ORIGINAL** and any **OFFICIAL COPY** of this Certificate are issued in accordance with the stated Test Method(s) and any directly associated Regulations. By authorising the application of the AWTA Ltd Seal, we hereby certify that the test results are within the precision limits of the Test Method declared. As far as is permissible by law, no other warranty is expressed or implied. On request, AWTA Ltd will make available sampling, weighing and/or testing details to any bona fide buyer or transferee of this Certificate. Photocopies and other reproductions are **NOT** recognised as Certificates. **THIS CERTIFICATE SHALL BE RENDERED VOID IF AMENDED OR ALTERED.**

***DECLARED: AWTA Ltd does not certify or provide any warranty whatsoever in regard to declared information.**

© AUSTRALIAN WOOL TESTING AUTHORITY LTD
01017/05

For and on behalf of Australian Wool Testing Authority Ltd

MICHAEL A. JACKSON B.Sc (Hons)
MANAGING DIRECTOR

DR. GEORG R. BEILHARZ Dip.App.Sc., M.Sc., Ph.D.
GENERAL MANAGER - LABORATORY OPERATIONS

AWTA Ltd
A.B.N. 63 006 014 106

IWTO Licensed

I.W.T.O.

NATA

MEMBER

CERTIFIED QUALITY MANAGEMENT SYSTEM

CLIENT USE ONLY

Attachment 12
Combined staple test certificate

AUSTRALIAN WOOL TESTING AUTHORITY LTD

Regd. Office: 70 Robertson Street, Kensington, Victoria 3031 P.O. Box 240, North Melbourne 3051 Tel: (03) 9371 4100 Fax: (03) 9371 4191

ORIGINAL

IWTO COMBINED STAPLE TEST CERTIFICATE

2-07490882-J9 225 BALES TEST METHOD IWTO-31 PAGE 1

TEST NUMBER	BALES	NETT	LNG	CV/L	STR	TIP	MID	BASE
2-06739066-L2	4	617	74	12	25	31	28	41
*JM/MITTA/BET					*AAAE			
2-07098027-L7	9	1764	110	12	31	38	62	0
*GIRRAWEEN/A					*BBB			
2-07175253-L5	5	908	89	10	38	14	44	42
*AVON					*AAAA			
2-07237650-L8	2	310	104	14	32	2	42	56
*JM/YASS					*AAA			
2-07328077-L4	8	1519	90	12	39	9	11	80
*GERALDRA/COOMA					*AAA M			
2-07403443-L6	1	165	97	17	38	0	61	39
*MERIGAN					*AAAM			
2-07430856-L6	9	1653	111	14	33	41	38	21
*MERIGAN					*AAAAM			
2-07439080-L4	5	945	87	10	23	0	3	97
*AVOCA					*AAA			
2-07446946-L7	3	582	112	14	28	20	77	3
*TYRONE					*AAA M			
2-07450300-L0	5	942	88	16	33	2	96	2
*B-PD/KILLIANMORE					*AAAM			
2-07461785-L9	12	2076	86	13	25	3	92	5
*MP/MURRA					*AAA M			
2-07461975-L6	6	997	77	13	23	92	8	0
*TUMBLETON/NORTH					*AAAM			
2-07462604-L1	6	1135	107	14	28	21	77	2
*EJN/CORADGERY					*AAAM			
2-07471099-L3	6	1080	116	18	26	9	74	17
*DANGELONG					*AAAM			
2-07474392-L9	7	1298	78	14	37	15	83	2
*F/BLANGY/TRAPROCK					*QA AAA			
2-07476464-L4	2	370	76	19	33	6	60	34
*RJW&CO/DUNNELONG					*AAM			
2-07476545-L0	1	176	73	16	41	12	76	12
*GIDLEY					*AAM			
2-07477153-L2	9	1713	75	21	39	38	48	14
*MERINO DOWNS/ARAMAC					*AAAWNR			
2-07479012-L8	2	301	96	18	31	9	76	15
*BENWERRIN					*AAA M			

CONTINUED ON NEXT PAGE

STAPLE LENGTH RANGES FROM 72 TO 116 MM
STAPLE STRENGTH RANGES FROM 23 TO 41 N/KTEX
ISSUED ON 30.03.2006, PRINTED ON 02.05.2006 3

REF. 06X138AU

TOTAL BALE WEIGHTS:

TEST HOUSE GROSS 42 104 KG TARE 450 KG NETT 41 654 KG

TEST RESULTS:

1. MEAN STAPLE LENGTH 91 MM
2. COEFFICIENT OF VARIATION OF STAPLE LENGTH 20 %
3. MEAN STAPLE STRENGTH 30 NEWTONS/KTEX
4. DISTRIBUTION OF POSITION OF BREAK:
   BROKE IN THE TIP REGION 28 %
   BROKE IN THE MIDDLE REGION 55 %
   BROKE IN THE BASE REGION 17 %

ADDITIONAL INFORMATION:

SPECIMEN ONLY

CHARGE: $ 44.40 GST @ 10% : $ 4.44 TOTAL CHARGE: $ 48.84

05.0930 0210 .00 .00 0 4741287 4697222

The **ORIGINAL** and any **OFFICIAL COPY** of this Certificate are issued in accordance with the stated Test Method(s) and any directly associated Regulations. By authorising the application of the AWTA Ltd Seal, we hereby certify that the test results are within the precision limits of the Test Method declared. As far as is permissible by law, no other warranty is expressed or implied. On request, AWTA Ltd will make available sampling, weighing and/or testing details to any bona fide bearer or transferee of this Certificate. Photocopies and other reproductions are **NOT** recognised as Certificates. **THIS CERTIFICATE SHALL BE RENDERED VOID IF AMENDED OR ALTERED.**

***DECLARED: AWTA Ltd does not certify or provide any warranty whatsoever in regard to declared information.**

© AUSTRALIAN WOOL TESTING AUTHORITY LTD 01017/05

For and on behalf of Australian Wool Testing Authority Ltd

MICHAEL A. JACKSON B.Sc.(Hons) MANAGING DIRECTOR

DR. GEORG R. BELHARZ Dip.App.Sc., M.Sc., Ph.D. GENERAL MANAGER – LABORATORY OPERATIONS

AWTA Ltd A.B.N. 43 006 014 106

IWTO Licensed No. 7

I.W.T.O.

NATA

ILRT MEMBER

HCS INTERNATIONAL

CERTIFIED QUALITY MANAGEMENT SYSTEM ISO 9001

CLIENT USE ONLY

Attachment 13
Daily report Tuesday (11/4/06)

CLIENT IFC As at : 11/4/06 1 of 1

PURCHASE SUMMARY FOR **M 41** Daily Summary

ORDER	BRK	LOT	LOC	BLS	MIC	CVD	S.DRY YLD.	VM	MM	CVL	NKT	POB M	ACIF	ORDER PRICE	TYPE	TEAM 3 mmH	Cvh	NETT KG	S.DRY KG.
IFC1	DALG	247	G	4	20.0	23.0	70.6	0.4	89	13	28	10	833	820	MFT	78.1	41.0	739	522
IFC1	ESMG	143	G	10	19.6	19.4	70.7	0.9	90	14	49	13	935	938	MFB	86.4	34.8	1929	1364
IFC1	ESMG	269	G	8	19.5	18.5	72.9	0.2	92	17	35	37	956	955	MFB	78.5	45.8	1370	999
IFC1	ESMG	331	G	7	19.6	21.9	74.7	0.6	96	17	43	23	929	938	MFB	83.1	41.6	1330	994
IFC1	ESMG	493	G	8	19.2	20.3	68.5	0.9	88	15	42	41	998	986	MFG	77.5	42.2	1577	1080
IFC1	ESMG	501	G	5	19.2	20.3	65.4	0.7	77	15	37	23	989	986	MFG	73.8	37.7	952	623
IFC1	ESMG	533	G	9	19.4	22.2	67.4	0.8	90	14	35	32	983	952	MFG	76.8	43.3	1639	1105
IFC1	ESMP	1515	P	2	19.2	19.8	75.7	0.2	87	14	45	36	973	1006	MFB	79.8	39.6	218	165
IFC1	LFLME	2002	HM	12	19.8	22.2	60.6	0.7	86	19	30	66	822	824	PG	67.2	51.3	2220	1345
IFC1	WISM	20	M	7	19.9	22.6	66.1	0.3	67	17	43	52	872	852	MFS	66.4	37.6	1263	835
IFC1		**10**		**72**	**19.6** *19.562*	**21.0**	**68.2**	**0.6** *0.640*	**86**	**15.8**	**39**	**36**	**926**	**920**		**76.3**	**41.9**	**13237**	**9032**
IFC2	ADEA	620	A	6	23.0	22.6	61.6	1.5	90	12	35	11	769	760	MFG	85.0	35.8	907	559
IFC2	AWNS	171	M	4	23.1	20.3	73.7	1.2	92	11	47	24	763	763	MFB	90.1	33.7	730	538
IFC2	DALA	1853	A	16	22.6	22.6	62.1	1.2	83	18	36	27	786	768	MFG	77.6	38.7	3041	1888
IFC2	DALG	164	G	2	23.0	21.7	76.7	0.3	87	21	48	34	761	765	MFB	83.0	37.5	276	212
IFC2	ESMG	130	G	4	23.2	22.8	66.7	1.0	95	15	43	24	762	761	MFB	87.4	37.6	762	508
IFC2	ESMG	203	G	10	23.3	20.6	72.8	0.7	94	12	41	37	754	759	MFB	86.9	39.0	1880	1369
IFC2	ESMG	536	G	7	22.6	23.5	70.9	1.0	93	15	33	20	770	773	MFB	82.4	40.5	1297	920
IFC2	QWBA	129	G	9	22.6	20.4	69.5	0.8	100	17	31	30	771	768	MFG	84.5	45.8	1770	1230

Attachment 14
Daily report Wednesday (12/4/06)

CLIENT IFC As at : 12/4/06 1 of 1

PURCHASE SUMMARY FOR **M 41** Daily Summary

ORDER	BRK	LOT	LOC	BLS	MIC	CVD	S.DRY YLD.	VM	MM	CVL	NKT	POB M	ACIF	ORDER PRICE	TYPE	TEAM 3 mmH	Cvh	NETT KG	S.DRY KG.
IFC1	DALG	79	G	12	19.2	19.3	75.7	0.3	94	14	36	14	987	1006	MFB	83.2	41.3	2218	1679
IFC1	DALG	114	G	5	19.0	21.1	71.9	0.4	87	14	39	38	1047	1040	MFB	76.3	42.3	856	615
IFC1	DALG	4564	G	5	19.6	23.0	63.8	2.3	84	23	36	38	827	838	PG	69.9	45.4	796	508
IFC1	DALG	4648	G	4	19.5	23.1	70.7	0.3	80	20	31	52	849	845	PB	66.0	47.4	765	541
IFC1	DALP	1422	P	7	19.6	23.0	73.5	1.1	88	17	28	26	894	888	MFT	73.1	45.3	1310	963
IFC1	ESMG	103	G	7	19.3	19.2	72.4	0.5	89	14	44	37	972	989	MFB	80.5	40.6	1047	758
IFC1	ESMG	109	G	8	19.1	19.4	73.8	0.6	88	16	33	34	991	1003	MFG	75.6	44.8	1439	1062
IFC1	ESMG	149	G	5	19.8	23.2	69.4	0.8	92	12	25	16	841	854	MFT	77.1	43.8	959	666
IFC1	ESMG	366	G	7	19.9	21.1	67.7	0.4	87	15	24	19	828	837	MFT	74.8	44.2	1350	914
IFC1	ESMG	401	G	10	19.0	20.5	72.7	0.5	87	18	40	23	1034	1040	MFB	77.9	40.9	1569	1141
IFC1	WISM	1407	X	4	19.1	21.5	63.8	1.5	81	25	36	57	877	873	PG	65.7	49.0	638	407
IFC1		**11**		**74**	**19.3** *19.348*	**20.9**	**71.5**	**0.7** *0.691*	**88**	**16.3**	**34**	**29**	**938**	**946**		**76.0**	**43.5**	**12947**	**9254**
IFC2	ADEA	631	A	7	23.5	23.0	61.6	3.0	99	13	34	35	725	720	MFG/B	84.4	42.9	1355	835
IFC2	DALA	1763	A	3	22.9	19.7	63.2	4.4	94	14	35	69	692	712	MFG/B	77.6	47.7	495	313
IFC2	DALA	1767	A	4	23.3	20.2	62.6	1.8	87	12	43	41	731	754	MFG	83.7	36.8	777	486
IFC2	DALA	1770	A	4	23.2	22.8	61.5	3.8	80	15	38	53	689	706	MFG/B	73.6	39.8	653	402
IFC2	DALA	1824	A	5	23.3	21.5	61.9	0.8	96	14	27	15	751	739	MFT	84.9	41.8	897	555
IFC2	ESMA	1897	A	7	22.7	22.9	61.2	0.5	87	15	26	3	751	751	MFT	80.7	38.3	1298	794
IFC2	ESMA	2108	A	10	23.1	23.8	67.7	1.6	92	16	27	12	747	743	MFT	81.0	41.0	1906	1290
IFC2	ESMA	2112	A	7	23.5	21.7	66.0	0.7	101	14	33	55	755	750	MFG	83.4	47.7	1312	866
IFC2	ESMG	520	G	13	22.7	22.0	63.0	3.1	92	12	39	42	712	716	MFG/B	81.8	40.5	2283	1438
IFC2	RODM	68	M	13	23.5	21.7	65.3	1.8	76	18	42	65	733	740	MFS	72.5	40.1	1847	1206
IFC2		**10**		**73**	**23.2** *23.155*	**22.2**	**63.8**	**2.0** *2.017*	**90**	**14.5**	**35**	**38**	**732**	**734**		**80.1**	**41.2**	**12823**	**8185**

Attachment 15
Weekly report Wednesday (12/4/06)

CLIENT IFC As at : 12/4/06 1 of 1

PURCHASE SUMMARY FOR **M 41** Weekly Summary

ORDER	BRK	LOT	LOC	BLS	MIC	CVD	S.DRY YLD.	VM	MM	CVL	NKT	POB M	ACIF	ORDER PRICE	TYPE	TEAM 3 mmH	Cvh	NETT KG	S.DRY KG.
IFC1	DALG	79	G	12	19.2	19.3	75.7	0.3	94	14	36	14	987	1006	MFB	83.2	41.3	2218	1679
IFC1	DALG	114	G	5	19.0	21.1	71.9	0.4	87	14	39	38	1047	1040	MFB	76.3	42.3	856	615
IFC1	DALG	247	G	4	20.0	23.0	70.6	0.4	89	13	28	10	833	820	MFT	78.1	41.0	739	522
IFC1	DALG	4564	G	5	19.6	23.0	63.8	2.3	84	23	36	38	827	838	PG	69.9	45.4	796	508
IFC1	DALG	4648	G	4	19.5	23.1	70.7	0.3	80	20	31	52	849	845	PB	66.0	47.4	765	541
IFC1	DALP	1422	P	7	19.6	23.0	73.5	1.1	88	17	28	26	894	888	MFT	73.1	45.3	1310	963
IFC1	ESMG	103	G	7	19.3	19.2	72.4	0.5	89	14	44	37	972	989	MFB	80.5	40.6	1047	758
IFC1	ESMG	109	G	8	19.1	19.4	73.8	0.6	88	16	33	34	991	1003	MFG	75.6	44.8	1439	1062
IFC1	ESMG	143	G	10	19.6	19.4	70.7	0.9	90	14	49	13	935	938	MFB	86.4	34.8	1929	1364
IFC1	ESMG	149	G	5	19.8	23.2	69.4	0.8	92	12	25	16	841	854	MFT	77.1	43.8	959	666
IFC1	ESMG	269	G	8	19.5	18.5	72.9	0.2	92	17	35	37	956	955	MFB	78.5	45.8	1370	999
IFC1	ESMG	331	G	7	19.6	21.9	74.7	0.6	96	17	43	23	929	938	MFB	83.1	41.6	1330	994
IFC1	ESMG	366	G	7	19.9	21.1	67.7	0.4	87	15	24	19	828	837	MFT	74.8	44.2	1350	914
IFC1	ESMG	401	G	10	19.0	20.5	72.7	0.5	87	18	40	23	1034	1040	MFB	77.9	40.9	1569	1141
IFC1	ESMG	493	G	8	19.2	20.3	68.5	0.9	88	15	42	41	998	986	MFG	77.5	42.2	1577	1080
IFC1	ESMG	501	G	5	19.2	20.3	65.4	0.7	77	15	37	23	989	986	MFG	73.8	37.7	952	623
IFC1	ESMG	533	G	9	19.4	22.2	67.4	0.8	90	14	35	32	983	952	MFG	76.8	43.3	1639	1105
IFC1	ESMP	1515	P	2	19.2	19.8	75.7	0.2	87	14	45	36	973	1006	MFB	79.8	39.6	218	165
IFC1	LFLME	2002	HM	12	19.8	22.2	60.6	0.7	86	19	30	66	822	824	PG	67.2	51.3	2220	1345
IFC1	WISM	20	M	7	19.9	22.6	66.1	0.3	67	17	43	52	872	852	MFS	66.4	37.6	1263	835
IFC1	WISM	1407	X	4	19.1	21.5	63.8	1.5	81	25	36	57	877	873	PG	65.7	49.0	638	407
IFC1		**21**		**146**	**19.5**	**21.0**	**69.8**	**0.7**	**87**	**16.1**	**36**	**32**	**932**	**933**		**76.1**	**42.7**	**26184**	**18286**
					19.454			***0.665***											

IFC2	ADEA	620	A	6	23.0	22.6	61.6	1.5	90	12	35	11	769	760	MFG	85.0	35.8	907	559
IFC2	ADEA	631	A	7	23.5	23.0	61.6	3.0	99	13	34	35	725	720	MFG/B	84.4	42.9	1355	835
IFC2	AWNS	171	M	4	23.1	20.3	73.7	1.2	92	11	47	24	763	763	MFB	90.1	33.7	730	538
IFC2	DALA	1763	A	3	22.9	19.7	63.2	4.4	94	14	35	69	692	712	MFG/B	77.6	47.7	495	313
IFC2	DALA	1767	A	4	23.3	20.2	62.6	1.8	87	12	43	41	731	754	MFG	83.7	36.8	777	486
IFC2	DALA	1770	A	4	23.2	22.8	61.5	3.8	80	15	38	53	689	706	MFG/B	73.6	39.8	653	402
IFC2	DALA	1824	A	5	23.3	21.5	61.9	0.8	96	14	27	15	751	739	MFT	84.9	41.8	897	555
IFC2	DALA	1853	A	16	22.6	22.6	62.1	1.2	83	18	36	27	786	768	MFG	77.6	38.7	3041	1888
IFC2	DALG	164	G	2	23.0	21.7	76.7	0.3	87	21	48	34	761	765	MFB	83.0	37.5	276	212
IFC2	ESMA	1897	A	7	22.7	22.9	61.2	0.5	87	15	26	3	751	751	MFT	80.7	38.3	1298	794
IFC2	ESMA	2108	A	10	23.1	23.8	67.7	1.6	92	16	27	12	747	743	MFT	81.0	41.0	1906	1290
IFC2	ESMA	2112	A	7	23.5	21.7	66.0	0.7	101	14	33	55	755	750	MFG	83.4	47.7	1312	866
IFC2	ESMG	130	G	4	23.2	22.8	66.7	1.0	95	15	43	24	762	761	MFB	87.4	37.6	762	508
IFC2	ESMG	203	G	10	23.3	20.6	72.8	0.7	94	12	41	37	754	759	MFB	86.9	39.0	1880	1369
IFC2	ESMG	520	G	13	22.7	22.0	63.0	3.1	92	12	39	42	712	716	MFG/B	81.8	40.5	2283	1438
IFC2	ESMG	536	G	7	22.6	23.5	70.9	1.0	93	15	33	20	770	773	MFB	82.4	40.5	1297	920
IFC2	QWBA	129	G	9	22.6	20.4	69.5	0.8	100	17	31	30	771	768	MFG	84.5	45.8	1770	1230
IFC2	QWBA	135	G	7	23.2	22.4	62.2	2.4	87	14	34	32	744	726	MFG/B	79.6	39.5	1058	658
IFC2	RHOA	518	A	8	23.5	21.7	66.0	0.5	88	18	42	42	756	750	MFG	81.7	39.8	1082	714
IFC2	RODM	68	M	13	23.5	21.7	65.3	1.8	76	18	42	65	733	740	MFS	72.5	40.1	1847	1206
IFC2		**20**		**146**	**23.0**	**22.0**	**65.5**	**1.5**	**90**	**14.9**	**36**	**33**	**750**	**748**		**81.5**	**40.3**	**25626**	**16781**
					23.043			***1.549***											

Attachment 16
Daily report, Thursday (13/4/06)

CLIENT IFC As at : 13/4/06 1 of 1

PURCHASE SUMMARY FOR **M 41** Daily Summary

ORDER	BRK	LOT	LOC	BLS	MIC	CVD	S.DRY YLD.	VM	MM	CVL	NKT	POB M	ACIF	ORDER PRICE	TYPE	TEAM 3 mmH	Cvh	NETT KG	S.DRY KG.
IFC1	DALA	1811	A	5	19.7	21.8	68.8	1.9	69	13	42	48	859	886	MFS	68.3	36.5	874	601
IFC1	DALG	116	G	4	19.4	21.1	74.7	0.6	92	15	39	52	994	972	MFB	76.5	46.2	682	509
IFC1	DALG	303	G	3	19.4	20.6	66.6	1.4	75	18	40	55	935	937	MFS	68.0	42.4	549	366
IFC1	DALG	362	G	7	19.5	19.5	75.7	0.3	90	14	44	62	946	955	MFB	77.4	45.0	1193	903
IFC1	DALG	443	G	8	19.1	22.0	70.1	1.6	90	15	26	22	920	973	MFT	74.2	45.6	1430	1002
IFC1	DALG	465	G	3	19.7	20.8	75.1	0.4	100	16	31	42	887	901	MFG	79.0	50.0	570	428
IFC1	ESMG	144	G	11	19.9	20.6	71.0	0.8	95	16	41	28	891	887	MFB	82.6	42.3	2118	1504
IFC1	ESMG	145	G	8	19.8	21.2	70.1	1.3	95	13	38	18	894	904	MFB	83.3	40.6	1552	1088
IFC1	ESMG	402	G	2	19.9	21.1	74.1	0.3	88	22	39	33	891	887	MFB	76.2	44.0	307	227
IFC1	ESMG	430	G	3	19.1	21.5	74.3	0.9	69	12	41	18	986	988	MFS	72.5	31.9	503	374
IFC1	LFLME	540	M	4	19.8	21.2	66.5	0.6	78	15	41	54	880	884	MFG	71.3	41.3	694	462
IFC1	QWBA	57	G	12	19.9	21.1	72.6	1.4	98	11	38	33	863	887	MFB	83.2	43.2	2314	1680
IFC1	RODM	47	M	2	19.4	22.7	70.2	0.5	86	23	36	58	946	952	MFG	68.5	49.6	344	241
IFC1	WISM	316	X	2	19.5	21.0	72.4	0.3	71	15	42	49	919	920	MFS	69.3	38.2	229	166
IFC1		**14**		**74**	**19.6**	**21.0**	**71.5**	**1.0**	**88**	**14.4**	**38**	**37**	**905**	**917**		**77.3**	**42.4**	**13359**	**9551**
					19.644			***1.038***											
IFC2	DALA	1757	A	11	22.8	20.6	64.1	1.5	93	12	34	51	766	764	MFG	80.8	44.1	2108	1351
IFC2	ESMA	1944	A	4	22.5	21.8	69.4	0.4	80	15	34	16	759	770	MFG	78.9	35.6	772	536
IFC2	ESMA	1958	A	14	22.9	21.8	63.1	0.8	95	14	38	41	756	762	MFG	83.7	42.2	2724	1719
IFC2	ESMA	2107	A	11	22.7	22.5	64.3	1.3	93	19	38	15	770	766	MFG	84.2	39.2	2086	1341
IFC2	ESMA	2123	A	10	22.5	24.0	66.6	1.4	87	15	32	21	762	770	MFG	78.7	39.3	1765	1175
IFC2	ESMG	129	G	16	23.1	22.1	68.5	0.6	87	16	45	40	765	763	MFB	82.4	37.6	3032	2077
IFC2	ESMG	463	G	3	23.2	22.8	61.5	2.4	76	17	33	60	752	746	MFS	69.1	42.4	584	359
IFC2	QWBA	124	G	6	22.8	21.9	61.2	2.0	73	13	44	9	756	754	MFS	80.7	27.6	1163	712
IFC2		**8**		**75**	**22.8**	**22.1**	**65.1**	**1.2**	**88**	**15.1**	**38**	**32**	**762**	**763**		**81.2**	**38.9**	**14234**	**9270**
					22.831			***1.151***											

Attachment 17
Weekly report Thursday (13/4/06)

CLIENT IFC As at : 13/4/06 1 of 1

PURCHASE SUMMARY FOR **M 41** Weekly Summary

ORDER	BRK	LOT	LOC	BLS	MIC	CVD	S.DRY YLD.	VM	MM	CVL	NKT	POB M	ACIF	ORDER PRICE	TYPE	TEAM 3 mmH	Cvh	NETT KG	S.DRY KG.
IFC1	DALA	1811	A	5	19.7	21.8	68.8	1.9	69	13	42	48	859	886	MFS	68.3	36.5	874	601
IFC1	DALG	79	G	12	19.2	19.3	75.7	0.3	94	14	36	14	987	1006	MFB	83.2	41.3	2218	1679
IFC1	DALG	114	G	5	19.0	21.1	71.9	0.4	87	14	39	38	1047	1040	MFB	76.3	42.3	856	615
IFC1	DALG	116	G	4	19.4	21.1	74.7	0.6	92	15	39	52	994	972	MFB	76.5	46.2	682	509
IFC1	DALG	247	G	4	20.0	23.0	70.6	0.4	89	13	28	10	833	820	MFT	78.1	41.0	739	522
IFC1	DALG	303	G	3	19.4	20.6	66.6	1.4	75	18	40	55	935	937	MFS	68.0	42.4	549	366
IFC1	DALG	362	G	7	19.5	19.5	75.7	0.3	90	14	44	62	946	955	MFB	77.4	45.0	1193	903
IFC1	DALG	443	G	8	19.1	22.0	70.1	1.6	90	15	26	22	920	973	MFT	74.2	45.6	1430	1002
IFC1	DALG	465	G	3	19.7	20.8	75.1	0.4	100	16	31	42	887	901	MFG	79.0	50.0	570	428
IFC1	DALG	4564	G	5	19.6	23.0	63.8	2.3	84	23	36	38	827	838	PG	69.9	45.4	796	508
IFC1	DALG	4648	G	4	19.5	23.1	70.7	0.3	80	20	31	52	849	845	PB	66.0	47.4	765	541
IFC1	DALP	1422	P	7	19.6	23.0	73.5	1.1	88	17	28	26	894	888	MFT	73.1	45.3	1310	963
IFC1	ESMG	103	G	7	19.3	19.2	72.4	0.5	89	14	44	37	972	989	MFB	80.5	40.6	1047	758
IFC1	ESMG	109	G	8	19.1	19.4	73.8	0.6	88	16	33	34	991	1003	MFG	75.6	44.8	1439	1062
IFC1	ESMG	143	G	10	19.6	19.4	70.7	0.9	90	14	49	13	935	938	MFB	86.4	34.8	1929	1364
IFC1	ESMG	144	G	11	19.9	20.6	71.0	0.8	95	16	41	28	891	887	MFB	82.6	42.3	2118	1504
IFC1	ESMG	145	G	8	19.8	21.2	70.1	1.3	95	13	38	18	894	904	MFB	83.3	40.6	1552	1088
IFC1	ESMG	149	G	5	19.8	23.2	69.4	0.8	92	12	25	16	841	854	MFT	77.1	43.8	959	666
IFC1	ESMG	269	G	8	19.5	18.5	72.9	0.2	92	17	35	37	956	955	MFB	78.5	45.8	1370	999
IFC1	ESMG	331	G	7	19.6	21.9	74.7	0.6	96	17	43	23	929	938	MFB	83.1	41.6	1330	994
IFC1	ESMG	366	G	7	19.9	21.1	67.7	0.4	87	15	24	19	828	837	MFT	74.8	44.2	1350	914
IFC1	ESMG	401	G	10	19.0	20.5	72.7	0.5	87	18	40	23	1034	1040	MFB	77.9	40.9	1569	1141
IFC1	ESMG	402	G	2	19.9	21.1	74.1	0.3	88	22	39	33	891	887	MFB	76.2	44.0	307	227
IFC1	ESMG	430	G	3	19.1	21.5	74.3	0.9	69	12	41	18	986	988	MFS	72.5	31.9	503	374
IFC1	ESMG	493	G	8	19.2	20.3	68.5	0.9	88	15	42	41	998	986	MFG	77.5	42.2	1577	1080
IFC1	ESMG	501	G	5	19.2	20.3	65.4	0.7	77	15	37	23	989	986	MFG	73.8	37.7	952	623

IFC1	ESMG	533	G	9	19.4	22.2	67.4	0.8	90	14	35	32	983	952	MFG	76.8	43.3	1639	1105
IFC1	ESMP	1515	P	2	19.2	19.8	75.7	0.2	87	14	45	36	973	1006	MFB	79.8	39.6	218	165
IFC1	LFLME	540	M	4	19.8	21.2	66.5	0.6	78	15	41	54	880	884	MFG	71.3	41.3	694	462
IFC1	LFLME	2002	HM	12	19.8	22.2	60.6	0.7	86	19	30	66	822	824	PG	67.2	51.3	2220	1345
IFC1	QWBA	57	G	12	19.9	21.1	72.6	1.4	98	11	38	33	863	887	MFB	83.2	43.2	2314	1680
IFC1	RODM	47	M	2	19.4	22.7	70.2	0.5	86	23	36	58	946	952	MFG	68.5	49.6	344	241
IFC1	WISM	20	M	7	19.9	22.6	66.1	0.3	67	17	43	52	872	852	MFS	66.4	37.6	1263	835
IFC1	WISM	316	X	2	19.5	21.0	72.4	0.3	71	15	42	49	919	920	MFS	69.3	38.2	229	166
IFC1	WISM	1407	X	4	19.1	21.5	63.8	1.5	81	25	36	57	877	873	PG	65.7	49.0	638	407
IFC1		**35**		**220**	**19.5**	**21.0**	**70.4**	**0.8**	**88**	**15.5**	**37**	**34**	**923**	**928**		**76.5**	**42.6**	**39543**	**27837**
					19.519			***0.791***										
IFC2	ADEA	620	A	6	23.0	22.6	61.6	1.5	90	12	35	11	769	760	MFG	85.0	35.8	907	559
IFC2	ADEA	631	A	7	23.5	23.0	61.6	3.0	99	13	34	35	725	720	MFG/B	84.4	42.9	1355	835
IFC2	AWNS	171	M	4	23.1	20.3	73.7	1.2	92	11	47	24	763	763	MFB	90.1	33.7	730	538
IFC2	DALA	1757	A	11	22.8	20.6	64.1	1.5	93	12	34	51	766	764	MFG	80.8	44.1	2108	1351
IFC2	DALA	1763	A	3	22.9	19.7	63.2	4.4	94	14	35	69	692	712	MFG/B	77.6	47.7	495	313
IFC2	DALA	1767	A	4	23.3	20.2	62.6	1.8	87	12	43	41	731	754	MFG	83.7	36.8	777	486
IFC2	DALA	1770	A	4	23.2	22.8	61.5	3.8	80	15	38	53	689	706	MFG/B	73.6	39.8	653	402
IFC2	DALA	1824	A	5	23.3	21.5	61.9	0.8	96	14	27	15	751	739	MFT	84.9	41.8	897	555
IFC2	DALA	1853	A	16	22.6	22.6	62.1	1.2	83	18	36	27	786	768	MFG	77.6	38.7	3041	1888
IFC2	DALG	164	G	2	23.0	21.7	76.7	0.3	87	21	48	34	761	765	MFB	83.0	37.5	276	212
IFC2	ESMA	1897	A	7	22.7	22.9	61.2	0.5	87	15	26	3	751	751	MFT	80.7	38.3	1298	794
IFC2	ESMA	1944	A	4	22.5	21.8	69.4	0.4	80	15	34	16	759	770	MFG	78.9	35.6	772	536
IFC2	ESMA	1958	A	14	22.9	21.8	63.1	0.8	95	14	38	41	756	762	MFG	83.7	42.2	2724	1719
IFC2	ESMA	2107	A	11	22.7	22.5	64.3	1.3	93	19	38	15	770	766	MFG	84.2	39.2	2086	1341
IFC2	ESMA	2108	A	10	23.1	23.8	67.7	1.6	92	16	27	12	747	743	MFT	81.0	41.0	1906	1290
IFC2	ESMA	2112	A	7	23.5	21.7	66.0	0.7	101	14	33	55	755	750	MFG	83.4	47.7	1312	866
IFC2	ESMA	2123	A	10	22.5	24.0	66.6	1.4	87	15	32	21	762	770	MFG	78.7	39.3	1765	1175
IFC2	ESMG	129	G	16	23.1	22.1	68.5	0.6	87	16	45	40	765	763	MFB	82.4	37.6	3032	2077
IFC2	ESMG	130	G	4	23.2	22.8	66.7	1.0	95	15	43	24	762	761	MFB	87.4	37.6	762	508
IFC2	ESMG	203	G	10	23.3	20.6	72.8	0.7	94	12	41	37	754	759	MFB	86.9	39.0	1880	1369
IFC2	ESMG	463	G	3	23.2	22.8	61.5	2.4	76	17	33	60	752	746	MFS	69.1	42.4	584	359
IFC2	ESMG	520	G	13	22.7	22.0	63.0	3.1	92	12	39	42	712	716	MFG/B	81.8	40.5	2283	1438
IFC2	ESMG	536	G	7	22.6	23.5	70.9	1.0	93	15	33	20	770	773	MFB	82.4	40.5	1297	920

IFC2	QWBA	124	G	6	22.8	21.9	61.2	2.0	73	13	44	9	756	754	MFS	80.7	27.6	1163	712
IFC2	QWBA	129	G	9	22.6	20.4	69.5	0.8	100	17	31	30	771	768	MFG	84.5	45.8	1770	1230
IFC2	QWBA	135	G	7	23.2	22.4	62.2	2.4	87	14	34	32	744	726	MFG/B	79.6	39.5	1058	658
IFC2	RHOA	518	A	8	23.5	21.7	66.0	0.5	88	18	42	42	756	750	MFG	81.7	39.8	1082	714
IFC2	RODM	68	M	13	23.5	21.7	65.3	1.8	76	18	42	65	733	740	MFS	72.5	40.1	1847	1206
IFC2		**28**		**221**	**23.0**	**22.0**	**65.4**	**1.4**	**89**	**15.0**	**37**	**33**	**754**	**753**		**81.4**	**39.8**	**39860**	**26051**
					22.967			***1.407***										