



Making More From Sheep

MODULE 2 ◀

Market Focused Wool Production



A joint initiative of Australian Wool Innovation and Meat & Livestock Australia

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Market Focused Wool Production

What does this module do for you?

Successfully producing and marketing wool can be one of the most challenging but rewarding roles for a sheep producer. Taking a market focus to production is the basis for: planning and operation within the wool enterprise; better management of price risk; selling to advantage; and improved profitability.

This module provides a background to wool enterprise planning and is designed to assist with on-farm decision-making, no matter what production and marketing processes are used. It describes

the influence of fibre characterisation on price, presents options for estimating wool value and offers a range of selling options. There are three procedures that form the basis for decision making in wool production, harvesting and marketing.

It introduces Woolcheque and other industry tools for valuing wool. Taking a market focus to production will help maximise the net return per hectare from wool.

Procedure 2.1

Know the features of your wool influencing demand and price



Background information



The physical characteristics of wool that determine the price you receive are heavily influenced by genetics, level of nutrition, time of shearing, contamination (such as vegetable matter), and the way in which the wool is prepared for sale. In addition, any given wool type is subject to supply and demand factors that may alter within a wool selling season (short term factors) or between wool selling seasons (long term factors).

Introduction

The wool pipeline from sheep producer to customer is long and complex. A simplified outline is presented in tool 2.1, figure 1.

Around seventy percent of Australian fleece wool and skirtings are destined for the worsted processing sector (60mm plus) whereby all short fibres are removed then the longer fibre combed parallel to each other and joined at the ends then worsted spun. Ten percent goes to the semi worsted process (45mm to 60mm) which involves the combing of fibres in parallel then woollen spun.

The balance is made into woollen yarn used in knitwear (less than 40mm) where fibres are carded (fibre brushed back and forth) with varying lengths going in many directions and overlapping at different angles.

Influence on price

Prices received for raw wool are heavily influenced by physical characteristics. Over the past few selling seasons the three major physical factors affecting raw wool prices adversely in the market have been the position of break in the middle (pobm), overlong length (gsl) and AWTA certification suffix descriptor type. Discounts were applied by the market to sale lines that exhibited high pobm readings over 85pobm, lines that tested over 110mm in greasy staple length and to lines with certificates not being suffixed with a P (farm lots) tested.

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- Understand the wool pipeline and identify the factors influencing demand and how they affect wool price
- Know the important characteristics that influence price of wool at sale
- Use a range of information sources to monitor the wool market

These fibre characteristics are influenced by flock breeding programs (see procedure 9.2 in *Gain from Genetics*). Tool 9.10 in *Gain from Genetics* – the on-farm fibre measurement (OFFM) calculator – can help you assess the expected financial benefits of applying OFFM to your wool enterprise, separated into clip preparation, breeding and selection.

Pasture management throughout the year (see procedure 8.3 in *Turn Pasture into Product*) and shearing date can also be important influences on wool characteristics.

Certification type has an influence on price received. Issues often arise by the lack of enough similar wool to form a grower sale line resulting in wool having to be bulk classed (B & Q certificate suffix) in brokers store, wool grower choosing to not use the services of a registered wool classer (D certificate

suffix) or small lines not considered commercial by grower or wool selling broker that need to be inter lotted (I certificate suffix). Discounts are applied by the market to all such certified sale lines, and broker advice should be sought to determine the best options available.

Lighter individual bale weights can also affect price returns, with handling costs per kg being the issue to the market.

Short-term wool market factors

Wool is a global product. Supply and demand factors can influence the raw wool market after you are committed to producing a particular type and style of wool in the current season. These may occur when:

- Stocks of wool in the form of tops and yarn build up in warehouses and spinners slow down purchases of wool top, with corresponding implications for raw wool demand
- The quantity and quality of wool on offer does not match current buyer demand. Unusually or unexpected higher number of bales of similar wool types in sale weeks can often bear down on price levels and conversely lower than expected numbers can place upward pressure on market returns.
- Major trading currencies shift, eg, a sudden rise in the Australian dollar may cause wool prices to decline at short notice.

Wool brokers and advisers have current information to help you better understand these short-term factors.

Buyers also blend fleecewool to meet the specifications of a processor order. This is done because:

- Most mill lots are large and cannot be obtained from one sheep producer, or fleece wool of one type
- Processing efficiency often requires wool to be of different types and from various growing districts and farms.
- It offers processors the opportunity to maintain continuity of supply of a similar blend throughout the year.



On-farm fibre measurement can help identify your most valuable wool-cutting sheep and make decisions directly related to your enterprise profitability based on objective information.

The practice of blending affects the supply–demand cycle. Wool can be blended with different types grown within Australia and also wool from other countries to maintain a consistent, continuous supply of a particular blend. This may explain price volatility for the same types of wool at auction on the same day and as processor orders are filled.

Long-term wool market factors

Some factors affect the market gradually, over a year or more. This provides an opportunity to respond with the type of wool produced. These factors include:

- An increasing consumer preference for light-weight apparel fabrics. Spinners and weavers have responded accordingly by increasing their demand for finer wool.
- Fashion trends and economic growth in the major industrialised countries. This affects consumer demand for textiles.
- Wool competes with synthetic fibres (polyester and acrylic), and natural fibres (cotton, cashmere, mohair and silk).
- Long-term trends in currency exchange rates.
- Growing casualization in the workplace is causing a reduction in the wearing of suits by business people in many traditional markets. Counteracting slightly this trend is the uptake of suiting in some non traditional markets in developing nations.

- Manufacturers are altering production processes to match and anticipate growing demand in markets for wool products, with the outdoor sportswear and next to skin lightweight garment sector a target. Formerly worsted spinner manufacturers have or are converting and replacing machinery and production to semi worsted and knitwear capable operations, requiring different greasy wool requirements. Generally this indicates a stronger demand long term for shorter (40 to 70mm gsl) length wool.

Key decisions, critical actions and benchmarks

Sheep producers choose the type of sheep and wool that best suits the farm's physical characteristics, management operations and production environment. Once a micron range and breeding line are selected, find out what characteristics or specifications processors require within that wool type, particularly those wool characteristics influencing price.

AWEX market reports and wool brokers' reports and advice are all sources of information that can be used to research the price implications of proposed changes to the sheep enterprise. The production and management decisions may range from:

- A shift from producing 21 micron wool (on average) to, say, 19 micron wool, while holding fleece weight at current levels

→ Starting (or increasing) supplementary feeding in times of feed stress or seasonal changes in feed quality, to reduce the possibility of tender wool (below 40 n/ktex), especially where the position of break would occur in the middle of the staple; or

→ Changing shearing date, lambing time or increasing stocking rate.

In all cases, assess price information over a number of consecutive years, use your personal knowledge of the wool market, seek advice from your brokers', and/or brokers' management services to interpret the variations in price and consider potential financial gains.

Growing ultrafine Merino fleece wool

This is an intensive, risky and highly specialised area of wool production. To achieve maximum returns from an ultrafine (finer than 16.5 micron) enterprise, quality is paramount. Vital attributes that are needed to achieve a profitable return are;

- High staple strength
- Even and good length of fibre
- Finest micron possible
- Exceptional style and whiteness.
- Soft handle

This market sector places extreme importance on excellent preparation of sale lines with an emphasis on uniform staple quality counts and strength. The cloth resultant from this area of production inevitably reaches the shelves of only a few of the world's leading luxury tailors and commands an exclusive price tag, so any faults are extremely and heavily discounted. Low vegetable matter content percentage is essential. An Italian trade adage of "the finer the micron the better the wool has to be" should be kept in front of mind.

As there are limited markets for this type of greasy wool, keeping closely up to date on demand is key to being active in this market sector. A well developed relationship through your wool selling agent to the manufacturer is important, not only in reaching satisfactory price returns, but in staying abreast of the latest technical specifications required and demand expectations.

Growing superfine Merino fleece wool

The most important attributes of superfine fleece wool (16.6-18.5 microns) that influence price received are:

- Fibre diameter
- Staple strength
- Staple length
- Position of break middle (pobm)

With most of the production in this superfine category heading for suiting and luxury apparel markets, the buyers of this wool are expecting an overall higher quality raw material than coarser merino types. Ideally the staple strength should be showing an additionally measured reading of above 35nkt. The ideal staple length of lines should be between 70mm gsl and 90mm gsl as a guide, and as even in length as possible, avoiding mixing short fibres and overlong through the main lines. Quality counts should be visually adjacent and consistent.

As a specialty area of wool production, the superfine market segment also places a strong emphasis on the wool grower's clip preparation standards. Wool producers can expect to receive a premium for sale lines within an obviously well prepared clip. Significant discounts are applied to superfine clips that exhibit inconsistent quality and poor preparation, as the better wool in this sector is generally destined for sensitive, higher value end uses such as Italian men's suiting and women's apparel lines.

Growing consumer trends for lighter weight, trans-seasonal and softer garments that can be worn next to the skin is increasing demand in this sector, with the development of new knitwear items in particular supporting raw wool price.

Growing fine, medium and coarse Merino fleece wool

The most important attributes of fine, medium and coarse Merino fleece wool (18.6 micron and coarser) that influence the price received are;

- Fibre diameter
- Staple strength
- Vegetable matter
- Position of break middle (Pobm)

As this area of production is mostly treated as the "commodity market" of the wool industry, high average fleece weights are vital to a productive enterprise being achieved. The broader the fibre diameter the more weight of wool is needed per head as market pricing reduces lower for each point of a micron.

While the fibre diameter remains the key pricing variance factor, the percentage of position of break (pobm) in the middle test result has grown in its influence on price.

Raw wool characteristic discounts are less stringently applied by the trade in this category and clip preparation standards are not overly demanding, although minimum code of practice standards are mandatory to achieve full market support.

Growing Crossbred, Carpet and Downs fleece wool

The most important attributes of crossbred fleece wool (25 micron to 32 micron) that can influence the price received are;

- Fibre diameter.
- Medullated and dark fibre free.
- Style and colour.

With a good portion of the crossbred (25 to 32 micron) wool produced heading into the long knitwear sector, the ability to dye the end garment into modern day fashion pastel colours remain a key component. Where possible all kemp, medullated and dark fibre should be kept separate, as these faults can lead to heavy discounts for the crossbred wool producer.

The most important attribute of carpet wool fleece wool (33 micron to 40 micron) that can influence the price received is a thick stapled durable wool type that will not break down under heavy use.

The most important attribute of downs fleece wool (28 micron to 36 micron) that can influence the price received are;

- Compression resistance.
- Vegetable matter content

Major end use destination of downs wool is in the bedding and quilting manufacturing area. This requires a spongy quality in the wool which is the foremost influence on price. Vegetable matter content needs to be low in order for simply scouring rather than the more expensive and sometimes damaging process of carbonizing the vegetable matter out of the fibre.

Australian Wool Production Forecast Report

The AWI Australian Wool Production Forecasting Committee publishes a forecast of Australian wool production four times a year to provide the best possible estimates of future sheep numbers for wool production (see signposts).

The committee releases its forecasts of production as a press release with a report that provides detailed forecasts, historical data and commentary on the key drivers of the forecasts. This report is a useful planning tool for wool producers.

Develop your own clip database

Establish an information database or spreadsheet for your own wool clip to record annual production levels, quality and quantity of wool sold by category and price received for each wool type. Review this database/spreadsheet regularly to track progress towards your wool quality and production goals and embed it in your business plan (see procedure 1.1 in *Plan for Success*).

Signposts

Read

Wool Reports in rural newspapers such as The Land, Stock and Land, The Weekly Times, Stock Journal, The Countryman and The Queensland Country Life

On line Wool industry news and current issues:

- All AWI publications relevant to wool www.wool.com/Recent-Publications.htm
- ABC rural news and country hour programs can provide the latest innovations and updates regarding wool production. If unable to listen, transcripts are provided at www.abc.net.au/rural/
- Fairfax digital rural news and commentary on line at www.farmonline.com.au/
- Wool and sheep industry news, views and commentary. www.weeklytimesnow.com.au/

Commercial wool market reports free access - National

- Landmark market reporting services <http://wool.landmark.com.au/wool-weekly/>. Wool Weekly is also available by fax by calling 1800 629 396.
- Elders Wool International market reporting and market regional averages and market indicators <http://livestock-wool.elders.com.au/market-reports#a1>
- Australia's largest exporter, Viterra Wool, provides a weekly free market summary and detailed micron indicators at www.viterra.com.au/wool/market-summary

Commercial wool market reports free access- NSW/QLD

- AUSTRALIAN WOOL & PASTORAL AGENCY www.schutebell.com.au/wool.shtml
- AUSTRALIAN WOOL NETWORK www.woolnetwork.com.au/
- LANOC http://lanocwool.com.au/_blog/Weekly_Market_Report
- MOSES www.mosesandson.com.au/marketreport.PDF
- JEMALONG www.jemalongwool.com.au/
- WESTERN www.westernwool.com.au/images/docs/wwwreport.pdf

Commercial wool market reports free access - VIC/TAS/SA

- RODWELL'S www.rodwells.com.au/
- ROBERTS www.robertsltd.com.au/roberts.html
- QUALITY www.qualitywool.com/index.php?id=5
- WISS www.woosell.com.au/reports/MarketReport.pdf
- B N PROUD www.bnproud.com.au/reports/rep1.pdf

AWEX Market Reports and full market pricing information are available on a subscription fee basis and are distributed either via fax or email. These reports are available daily and weekly. Specific reports relevant to your production enterprise can be individually tailored to your requirements. To subscribe contact AWEX by E-mail at subscriptions@awex.com.au.

Many wool brokers not listed offer personalised client log in services for market information and reporting, which are not accessible to public viewing.

View

AWI's Market Intelligence Reports: collect and collate global wool market information. View web link: www.wool.com/market.information.htm

Wool on the Web: technical information on the wool pipeline for wool processors: www.woolontheweb.com.au/LivePage.aspx?pagelid=2

On Farm Fibre Measurement quality assurance brochure: questions and answers about OFFM which includes information about assuring the quality of OFFM. Visit: <http://www.awex.com.au/publications/offm-qa.html>

For detailed forecasts and historical data on the key drivers of past, current and future sheep numbers and wool production statistics, the following sites can be utilised as a valuable resource:

- AWI www.wool.com/Market-Information.htm
- AWI www.wool.com/6697.htm
- AWTA www.awta.com.au/en/Home/Statistics/Key-Test-Data/
- ABARES www.abares.gov.au/

For the latest updates and information relating to sheep and wool breeding and selection, flock management, feeding and nutrition, health and disease and stocking rates etc can be sourced from the following web sites:

- AWI www.wool.com/Grow
- MLA www.mla.com.au/Livestock-production
- AASMB www.merinos.com.au
- SHEEP CRC www.sheepcrc.org.au/
- DAFF www.daff.gov.au/animal-plant-health/pests-diseases-weeds/animal
- MLA/AWI www.sheepgenetics.org.au
- MLA/AWI www.sheepgenomics.com/

All state government bodies have sections devoted to issues relevant to their states sheep and wool industry. Useful information regarding wool and sheep production can be obtained from the following sources:

- NSW www.dpi.nsw.gov.au/agriculture/livestock/sheep
- WA www.agric.wa.gov.au/
- SA www.pir.sa.gov.au/livestock/sheep/wool__and__fibre
- VIC <http://new.dpi.vic.gov.au/>
- QLD www.dpi.qld.gov.au/27_120.htm
- TAS www.dpiw.tas.gov.au

Attend:

OFFM workshop: on-farm fibre measurement workshops help wool producers understand how to best use the products available, help wool brokers to accurately advise their clients and facilitate specialist training for OFFM operators. For workshop locations and dates, see: http://www.wool.com.au/Grow-On-Farm-testing_OFFM-workshops.htm

Wool sales; The auction sales provide a valuable tool in providing production comparison to your wool clip. On the wool show floor, not only look at your own wool samples, but take the time to view and compare other wools grown from your local district. During the auction, take note of prices received by other growers. The wool sales can also provide opportunities to interact with many of the exporters, giving a global perspective on pricing, preparation and future demand issues.



Procedure 2.2

Use a customer focus to produce, harvest and prepare wool for sale



Background information



The Australian Wool Exchange (AWEX) Code of Practice for the preparation of Australian Wool Clips describes the recommended practices and standards. The code aims to:

- Prepare uniform, consistent, reliable, predictable, low risk lines of wool suitable for the diverse needs of wool processing and so maximise competition from buyers for the wool;
- Present a product free of contamination that is correctly documented, described and packaged.

Clips prepared to the Code of Practice will meet the needs of wool processors and attract the maximum competition at auction to maximise the return.

Australian wool is renowned worldwide for its whiteness and cleanliness and, consequently, commands premiums compared to wools from other countries.

Contamination of the Australian Merino wool clip has mostly been associated with dark fibres originating from urine stains and isolated pigmentation found in the fleece. In recent years the introduction of exotic sheep breeds has brought a new and increasing source of dark and medullated fibre contamination. This contamination costs about \$100 million each year to remove or correct by picking out from fabric after weaving.

Key decisions, critical actions and benchmarks

Cost of production

Cost of production (COP) is a key factor affecting the profitability of wool producing businesses. COP, measured in dollars per kilogram of clean wool, is an indication of the outlay needed to produce each kg of wool (see tool 1.7 in *Plan for Success* and other COP tools including the Elders COP calculator). Calculating the cost of production (in cents per kilogram) is an important step in assessing and improving the performance of a wool growing enterprise. COP is most useful when calculated over two or more years, to track trends and influences over time.

The key benefits of knowing COP are to:

- Provide a benchmark to measure the performance of your wool enterprise year on year
- Enable a comparison of the efficiency of your enterprise annually with other wool producers
- Identify any opportunities for improvement and where your enterprise is performing well
- Help set a target sale price which will achieve a satisfactory profit margin and help determine the right time and price to market your wool.

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- Understand the benefits of developing the relationships that underpin the annual production, harvesting and preparation of wool
- Use the AWEX Code of Practice for Woolclassers to manage and supervise shearing, preparation and classing activities
- Discuss your shearing plans with your broker and secure their shearing stationery
- Consider producing for the growing niche market for 'ethical' and organic wool

Managing shearing

Shearing management and wool harvesting practices can have a big influence on quality of wool sold. Tool 2.4 contains basic guidelines to assist with planning for shearing, wool preparation and classing.

Dark and medullated fibre contamination

AWI-funded research by CSIRO developed the dark and medullated fibre (DMF) test for use on wool core-samples routinely used for yield and micron testing by the Australian Wool Testing Authority (AWTA). For around \$40 (+GST), the voluntary DMF test:



Clips prepared to the AWEX Code of Practice will attract maximum competition from buyers at auction

- Enables Australia’s white-wool producers to promote their wool as such to buyers
- Provides buyers and processors with a reliable and quantified measure of the level of dark and/or medullated fibre risk in sale lots.

The Dark and Medullated Fibre Risk (DMFR) Scheme is a voluntary declaration that rates clips for contamination risk and advises purchasers of Australian wool of the likely level of contamination of white wool from traditional natural pigmentation or stains and new sources such as exotic breeds.

The DMFR declaration requires Australian Merino wool producers to formally identify the following information on their wool classer’s specification or associated declaration form:

- If their stock have been in contact with exotic sheep breeds
- If crutched
- If crutched within 3 months of shearing
- Age
- Sex
- Wool description.

Tool 2.3 describes how this information contributes to the ratings. If the classer’s specification form does not include a section for this information, a separate declaration form is available from wool brokers.

Wool producers can nominate all, some, or certain lines in their wool clip for inclusion in the voluntary declaration scheme.

Eco / organic wool

Recent market research indicates that there is a growing niche market for ‘eco’ and organically grown wool. Ethical wool products are those made from fibre grown in an environmentally sustainable manner (see procedure 5.4 in *Protect Your Farm’s Natural Assets*) and that recognise animal welfare (see procedure 11.5 in *Healthy and Contented Sheep*), human rights and social justice standards. While this is a niche market, it is likely that the demand for ethical and organic wool will increase substantially over the next five years.

The EU Eco-label provides one such voluntary opportunity where products are certified for their ‘kindness to the environment’. In the case of wool products, this includes chemical residues on raw wool falling below certain prescribed levels. The Australian wool industry is well placed to supply these niche markets. The EU Eco-label provides some simple rules about chemical use for greasy wool that sheep producers can aim to meet (see tool 2.5).

Best practice chemical use

Guidelines are being developed to enable the most cost-effective external parasite (lice and blowflies) control and achieve environmental protection, human safety and quality of final product (wool and meat). Tool 2.6 describes currently recommended practices for the use of chemicals (pesticides) to control lice and blowflies on sheep.



Signposts



Read

Preparation of Australian Wool Clips: the Code of Practice 2010–2012: the Australian standard for preparing wool to meet the needs of wool processors. It contains recommended practices and technical explanations for wool producers and woolclassers to help maintain Australia's reputation as the world's premier supplier of a quality natural fibre. Contact The Woolclasser Registrar on (02) 9428 6100 or email registrar@awex.com.au for your copy.

Beyond the Bale: the Australian Wool Innovation published quarterly newsletter. Archived and current copies can be found online at www.wool.com/Recent-Publications.htm?cat=

BOARDTalk: the quarterly Wool classer Newsletter published by AWEX. For previous copies, visit: <http://www.awex.com.au/> and look under the woolclasser tab.

Fact Sheet: '**Guidelines for producing European (EU) eco-label, low or nil residue wool**': www.agric.wa.gov.au/ and search for ECO-Lable wool

Visual Assessment Scores: a national set of standardised visual scores to consistently describe, record and class sheep conformation, wool quality and breech traits. To order your free copy, call the AWI Helpline on 1800 070 099 (free within Australia).

View

AWI Cost of Production Calculator for Wool: calculating your cost of production is an important step in assessing flock profitability and a first step to making change: <http://www.wool.com/woolcheque>

Elders Business Tools: includes the **Elders Cost of Production on-line calculator**: <http://livestock-wool.elders.com.au/wool/cost-of-production-calculator>

AWEX Code of Practice for Woolclassers: visit the AWEX website for your copy: <http://www.awex.com.au/> and click on the publications tab.

Monitor **AWI and AWEX websites** to keep abreast of current developments:

→ www.wool.com.au

→ www.awex.com.au

AWTA Raw Wool Testing Services: summary of the major services AWTA provides to the industry, and descriptions of the processes used to achieve test results: <http://www.awta.com.au/> and click on Our Services

Dark and Medullated Fibres Program: protecting the reputation of Australian White Merino Wool: go to <http://awta.com.au> click on the For Wool Growers tab and look for DMF Risk Scheme.

→ Also see Tool 2.3 for the National Wool Declaration

Wool Residues - market, environment and occupational health issues: a good overview of the issues posed by wool residues, published by the Department of Agriculture and Food WA: www.agric.wa.gov.au/ and search for Farmnote 271.



Single dark fibres in a white or pastel fabric need picking out at a cost of more than 10 cents per kilogram

AWI Wool Handling and Shed Skills

DVD: a Training DVD for wool handlers covering throwing, skirting, rolling and other shed responsibilities. Other DVDs in the series include *Novice Shearer Training*, *Improvers / Professional Shearer Training* and *Gear Maintenance and Grinding*. To order your free DVDs, call the AWI Helpline on 1800 070 099 (free within Australia).

Attend

Woolclasser education courses:

prior to being registered by AWEX as a woolclasser, individuals need to undertake a wool classing training course. Find out more about wool classing courses by contacting your nearest TAFE or training organization, contacting AWEX on (02) 9428 6140 or emailing: industryservices@awex.com.au

Masterclasser: Masterclassers (MC) are Australian Woolclassers (AW stencil holders) who have been nominated by industry and have attended a Masterclasser training course.

Each MC is required to have the following attributes:

- Must be actively woolclassing for the last three years,
- Must class a minimum of 7 clips or 400 bales per annum,
- Must have ability and desire to further their wool knowledge, and
- Must demonstrate good character, judgment and capacity for leadership.

To obtain Masterclasser status, attendees will be required to attend a 4 day workshop at a nominated selling centre. They must pass an open book exam at the course on the Woolclassers Code of Practice. Retention of Masterclasser status will require the attendance at periodic refresher courses and routine audits. Further reference visit www.awex.com.au/ and click on the woolclasser tab.

Procedure 2.3

Maximise returns from your wool sales



Background information



Many options exist for the marketing of your wool clip. The price of wool is highly volatile, with this volatility being a major risk for any woolgrowing business. Understanding the value of your wool before sale can assist in assessing marketing options and the use of price risk management tools. Knowing where current prices sit in relation to historical values can also help reveal the current point in commodity price cycles.

Introduction

Wool producers have many selling options available to them. The options will vary according to the scale of your enterprise, and the characteristics of the wool you produce (micron, market speciality). To secure the true market value of your wool, work with your wool broker or adviser when using any of these selling options. The more commonly used methods include:

→ Open-cry 'progressive' auction

– The preferred method of sale and ownership transfer for about 85% of wool producers. This system is facilitated and managed by wool brokers, guarantees payment, and allows maximum exposure and competition for wool at sale time, with all major buyers of Australian wool present in the auction rooms.

→ **Private treaty** – Prices are negotiated privately with buyers at or about the time of shearing. Wool may be sold either tested or untested, however, untested wools will not be paid the same as tested wools.

→ **Forward sales** – A contract is made before shearing to deliver wool to an agreed specification and to an agreed price schedule. Payment is made against the actual test results. Remember that once contracted, your wool must meet specifications.

→ **Direct to topmaker/exporter** – Similar to forward contract, but a spot sale through an exporter for delivery direct to a topmaker. Negotiation of the final price in Australian currency must be managed carefully to eliminate fluctuations in currency exchange rates.

AT A GLANCE



- Use AWEX, your wool broker and/or Woolcheque to estimate the value of your wool
 - Use your wool value estimates to set auction reserve prices or negotiate direct sales
 - Consider wool selling options 4–6 months ahead of shearing and evaluate a range of methods
 - Develop strategies to manage price unpredictability before shearing and keep under regular review.
- **Internet selling** – Electronic offer board where wool is available for sale to buyers 24 hours a day, 7 days a week. A reserve price is 'posted' (presented for sale on computer screen) and can be simultaneously seen by all registered buyers. Submission of bids and final sale is facilitated via the offer board, and not directly with the seller. The most significant advantage of an electronic offer board comes in a rising market, when it allows buyers to purchase wool lots outside the scheduled auctions. See the link to Wooltrade in the signposts.

→ Grower marketing groups –

Grower based marketing groups established to sell direct to processors and manufacturers. Grower marketing groups need a structure, training and a sound business case to succeed and be profitable over time.

→ **Wool Pools** – A contract is made to deliver a volume of a shearing or yearly production to the pool up to 12 months prior to shearing. By participating in the pool you are assigning the risk management of your wool portfolio to a third party. The aim is to reduce exposure to price volatility. An upfront payment occurs after delivery based on a percentage of the current market. At the close of the pool a final payment is made based on the performance of the pool against the physical market. This option also includes traceability, downstream education and opportunities for contact with end use customers. See the link to TMC pools in the signposts.

→ **Grid Sales** Similar to selling livestock “over the hooks”, prices are offered from a set grid of prices for wool delivered to store. Prices are generated from all stages of the demand chain as the various businesses feed direct orders from the pipeline. Most wool selling brokers will offer some form of grid sales or a price at door pricing system for their clients.

→ Partnership Processing – retained ownership

Some processors offer an option to growers allowing the grower to retain ownership of the wool beyond the greasy form. By using downstream manufacturers infrastructure, a grower can participate in the value add of wool from top to yarn to garment. This partnership results in a sharing of the profit as wool is transformed into retail products. See the link to Michell Direct in the signposts.

→ Chain pipeline sales – Wool4

The Wool4 program is an example of a commercial value chain pipeline to provide an ethical and sustainable product to the global textile market. The aim is to give growers a means of differentiating their wool based on complying with set production standards. See the link to the Landmark Wool4 program in the Signposts.

→ **Mill Direct** Marketing wool through Mill Direct enables an offer of growers wool directly to a network of international processors at your own set price. It provides the opportunity to receive valuable feedback on your product and build strong relationships for future orders. See the link to Elders Mill Direct in the signposts

Key decisions, critical actions and benchmarks

If immediate sale prospects are poor at the time of shearing and the outlook is for improving price, consider holding wool in store pending a later sale (defer selling). Alternatively, sell part of the clip (split selling) and defer the remainder to a time of lower supply. Work closely with your wool broker or adviser and be aware of storage costs and the time value of money.

Valuing your wool

You can use the web-based tool, Woolcheque, to independently value your wool clip with the prices sourced from the historical AWEX market reporting system.



Woolcheque can be used for:

- Modeling different clip scenarios and flock management strategies
- Daily and historical valuation of clip details
- Understanding the role that premiums and discounts for staple strength, VM, staple length etc play in achieving profitability
- Appreciating the importance of price risk management.

Woolcheque includes up-to-date market pricing, useful price charts and lot benchmarking, (see signposts).

Alternatively, you can use your wool brokers' appraisals. These appraisals may differ from those provided by Woolcheque. Brokers' appraisals incorporate a visual inspection of your wool in the sample box, anticipated market movements and the quantity of offerings in the forward weeks to provide an estimate of what your wool will



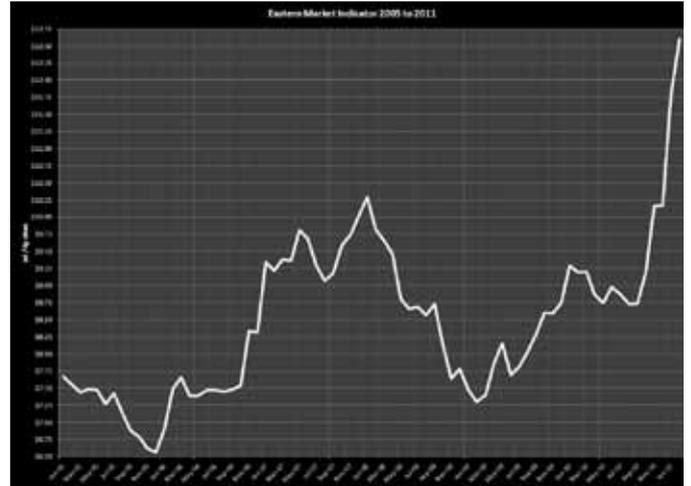
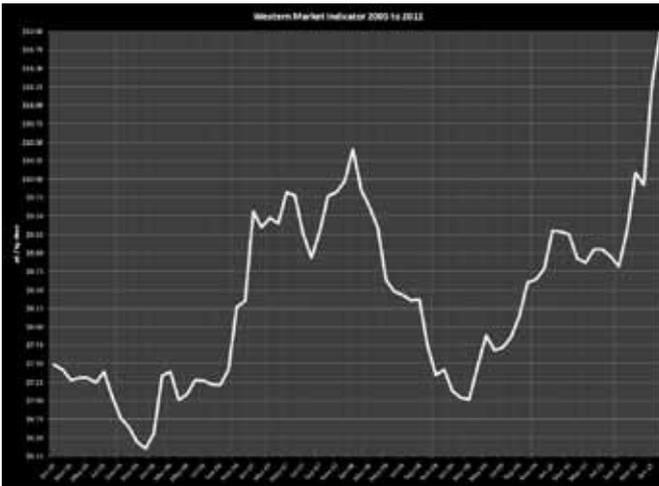


Figure 2.1: Commodity price cycles in key wool markets over 15 years (Source: The Woolmark Company)

achieve at auction. Woolcheque values your wool based on previous auction results only. It is prudent to use both the Woolcheque valuation and your broker’s appraisal when marketing your wool.

Selling options

Plan your selling system 4–6 months before shearing commences. The final choice will be determined by a number of factors including:

- Short- to medium-term market outlook and projected price trends
- Estimates of the value of your wool using information from broker valuations, forward markets or Woolcheque
- Prices on offer relative to that valuation and expected price trends
- Estimates of selling and possible storage costs
- Your own financial circumstances, including the cost of production
- Potential risks of market volatility and your approach to managing price risks.

It is recommended that you monitor market conditions and review approaches to selling, up to the point of sale.

Price risk management programs and products can help protect your profitability from volatile commodity prices and the vagaries of the weather

Managing price volatility

The profitability of your enterprise is determined by a combination of seasonal conditions, your personal management programs, and wool price cycles. Wool prices, like all commodity prices, move in cycles, as shown in figure 2.1 above.

A recent study indicated that wool price volatility is the major source of business risk on woolgrowing farms. Wool price volatility contributed about 80% of the variability of return on equity, while production risk contributed about 20% of the variability. Yet few wool producers have appropriate strategies in place to reduce the risk of low and unprofitable wool prices.



Price risk management programs and products can help protect your profitability from volatile commodity prices and the vagaries of the weather.

Wool brokers and advisers can access a wide variety of price risk management tools around the world to help reduce the uncertainty of future cash flows. It is important to seek professional advice to understand the practicalities and implications when developing strategies to manage price risk. Options include:

- Making use of forward selling or hedging options such as selling wool futures or the use of wool pools before shearing.
- Accessing price risk management tools through a wool agent or exporter. This eliminates most of the risk of price fluctuation, but production and wool quality risk remains.
- Exploring fixed price wool indicator contracts, wool minimum price facility, and deferred price contracts.

Some on-farm approaches to managing the current market situation and possibility of price volatility at the time of sale include:

- Spreading the risk by offering your clip over more than one scheduled sale or allocate a portion to a wool pool.
- Setting well researched and realistic reserves to protect against downside risk of price fluctuations and maintain flexibility up to the time of sale.

Holding wool in storage requires an assessment of the likely storage costs and financial impact of a delay in wool sales against the potential for price gains when wool is finally sold.

Signposts



Read

A Marketing Guide for Wool Growers: a manual that outlines the various methods and operations involved in selling wool. To order, call the AWI Helpline 1800 070 099 (free within Australia).

Risk Management for Woolgrowers: explains alternative approaches to risk management. To order, call the AWI Helpline 1800 070 099 (free within Australia).

View

WoolTrade: an internet based wool selling and trading system allowing wool producers to offer their clips to all buyers 24 hours/7 days per week: www.wooltrade.com.au

Woolcheque: the wool pricing tool for Australian wool producers: www.woolcheque.com.au

Bank risk management products Commonwealth Bank offer 3 wool hedging options.

- Wool Swaps
- Wool Options
- Wool Collars

www.commbank.com.au/business/agribusiness/commodities-risk-management/wool/

ASX Wool Futures ASX Wool Futures and Options are standardised exchange-traded and centrally cleared forward contracts that specify a fixed quantity of wool for delivery or cash settlement at an established point in the future at an agreed price. ASX offers four deliverable and two cash settled wool futures contracts. www.asx.com.au/products/asx-wool-futures-and-options.htm

Independent Commodity risk management For an independent source of managing your price risk on wool return. Search the internet for specialist providers such as Market Check and AgConcepts Unlimited.

Websites for managing wool price risk and market volatility can be found at:

For futures, bank products, grid sales and forward selling options all wool selling brokers sites have service facilities available and a licensed to trade advisor. Contact your broker for service and advice for your best option.

Wool pool services are available from The Merino Company (TMC) and details can be viewed at www.merinocompany.com/Page_Growers.asp. Other wool selling brokers also utilize the wool pool as a service to their grower clients and can be accessed through their individual web sites at:

- Ruralco group of brokers -Roberts www.robertsitd.com.au
- Primaries WA www.primaries.com.au
- Rodwells www.rodwells.com.au
- WISS www.woolcell.com.au

Partnership Processing or retained ownership methods of transfer of ownership can be viewed at www.michelldirectwool.com.au/public/index.aspx

Hedge to Arrive forward contract (HTA) which allows you to forward market your wool clip up to 12 months in advance. This risk management solution allows the producer to sell their wool through the traditional auction system while reducing risk. For more information on this type of product and availability view www.westernwool.com.au/risk-management.html

Chain pipeline supply system Wool4 can be found at <http://wool.landmark.com.au/wool4/>

Mill direct supply serviced by Elders in conjunction with their export arm Elders Wool International can be viewed at <http://livestock-wool.elders.com.au/selling-options/wool-selling-options>

Grower marketing groups

- Ausfine Merino www.ausfinewool.com.au
- Tasmanian Merino www.merinocompany.com
- Wool Connect www.woolconnect.com
- Traprock www.traprockwool.com
- New Merino www.newmerino.com.au

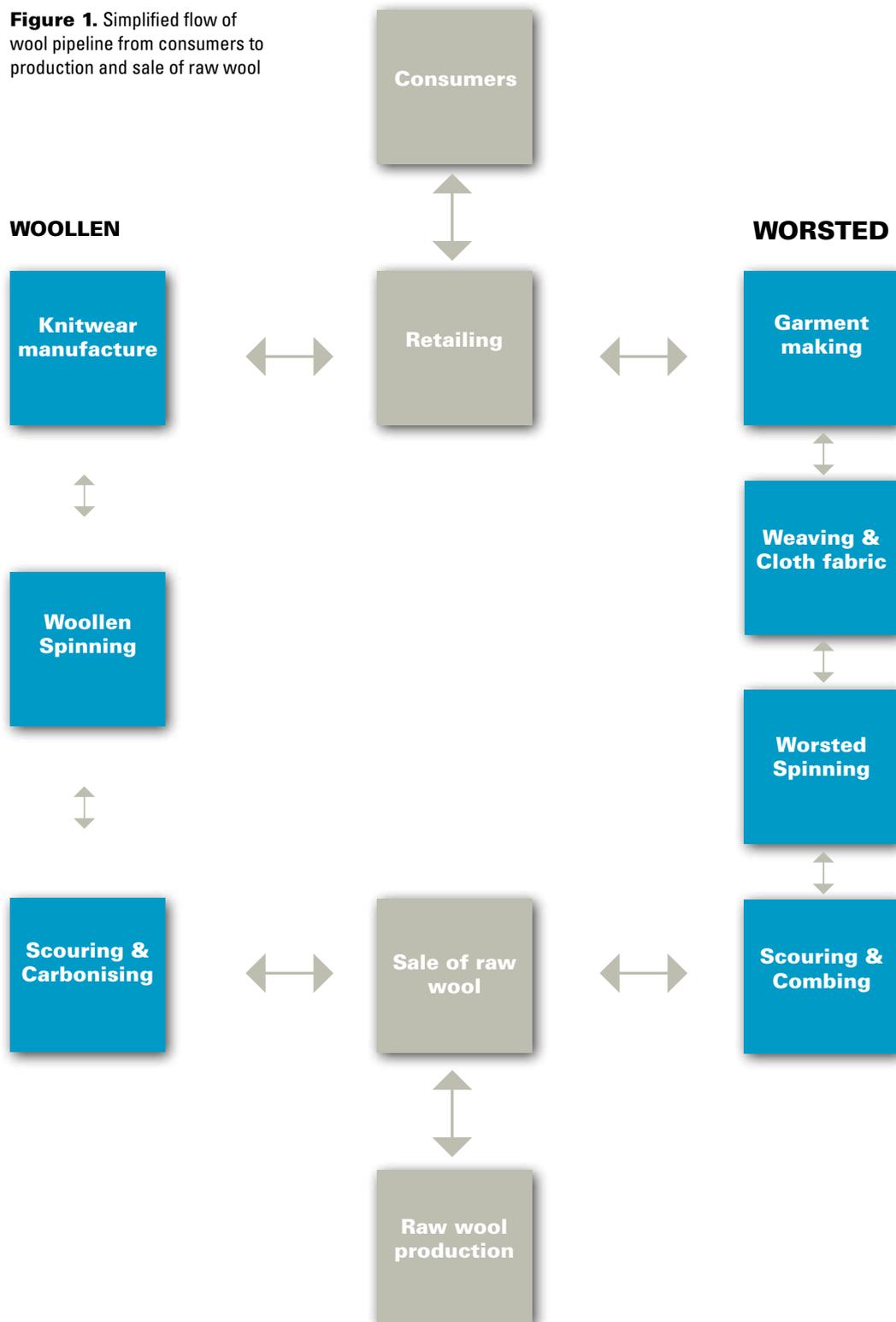
Contact your local wool broker and arrange for a licensed futures adviser to contact you.



Tool 2.1

Simplified flow of the wool pipeline

Figure 1. Simplified flow of wool pipeline from consumers to production and sale of raw wool



Around 80% of Australian wool passes through the worsted system. This is based on firmly twisted yarn spun from combed and carded long-staple wool (such as fleeces and pieces).

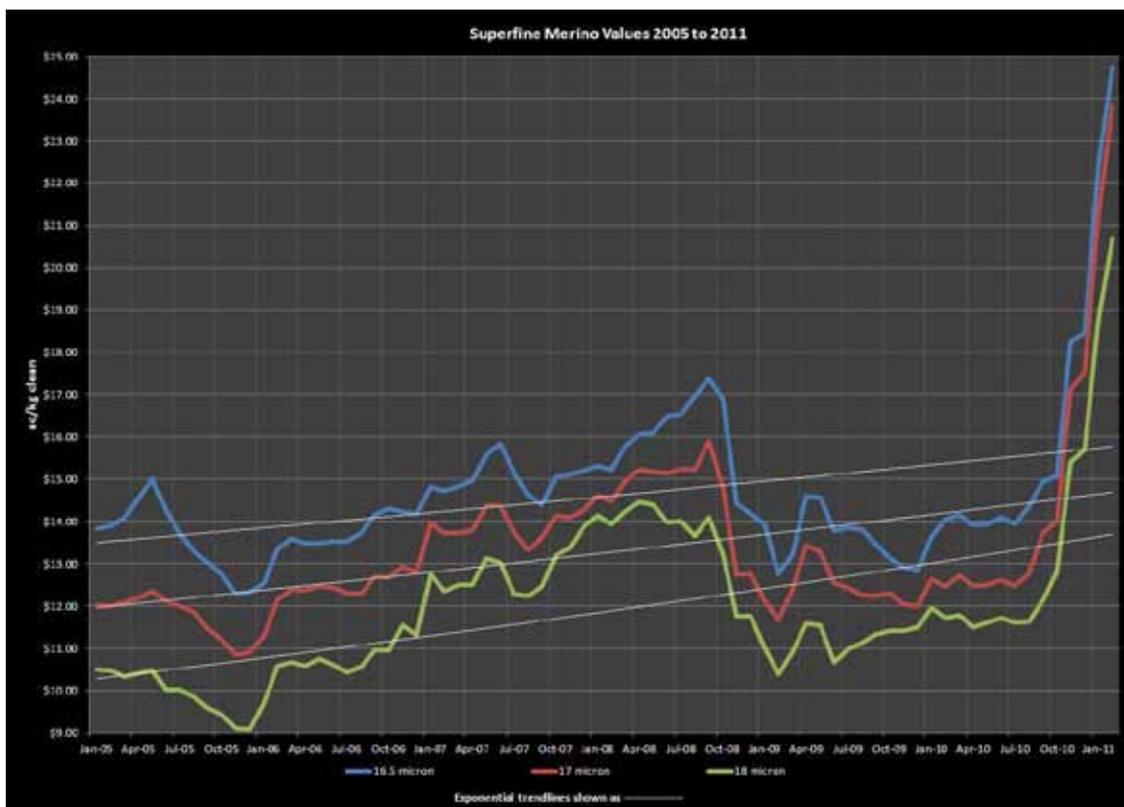
Most of the remainder is processed through the short-staple woollen spinning system and comprises mainly lambs' wool and carding types (eg, locks and crutchings). Woollen yarn is typically used in knitwear.

It is important to understand that wool is bought and blended to meet customer/processor specifications. By managing this process buyers are able to meet the specifications for the least cost. Not only are different types of wool substituted from within the Australian clip to reduce cost but wools from other countries are also blended to meet specifications.

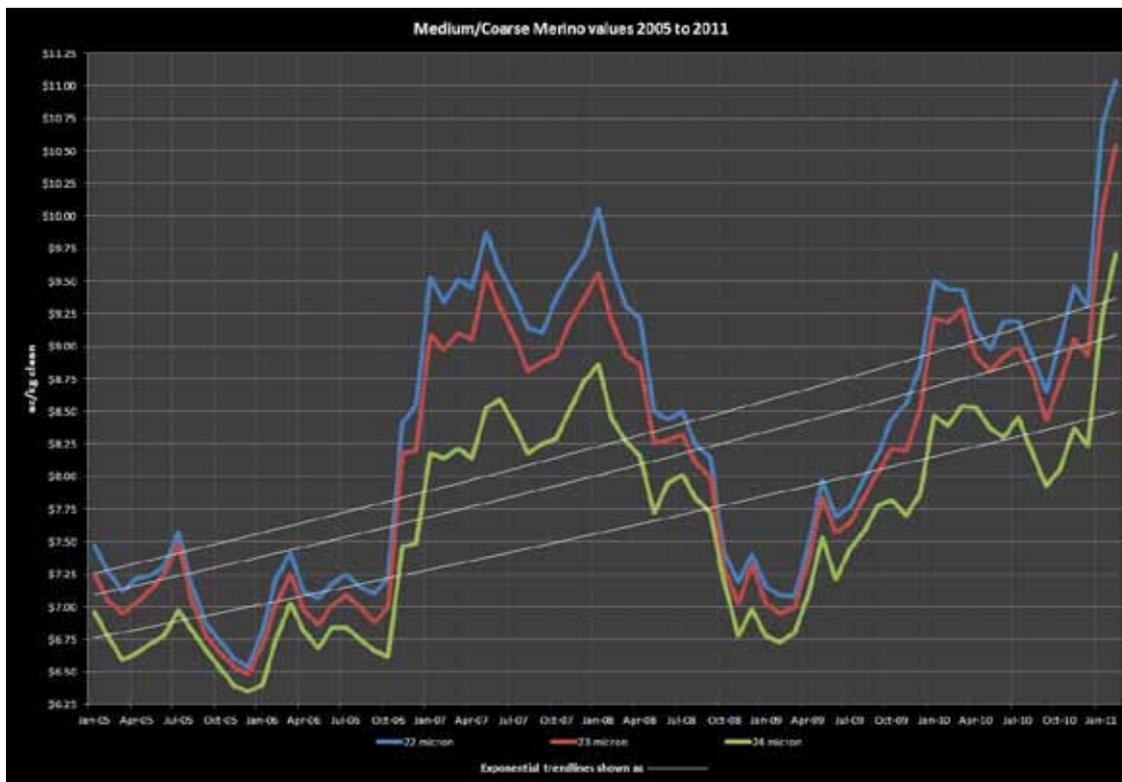
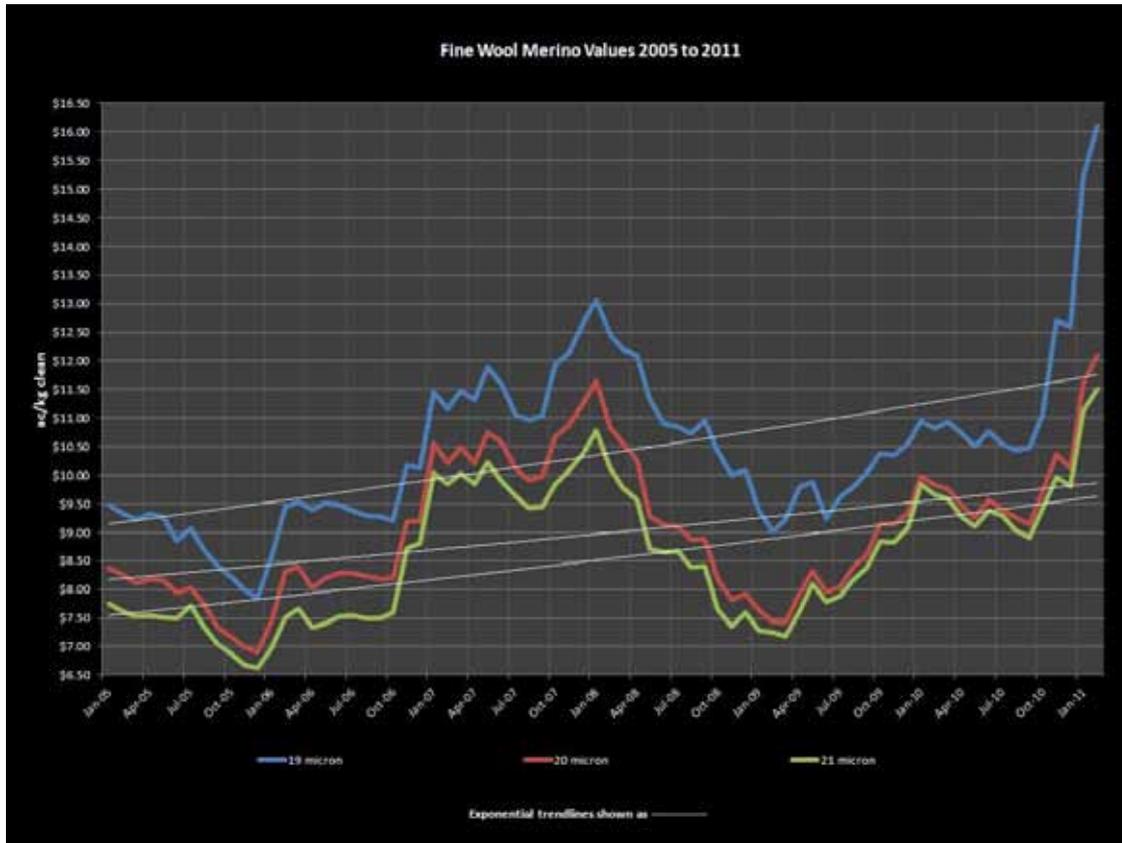


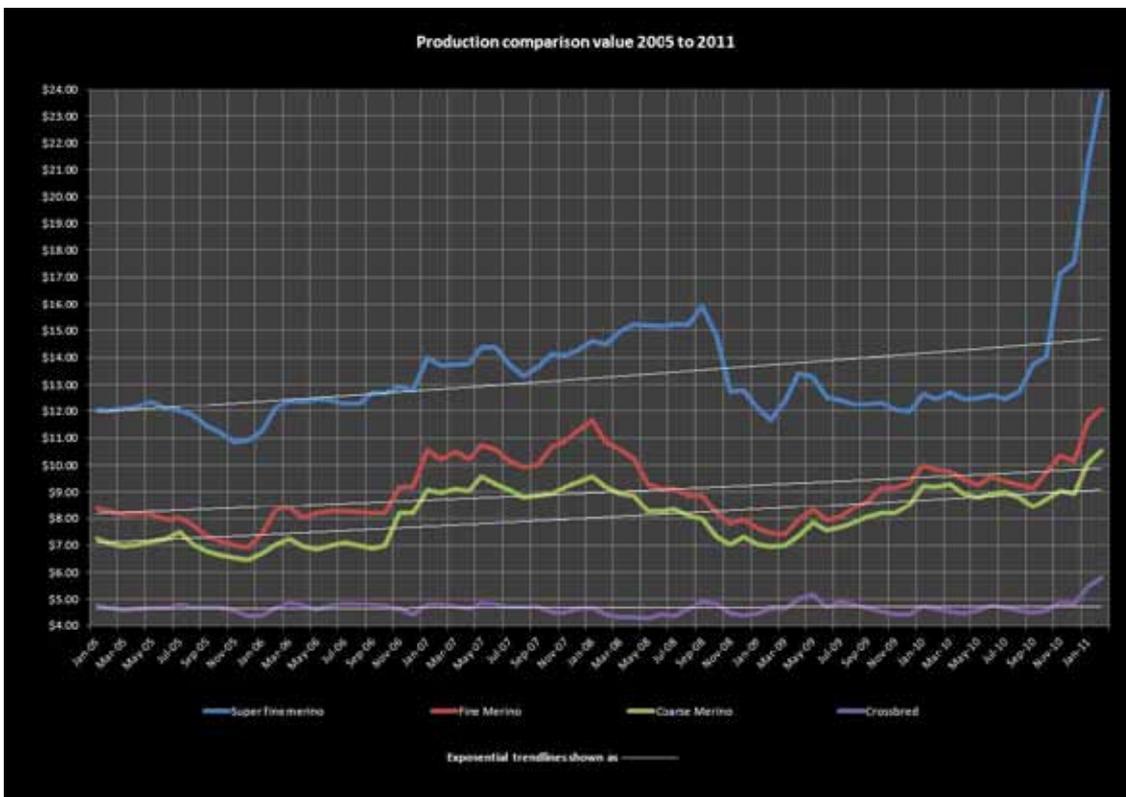
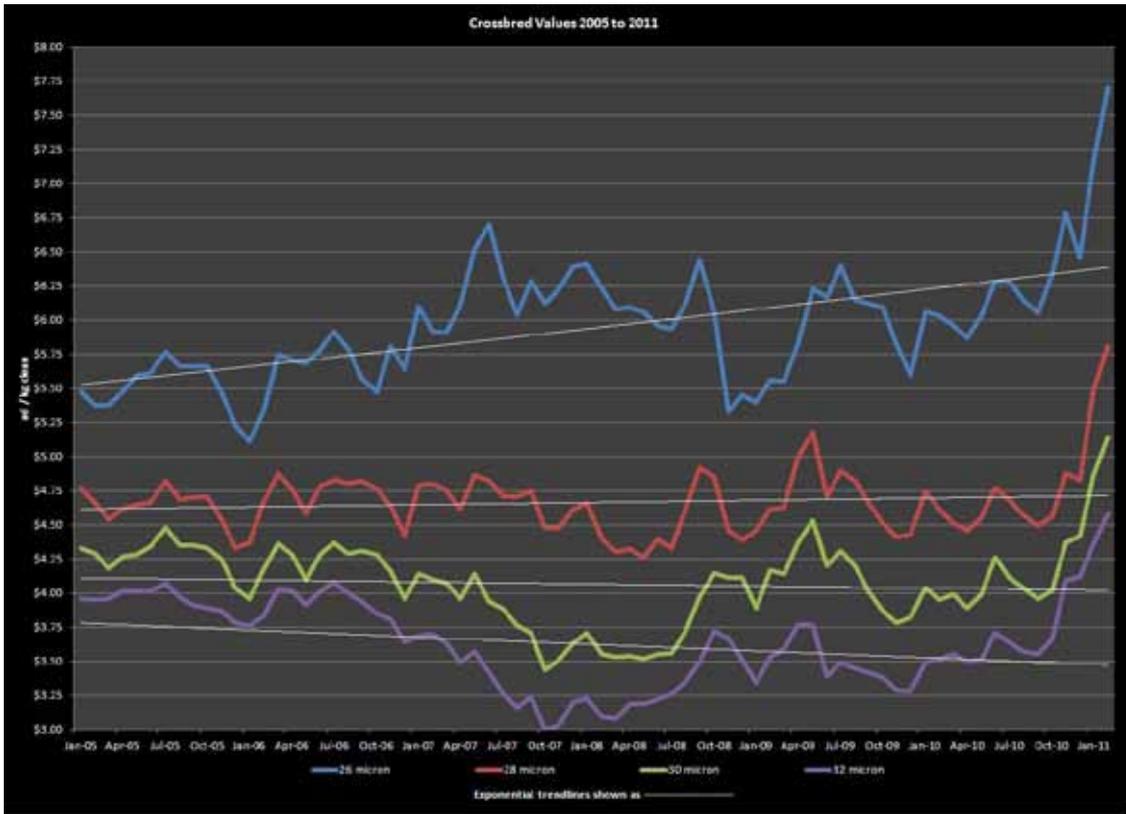
Tool 2.2

Wool values over time



* Marketing factors include region, sale by separation, re-handling and lot size.







Tool 2.3

The Merino Dark and Medullated Fibre Risk scheme & National Wool Declaration

A voluntary dark and medullated fibre risk (DMFR) scheme was introduced for Merino fleece and piece wool in July 2004 initiated by the Australian Council of Wool Exporters. It provides a rating of the risk of dark and medullated fibre contamination recorded on Australian Wool Testing Authority (AWTA) test certificates and in sale catalogues. This program is promoted by some brokers and it is expected that market forces will show premiums for the declared clean wools.

The DMFR Scheme allows:

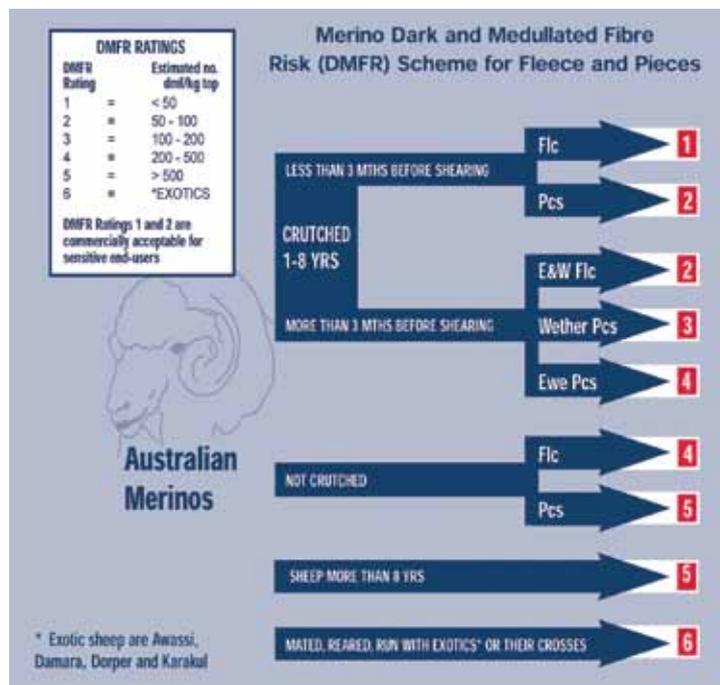
- Wool producers to promote their clips as white and uncontaminated
- Wool buyers and processors to minimise the risk of buying contaminated wool
- Better analysis of price differences for wools with various contamination risks
- Protection and advancement of Australia's woolclip reputation as white and non-contaminated.

Merino sheep producers have the option of supplying DMFR information for all, some, or none of their fleece and piece lines.

Non declared wools will be branded "ND" in the Auction catalogue, indicating to buyers that there is some risk associated with these wools.

The diagram (below) shows how the DMFR rating for your wool is determined:

To enable woolgrowers wishing to promote to downstream users the evolving changes in their animal welfare procedures, there is a need for a standardised declaration method. This is the function of the National Wool Declaration (NWD).



Once a woolgrower has completed the NWD, the contents are converted by the wool handling agent into a Mulesing Status Code for inclusion in the sale catalogue. The NWD has now been combined with the Classer's Specification. For more information on the NWD, see the AWEX website at www.awex.com.au.



Tool 2.4

Planning guidelines for shearing, wool preparation and classing

Wool harvesting

Check list for efficient wool harvesting procedures and effective communication pathways at shearing:

- Set up effective communication with the contractor, shearers and shed staff
- Brief the team so they understand your expected standards
- Engage a shearing team known for the quality and reliability of its work and that employs sufficient shedhands
- Give particular attention to the level of shed staffing for sheep handling and wool preparation
- Read and apply the Grower Responsibilities section of the AWEX Code of Practice for Woolclassers
- Provide a better-than-average working environment; ensure that the shearing shed, as a minimum, meets your state's Occupational Health and Safety (OH&S) requirements
- Acknowledge the professionalism of shearers and shed staff; this creates a highly productive and efficient work environment.

Consider the following in the annual stock management calendar:

- Choose a date for shearing that is likely to maximise the potential value of the total clip, in terms of both fibre characteristics (eg, staple strength, position of break) and total wool production
- Crutch within 3 months of the scheduled shearing date to reduce potential stained fibre contamination
- Manage the flock to ensure the sheep are kept dry, not scouring and not stressed by excessive yarding and handling immediately prior to shearing.

Wool preparation and classing the clip

Wool offered for sale in Australia is usually prepared by a suitably qualified and registered woolclasser. To be registered with AWEX a woolclasser must have completed and passed a recognised training course in woolclassing/wool preparation.

In preparation for shearing,

- Provide the classer with a breakdown (preferably written) of flock structure with regard to mob sizes, ages and the order that they will be presented for shearing
- Provide the classer with previous years' clip results
- Consult with the classer on the preparation of the clip prior to shearing
- Agree on the code of practice, particularly in determining the number of lines, observance of bale weight limits (195 kg is recommended, 204 kg is maximum) and guidelines for describing the wool in each bale.
- For the classer's stencil to be applied to the bale of classed wool, the classer must adhere to the industry benchmark for wool clip preparation, the AWEX Code of Practice for Woolclassers.

- In smaller shearing sheds (four stands or less), the classer may assist wool handlers with clip preparation but in larger sheds the classer must concentrate wholly on classing and shed management.
- Visit your woolbroker's showroom floor to inspect sample boxes and discuss your own clip's preparation, test results and presentation. Ask about lot valuations and types. Take the time to inspect the classing and preparation of other clips of similar wool types from comparable regions.
- Actively seek and obtain feedback on the lots that sold well or below expectations or valuation. Enquire how the buyers typed and valued your clip. Keep a record of who buys your wool and where it might go for processing.

Further sources of information

The following sources provide information on best practice for shearing, wool preparation and classing.

Shearing Shed Guidelines – AWI provides guidance on planning new shearing sheds or renovating old sheds. Access the AWI home page (www.wool.com.au) and click on 'wool harvesting', then select 'shearing shed guidelines' from the menu.

The guidelines will help you improve productivity in the shearing shed and meet OH&S standards. From the same menu, you can gain some indication of the potential costs if these standards are not met, by selecting 'shearing and OH&S'.

AWI Wool Handling and Shed Skills DVD – A Training DVD for wool handlers covering throwing, skirting, rolling and other shed responsibilities. To order your free DVD, call the AWI helpline on 1800 070 099 (free call within Australia).

The AWEX Code of Practice grower responsibilities – AWEX home page (www.awex.com.au) click on 'wool classer' and scroll down to code of practice. You can download the 'grower responsibilities' section of the code of practice from the website, or contact AWEX (02) 9428 6136 for a copy of the complete code of practice.

The code of practice provides guidance to wool classers on the standards required by customers of Australian wool. If your registered wool classer follows the Code you can be assured that:

- The processor will receive lines that are uniform in terms of visible characteristics
- There is minimum risk of contamination
- The documentation is accurate

On Farm Fibre Measurement (OFFM) – Go to the AWI website (www.wool.com.au) and access 'testing and handling', then select 'on-farm testing'.

OFFM is a valuable tool in accelerated breeding from superior animals (see tool 9.10 in *Gain from Genetics*) and culling of low-value animals. In addition, there are occasions when producers of superfine wool (below 18 micron) have found OFFM helpful in compiling homogenous sale lines of finer wools if OFFM quality assurance guidelines are followed. Ensure that the potential fibre diameter premiums outweigh the likely additional costs.

Analysing a typical wool clip over five years (2000-2005), OFFM can return per sheep net profits* of between \$3.04 (20 micron flock) and \$5.56 (18 micron flock), primarily by improved selection and breeding. (*Source: OFFM Calculator).

The OFFM Calculator was developed by Dr Kevin Atkins and Steve Semple from NSW Department of Primary Industries with funding from AWI, the Australian Sheep Industry CRC, and the International Fibre Centre.

Your wool brokering team can supply support and information on best practice for shearing, wool preparation and classing.



Tool 2.5

Specifications for environmentally assured wool

Recent AWI international consumer research shows a mass trend toward a lifestyle of health and sustainability, with approximately one in three consumers preferring natural/organic fibres for their clothing. This means demand for organic (or otherwise environmentally assured) food and fibre is quickly growing from niche to mainstream markets. At the retailer level, AWI research has confirmed that major brands and manufacturers are widening their interest in the production and marketing of environmentally friendly apparel such as organic/eco-wool.

Wool is well positioned to meet this growing market with excellent 'natural' credentials – it is a natural, renewable, biodegradable protein, produced in extensive grassland ecosystems. However, assurance of these environmental credentials at finished product stage requires proof of compliance to certain standards through the supply chain. There are two major emerging standards: certified organic/biodynamic, and the EU Eco-label.

Organic wool

'Organic' food and fibre is produced to a set of standards related to issues such as chemical use, animal welfare and sustainability. The principle behind organic farming is to produce food as 'naturally' as possible. Biodynamic farming is a form of organic farming, using preparations made from farm-sourced materials to enhance soil structure and nutrient cycles, hence improving plant and animal growth and development.

Around 300 tonnes of clean certified organic/biodynamic wool is currently produced in Australia – about 0.06% of the national clip. The major certifications used are the Australian National Organic standard (EU 2092/91 compliant) and USDA NOP standards (US Department of Agriculture compliant).

It costs sheep producers about \$1,000 – \$3,000 annually to comply. This is due to costs of compliance and certification, changes to sheep management practices associated with disease control and potentially higher sheep mortality as a result. Most organic wool producers in Australia are in the low rainfall areas, as their management practices are highly compatible with the organic standards.

There are currently five certifying bodies for organic wool in Australia. Visit their websites at:

- National Association for Sustainable Agriculture, Australia (NASAA): <http://www.nasaa.com.au>
- Australian Certified Organic: <http://www.aco.net.au/>
- The Bio-Dynamic Research Institute (BDRI): <http://www.demeter.org.au/>
- Tasmanian Organic Biodynamic Producers Inc: <http://www.tasorganicdynamic.com.au/>
- The Organic Food Chain Pty Ltd (OFC): www.organicfoodchain.com.au

EU Eco-label compliant wool

There is an increasing probability that chemical residues left on wool at sale will lead to loss of markets, price penalties or both. At present, only the European Union has published environmental standards for chemical contaminants. These took effect in October 2007. It is expected that environmental standards similar to those of the EU will gradually become a feature of other export destinations.

On the positive side, there are opportunities to capitalise on wool's natural image by exploiting 'eco' marketing niches. The European Union Eco-label provides one such voluntary opportunity. The EU Eco-label is a scheme by which products are certified for their 'kindness to the environment'. In the case of wool products, this includes chemical residues on raw wool falling below certain prescribed levels.

The EU Eco-label provides a set of standards for residue levels in greasy wool that wool producers can aim to meet by following some simple rules about chemical use. There is no compulsion to try to meet these standards, but they may provide a small price premium if wool is sold through a supportive broker or selling method. Wool can also be tested by AWTA to provide objective evidence of compliance. The cost is around \$160/sample, or \$320 for up to 10 lots from one clip, for the “E1 Wool residue testing (a) AWTA greasy or scoured core samples” test. To find out more about this pesticide residue testing service, visit AWTA Services: www.awta.com.au/en/Home/Our_Services/

The AWI-funded pesticide residue survey of sale lots in Australia estimates that 41% of the national clip is potentially compliant with the EU Eco-label, although currently only 1% of the national clip is tested to demonstrate compliance. The new EU Eco-label criteria introduced in 2010 includes dicyclanil (an insect growth regulator used in some flystrike prevention treatments), this will result in a significant reduction in the % of Australian wool that is EU Eco-label compliant.

Producing wool compliant with the EU Eco-label

Wool is not compliant with the EU Eco-label if:	Wool is compliant with the EU Eco-label if:
<p>Sheep have been treated with:</p> <ul style="list-style-type: none"> → any synthetic pyrethroid product → any triflumuron product → any diflubenzuron product → any dicyclanil products <p>at any time since last shearing.</p> <p>Or, if sheep have been treated with any diazinon product within the 7 months leading up to shearing. Note: This varies with method of application</p>	<p>Sheep have not been treated with an external parasite product since last shearing.</p> <p>Or, if sheep have been treated only with:</p> <ul style="list-style-type: none"> → any cyromazine product → any spinosad product → any macrocyclic lactone product → any magnesium fluorosilicate product <p>at any time since last shearing.</p> <p>Or, if sheep have been treated with any diazinon product, provided treatment was more than 7 months before shearing. Note this varies with method of application or for other products they must be used with a certain wool harvesting interval (WHI).</p>

Notes:

- Australian wool harvesting intervals (WHIs) must still be observed.
- Wool harvesting interval (WHI) has replaced the term “wool withholding period” (WHP). The definition of WHI remains the same as for WHP: “the time from application of a chemical to when the wool is shorn”. Wool producers are advised to contact their wool broker regarding market requirements relating to residues.

Wool producers can also declare the residue status of their clip at sale by completing a voluntary vendor declaration in the woolclasser’s specification. This declaration, however, provides only minimal information to the buyer, with the only options being ‘Nil’, ‘Low’, ‘High’ and ‘Not applicable’ in reference to residue risk.

A properly audited broker’s scheme or objective residue test is more likely to attract serious buyers of low-residue wool and enable the broker to declare a clip/lot as EU Eco-label compliant in an auction catalogue.



Environmental Management Systems (EMS)

There is growing interest from consumers interested in knowing more about the conditions that their wool is grown under, if there are good animal, environmental and sustainability management on farm. There are a number of EMS programs currently being used by producers but the important aspect for customers is that it is externally audited and meets international standards such as ISO 14001. The most effective program will cover all enterprises run on the property. Currently there are the following EMS programs available.

- Australian Landcare Management Systems www.alms.org.au/
- BestFarms - Blackwood Basin Group www.bestfarms.com.au/
- CBH Quality Assurance www.cbh.com.au/media/167894/faq_bfiq_final.pdf
- Healthy Farms - Mingenew-Irwin Group. www.mingenew-irwin.asn.au/

There may be other programs moving from a self assessed EMS to external auditing so investigate the options if you wish to pursue an EMS.

Carbon Neutral Wool

Growing concern regarding climate change has resulted in the development of market opportunities for Carbon Neutral Wool. Presently there are limited opportunities for wool producers to offset their wool production and market the clip as Carbon Neutral. The opportunities tend to be occurring further downstream with the buyer, processor or end use customer offsetting the product through the purchase of carbon credits.

In Australia the Carbon Farming Initiative will commence from July 2011 and is a scheme designed to give landholders opportunities to participate in the voluntary Carbon Market this may well open up further markets for wool. Presently only The Merino Company TMC offers a commercial product related to balancing the carbon offset and further information can be found at www.merinocompany.com.



Tool 2.6

Guidelines for reducing chemical residues

It is desirable for the wool industry to use chemicals in a more targeted way to control external parasites (lice and blowflies) to:

- Maximise the cost-effectiveness of treatments for lice and blowflies
- Minimise the environmental consequences of chemical treatments on-farm
- Minimise any harmful impacts of chemicals on farm workers
- Ensure wool is suitable to be sold into any residue-sensitive market (including its eligibility for EU Eco-label certification)
- Ensure sheepmeat will not contain chemical residues that could affect its suitability for safe human consumption
- Ensure sheepmeat for export adheres to current export slaughter interval standards of the purchasing country.

Minimising on-farm chemical use

More targeted chemical management starts with looking for opportunities to use chemicals as little as possible.

Tick the box that best describes the overall approach to chemical management on your farm. There are a number of options available to assist in the control of blowflies and lice that could be applied to your wool enterprise, depending on which box/es you tick.

- | | |
|--|-----------------------|
| | ✓ |
| 1. Never use chemicals and am an accredited biodynamic sheep producer | <input type="radio"/> |
| 2. Never use chemicals and am an accredited organic sheep producer | <input type="radio"/> |
| 3. Never use chemicals but am not an accredited organic sheep producer | <input type="radio"/> |
| 4. Use chemicals as little as possible, because I prefer to live without them | <input type="radio"/> |
| 5. Use chemicals infrequently, because the environment doesn't generally require them | <input type="radio"/> |
| 6. Use chemicals quite often, even though I don't like it, because lice and flies are big problems | <input type="radio"/> |
| 7. Use chemicals quite often and not concerned about it | <input type="radio"/> |

Non-chemical options (boxes 1-4)

For lice minimisation, quarantine introduced sheep (including rams), maintain good fences, minimise split shearings, only treat when lice are identified (and deemed economically important) and aim for eradication at the next shearing after lice are found.

Reducing chemical use (boxes 4-7)

Reduced chemical use minimises costs and reduces the risk of resistance developing. It also reduces the risk of environmental damage on the farm and adverse health effects on people applying the chemicals or those handling treated sheep. Consider adopting some or all of the management options listed under “non-chemical options”.

Measures that aid blowfly control include correct tail docking, breech modification, effective worm control, breeding, flytraps and appropriate time of shearing, crutching and lambing.

Integrated Parasite Management – sheep (IPM-s)

Chemical and non-chemical options can be combined in an approach called ‘Integrated Parasite Management’ (IPM). An IPM system still includes the use of chemicals, but they are used selectively and as infrequently as possible instead of being the first and most frequently used option.

See procedure 11.2 in *Healthy and Contented Sheep* and visit the AWI IPM-s web page for guidelines for managing sheep parasites in winter-dominant, summer-dominant and Mediterranean rainfall zones: <http://www.wool.com/grow.htm> and look for Integrated Pest Management under the Animal Health tab.

Chemical application

Correct application of the most appropriate pesticide is needed to effectively eradicate or control the targeted pest in a safe manner for the sheep, operators and the environment and to meet meat and wool withholding periods.

To achieve this, read labels closely (and the material safety data sheet, if necessary) and take care with preparation and dispensing of the pesticide. Ensure correct calibration of the delivery tools and apply product with effective equipment to well-prepared and contained sheep.

Eradicating lice requires correct treatment – if only a few lice survive, the population will build up again over a period of months and re-treatment will be required. Unfortunately, getting it right is a challenge and eradication of lice often takes several years, even when managed by careful operators. Many labels, especially those on older wet dip products, are complicated and confusing. Also, many dipping facilities on farms are in poor condition and do not do an effective job.

Seek advice from the chemical company, your contract dipper or vet if directions are not clear. If a wet dip is preferred, using a reputable contract dipper is often the best approach.

For the most up-to-date Making More from Sheep information, including web signposts, products, publications and events, visit www.makingmorefromsheep.com.au

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