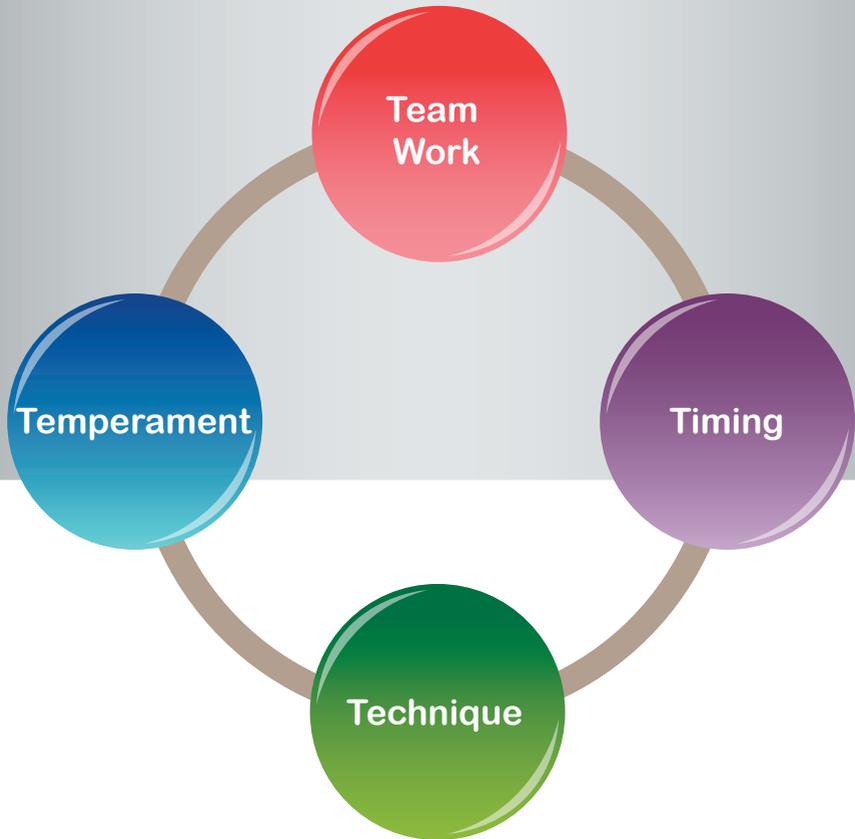
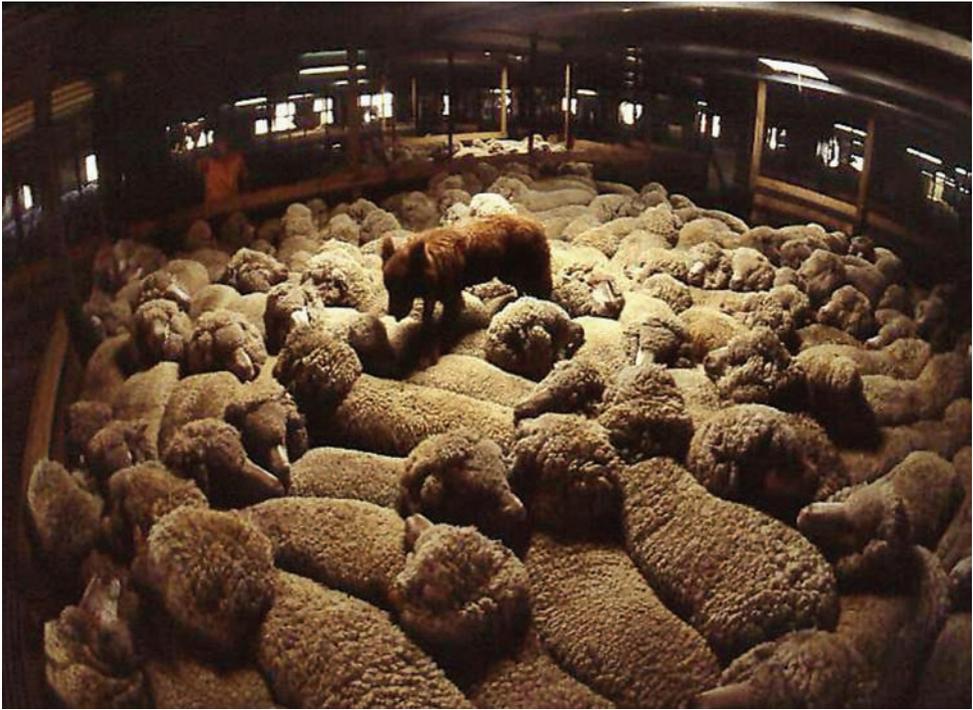


# THE FOUR PILLARS OF WOOL HANDLING





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This Four Pillars of Wool Handling booklet was developed in association with the wool harvesting industry as part of a TAFE NSW Western Institute, Australian Wool Innovation Ltd (AWI) and NSW Stud Merino Breeders Association wool handler coaching development project.

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# THE PILLARS OF WOOL HANDLING

The pillars of wool handling were developed by wool handler trainers who attended the AWI national consistency workshops and are the underlying principles that form the basis of the AWI wool handler training program.

## Teamwork

If one person in the team fails to carry out their particular role correctly, it can affect the overall quality of the product. Making the next person's job more difficult to perform and increases the likelihood of mistakes.

Communication between wool handlers, the classer and shearers is essential. All members of a wool harvesting team are dependent upon one another to complete their tasks.

## Technique

Using the correct technique in performing each role makes the job easier and improves the standard of clip preparation.

## Timing

Efficient work practices and being able to correctly anticipate the next job makes the whole shed run more effectively.

## Temperament

Is possibly the most important pillar. Having the correct temperament - the ability to control emotions whilst under stress and being able to relate and communicate with all members of the team will ensure the smooth running of the shed.

# OVERVIEW

## Effective Clip Preparation

Depends on everyone in the team. The quality of clip preparation will affect wool grower's returns and the suitability of wool for use by the wool processing industry.

Everyone involved must have a clear understanding of each aspect of wool preparation and be skilled in the role they are performing. Clear communication and teamwork is critical.

## The Role of the Wool Handler

The wool handler prepares lines of wool – bellies, locks, stain and skirtings – under the guidance of the wool classer. The work done by the wool handler directly affects the quality of the Australian wool clip and financial returns to wool growers.

Wool preparation in the shed is the first stage of wool processing. The quality of work of the wool handler will directly affect the value of the end product.

## Occupational Health and Safety

All workers in the shearing team have a responsibility to follow safe working procedures and take care not to put other team members in danger. All members of the team should be aware of their obligations to their own and workmates health and safety and take steps to meet these requirements.

Be involved in safety in the shed. Always report safety hazards you have observed to the shed manager, use safe work practices and correct manual handling techniques and never remove safety guards or operate damaged or poorly maintained equipment.

## **Getting ready for work; What do you need?**

- Tax File Number
- Superannuation number
- Self sufficient – own food, water, towel
- Be prepared to work cooperatively with other staff

## **Roles and responsibilities**

Roles and responsibilities need to be allocated before work begins. This will depend on shed layout and the number of staff and will vary from shed to shed.

### **There are five main wool handling roles:**

- Board Person
- Pick Up Person
- Wool Roller
- Pen up person
- Presser

Most teams come to some agreement about rotating roles during each run. Having specific duties and an agreed rotation spreads the workload between wool handlers. This aids work flow and makes for a happy shed environment.

# THE WOOL TEXTILE PIPELINE

The textile pipeline starts in the paddocks of wool growing properties and both the animal husbandry practices of woolgrowers and how wool is prepared in the shearing sheds has the greatest impact on the quality of the finished product.

<b>Sector</b>	<b>Process</b>
<b>Wool Grower</b>	Produces & harvests wool
<b>Auction or Private Sale</b> (Local or Export markets)	Traders - exporters or direct to mills
<b>Early Stage Processors</b>	
Scouring	Washing wool for either the woollen or worsted system
Combing	Producing a wool top destined for the worsted system
Carbonising	Producing wool for the woollen system
<b>Spinning</b>	Drawing and spinning wool into yarn
<b>Weaving</b>	Weaving spun yarn into cloth
<b>Dying</b>	Can be done in the either the top, yarn or fabric stages
<b>Confectioner</b>	Garment maker
<b>Retailer</b>	Retailing

# FROM SHEEP TO SHOP

## The Process of Wool Scouring

Wool scouring or washing is a process that all wool whether destined for the worsted or the woollen system must undergo prior to further processing.

There are two types of scouring in operation, these being the traditional and more common aqueous or water based scour and the solvent based scour.

In both cases the scouring process is designed to remove the suint, dirt, dust, and scourable yellowness where possible from the wool in order to produce a clean product ready for further processing. Vegetable matter is not removed during scouring, but some reduction may occur due to agitation.

Scouring firstly involves the greasy blending of the various components of a batch or type that is required into a large bin located at the start of the scour. The blended greasy wool is then conveyed into a number of hot and cold scouring bowls where the wool is mechanically agitated and propelled with forks or suction drums causing further more homogenous blending of the fibres.

There are normally six bowls each of which has a double squeeze roller at the end where the wool passes through to squeeze the scouring solution out of the wetted wool along with the grease and dirt prior to entering the next bowl.

Wool grease is extracted with separators from the scouring liquor during processing, and then sold as a by-product, which is refined into lanolin for the cosmetic and pharmaceutical industry.

Three of the bowls contain detergent the rest are clean rinse or cold suint bowls.

After final rinsing in pure water the wool is then dried through a drum dryer and conveyed into bins prior to pressing into bales ready to send to the spinner if the wool is to be processed on the system.

Or if the wool is to be combed or carbonised the wool continuously flows from the scour into the start of the relevant processing line.

## **The Process of Wool Carbonising**

Wool carbonising is a process that all high vegetable matter short and long wools must undergo prior to spinning into woollen yarn. The main purpose of wool carbonising is to prepare the wool for spinning into yarn.

During the wool carbonising process all vegetable matter contained in the wool will be removed in preparation for carding and spinning into yarn.

The harsh process described below causes considerable fibre breakage and loss rendering any long wools used, suitable for the woollen system only. These high VM long wools are generally unsuitable for combing due to the excessive vm.

All wool carbonising plants have their own wool scouring facility located on site where wool is washed prior to the carbonising process. It then follows a continuous line of processing where the wool is treated.

After scouring the wool is then propelled into a bowl containing a 5-7% diluted sulphuric acid solution. The solution saturates the wool as well as the vegetable matter contained in it. Although the acid solution can cause some weakening of the fibre, its greatest effect is on the cellulose based vegetable matter which is now impregnated with acid.

The acid affected wool and vegetable matter are then conveyed into first drying and then into baking ovens where the wool is heated to a temperature of around 95-110 degrees Celsius. Wool is baked on the continuously moving conveyer for around 10-15 minutes at which stage the vegetable matter contained in the wool has been baked or carbonised.

The carbonised vegetable matter is however still present in the wool and must be removed. This occurs when the wool is conveyed through burr crushing and dusting machines which crush, agitate and vacuum the wool to remove all vegetable matter residue from the wool.

The next stage is to rinse and neutralise the acid affected wool and return it to an acceptable PH (acidic) level which is suitable for the dyers and further processors.

It is also washed in soap solution to soften the wool as well as remove any residue left in the wool. This is achieved by propelling the wool through bowls which contain a diluted solution of soda ash and soap in order to achieve a final PH in the wool of 5-6.

After neutralising and washing the wool then passes into rinse bowls and finally into a bleach bowl where the wool is saturated in a 0.6-1.1% hydrogen peroxide bleach solution prior to final drying.

The wool is then packed into bales ready for delivery and is then ready for carding and spinning.

## **The Process of Wool Combing**

Wool combing or topmaking as it is also referred is a process that all long wool destined for the worsted system must undergo prior to spinning into yarn.

The main purpose of wool combing is to prepare the wool for spinning into yarn. During the wool combing process vegetable matter contained in the scoured wool will be removed, any short fibres will be removed and the wool fibres will be aligned and formed into a continuous slivertop ready for spinning. Most wool combing plants have their own wool scouring facility located on site where wool is washed prior to combing.

The scoured wool is then lightly oiled with a water soluble oil emulsion which helps lubricate the wool through the combing process and reduce fibre breakage.

The wool then passes into the carding machine which is the beginning of the fibre alignment and vegetable matter removal process.

During carding the wool passes from rotating drum to drum as a thin veil covering the drums which contain millions of pins (known as clothing). This action disentangles and helps align the fibres as well as removing a considerable portion of the burry vegetable matter from the wool. The veil of wool covering the final carding roller is then made into a sliver form of roughly aligned fibres and collected in a circular bin ready for Gilling.

There are normally three stages of gilling prior to the wool being put onto the combing machines. At each stage the fibre alignment process continues. After the third stage of gilling the continuous sliver is wound into a ball ready for loading onto the combing machines.

At this stage the sliver still has a considerable amount of vegetable matter present as well as short fibres.

It is the combing process which will remove these short fibres and vegetable matter as well as complete the fibre alignment process in preparation for spinning.

The vegetable matter along with the short fibres that are removed from the longer fibres which remain in the wooltop are called noils. Following combing the wooltop sliver put through two finishing gills. The first removes the wave pattern that occurs on the combed sliver due to the action of the combing machine. The second gilling regulates the actual weight per metre of the sliver according to the spinners requirements. The sliver is then wound into a bump or a ball and pressed onto bales ready for delivery to the spinner.

**ALL WOOL PRIOR TO ANY TYPE OF FURTHER PROCESSING MUST FIRST BE SCOURED OR SCOURED AND CARBONISED AND/OR COMBED.**

### **Further processing includes:**

- SPINNING
- WEAVING
- KNITTING
- FELTING (NON WOVEN)
- SLIVER KNITTING ETC (NON WOVEN)

At the spinning stage the wool process divides into two different systems depending on what the final product is to be. For fine yarn and fabric the wool is generally processed via the worsted system and for hairier less finely spun yarn the wool is processed via the woollen system. As a rule of thumb the worsted system produces yarn which goes into weaving and the woollen system produces yarn for knitting. There are some exceptions.

# **WORSTED AND WOOLLEN SYSTEM**

## **THE WORSTED SYSTEM**

80 % of Australia's wool is used in the worsted system. The worsted system involves the processes involved to convert long wools such as fleeces/pieces and bellies into woven or knitted fabrics and materials.

The products that these wools are used in are generally the high quality lightweight to medium weight woven cloths normally used in suiting materials, fine garments and apparel wear.

Worsted weaving is the terminology used to describe these products. These wools are also used to make yarn for machine knitting of wool sweaters.

Worsted knitting is the terminology used to describe these products. Worsted knitwear is again lightweight and high quality.

The suitability of wools for the worsted system is determined mostly by length and vegetable matter. Micron has little to do with its suitability as long X-bred wools are also processed on the worsted system.

Longer wools such as pieces and bellies and occasionally fleece wool that have high to very high vegetable matter present, (ie) 6-8 % and higher, often end up in the Woollen system as these have to be carbonised in order to eliminate VM, which dramatically decreases the length and strength of the wool, making it unacceptable for combing. In order for wool to be converted from the greasy state into a finished worsted product it must undergo a large number of processes.

These are:

SCOURING

CARDING

COMBING OR TOPMAKING

SPINNING

DYEING

WEAVING/KNITTING

FINISHING

GARMENT MANUFACTURE

## **THE WOOLLEN SYSTEM**

Most of the remaining 20% of wool produced in Australia is used in the woollen system. The woollen system involves the processes involved to convert shorter wools or oddments such as locks, crutchings, lambs wool and high vegetable matter pieces and bellies and fleece, into woven or knitted fabrics and materials.

The by-products of wool combing such as noils and burrs are also used in the woollen system.

The wools that are processed on the woollen system are normally short <50mm, and vary in vegetable matter from 0.1% to 20.0% plus.

The wools which have higher VM (ie) 3% plus, must be carbonised which adds considerable cost to the finished product.

Lower micron wools are scoured only or carbonised in the cloth. Microns used in this system cover the full range from X-bred to fine merino.

The products that these wools are used in are generally the medium to high quality heavier weight woven cloths normally used in overcoats, heavier skirts, socks and blankets. Good quality fine felted woven cloths can also be made with the finer microns.

Woollen weaving is the terminology used to describe these products.

Woollen knitwear, can also be produced on the woollen system, an example would be lambs wool sweaters which are still a popular product available today. They range in quality depending on the micron used.

The woollen process has historically been a cheaper process than the worsted process and produces a more affordable wool garment however, in recent times with advances in worsted technology the gap has reduced considerably.

Because the wool is not combed as such but only carded prior to spinning the alignment of fibres is poorer which produces a rougher, bulkier yarn more inclined to pill and ball in the fabric.

The processes involved in converting wool from the greasy state into finished woollen system product are fewer than the worsted system and include:

SCOURING or CARBONISING  
CARDING  
SPINNING  
DYEING  
WEAVING/KNITTING  
FINISHING  
GARMENT MANUFACTURE

There are also non-woven woollen system products which are used commercially such as Felts (used for cleaning, polishing etc), wool quilts and doonas, sliver knitted woollen underblankets.

These undergo a range of different processes to the ones listed above, however the one thing common to all is that prior to further processing the wool must be either scoured or carbonised.

**SOURCE:**

Sheep to Shop - Wool textile Pipeline : Lempriere Fox & Lillie Pty Ltd

# MAIN NON-FLEECE WOOL TYPES

The wool handler is primarily concerned with preparing wool types based on length and colour. Each of the following wool types has different processing requirements and should be kept separate.

## Bellies

Bellies are removed first during shearing. Stain is the main fault seen in bellies and must be removed.

Pizzle stain is found around the pizzle area in wethers. Pizzle wool will usually contain urine stain that must be removed and may require drying before pressing.



Pizzle Stain Belly



Brisket Stained Belly

The short brisket wool found between the front legs may be cotted or heavily discoloured and should be removed.

Bellies may have pen stain picked up just prior to shearing or high levels of mud on the tip. These faults also need to be removed. Bellies also need to be checked for skin pieces.

## Breech

Breech wool should be prepared by removing any stain or dag.

## Brands

Areas of wool where sheep brands have been applied must be removed and kept separate from all other wool. These brands often do not scour (wash) out of the wool and cause problems when the wool is processed.



## Crutchings

Crutching is the removal of wool from the breech area of the sheep during the year. At crutching, wool is also removed from around the pizzle in wethers. Sheep may also be wigged - removing wool from around the eyes.

Each type of wool removed during crutching may require different preparation. Crutching is usually done with three to six months' wool so this wool is significantly shorter than most wool at shearing.

Wiggings are generally clean and may contain higher levels of vegetable matter depending on the season and time of year.



## Dags

Dags from the breech and back leg area must be removed and placed in a separate pack. All dags are removed on the board before the fleece is picked up.



## Jowls

Jowls are wool shorn from the cheek and jaw area. Jowls are removed from the skirtings line when they are matted or contain higher levels of vegetable matter. Heavy cotted jowls can damage processing machinery.



## Locks

Locks are a combination of second cuts, short fribs, short breech wool and topknots. Table locks come from under the wool table and board locks from the shearing board. Table locks are clean, contain almost no stain. Board locks may contain some urine stain and dag that must be removed.

It is easier to prepare locks properly if they are not allowed to build up.

In most sheds, table and board locks are combined. In large wool clips, and depending on when sheep were crutched, the woolclasser may decide to keep table locks and board locks separate.



## Shanks

Shanks are shorn from the lower part of the leg. Shanks are short, may be heavily cotted and often contain high levels of medullated kemp fibres. Shanks must not be combined with other wool, including locks and stain.



## Skin

Skin pieces need to be removed and kept separate from all other lines of wool. Skin pieces left in fleece and skirtings can damage processing machinery and affect the final product.



## Skirtings

Skirtings contain shorter edges and fribbs, and have higher vegetable matter content than the remainder of the fleece. Skirtings may also contain clumpy vegetable matter, the edge of the belly wool (if left on the fleece) and heavily weathered wool from around the head.



## Stain

All stain must be removed. (Urine, water, unscourable colour, blood etc.) Ideally, the sheep presented for shearing will be urine and dung stain free. Where this is not the case, urine stain should be removed on the board by removing every crutch and be placed directly into a separate pack to minimise the chance of contamination. Long (combing length) and short (carding length) stain must be kept separate.



Urine Stain



Water Stain

# CONTAMINATION

Contamination is a major quality issue in the wool industry. When greasy wool is contaminated, it affects the whole wool pipeline, from the sheep property to the cloth/fabric manufacturer. The various contaminants in greasy wool increase costs along the wool pipeline by reducing wool buyer competition.

## The major types of contamination are:

- Stain
- Urine stain
- Pigmented and medullated fibres
- Hard contaminants
- Soft contaminants

## Stain

Stain is discolouration that has combined with the structure of the wool fibre. It's permanent and cannot be removed by scouring. The intensity of the stain determines the dye colour needed to over-dye the stain and so reduces the value of the greasy wool. Permanent stains include urine, dung/pen stain, water/bacterial stain, canary/yolk stain, flyblown, blood and brands.



Scoured Wool  
Contaminated by Urine Stain

## Urine stain

Urine stain is a major contaminant. The risk of contamination from urine stain can be greatly reduced by crutching sheep, ideally within three months of shearing.



## Shedding breeds - pigmented and medullated fibres

- The main shedding breeds of sheep are the Damara and Dorper.
- Pigmented and medullated fibres in wool affect processing performance and the quality of the final product. Only small amounts of pigmented and medullated fibres are needed to contaminate wool. Just one staple of pigmented wool in one bale of white wool is sufficient to prevent that wool being used for light-coloured cloth or yarn.
- Medullated fibres must be kept separate from all other wool. Medullated fibres are hollow and do not take up dye, are very coarse and appear as white fibres in dyed garments.



Exotic Sheep

## Hard contaminants

The most common hard contaminants found in pressed bales of wool are combs and cutters, screwdrivers, bale fasteners, bale hooks, small tools and drink cans. Hard contaminants can cause major machinery breakdowns. Hard contamination is the easiest type to detect and care must be taken to ensure they do not end up in the bale.



Hard Contaminants Found in Bales

## Soft contaminants

The major soft contaminants include dog hair, clothing, towels and grease rags. Any polypropylene products – baling twine, old wool packs and fertiliser bags – are a particular problem. When wool is processed, the fibres will break up into many single fibres that spread throughout the processing batch. These fibres can only be removed by hand picking in the fabric stage at great cost to the manufacturer. The entire wool batch being processed – up to 10,000 kg – can be affected by one small piece of baling twine.



Black polypropylene (Baling Twine) fibre in a fabric

## Prevention

Prevention is everyone's responsibility!

- Remove every crutch, every time
- Prepare lines of wool with care and as instructed by the classer
- Talk with the classer about any contamination issue you have seen
- Store tools, clothing, towels and shearing gear and bale branding supplies away from wool handling areas
- Remove all poly products found.
- Never use fertiliser bags as bulk class bale dividers
- Don't use old (non-nylon) wool packs
- Keep the wool press area, wool room, shearing board and sheep pens clean
- Don't let dogs camp in the wool areas
- Don't eat in the wool handling areas
- Use rubbish bins



Keep Board Clean at all Times

# BOARD DUTIES



## Key tasks

1. Remove and prepare bellies as directed by wool classer
2. Remove and prepare crutch wool
3. Sweep board

## 1. Remove and prepare bellies as directed by wool classer

- Talk with the classer before starting to find out the wool preparation requirements.
- Remove the belly wool out of the working area as soon as practical to minimise cross contamination and maintain work flow.
- Check both sides of the belly for brisket, teat stain, urine stain, fly, blood, skin pieces, mud, black wool and pen stain.
- Shake the belly to remove second cuts, skirt short wool if required.

## Tips

- *Continually organise the bellies so they are together ready for preparation.*
- *Having bellies together makes it easier for the pick up person to help you as they don't need to enter the board area.*
- *When using a bin for bellies, stack the bin. This makes the bellies easier to press, you can utilise the whole bin, the bellies won't topple out and it looks more professional.*

## 2. Remove and prepare crutch wool

Enter the crutch area when the shearer has commenced the 'undermine'.



- Approach safely and do not interfere with the sheep or the shearer.
- Keep the paddle behind the handpiece at all times
- Ensure the paddle moves in the same direction as the handpiece.
- Sweep out the crutch at approximately 45 degrees with minimal paddle movement.
- Identify and separate different wool types and place in correct bins

### Tips

- *Don't be hesitant – judge the correct time and move in confidently so the shearer is sure of what you are doing and when you will be there.*
- *Always be aware of the positioning of the sheep's legs, the handpiece and where each blow is going.*
- *If the sheep is kicking move back or to the side removing your paddle from the sheep's vision and wait until it stops kicking before you try again.*
- *Leave the first back leg in a position where it is easily accessible for the person on pick up.*
- *Use your hands rather than the paddle to prepare shanks. This makes it easier to remove shank wool only.*
- *Uncrutch sheep will be carrying some stain. Separate this stain from shanks and other crutch wool.*

## Take home message

In order to remove 100% of crutches effectively, timing and technique are essential. You can predict the time to remove crutch wool by listening and observing. If the crutch is missed on the hind leg, there are still opportunities to remove before throwing onto the wool table.

- When shearer has commenced undermine
- During shearing transition – first shoulder to long blow
- Long blow
- On the last side while helping to set fleece up for pick up
- Just prior to pick up
- Remember you are part of a team - ask for help

## 3. Sweep board

### The stand

Use the tip of your paddle to get in, around and behind the handpiece.

Using large sweeping motions, sweep in direction of the drag to avoid shearer and prevent cross contamination of next fleece.

Sweep behind shearers on either side while you have easy access.

### The board

When sweeping the board for oddments, look for ways to save unproductive time walking up and down the board. One good method is to carry stain along the way.

### Tips

- *Organise the board constantly as you move. The more organised and tidy your board is the easier it is to keep contaminants separate.*
- *Prepare sweepings as you go so they don't build up.*
- *Always place paddles in readiness for next use to maximise best use of time and without hindering co-workers.*
- *Use different paddle types and designs to best suit the job.*
- *Always have your own paddle. Don't rely on suitable paddles being provided in the shed.*

## Apply the Pillars

### TECHNIQUE

- Use your paddle/raised board sweeper to get crutches out effectively
- Sweep stands
- Pick up other wool types as you sweep oddments down board.

### TIMING

Time each shearer according to style, pace and tallies in order to get out every crutch and sweep every stand.

### TEAMWORK

- Talk to the classer prior to commencement of work in order to find out the clip preparation requirements.
- Talk with the classer about any contamination issue you have seen.
- Assist the pick up person if they can't pick all their fleeces up.
- Set up fleece for pick up
- Sweep the wool area around the wool table
- Keep an area clean and free of all oddments to one side of the table as an area to set down any fleeces that can't be thrown immediately
- Ask the person on pick up to get a crutch out if you can't make it or ask the shearer to flick it out.
- Help wool roller as time permits
- Check and jump packs and change when necessary
- Assist other team members at the start and end of each run and at cut-outs.

### TEMPERAMENT

- Keeping calm at all times
- Remember the importance of being a team player

# PICK UP DUTIES



## Key tasks

1. Set up the fleece.
2. Pick up and throw every fleece.
3. Pick up oddments and jump packs.

The person on pick up is responsible for picking up every fleece where possible. Different wool types will be picked up using different techniques.

## 1. Set up fleece.

- Assess the order of pick up, 'throwability' (size, weight, how well it holds together) and the shearers style
- Identify wool faults and notify the wool classer as needed. Wool faults include: - Dermo, water stain, black wool, fly (dry/wet), skin pieces, brands, stain, mud and blood.
- Find and position the first hind leg.
- Set up the fleece by pulling the neck out towards feet until first hind leg is exposed

## OR

- Centre neck with foot or hand (maintaining integrity) lift up wool on left side of fleece with right hand and push hind leg with left hand.

## TIPS

- *Remove any remaining shanks. There will often be shanks sitting on top of the fleece from the last front leg or from the last back leg.*
- *Check the board person has removed all the crutch wool and shank wool from the first hind leg.*

## 2. Pick up and throw every fleece.

### **Pick up safely in a controlled and balanced bundle:**

- Once you have set the fleece up gather the back legs using fingers and thumbs. Don't let go.
- Push towards centre of fleece (the more compressed the fleece is the easier it is to control and throw)
- Roll legs back towards fleece neck area/own feet. You should have similar amounts of "tip and white" wool showing.
- Use remaining fingers to gather fleece. Avoid the use of elbows. Try to find the point of balance to keep wool from falling through.
- Improvise and adapt technique according to time and fleece variations. Possible variations include pick up side ways, pull back, push aside and ask for help.
- Carry fleece to the table without interference to co-workers and obstacles.
- Check fleece for hanging bits and either regather or ask co-workers for support.
- Aim throw at approximately 45 degree angle to allow fleece time to spread before landing on the table. Do not let go of legs – throw neck towards end of the table.
- Throw or place fleece so fleece lands flat, tip side up, on the wool table.

### **OR**

- Place the fleece on the floor or on the table if room permits. Always leave the back legs so they can be easily identified.



See comprehensive instruction on AWI Wool Handling DVD

## TIPS

- *If the first back leg can't be found, it is better to pick up fleece as it is. When thrown on the table the leg should be laying across the top of the fleece.*
- *Always retrieve wool not landed on the table. It is the pick up person's responsibility to ensure all fleece wool lands on the table.*
- *In order to reduce double handling and cross contamination, it maybe easier to put 2 fleeces on the table at a time. This will depend on the classer, the size of the table and the size of the fleeces.*
- *Place fleeces on clean floor/designated area when the table is unavailable. Do not place fleeces in front of table where it is prone to cross contamination from crutch area of fleece on the table. Do not to place fleece on oddment piles or leave them laying all over the board.*
- *Leave back legs so they can be easily identified.*
- *Prem shorn wool, lambs wool or short wool can be placed with the aid of batts.*
- *When preparing prem shorn wool and lambs, wool packs can be placed on the table to stop wool falling through table grates.*
- *In some cases, fleeces may be thrown upside down to check for specific wool faults like water stain or dry fly stain.*

### 3. Pick up oddments and jump packs.



- It is easier for the pick up person to place oddments in the pack because they don't have a paddle. Also, the piles of oddments are usually in the direction of travel.
- When picking up oddments, use your feet as a stopper and roll the wool back.
- When waiting for a fleece to come off take every opportunity to pick up locks, stain, shanks and bellies.
- Check and jump butts regularly.
- Tramp wool firmly to corners and sides. When a pack is nearly full, part wool to the sides and corners and then tramp.
- Close and label butts when full or at wool cut outs.
- Get assistance from co-workers or use trolleys to move and store butts.
- Sweep area and replace pack in holder.
- Assess pack holders for safety - sharp protrusions, bale fasteners, stability of pack holder, height and proximity to roof and other hazards like shafts, power and lights. Use steps if need be.

#### TIPS

- *Continuously check contents of oddment packs for uniformity. Is it what it is meant to be?*
- *Temporarily label pack when closing, always keeping the top flaps free of any markings.*

## Applying the Pillars

### TECHNIQUE

- Practice and use the right technique to pick up fleeces realising that different types of wool will have require handle techniques.
- Practice and use the correct technique to pick up piles of oddments.

### TIMING

- Use timing skills to determine the order of pick up.
- Take into account shearers styles, pace and tallies. When picking up fleeces you will notice that shearers have different styles.
- Some shearers will finish the last side quicker than others. You need to time how long you have to pick up that fleece before the next one is due.

### TEAMWORK

- Identify any wool faults like dermo and water stain whilst picking up and tell the classer.
- Make sure the shearers talk to you if they identify any wool faults, especially black wool.
- Help the board person with crutches and bellies.
- Help the wool roller by skirting the front legs on the table where possible.
- Sweep the wool area.
- The pick up person is an ideal position in the shed to assist either the board person or wool roller, depending on the area of most need

### TEMPERAMENT

- Keeping calm at all times
- Remember the importance of being a team player

# WOOL ROLLING DUTIES



## Key Tasks

### Skirt fleeces efficiently

- Skirt around the fleece using the thumb, index finger and middle finger.



- Don't skirt using your whole hand, you rip further into the fleece removing good wool that should remain with the fleece.
- Over skirting costs the wool industry millions of dollars every year.
- Heavy skirting often results in good fleece wool being removed and down graded.
- Excess skirting will only have a minimal impact on the level of vegetable matter remaining in the fleece.
- Each fleece must be skirted based on its characteristics.
- All fleeces are different and there is no 'one size fits all' skirting procedure in the amount of wool removed.
- The woolclasser will decide on the level of skirting required and what if any other wool faults need to be removed.

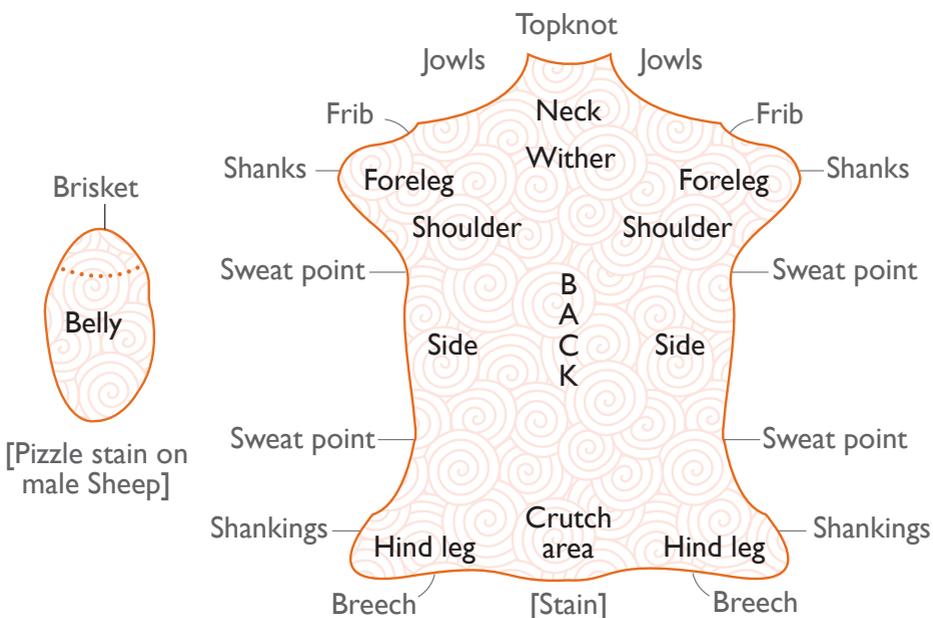
## General Skirting Method

- Check the crutch area and remove short or stained wool if still present.
- Check and remove brands if present. When removing a brand ensure that only brand is removed. If the brand is small, grab hold of staples of wool containing brand, twist and pull out. When a brand is large, skirt around the outside of the brand, ensuring that you only get the brand and no good wool.
- Check shanks on hind leg through to breakpoint (breakpoint is the area where the belly wool has been taken off between the flank and front leg).
- Shake portion being skirted to remove second cuts.
- Check along break point for belly wool.
- Skirt from shoulder at the frib point to next break point where the neck wool is broken out. Double check for any shanks left on the front leg.
- Skirt around the head.
- Follow the classers' direction to remove and separate any short wool, jowls, wasty weathered wool, cott or heavier colour.
- Fold over the edge being skirted as it is finished. This identifies where the fleece has been skirted and turning the edge in allows the wool roller on the opposite side of the table to check for any fribs that may have been missed.
- Roll fleece according to wool classer's direction. The fleece will usually be rolled from the breech to the neck end, with the aim of presenting the shoulder consistently to the woolclasser.
- Check for skin pieces while rolling. Apply the same method for removing brands brand to removing skin pieces. Grab a hold of the skin piece, twist it and pull out ensuring that you are only grabbing skin.
- The wool roller is critical to the final quality of the wool clip. Once you know the fleece areas and are doing a quality job on the table, the required speed to keep up with the rate of wool flow will come easily.
- Different skirting procedures will be used for preparing superfine clips. These requirements will be determined by the woolclasser

and you will be instructed on individual clip requirements.

- Learn the pattern of the fleece so you know exactly what you are looking for.

## Fleece Components



## Table organisation

- It may be possible to put two fleeces up on the table at a time.
- Generally, most wool tables are large enough to throw one fleece and set the next fleece on the end of the table.
- This will reduce double handling the fleeces, reduce cross contamination and it may be easier for the wool handling team.
- However, the organisation of the table will depend on the classer, the size of the fleeces, and the size of the table.
- As you finish skirting the back legs, fold the back legs forward to allow room on the table for placement of next fleece.
- The table person is responsible for making room on the table for the person on pick up to throw the fleece.

## Tips

- *Recognise breakpoints in the fleece not requiring skirting. Get to know exactly what you are looking for.*
- *Identify crutch area, hind legs, front legs, back, shoulders, crutch and jowls.*
- *Check all the wool has gone into the correct bins - pieces in pieces bin, skin in skin box, any shanks separate from pieces.*
- *It is your responsibility to keep the table area well swept. Sweep under the table using big quick sweeping motions, pick up the locks and put them in the butt.*
- *The more fleeces you put on the floor, the more double handling the wool team will have and the more fleeces will fall apart. This slows down the entire wool rolling job.*

## Applying the Pillars

### TECHNIQUE

- Learn to skirt efficiently using your fingers not your whole hand ensuring the right amount of skirtings are removed.
- Consistently present the same area (shoulder) of fleece for classing
- Maintain a clean work area at all times.
- As you have time, sweep under and around the table, bins and butts and wool press areas.
- Check that oddments are sorted to the correct bins or butts.

### TIMING

- Always know where each of the shearers are up to so as you know when fleeces will be thrown onto the table.
- The wool flow rate will determine the pace of skirting on the table.

## **TEAMWORK**

- Talk to the classer to determine the required wool preparation methods, what needs to be skirted off the fleece and how much should be removed.
- Talk to the classer and the wool handling team about any faults you have identified in the fleece.
- Talk to the pick up person and classer to work out how best to organise the wool table.
- Help pick up fleeces, remove crutches and assist in preparing bellies where possible.
- Work with the wool handling team to avoid getting behind in the required wool flow.
- Avoid having fleeces all over the board that will cause cross contamination between oddments and fleece wool
- Pick up piles of oddments or pick up the next fleece if you have time.

## **TEMPERAMENT**

- Keep calm at all times
- Remember the importance of being a team player

# PENNING SHEEP



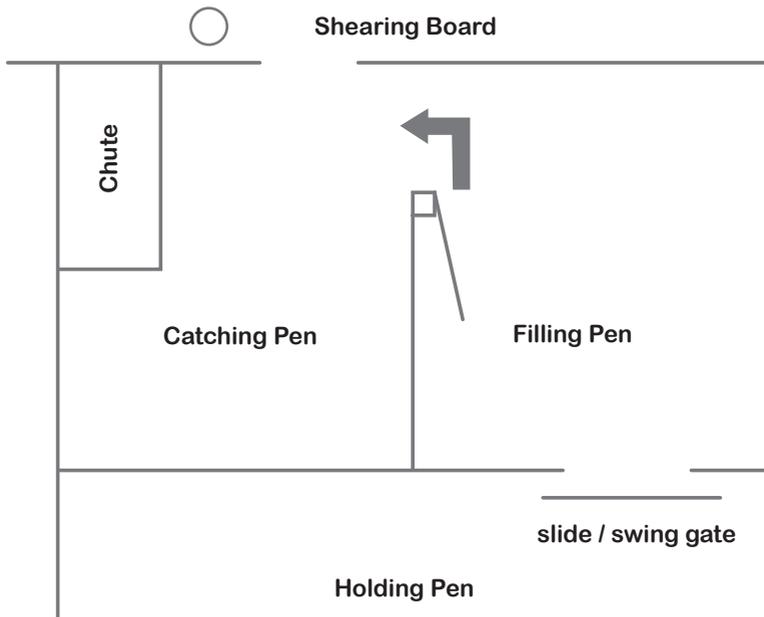
## Key tasks

1. Provide a continuous flow of sheep to the shearers
2. Organise mob cut-outs
3. Prevent contamination of wool

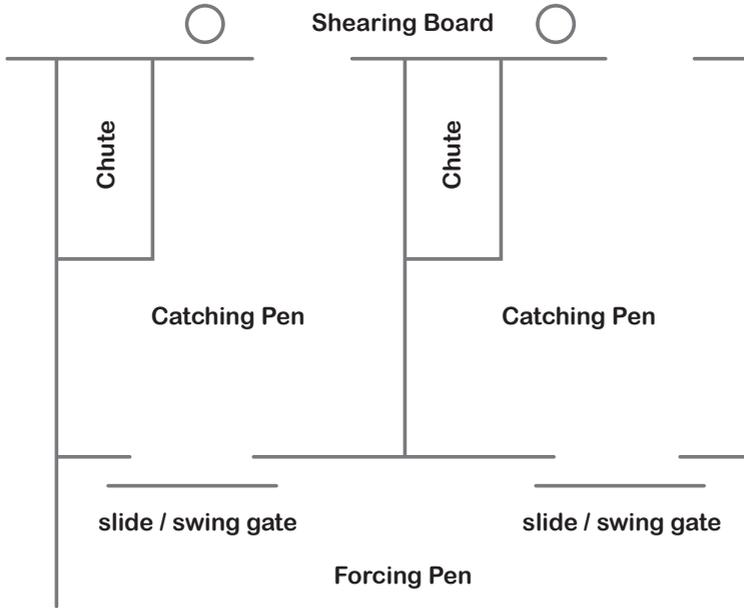
## Pen Layouts:

There are two common catching pen layouts

## FRONT FILL



## BACK FILL



### Gate Types:

There are various gate designs in use i.e. Slide, lift, swing combinations.



See AWI Wool Handling DVD gate designs

## Sheep behaviour

- Sheep generally move best up a slope and as a mob. They have a strong 'follower' instinct. Sheep don't like changes in light, changes in flooring or noise.
- Some sheep will pen up relatively easily. Lambs and rams are often the most difficult to work with.
- Some ways to make penning up easier include:
  - Turning sheep to create a leader / follower in required direction.
  - Using a draw sheep
  - Eliminating obstructions and noise when possible, especially sunlight, noise from the stands like radios and light shining from below the grating.
  - Use gates as a block and a force
  - Use penning aids like dogs and shakers / rattles.
  - Use sheep behaviour to create movement. When the mob starts to move, keeping the flow going.
  - Attempting to use of excessive force without using sheep behaviour to assist makes the penning up role very difficult.

## Animal welfare

- Care must be taken not to injure sheep when penning up. The main ways sheep are injured or killed are smothering from penning at too high a density, broken or gapped grating that will break legs, using biting dogs and using excessive force. Lambs in particular need to be penned at lower densities.
- Never leave sheep penned in a sloping ramp. The mob will gradually work their way down the slope and smother sheep at the rear.
- If dogs are being used, they should be restrained when not being worked. Many sheep have been smothered with dogs working sheep alone and forcing the mob into corners without shed staff being aware.
- Suitable accommodation and access to water for dogs should be provided.
- Dogs that use a lot of force by biting should be muzzled.

## Safety

Check the sheep movement area – holding, forcing and catching pens for potential hazards – broken grating, low beams, broken rails and damaged gates.

Sheep have a strong flocking instinct. An isolated sheep will try to rejoin the mob and will charge past people and dogs to do so. This can cause injury to the penner up. Rams pose a particular danger because of their larger size, greater strength and horns.

Always approach rams from the side and never front on. Be careful of the rams' horns and never place your head on the same level as the ram.

Safety issues occur with “full” sheep being penned. The sheep working area will become wet and slippery from faeces and urine and will also increase the amount of pen stain. When full sheep are brought to the shed, delay penning as long as possible and inform the shed manager or the wool classer.

Many sheds now use a sedative to calm rams just prior to shearing. This makes handling and shearing the rams easier. However, the role of penner up does not include injecting rams with this sedative.

## 1. Provide a continuous flow of sheep to the shearers

### Penning

- The size of catching pens mean there will usually have to be one fill during the run. If the shearing team has a break on the hour, this is an ideal time to refill the catching pens.
- Shearer's speeds vary. Have a look at the tally book to see how many each shearer is doing. This will give a good idea when the pen will need to be filled.
- Shearers will call 'Sheepo' when the pen is down to the last sheep.
- Keep the force pens behind the catching pen full at the start of each run. This will minimise sheep movement during the run.

## Tips

- *Sheep should be emptied out for at least 4 hours before they are penned.*
- *Try to have the direction of movement across floor grating, rather than along the slats.*
- *Light coming up through the grating makes sheep movement particularly difficult.*
- *Light coming in through walls (even small shafts of light) will stop sheep feeding into the next pen*
- *Fill forcing areas during shearers break periods when there is less noise from the shearing area. This allows you to do minimum penning when shearing is in progress.*
- *Walking back through a mob from the front will often encourage sheep to move around you and fill the pen more effectively than using excessive force at the rear.*

## 2. Organise mob cut-outs

- Communicate with shed manager and / or wool classer for mob order and when the mobs will cut out. A cut out is when all the sheep in a mob or part of a mob are completely finished before penning the next mob.

### Water cut-out

- When part of a mob has been in the yards for some time, the shed manager will want to get the sheep back onto water.
- A cut out for water can be gradual because all sheep are returning to the same mob and the lines of wool are continuous. However, it is still important to identify the last sheep in the group to be shorn so the shed manager or woolclasser can manage how long sheep are yarded.

### Mob cut out

- The entire mob is complete. A mob cut out may only be a sheep cut out if the wool classer decides the lines of wool are similar and will be combined with the next mob. This may also be a wool cut out.

## Wool Cut Out

- A wool cut out occurs when the classer decides the wool needs to be kept separate from the next mob. In some cases, like changing from a merino mob to a crossbred mob, all wool may need to be pressed up or placed in butts before shearing can resume.

## Shed cut out

- A shed cut out occurs when the shed is finished. All sheep are shorn and all wool is pressed into bales.
- It is important to work with shearers and all the wool handling team to cut out mobs evenly.
- Clearly identify mob cut outs and water and feed cut outs and keep separate.
- Gauge each shearer's tally to even out supply of sheep so all shearer's finish at the same time.

## Tips

- *Use dog collars, an empty pen, or wire (non contaminating fibrous material) to clearly identify separate mobs and cut outs.*
- *Refer to tally book.*
- *Arrange sheep numbers in catching pens for efficient cutout.*

## 3. Prevent contamination of wool

- Remove wool from all pens, before shearing starts and at the end of shearing.
- Remove any contaminants from wool you see while penning up. Wire, twine and 'devils claw' are sometimes seen.
- Prevent overcrowding in all sheep handling areas to minimise pen stain.
- Notify the woolclasser and shearer of black, fly blown, shedding breeds and excessively pen stained sheep.
- Notify shearers of classer's order of shearing preference e.g. shear black sheep last.
- Keep dogs out of wool working and pressing areas.

## Apply the pillars

### TECHNIQUE

- Use the right techniques to provide a continuous flow of sheep to shearers taking into account pen layouts, gate types, dogs, sheep behaviour.

### TIMING

- Use timing skills to determine shearers pace in order to know which pen to fill first or most frequently.

### TEAMWORK

- Talk to the classer and shed manager about different mobs, cut outs and sheep numbers.
- Talk to the shearers to let them know when the cut outs are in the pen.
- Listen for the shearers call “sheepo” to let you know when to fill a pen.
- Help out board / pick up / wool rolling and pressing duties when possible.
- Assist other team members

### TEMPERAMENT

- Stay calm around sheep
- Treat the dog/s correctly
- Communicate with appropriate staff

# PRESSING DUTIES



## Key tasks

1. Prepare and maintain the wool pressing area
2. Operational checks
3. Pressing wool
4. Brand and record bales
5. Weigh and store bales

## Safety

- Check the press and make sure all safety mechanisms including emergency stops and guards are present and working.
- Each press will have manufacturers' instructions or standard operating procedures. Become familiar with these. If they are not available, ask an experienced presser to demonstrate the correct operation. Each press will be a little different. If you have any doubts about safe operation, stop and ask someone for help.
- Each State has WorkCover publications that cover health and safety at work, press guarding and ways to prevent injury when using a wool press as well as correct manual handling techniques.
- Remove jewellery and loose clothing and tie up long hair to prevent injury.
- Report equipment faults to shed manager.

## 1. Prepare and maintain the wool pressing area

- Check you have sufficient supplies.
- Keep work area free of contaminants. Store stencils, branding ink, marking pens, wool book, wool hook, bale fasteners and wool packs so there is no contamination risk.
- Keep the wool pressing area clean and well swept.
- Position press safely to maximise pressing efficiency
- Exclude people and animals from wool bins.

### Tips

- *Remove all possible contaminants from the wool pressing area. This includes clothing, towels, water bottles, tools, cigarette butts, ashtrays and hats.*
- *Have an area for keeping all the pressing supplies together.*
- *Sweep at the completion of each bale or before changing lines. This is the ideal time to keep the work area clean and looking professional.*

## 2. Operational checks

- Become familiar with specific press operational requirements.
- Calibrate and tare scales.
- Look for oil leaks, check leads and hoses for safe operation.
- Check exhaust fumes do not pose a health risk if the press has a petrol motor.
- For petrol motors, ensure there is an adequate supply of petrol, oil and a spare starter rope.
- For electric presses, make sure the power lead and power supply are safe.

### Tips

- *Check with press owner/managers for operating instructions and safe work practices for the press.*
- *Know your own weight to calibrate the scales or use a known water quantity. One litre of water weighs 1 kg.*

### 3. Pressing wool

- Shake out the wool pack away from the wool working area before placing in the press so there are no loose fibres or wool contaminants in the pack.
- Place the wool pack into the press with the continuous seam running through the press. You will know the pack is in correctly if this side has the last flaps closed.
- Make sure the pack is fitted securely in the press and the corners line up between the pack and the press.
- Never by-pass any safety systems installed on the wool press.
- Load the press with wool evenly when pressing bales.
- Watch the weight of the bale, remembering the scales may not be accurate and wool may gain weight from atmospheric moisture on the way to the wool store.
- The minimum weight for bales is 110kg unless it is a speciality superfine bale where the limit is 90 kg.
- The maximum weight for wool bales is 204 kg (including bulk class bales) and the suggested maximum pressing weight is 190kg to 195kg
- When the bale is the required weight, close the pack using four bale fasteners on each flap.
- The maximum bale length is 1.25m.
- Identify the contents before the bale is turned out of the press.

### Tips

- *When the required weight of wool is in the press, spread the wool into each corner to flatten the top. Allow the press to cycle another time and this will pin the wool down to the level of the press box. This keeps the bale square and within length limits.*
- *Take care when using a bale to pull bale fasteners tight. Always face the points of the bale hook away from your body and be careful there are no other wool handling staff in the area.*
- *Some presses can cycle after the first flap is closed and this results in a more compact and even bale.*
- *Make sure the pins are fully retracted from the bale before turning the bale out. This stops packs being ripped and prevents contamination from pack material.*

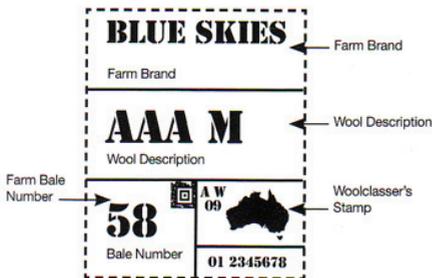
## 4. Brand and record bales

- Wrongly branded bales are a problem for the wool industry.
- This can be reduced by identifying bale contents before they are turned out of the press and by recording the required details immediately in the wool book.
- Brand the head and face of the bale as shown below and record the details in the wool book.
- The woolclasser will decide on what bale description is used for each line of wool. Follow these directions exactly.

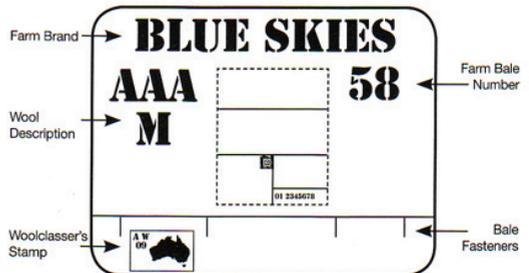
### FIGURE 1: COMPLETING THE BALE LABEL

EITHER fill in the label as below left OR below right NOT both.

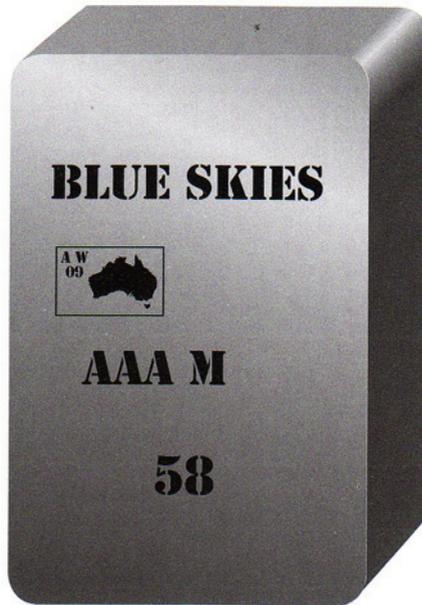
#### 1a: Filling in the Bale Label



#### 1b: Marking the Bale Head



**FIGURE 2: Bale Face**



Reproduced from the Australian Wool Exchange Preparation of Australian Wool Clips  
The Woolclasser Code of Practice (2007-2009)

## **Tips**

- *Make sure the brush or roller isn't too wet when using stencils to brand bales. The brand will take a longer time to dry, may smudge and be difficult to read. It may also wet through the wool pack to the wool and cause dyeing problems.*
- *Any details you write in the wool book must be legible.*

## **5. Weigh and store bales**

- Record bale weight details in the wool book.
- If the scales are separate to the press, tare the scales before use.
- Using a trolley to move wool bales around the shed.
- Use correct manual handling techniques to move and stack bales around the shed.

# Wool book page

## The Wool Book (example)

BALE No.	Classer's Spec's	Loading Check	WOOL DESCRIPTION	BALE WEIGHT	Mob I.D.	LABEL No.	COMMENTS
1			AAA M		1		(Mob 1 - Merino
2			AAA M		1		Ewes, 4 year old
3			AAA M		1		80 mm, light burr,
4			AAA M		1		fine quality.)
5			AAA M		1		"
6			AAA M		1		"
7			AAA M		1		Shorter Line approx 60mm
8			AAA M		1		"
9			M PCS		1		
10			AAA M		1		Broader Fleece Line
11			M BLS		1		
12			AAA M R		2		Mob 2-Merino Ewes run
13			AAA M R		2		with shedding breeds,
14			AAA M R		2		80 mm,
15			AAA M R		2		light burr, fine
16			AAA M R		2		quality.
17			M PCS R		2		
18			AAA FX LMS Y		3		Mob 3-Black point Lambs
19			AAA FX LMS Y		3		with visible black fibre.
20			AAA FX LMS Y		3		Approx. 50mm
21			AAA FX LMS Y		3		
22			AA FX LPCS Y		3		

Reproduced from the Australian Wool Exchange Preparation of Australian Wool Clips  
The Woolclasser Code of Practice (2007-2009)

## Apply the pillars

### TECHNIQUE

- Use correct press operation methods.
- Use safe lifting techniques to load wool into the press.
- Keep bales square and compact
- Keep bales within weight and length limits.

### TIMING

- Time the wool flow rate according to different lines in conjunction with the wool classer to determine the order of bales pressed.

### TEAMWORK

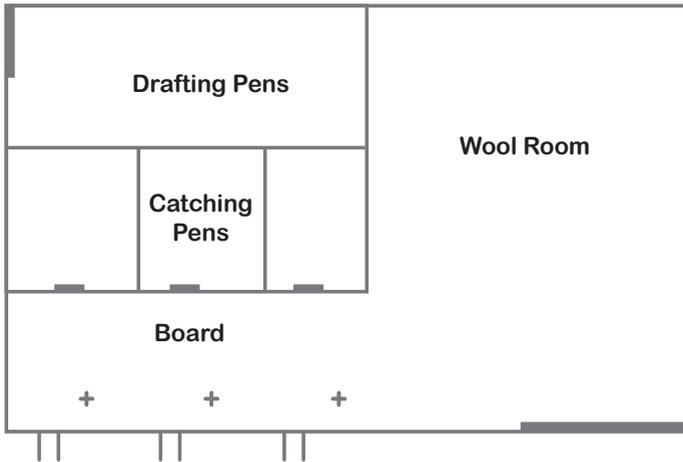
- Talk to the classer to find out which lines to press.
- Talk to the classer to make sure all required details are being recorded in the wool book.
- Inform the classer if you see things in lines of wool that shouldn't be there – fribs left on the fleece, stain in lines of fleece or non-stain oddments, contamination. Help support wool handling roles when needed.
- Ask for help from support roles when cutting out a shed / mob or when you get behind.

### TEMPERAMENT

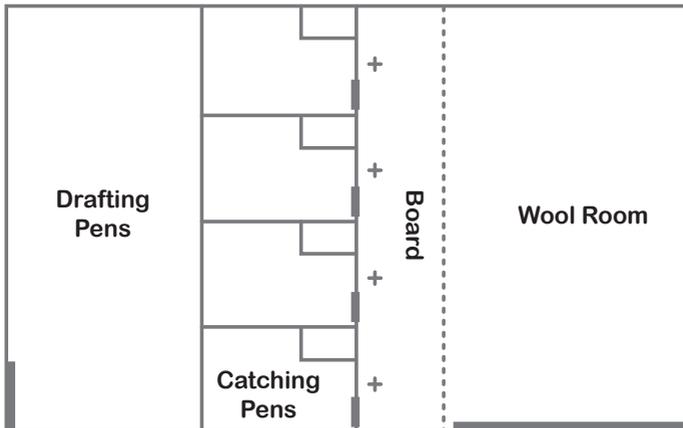
- Be alert all the time whilst pressing
- Be aware of other individuals in the work area

# TYPES OF SHEARING SHEDS

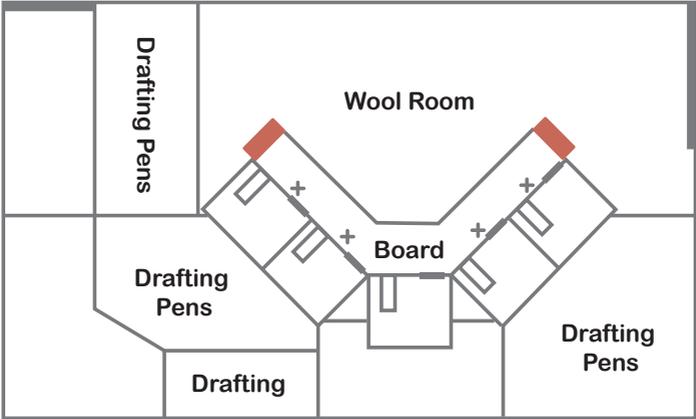
## CLOSED BOARD



## OPEN BOARD



# RAISED BOARD



# WOOLGROWER RESPONSIBILITIES

How woolgrowers can help your shearing team to improve your bottom line.

## **Control contamination**

Urine stain, soft contaminants like polypropylene products and hard contaminants that damage machinery remain major problems for wool processors. All wool producers pay the cost for this contamination.

## **Sheep preparation**

- Draft sheep into suitable mobs for shearing. Don't present mixed mobs - breed or lambs and ewes – for shearing.
- Avoid branding sheep where possible. This saves a job on the table and ensures there will be no price discount for brands in lines of wool.
- Eliminate urine stain as an issue by crutching sheep within three months of shearing. The quality of your clip will improve and shed staff will have extra time to concentrate on preparing your clip to best commercial advantage, rather than spend their time chasing stain.
- Yard sheep at least four hours prior to shearing to allow them to empty out. This reduces the incidence of pen stain.

## **Shed preparation**

- Clean yards and wool handling areas. Remove all baling twine, fertilizer bags and non essential items before shearing commences.
- Provide good lighting.

## **Equipment**

- Make sure all equipment in is good working order and there are sufficient wool packs, bale fasteners, wool and tally book, bale branding supplies, paddles, pack holders and contamination boxes.
- Have accurate scales available
- Be aware of the relevant OH&S regulations.

## **Staffing levels**

- Staff the shed at an adequate level.
- Running a wool handler short puts pressure on the rest of the team.
- The saving in a wool handler's wage is far outweighed by the overall reduction in clip preparation standards (especially oddments) and poorer skirting efficiency.
- Use any opportunity to increase the skill levels of the shearing team – novice training, in shed coaching and speciality wool team workshops are all available.

## **Communication and documentation**

- Provide mob details to the shearing team.
- Supply the woolclasser with team results from last year's shearing.
- Complete the documentation required – Dark and Medullated Fibre Risk declaration and the crutching status/month crutched section in the Woolclasser Specification.

## **Take home message:**

- Assisting the shearing team will increase your returns

# GLOSSARY OF WOOL HANDLING TERMS

## **Backs**

Fleece wool from the back of the sheep – classer will direct if there is a need to remove

## **Bale or Pack**

Container of wool made of nylon and pressed to specifications set in the AWEX “Code of Practice” for the preparation of wool

## **Bale Fastener**

Metal clasp used to close a bale of wool

## **Bale Hook**

A tool to help grasp bales of wool while handling

## **Baling Twine**

Made of synthetic polypropylene and one of the major contaminants of wool

## **Belly Wool**

Wool shorn from the stomach of the sheep

## **Bin**

Storage area for a line of wool prior to pressing

## **Black Wool**

Dark pigmented wool (grey or black)

## **Board**

Area used for shearing the sheep

## **Brand**

1. The markings on a bale of wool used for identification
2. Mark placed on the sheep for identification – needs to be removed from fleece as it prevents uniform dye uptake during processing

## **Branding**

The action of rubbing special ink over a stencil to apply the “brand to a bale”

## **Broom / Paddle**

Specialised broom or floor sweep used by a wool handler

## **Butt**

A wool pack containing wool packed down by hand

## **Butt Holder**

Frame used to hold a wool pack to be used as a butt

## **Camp Out Shed**

A shearing shed where accommodation and meals are supplied to the team

## **Catching pen**

Pen adjoining the board where the shearer catches their sheep prior to shearing

## **Chute**

The ramp down which a sheep slides into the let go pen after being shorn

## **Classing**

Grading wool into lines

## **Clip**

The total amount of wool shorn on a property in one year

## **Code of Practice**

Industry agreed minimum standard for the preparation of the Australian wool clip

## **Combing Wool**

Wool suitable for conversion to yarn on the worsted system – generally wool greater than 50mm in length

## **Contamination**

Foreign items found in wool that affects processing that falls into two categories:

1. Fibrous - baling twine, dogs hair, feathers, super bags etc – These contaminants behave just like the wool fibre and end up woven into finished fabrics
2. Hard – metal or hard substances – bale hooks, tools, tyre levers, timber etc – if undetected cause costly damage to early stage processing machinery that usually requires production lines to close while being repaired

## **Cotted**

Matted section of a fleece

## **Crossbred**

The result of crossing two different breeds of sheep

## **Cull**

An inferior sheep that is removed from the flock

## **Crutch**

The area on a sheep around the anus

## **Crutching/s**

Removing wool from the crutch area of the sheep – this has a twofold purpose – minimisation of stain and as a control for possible flystrike

## **Cut Out**

The end of a particular mob of sheep within a flock

## **Dag**

Wool encrusted by faeces

## **Dark & Medullated Fibres**

- Pigmented fibres usually black or grey as well as any fibres affected by stain (see definition of stain below)
- Medullated fibres are coarse hollow fibres that cause serious problems in the dyeing process that are generally found on the hocks and briskets of sheep

## **Dermatitis (Dermo)**

A fungal condition that produces wool that is matted or clumped together

## **Ewe**

A female sheep

## **Fleece**

The main body of wool that forms the sheep's coat

## **Fibre**

A single strand of wool within a fleece. Grouped together they form staples

## **Flock**

All the sheep on one farm, usually made up of several "mobs"

## **Flyblown**

Sheep or wool infested or affected with or by maggots

## **Hogget**

Young sheep approx. 7-18 months of age

## **Jowl**

Wool from around the sheep's jaw which can be matted or seedy

## **Lamb**

Young sheep from new born to 6 months of age

## **Let go Pen**

An individual pen for each shearer to release their shorn sheep into

## **Line**

Each different grade of wool is separated and referred to as a “line of wool” e.g. A line of Fleece, Bellies or Locks

## **Locks**

Very short wool cut from the fleece by shearers. Either short wool from around the points or second cuts caused when shearers lift the handpiece off the skin and then shear the sort fires left on the skin to tidy up.

## **Lousy / Lice**

Wool from sheep that have been affected by lice. The lice make the sheep itchy so they rub against trees and fences and this make the wool become matted and straggly. The wool smells and turns yellowish.

## **Merino**

The dominate apparel wool sheep grown in Australia.

## **Micron**

One thousandth of one millimetre. The measurement used to describe the fibre diameter of wool fibres. e.g. 20.0 microns

## **Mob**

One group of sheep within a flock. A flock may comprise several mobs according to age or sex e.g. Lambs, Hoggets, Wethers or Ewes

## **Monkey**

The plate used to compress the wool within the press. It is moved up and down manually by bars and springs or by hydraulics – Proper name is “Plate”

## **Mud**

Any wool that is encased in mud

## **Mulse**

The operation to remove excess skin from around a sheep’s crutch in an attempt to minimise fly strike

## **Necks**

Part of a fleece from the neck region of the sheep

### **Oddments**

Another term for all other lines of wool other than Fleece, Pieces and Bellies

### **Overgrown**

Any wool that has more than 12 months growth

### **Over Skirting**

Removing good fleece wool and down grading that wool into pieces lines while skirting

### **Pen Stain**

Fleece wool discoloured by sheep's faeces while the sheep are being penned. Usually a dark green colour.

### **Penner Up**

Member of a shearing team responsible for penning the sheep

### **Pieces**

Wool skirted from fleece containing dark sweat locks. This wool must be removed as it does not scour completely and affects the background colour of the fibre. This causes major problems in the dyeing process

### **Pizzle**

Male sheep's penis

### **Pizzle Stain**

Urine stained wool found on bellies from around the pizzle are of male sheep

### **Polypropylene**

A major contaminant in the wool industry commonly used as hay baling twine dyed black and red.

### **Porthole**

The entry into the let go pen from the shearing board

### **Prem Wool**

Wool shorn prematurely

### **Quarters**

Name for accommodation provided at camp out sheds

### **Raddle**

A chalky like substance used to identify sheep

## **Ram**

1. A male sheep with its sexual organs intact used for breeding
2. Hydraulic piston used to drive the monkey on a wool press

## **Run**

1. Two hour work period
2. Description of total work available e.g. the run consists of five sheds or the run goes from July to December

## **Scorable**

Wool that can be washed clean of all impurities and colour

## **Second Cuts**

Refer to locks

## **Seedy**

Wool containing grass seeds

## **Set Up**

Set up the shearing shed prior to commencement of shearing – label and place wool containers in strategic locations

## **Shanks**

Wool from the hock area (lower legs) of sheep. Shanks must be kept completely separate from all other lines as they contain medullated (coarse hollow fibres) that cause serious problems in the dyeing process

## **Shearing Contractor**

Employs members of the shearing team and contract with woolgrower to shear his clip

## **Shearing Team**

All staff employed to work in a wool harvesting team

## **Sheep**

Animal that grows wool

## **Shedding Breeds**

Introduced breeds of meat sheep that self shed fleeces that contain pigmented and medullated fibres. These wool must be kept separate from all other lines

## **Sheepo**

A term/call by shearers to the penner up to fill up their catching pen

## **Skin Pieces**

Small pieces of skin accidentally removed during the shearing process. Must be kept separate from all other lines as the skin pieces cause damage/blockages to combing machines

## **Skirting**

Removal of sweat locks and other processing faults in present from the outer section of fleece under instruction from the woolclasser

## **Smoko**

Morning or afternoon tea break (a short break)

## **Sound Wool**

Wool fibres that don't break easily – wool that test 35 newtons per kilotex and above is usually deemed as sound

## **Stain**

Wool fibres that are affected by various contaminants that can't be removed by scouring and are permanently discoloured. e.g. urine, pen, water and blood stain

## **Stand**

Section of a shearing board allocated and used by one shearer

## **Stag**

Male sheep that has not been castrated properly

## **Staple**

A group of individual wool fibres "clumped" together within a fleece

## **Stencil**

Plastic or metal template used for branding bales

## **Suburban Shed**

A shearing shed close enough to travel to and from on a daily basis

## **Sweat Locks**

Wool fibres encrusted with black heavy conditioned crease from the sweat glands of sheep often referred to as fribs

## **Tally Book**

A booked used to record the numbers shorn by each individual shearer (tally) used to determine wages

## **Tender Wool**

Wool that breaks easily anywhere along the staple that causes problems during processing. Mid point breaks cause the most concern to processors

## **Top Knot**

Wool from the top of a sheep's head

## **Under Skirting**

Not removing all the wool faults that affects processing performance from the fleece

## **Vegetable Matter**

The term to describe all grass seeds and burrs found in wool

## **Weaner**

- A sheep that has just been separated from its mother for weaning
- Wool that has not been shorn as a lamb, still has that thin wispy tip

## **Wether**

Male sheep that has been castrated. The majority of male sheep on a farm are wethers

## **Wet Wool**

Wool that needs to be dried. Wool that is packed wet can ignite through spontaneous combustion

## **Wiggings (Wigs)**

Wool removed from the cheeks on the either side of a sheep's head

## **Wool**

The outer coat grown by a sheep

## **Wool Away**

Call made by shearer to wool handler to remove shorn wool

## **Wool Book**

Book for recording bale numbers, content, weight and pertinent information. This is maintained by the wool presser

## **Wool Storm**

This occurs when something disrupts the flow of wool from the shearer to the table that necessitates wool stacking up on the floor between the shearer and the wool rolling table.

## **Wool Pack**

Specifically designed bag made of nylon to pack and transport wool

## **Woolclasser**

Member of a shearing team responsible for classing (grading) the clip and supervising the wool handlers

**Woolgrower**

The owner of the sheep that are shorn

**Wool Handler**

A key member of a shearing team that works under the supervision of the woolclasser

**Wool Harvesting**

The whole operation from shearing to baling the wool for sale

**Wool Press**

A machine used to package wool

**Wool Presser**

A member of a shearing team who responsible for packing the bales

**Wool Room**

The dedicated area within a shearing shed where fleeces are skirtd and classed

**Wool Table**

Table on which fleeces are placed for skirting and rolling

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