

## **Presenter notes for: AN INTRODUCTION TO STOCKMANSHIP & MERINO VISUAL CLASSING**

### **WORKSHOP OBJECTIVE**

The workshop objective is to highlight the importance of the core skills of stockmanship and Merino visual classing in running a successful Merino enterprise and to provide information for further learning opportunities.

### **BACKGROUND**

Traditionally, the Merino industry has encouraged new entrants into the industry by offering entry-point positions in the form of jackeroos and jillaroos. Due to a combination of factors including the decline in sheep numbers, competing youth employment and move away from larger Merino flocks, the number of young people entering the industry via this method has declined, and the number of people entering the industry off the back of more theory-based education has increased.

Due to this shift, there is now a lack of training in fundamental foundation post-secondary level skills, important to any Merino operation.

### **Why focus on stockmanship and sheep classing?**

- Both impact on profitability, sheep health and welfare
- There has been a recent decline in 'on the job' training
- Experienced staff have less time available to instruct
- Fewer experienced staff on farm
- Fewer permanent staff, greater use of contractors
- Limited opportunities now available in jackaroo/jillaroo system

### **WORKSHOP FORMAT**

The workshop material comprises a combination of practical activities to develop participants' core skills in stockmanship and Merino visual classing.

The workshop is designed to provide the presenter with flexibility to deliver the workshop as a half-day *Introduction to Merino visual classing* and a half-day *Introduction to Stockmanship* or for the power point learning and practical activities to stand alone as full-day workshops respectively.

**Power points with a grey heading are designed more for half day workshops, the orange headings are designed for use in full day workshops and green headings for inclusion on the website version. Clearly the presenter can show or "hide" slides according to the skills of the attendees and time available.**

The full set of the PowerPoint slides are available on the AWI website, at <http://www.wool.com/education-and-extension/stockmanship-and-merino-visual-classing-workshop-material/>

The PowerPoint (ppt) files are provided as a guide and the presenter/teacher is encouraged to modify the workshop material to suit the level of industry knowledge, understanding and experience of the participants.

It is also important to note that the workshop should be delivered by an experienced stockperson using sheep in appropriate sheep facilities. However where this cannot occur there are photos and you tube videos to assist.

The workshop material was developed using a range of learning mediums covering the 'VARK Principles'. Where possible, the workshop material aims to include a mixture of:

- Visual elements - colour, photos, diagrams, graphs, flow charts, videos
- Audio - presenter clearly explaining the key principles and practical activities
- Read/write - concise text, lists and activities with accompanying handouts
- Kinesthetic/hands on - practical activities.

## TARGET AUDIENCE

The target audience for the stockmanship and Merino visual classing workshops includes:

- university students;
- TAFE students;
- students studying Certificates in Agriculture;
- those who are within their first one to two years of working in the sheep industry; and
- school students studying agriculture, primary industries or interested in agriculture.

To successfully demonstrate and to provide the opportunity for participants to gain practical 'hands on' experience during the workshop, it is suggested that the group has a maximum of eight participants per workshop.

## WORKSHOP CONTENT

The workshop content is provided in the accompanying PowerPoint presentations.

The content involves four key subject areas:

### 1. Overview

The overview sets the context of the workshop, provides a background on the project and the project aims as well as a brief outline of the

Australian wool industry and the fundamental on-farm changes that have occurred over the last 50 years.

## **2. An introduction to stockmanship**

The stockmanship component involves theory on animal welfare legislation; the importance of animal observation; understanding natural sheep behaviour; building effective sheep handling skills (including practical activities in the yards); understanding the impact of the environment, flock structure and enterprise mix; key principles of using working dogs (including practical demonstrations in the yards); and people management.

## **3. An introduction to Merino visual classing**

The visual Merino classing component involves theory on the principles of visual classing; flock objectives; selection for a 'type' to suit the environment; visual classing (including practical activities in the yards); and the importance of balancing visual and objective measurements.

## **4. Career pathways in the wool industry**

This topic refers to the 'AWI Career Path' profile project, which provides a range of case studies on career paths available in the wool industry.

## **PRACTICAL ACTIVITIES**

Practical activities are a key element of the workshop design. This document contains an outline of the suggested practical activities, proposed learning outcomes, required resources and handouts for the participants.

Ensure that participants are aware of the Workplace Health and Safety Requirements and Standard Operating Procedures (SOPs) (Appendix 1) for working safely with sheep.

## **WORKSHOP RESOURCES**

To effectively deliver the workshops, the presenter will ideally need:

- Access to electricity
- Access to a laptop with Powerpoint
- Data projector and screen (preferably an area with low lighting to set up the projector)
- Seats for participants
- Handouts. It is recommended that participants are provided with a copy of the Powerpoint slides as well as the below activity templates
- Good sheep yard facilities including a race and draft
- Shed in case of wet weather
- Approximately 200 sheep preferably with enough variation within management groups (ie. hoggets, ewes, rams) to allow for sheep classing activities to be relevant.

### 1. ACTIVITY - Workplace Health and Safety (handout)

- a) Complete the risk assessment template below for a typical Australian Merino enterprise
- b) Discuss with presenter and other participants

<b>Risk Assessment</b>			
Property:		Conducted by:	Date:
<b>Work Activity</b>	<b>Potential Hazards – What can harm you?</b>	<b>Risk Level</b>	<b>Control – What can you do to make it as safe as possible?</b>
List work activities	I.e. <b>Physical</b> - sunburn, dehydration, heat exhaustion <b>Chemical</b> - backlining, drenching <b>Biological</b> - Q Fever <b>Ergonomic</b> - lifting/catching sheep <b>Electromechanical</b> - motorbikes, ATVs, augers <b>Psychosocial</b> - depression, ill health	1 to 5 (1= low, 5 = high)	
<i>Eg: Mustering sheep on a motorbike</i>	<i>Physical – fall off bike</i>	<i>5 = High</i>	<i>Wear helmet, protective clothing, complete training</i>

## 2. STOCKMANSHIP

### 2.1 ACTIVITY & DISCUSSION - How do we react?

a) Brief group discussion: *Understanding the experiences that make us feel threatened, intimidated or under pressure.*

- Eye contact (direct, unwavering)
- Position of body (frontal stance)
- Personal space (too close)
- Isolation (no one else around)
- Confinement (can't escape or exit blocked)
- Noise (Largely ineffective)

b) Time to practice - participants are to pair off and try the following:

1. Eye Contact:

Participants are to establish when eye contact becomes intimidating. Also to recognise brief eye contact is normal at times but prolonged use creates pressure.

2. Position of body to partners:

Participants commonly assume standing up close in front is the most confronting however standing behind is actually far more uncomfortable. It is important that this is identified.

3. Personal space:

Participants are to identify their personal "bubble" and when their partner is too close. Personal space preference will likely vary between both people and sheep.

4. Partners passing each other in a created narrow corridor:

It is usual in our daily lives when we pass someone we don't know to roll our shoulder and trunk away from the person we are passing. Eye contact is also brief and introductory. No eye contact is usually a sign of distrust.

5. Confinement:

Discuss the analogy of being trapped by a much larger and threatening person. Then add the extra pressure of being isolated and trapped in an area we can't get out of.

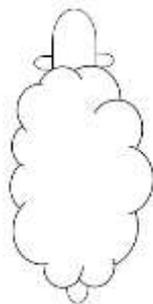
*The main point we are trying to establish is empathy with the other party who is being placed under pressure.*

*All these points are the main triggers for fear in our handling of sheep. All the things that make us feel uncomfortable or threatened have the same effect on sheep.*

**What we need to remember:**

1. Your head up and facing stock is aggressive body language.
2. Your back facing the stock is non-aggressive body language.
3. Your head down facing stock is also not as aggressive as example number one.
4. Animals are always watching what your eyes and body language is doing.
5. Sheep are copycats and will follow a leader.
6. When pressure is used it must be released. Either you or the animal has to move.
7. Use pressure to your advantage and try to face your body towards the part of the yard that you are trying to empty.
8. Avoid curves and approaching from the rear. Your sheep will keep turning to face you. This pressure if continued, is what leads to panic and breakaway incidents.

Draw and label the pressure zone the flight zone **and the blind spot.**



## 2. STOCKMANSHIP

### 2.2 ACTIVITY - Planning and simulation for sheep handling

- a) As a group walk through the yard with the presenter. Discuss sheep behaviour and the impact of the following:
- gateways
  - moving sheep from outside yards through to draft
  - working race
  - light
  - shadows
  - slippery surfaces
  - weldmesh
  - WH&S issues
- b) Discuss likely flow of sheep
- c) Discuss the importance of planning and observation
- d) The presenter will discuss and demonstrate **pressure and release** using the participants as sheep and move them from yard to yard.

#### Notes:

## 2. STOCKMANSHIP

### 2.3 ACTIVITY - Handling sheep, applying and releasing pressure

- a) Each pair to move a small mob of sheep yard to yard (use 25 to 50 sheep depending on yard size and layout).
- b) One pair to work at a time whilst the remaining participants observe to see where the stock are resisting. Note - observers to be situated preferably in a central yard but not in the way.

**Applying and releasing pressure** - follow the below steps:

1. Set up gates. Always do this first
2. Direct body pressure towards area of yard you are emptying
3. Step in sideways to apply pressure to lead, step back out again to release.
4. Move forward and backwards to keep sheep moving, if more pressure is needed step in. Avoid turning to lead.
5. Try to avoid walking to rear of mob.

**Releasing pressure and closing gates:**

6. Step away or turn body away from stock again, focus should be on area of yard you want to empty.
7. When shutting gates try to drop eye contact to just in front of gate, sheep are more likely to shuffle forward than break away.

**TIP-** Avoid overcrowding yards

**RESOURCES:**

- **Insert the link below into your web browser to view AWI's videos on Moving Sheep Between Yards and Sheep Ringing:**

Moving sheep between yards 1:

<http://youtu.be/Bh3U88f1Vcs>

Moving sheep between yards 2:

<http://youtu.be/iimBS2Dae3g>

Sheep Ringing:

<http://youtu.be/bsTjKtg03bA>

## 2. STOCKMANSHIP

### 2.4 ACTIVITY – Drafting

- a) Discuss strategies to assist the process of drafting.
- b) Use the same pairs as above - one on the draft & one keeping sheep flowing:
  1. Plan the way you want the sheep drafted, ideally the smallest mob are drafted towards the drafter
  2. Main mob to go straight ahead
  3. Pick obvious sheep to draft (eg. tag colours, woollies from shorn sheep, lambs from ewes)
  4. Ensure sheep coming up to the draft can see drafted sheep
  5. Push sheep squeezing their tail, direct their head with a hand under their jaw and avoid grabbing wool
  6. With ewes and lambs, start with several ewes - lambs will follow
- c) Alternate pairs and repeat.

#### **Drafting tips:**

- *Do not grab wool to pull or push the sheep*
- *Keep your eye sight well ahead of the drafting gates to ensure timely drafting decisions are made*
- *Use soft/cupped hands on the drafting gates - if the sheep jump you are less likely to damage hands*
- *Use inside knee to push sheep back in draft that are heading in the wrong direction*
- *Keep your body movements slow and smooth, avoid sudden or loud movements*
- *Start with 2-way drafting before progressing to 3-way*
- **BE PATIENT!**

#### **RESOURCES:**

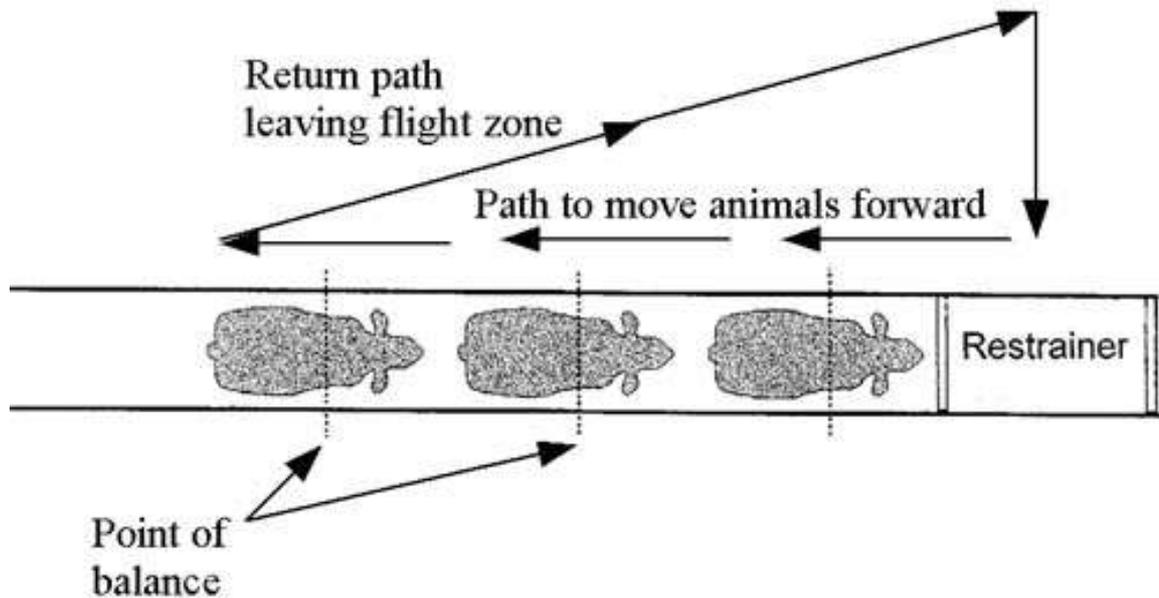
- **Insert the link below into your web browser to view AWI's video on Drafting Sheep:**

Drafting Sheep:  
<http://youtu.be/f1C8OYPXU8Y>

## 2. STOCKMANSHIP

### 2.5 ACTIVITY – Filling the working race

- Discuss strategies to assist the process of filling the working race. Including the following diagram:
- To load a race, moving back down race tends to push adult sheep forward. To move forward take a wider arc, in doing so you leave the sheeps flight zone and don't turn the sheep back in the race.



(Source: Adapted from [www.fao.org](http://www.fao.org))

- The 'filling the race' exercise is to be conducted individually. Rest of the group to watch on, but ensure they are not in the way.
  - Start the same as the drafting. Once sheep have started to walk or trot 2/3 of the way to the lead, walk up with pressure directed away from your sheep.



2. Quickly turn and come in extending inside arm over the rump of your sheep.



3. Eye contact is also over the top of your sheep focussing on the rump.
4. This should cause the sheep to duck under and surge forward. You may have to start the lead by squeezing the tail of the sheep.



5. If too slow, or you go too far towards the front of the race, you will cause your sheep to turn back.
  6. Watch eyes and ears to anticipate response.
- d) Discuss overcrowding and dangers of sheep being left unobserved particularly lambs and weaners.

**RESOURCES:**

- **Insert the link below into your web browser to view AWI's video on Filling the Race:**

Filling the Race:  
<http://youtu.be/AhS2U24XaF8>

## 2. STOCKMANSHIP

### 2.6 ACTIVITY – Counting sheep

- a) Discuss where sheep like running & how body position can help with counting sheep. Note – Presenter should position participants whereby they can have a clear view of the sheep.
  
- b) Use sheep from previous activities. To be conducted as a group exercise:
  1. Pick a small gate, with secure fences either side (that sheep flow through well) and that opens in the same direction of the sheep flow.
  2. Presenter to control sheep flow.
  3. Keep a hand on the gate and move your body to impact on the flow of the sheep – move towards the sheep to slow the flow and move away from the sheep to increase the flow.
  4. Start counting in 2s, more experienced counters often progress to 3s, 5s or 7s. Record the count.
  5. Use a tally counter or stones for the hundreds, if others are in ear shot they can count the hundreds.

#### Counting sheep tips:

- *Use a finishing post to count.*
- *Position your body so sheep are running past your shoulder, they will flow with less resistance.*
- *Try to pick a yard the sheep like running to, generally from an inner yard to an outer yard.*
- *Keep the stock looking at the sheep moving through the gate.*
- *Practice whenever you get a chance!*

#### RESOURCES:

- **Insert the link below into your web browser to view AWI's video on Counting Sheep:**

Counting Sheep:

<http://youtu.be/xC6vGOKR-I4>

## 2. STOCKMANSHIP

### 2.7 ACTIVITY – Restraining, catching and tipping sheep

- a) Discuss the importance of not isolating the sheep to be caught. A small yard with a portion of mob will avoid injury to single animals panicking.
  
- b) Sheep from previous exercise to be used. Presenter to demonstrate this first, then each individual to practice:
  1. Place your hand under the jaw.
  2. Place your leading leg behind the shoulder.
  3. Place other hand above the tail on the opposite side.
  4. Push the head away from you and rotate the sheep onto its backside rotating it around your leading leg.
  5. This gives the most leverage and control over the animal.
  6. For larger animals your trailing hand may need to reach over and grab the flank skin just in front of its thigh.
  7. To release, gently roll sheep back onto its feet.

#### RESOURCES:

- **Insert the link below into your web browser to view AWI's Video on Tipping Sheep:**

Tipping Sheep:

<http://youtu.be/AfkjNx5Gyuc>

## 2. STOCKMANSHIP

### 2.8 ACTIVITY – Working dogs

- a) Presenter to discuss the key principles of introducing and using working dogs.
- b) Working dog demonstration by presenter on:
- Obedience/commands
  - Understanding the dog's natural working behaviour
  - Dog training
  - Moving sheep between yards
  - Yard Skills
  - Paddock skills
- c) If presenter or participants have a range of dog ages and experience, the following activities could include:
1. Early obedience – (4-6 months onwards)
    - i. Teaching to sit
    - ii. Teaching to come (use of lead rope)
    - iii. Teaching to stay behind handler
  2. Exposure to sheep – (6 months onwards, all dogs are variable)
    - i. Exposure of puppy to sheep (placing yourself between pup and sheep)
    - ii. Balancing of sheep in small yard (starting to use your eye and body to direct)
    - iii. Bringing a stop and cast into the equation
    - iv. Progress hopefully (dogs vary greatly to the work they are suited for)
  3. Older dogs: Progression from above.
    - i. Casting & applying pressure
    - ii. Force areas, sheds, loading ramps, working races & the draft
    - iii. Problem solving bad habits
- d) Training and Obedience:
1. Start with a small yard and a lead rope on your pup/young dog.
  2. Use only a small number of sheep (quieter, older sheep are preferable as a training mob), your dog will hopefully go to a lead (12 o'clock position).
  3. Try not to let your pup be overwhelmed by big numbers, or be trod on in high traffic/pressure areas.
  4. Let your dog become used to the sheep. At first there will be any number of reactions from excitement, barking, chasing, to sitting and quiet observation.

5. Once initial reaction is over, try to position yourself in a “ringmaster” or “traffic controller” role and observe your pup. This observation will determine how you proceed with your young dog’s handling.

**RESOURCES:**

- Further reading:
  - <http://www.awbcr.com/History/index.htm>
  - [www.wkc.org.au/About -Kelpies/Origin-of-the-Kelpie.php](http://www.wkc.org.au/About-Kelpies/Origin-of-the-Kelpie.php)

### 3. MERINO VISUAL CLASSING

#### Getting started:

- The animals should have easy to pick variation and some cull traits
- Sheep should have at least six months of wool and be the same age
- Preference is for:
  - rams to provide a link to commercial activity;
  - unclassified yearling or hoggets;
  - aged rams can show more variation; and
  - ewes are good for repetition.
- Big and small pegs in 8 colours
- *Note – the style in which the activities are presented will depend on the existing level of skills and knowledge of the presenter/facilitator*

### 3. MERINO VISUAL CLASSING

#### 3.1 ACTIVITY – Conformation & constitution traits (top 2 and bottom 2)

a) Presenter to provide overview of visual classing activities

*Note - Ensure activities are kept reasonably simple to evoke confidence.*

b) Traits to be assessed (these can be varied depending on the experience and confidence of the participants):

1. Size, body depth, length, top line, shoulder and structure
2. Jaw, muzzle, eyes, pigmentation and poll
3. Hocks, feet, pasterns
4. Testicles, udders
5. Overall conformation

c) Each individual to follow the suggested steps below:

1. Assess the whole race of sheep provided and gain an overall appraisal of sheep.
2. Pick a peg colour for your classing - for these exercises the 'tops' will be pegged on the shoulder and the 'bottoms' on the rump.
3. Identify top 2 and bottom 2 sheep for body traits including size, body depth, length, topline, shoulder and structure. Discuss
4. Identify top 2 and bottom 2 sheep for head traits including jaw, muzzle, eyes, pigmentation and poll. Discuss
5. Identify top 2 and bottom 2 sheep for leg traits including hocks, feet (front & rear), pasterns. Discuss

6. Check testicles on rams and udders on older ewes.
  7. Complete an overall assessment combining all above traits. Peg top 2 and bottom 2.
- d) Explanation and discussion of placings - verbal presentation by each individual if confident enough (reason and logic more important than placing).

### 3. MERINO VISUAL CLASSING

#### 3.2 ACTIVITY – Wool traits (top 2 and bottom 2)

- a) Presenter to provide overview of the wool component of visual classing activities.  
*Note - Ensure activities are kept reasonably simple to evoke confidence.*
- b) Traits to be assessed (these can be varied depending on the experience and confidence of the participants):
1. Staple length
  2. Wool coverage
  3. Wool/fibre density
  4. Colour, handle or softness, crimp frequency
  5. Explanation and discussion of placings
- c) Use same sheep as in activity 3.1. Each individual to follow the suggested steps below:
1. Step back and gain an overall appraisal of the race and mob of sheep. Then spend some time opening up the wool on the race full of sheep. This is to gain an understanding of the type of sheep, the strengths as well as the weaknesses of the flock.
  2. Identify top 2 and bottom 2 sheep for staple length (longest and shortest staple). Discuss dust penetration.
  3. Identify top 2 and bottom 2 sheep for wool coverage (pick sheep with the most and least wool cover). Discuss wool cuts and trade-offs that may occur including fleece weight, fertility, grass seeds etc.
  4. Identify top 2 and bottom 2 sheep for wool/fibre density (pick sheep with high/low density). Discuss
  5. Identify top 2 and bottom 2 sheep for colour, handle (or softness) and crimp frequency. Discuss feel of wool, fibre alignment and primary fibres.
  6. Complete an overall assessment combining all above traits. Peg top 2 and bottom 2.
- d) Explanation and discussion of placings - verbal presentation by each individual if confident enough (reason and logic more important than placing).

### 3. MERINO VISUAL CLASSING

#### 3.3 ACTIVITY – Selection on combined traits

- a) Use the same sheep as in activity 3.1 and 3.2 above. Each individual to follow the suggested steps below:
1. Stand back and watch all the sheep enter the race, take a quick visual appraisal of each sheep (if possible use a classing box to make the process easier).
  2. Identify (rattle or spray) obvious culls e.g. short bodied, narrow bodied, poor shoulders, small, over-developed – obvious culls not to be looked at again.
  3. Start at the front of the race, working back.
  4. Start with the mouth and face, look at front legs and feet, then the body, finishing looking at the hindquarters, hocks and twist.
  5. Check wool quality and quantity.
  6. Try to make it quick, your first impressions are generally right.
  7. Check the sheep running through the draft for hocks, anything missed, or walk them between you and a partner check feet and legs.
  8. Very important to keep count to ensure numbers are in line with percentage available to be taken out. This is usually done after the first few races.
- b) Identify the top 5 using pegs.
- c) Identify the bottom 5 using pegs.
- d) Complete an overall appraisal – short written and verbal description of placings.
- e) Draft sheep off, if possible.

## FURTHER INFORMATION

### Stockmanship

Available courses:

- Stock handling courses  
<http://www.lss.net.au/training.htm>  
<http://www.stressfreestockmanship.com.au/>
- Stock handling and dog training  
<http://www.waddell.com.au/stockhelp/>
- StockSafe  
<http://www.profarm.com.au/>
- Videos:  
 Wool From New Heights  
<https://www.youtube.com/watch?v=gV6ozSLyrOk>  
 Learning NSWDEC clips on observation, mustering, flight zone, etc.  
<https://www.youtube.com/watch?v=9zNKbfaCxbU>
- Making More From Sheep – Module 11, Healthy & Contented Sheep  
[http://www.makingmorefromsheep.com.au/healthy-contented-sheep/procedure\\_11.5.htm](http://www.makingmorefromsheep.com.au/healthy-contented-sheep/procedure_11.5.htm)
- A Producers Guide to Sheep Husbandry Practices  
<http://www.mla.com.au/News-and-resources/Publications>
- Best Practice Cattle & Sheep Handling Learning Resource  
[http://www.australiananimalwelfare.com.au/app/webroot/files/upload/filesLivestock\\_Handling\\_Training\\_Facilitators\\_Guide\\_final\\_version\\_24\\_8\\_12.pdf](http://www.australiananimalwelfare.com.au/app/webroot/files/upload/filesLivestock_Handling_Training_Facilitators_Guide_final_version_24_8_12.pdf)
- Animal behavior – Sheep Chapter  
<http://www.animalbehaviour.net/JudithKBlackshaw/Chapter3b.htm>
- Temple Grandin – Livestock Behaviour  
<http://www.grandin.com>

### Further reading:

- Dogs  
<http://www.awbcr.com/History/index.html>  
[www.wkc.org.au/About-Kelpies/Origin-of-the-Kelpie.php](http://www.wkc.org.au/About-Kelpies/Origin-of-the-Kelpie.php)
- Staff management  
 Under the Chloroform Tree; R Jameson  
 Making More from Sheep Module 4 – Capable & Confident Producers

<http://www.makingmorefromsheep.com.au/capable-confident-producers/index.htm>

### **Visual Classing**

- *Visual Classing Merino Sheep* - AWI Booklet, AWI website
- *Visual Sheep Scores Version 2, 2013*, AWI & MLA, AWI website
- *Merinos to Market* – AWI website

### **Breeding Values**

- Sheep Genetics  
[www.sheepgenetics.org.au](http://www.sheepgenetics.org.au)
- Merino Sire Evaluation  
[www.merinosuperiorsires.com.au](http://www.merinosuperiorsires.com.au)
- *ASBVs A guide for ram buyers*, Sheep CRC June 2013
- *A Pocket guide to ASBVs* – Sheep Genetics
- *Breed Well Fed Well Workshops* – MLA website
- *Sheep Select Workshops* – CRC website

### **Other:**

#### **Stud Merino Breeders Websites:**

- **Australian Association of Stud Merino Breeders**  
[www.merinos.com.au](http://www.merinos.com.au)
- **State Merino Breeder websites**

#### **Merino Bloodline Performance**

[www.dpi.nsw.gov.au/agriculture/merino-bloodline-performance](http://www.dpi.nsw.gov.au/agriculture/merino-bloodline-performance)

- **State DPI factsheets/Agfacts**

## Career Paths

- Wool industry involvement and careers  
<http://www.wool.com/en/education-and-extension/education-and-leadership-opportunities>  
National Merino Challenge: <http://www.awinmc.com.au>

## GLOSSARY

**Australian Sheep Breeding Value (ASBV)** - An ASBV is an estimate of the genetic potential a sheep will pass onto its progeny. ASBVs are available for a range of economically important traits and are designed to be used in conjunction with visual selection.

**Breeding objective** - A breeding objective is a long term statement that sets the target at which the breeder is aiming their breeding program to further improve returns. It provides a description to guide your choice of a source of genetics and for selecting rams and replacement ewes.

**Flight zone** - An imaginary space that surrounds an animal, i.e., like a person's personal space. When the flight zone is encroached by the handler, it elicits either a flight or fight response from the animal. The animal runs or attacks. Every animal's flight zone is slightly different and will vary depending on how calm it is.

**Genotype** - the information within a gene, or the genetic makeup of a specific organism.

**Management groups** - sheep that are run together under the same environmental conditions are called a management group.

**Merino visual classing** - visually assessing and scoring sheep for various conformation and wool attributes.

**Phenotype** - is what you see. Phenotype (the overall appearance and actual performance of an animal) results from the interaction of its genes and its lifetime environment. Phenotype = Genotype x Environment ( $P = G \times E$ ).

**Stockmanship** - knowledgeable and skilful ability to handle and manage healthy, contented and productive stock.

## Appendix 1 – SAFE OPERATING PROCEDURES (SOPS) FOR SHEEP

**Safe Operating Procedures (SOPs):** A description providing information on an activity covering, Safety, Preparation, Animal welfare, Procedures, Handling, and Skills required.

### 1. Preparation:

- **Suitable clothing** is required, long pants or jeans, long sleeved shirt, boots, hat and sunscreen.
- **Instructions are clear** in regard to animal health products. Equipment is working and PPE is available for example drench guns, backlining equipment, chemical gloves etc.
- **Inspection of yards and facilities** to make sure all aspects are working if not repair or make alternative arrangement. For example broken gates, loose rails, weldmesh protruding.
- **Observation of sheep to be handled:** work as quietly and as calmly as possible, if flighty give more room, don't over fill yards.

### 2. When handling:

- Avoid isolating individual animals and placing yourself between it and the rest of the mob (accidental charging, knee, leg hip impact).
- Avoid bending over in front of draft to clear blockages, use inside knee and assistance (head impact by animal jumping).
- Avoid hands in front of draft gates and race rails for crush injuries from animals jumping or banging against race sides (rams especially).
- Request assistance when lifting individual sheep, bend knees with each person holding 2 legs. Make use of lifting equipment (e.g. ute hoists if available).
- Be especially careful when handling rams, stand in brace position that can absorb resistant pressure rather than injure.
- Keep dogs under surveillance as they can often cause unneeded stress.