RURAL INDUSTRY GUIDANCE NOTE:

AVOIDING BACKWARDS DRAG IN SHEARING

Over the past 30 years, the size of sheep in Australia has increased by 30 to 40 per cent and the amount of wool clipped from each sheep has almost doubled. (to be verified with farmer & contractor assoc's) The average shearer is an industrial athlete – often dragging and shearing a 60-kilogram plus sheep every three minutes 110 – 200 times a day during shearing.

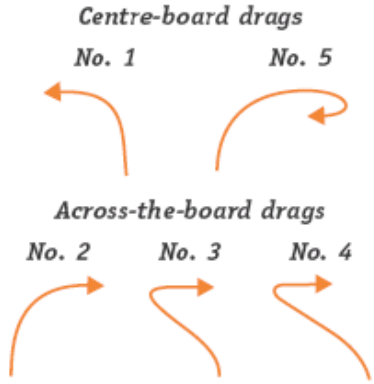
There is evidence that it is becoming more difficult to attract new workers to the shearing occupation and to retain experienced shearers. It is therefore critical for the long term security of the wool growing industry, that all possible is done to ensure that sheds in which shearers work, are both efficient and safe. Backwards drag has been identified as an activity which increases the risk of serious injury in shearers but that can be overcome with cooperation between wool growers, shearing contractors, shearers and shed builders.

A recent AWI report identified that 'based on injuries per hours worked, shearing is 4.4 times more dangerous than the average of agricultural industries and 7.2 times more dangerous than all Australian industries'. Animal handling injuries account for about half of shearer injuries and 50 - 70% of workers compensation costs. Catch tip and drag injuries are at least 13% of shearer injuries and at least 26% of the cost. Back injuries specifically account for a significant portion of these injuries and result in 45% of the cost.

What is Backwards Drag

Backwards drags is a drag path that can result from poor shearing shed design or layout, that requires the shearer to turn up to 270 degrees whilst dragging the sheep from the catch pen doorway to the shearing stand start position. Backwards drag can occur with both left handers shearing on some right hand stands and right handers shearing in backwards drags stands.

What needs to be avoided is a greater than 90degree turn in the drag path and the avoidance of 90 degree turns over less than 1.5 meters.



This diagram demonstrates a few common drag paths (for right handed shearers, turns need to go in the opposite direction for left handed shearers).
No. 1 and No. 2 represent good drag practice, being limited to 90 degree turn and utilizing a turn radius of more than 1.5 meters.
No. 3, 4 and 5 represent poor practice with shearers being subject to more than a 90 degree turn and tight turn angles.

What harm can backwards drag cause?

During normal shearing practice, a shearers back can be subject to a range of forces. With good shed design, sheep management, shearing management, training, fatigue management, technique, and warm up, fatigue management and, the risks associated with shearing can be reduced.

Backwards drag however, places a additional loads on the shearers back particularly spinal rotation with spinal torque. This results in a multiplication effect when combined with the usual sheep shearing forces including sustained flexion, spinal rotation, live unpredictable loads, repetition, long duration, fatigue, dehydration and increasing sheep weight.

The combination of twisting and twisting torque (a twisting force) is a key risk factor for back injury in shearing. Backwards drags raises these risk factors overall, to an unacceptable level.

What action would WorkCover take if a complaint was received about shearers working in backwards drag conditions?

Where WorkCover is responding to a complaint or looking into an insurer notification of injury, various courses of action are available to the Inspector. If shearing is not underway but the shed design is such that the inspector forms the opinion that shearers would during shearing be working in backwards drag on some stands, the inspector may issue an improvement notice. This type of notice would require the employer to make modifications to work practices relating to identified stands to control the backwards drag hazard. The inspector would negotiate with the employer a reasonable time in which the changes would need to be made.

If WorkCover was to visit a shed in which shearing was under way and shearers were performing backwards drag, the inspector may issue a prohibition notice. This type of notice would require shearing to cease immediately on effected stands until such time as changes to work practices or the shed are made to control the backwards drag hazard. Shearing on stands not effected by backwards drag could continue.

What can be done for sheds that have backwards drag path problems?

In order to best address the issues of backwards drag it is important that wool growers, contractors, shearers and shearing shed builders work cooperatively.

It is acknowledged that some solutions, particularly short term solutions are based on achieving a balance between shearer safety and shed efficiency. Following is a list of solutions that you might wish to consider and/or discuss with your contractor or shearers. It is important to note that work practice based

solutions should be regarded as interim or additional measures to combine with physical shed modifications and should not be seen as suitable on an ongoing basis. It is reasonable to expect that prior to the next shearing that required modifications have been made to the shed to eliminate backwards drag paths or significantly improve the drag path.

Solutions

The simplest and safest solution to apply is to not use stands that create backwards drag paths until such time as modifications have been made to the shed to eliminate the problem. Where your shed design is such that it is not readily possible to do this for the upcoming shearing, the following work practices should be considered and applied if possible.

- Whilst it is common for stands to be drawn by shearers, shearers should also be using stands appropriate to being a left or right hander
- Changing shearing plant mounts can aid in reducing the tightness of turns in the drag path thus lessening loads on the shearers back during drag.
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- Extra emptying of sheep is a simple work practice that can significantly reduce drag loads on shearers. This is particularly useful for larger sheep. This should be usual practice regardless of the existence of backwards drag paths
- Incorporate additional Rest breaks (suggested every 15 mins) while shearing heavier sheep. Working in backward drag stands is more strenuous that conventional drag. Injuries tend to occur more often when workers are fatigued.

Shed designers need clearer and uniform direction.
Heavy sheep and greater than 90 degree turns or 90 degrees over less than 1.5 meters should be avoided as an immediate step

Shed Modifications.

Whilst all sheds are different, there are a number of modifications that can be considered to eliminate backwards drag. Some require minor modifications, whilst others are best considered as part of a larger shed upgrade or in specifications for new sheds. These include:

- Modification of catch pen layout to avoid shared catch pens and improve in pen drag paths

- Ensuring that the stand relationships (positioning of key components relative to each other) provide the best working set-up. This can include ensuring catch pen doors, electric plant and down tubes and let-go chutes are positioned correctly in relation to each other.

- Curved board and saw tooth board layouts can significantly improve on board drag paths.

Who is responsible for avoiding shearers working in backwards drag situations?

Responsibility for avoiding injury to shearers due to backwards drag is shared by shearing contractors, wool growers, shearers and shearing shed builders. Increased workers compensation costs borne by contractors due to their shearers sustaining injuries is ultimately passed on to the woolgrower through higher quoted shear prices. All parties should work cooperatively to promote shearing shed safety. The following provides guidance in the practical roles that each might play.

Shearing Contractors

Contractors should discuss with the woolgrower prior to the commencement of shearing what options exist to avoid backwards drag paths. In some cases it may be possible to negotiate using a backwards drag stand for the current shearing as an interim measure, provided that it is possible to implement modified work practices in consultation with the shearers and woolgrower to minimize risk levels. Interim (work practice) measures are not acceptable on an ongoing basis.

It is reasonable to expect that prior to the next shearing, that required modifications have been made to the shed to eliminate backwards drag paths.

It may be useful at the end of shearing to discuss with the woolgrower and/or shearers what improvements can be made to the shed to improve both efficiency and safety prior to next shearing. It would be useful if this were documented.

Wool Growers

At time of engaging your shearing contractor or shearers, you should discuss with them the practices they will put in place to avoid having shearers subject to backwards drag. If it is agreed as an interim measure to use modified work practices to lessen the risk of backwards drag you should discuss with the contractor what these will be.

Whilst it acceptable for interim measures to be used temporarily, woolgrowers should work toward implementing longer-term solutions prior to the next shearing.

Woolgrowers should avoid hiring contractors that intend having shearers working in backwards drag path stands. Any potential liabilities for the wool grower as the owner of shed, are significantly increased by contractors having shearers working in backwards drag situations. It is in the wool growers best interest to evaluate shearing quotes having considered shearing price, quality and safety. Once again the use of interim measures in modified work practices may be suitable for the current shearing.

If you are in the process of either upgrading your existing shed or building a new shed you should talk to your builder about designs that eliminate backward drag paths and best manage in pen and on board drag paths. This will result in both an efficient and safer shed. A wide range of information is available from a range of sources.

Shearers

Shearers should cooperate with their employer or client in avoiding situations where backwards drag is being used. In sheds where agreed short term, interim solutions are in place some flexibility in work practice may be required to minimize injury risk.

Shearing shed builders and designers

Builders and designers should ensure that sheds are not built that have inherent backwards drag problems. Characteristics that should be considered include incorporation of multiple shearing plant positioning options, the avoidance of shared catch pens and ergonomic design of catching pen, shearing stand and let go dimensions and layout.

MORE INFORMATION AND ASSISTANCE:

Further information or guidance can be obtained by contacting your association or through any of the following.

Rural Safety Hotline: 1800 300377

WorkCover web site: www.workcover.nsw.gov.au

The Department of Primary Industries has numerous Ag Fact sheets that provide detailed guidance on various shed design and related issues

WorkCovers 'Health and Safety at Work – SHEARING' (Catalogue No.692) provides extensive practical information on all aspects of shearing.