1-1-1965

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A L. Jones

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Sharpening and care of . . .

MULESING SHEARS

By A. L. JONES, Dip. Agric. (Massey, N.Z.),
Instructor, Sheep and Wool Branch

New modified shears make mulesing easier —but they must be properly sharpened.

THIS year will probably see more sheep mulesed in Western Australia than ever before. It is not surprising, therefore, that some improvements have been made to the standard mulesing shears.

In the past, farmers have had no alternative but to use a pair of dagging shears to perform the operation. While many were able to do a satisfactory job with these, most agree that the modifications described later, make the shears easier to handle.

As farmers do this operation on only one or two days each year, it takes some time to “get their hand in” and become proficient. The confidence that comes from handling a pair of sharp, well-designed shears, enables the operator to make his cuts quickly and cleanly, right from the very first sheep.

One of the greatest faults in mulesing is failing to take off enough skin. Sharp shears, opened out to their full extent, enable the operator to make the cuts exactly how and where he wants them.

Many learners find that their slow awkward cuts tend to bleed profusely and they envy the accomplished muleser who can often (especially with sheep in fat or forward condition) perform an operation where the blood will only appear as globules on the fat’s surface. This proficiency comes with practice—provided the technique is basically sound.

The problem of sharpening shears is a regular subject for discussion at mulesing demonstrations. Some farmers have actually given up mulesing because of their inability to keep the shears sharp. The length of wool, and the amount of dust or grit present, controls the number of sheep that can be done before the cutting edges need touching up.

Two weeks’ wool growth is the most that can be handled effectively, as there is
The modified shears (top) are offset to facilitate keeping the blades flat on the skin. Also note that the bow spring has been ground down to weaken the spring.

The blades on the modified shears (top) do not close completely together when shut. Points are ground back for safety, and the shoulder has been ground back from the cutting edge to facilitate sharpening.

also much less dust and grit where sheep are done off shears immediately.

The number of sheep that can be done before resharpening will vary from a dozen or so with longer-wooled wheatbelt sheep (two weeks off shears) to 60 or more in soft-skinned, freshly-shorn sheep run under dust-free conditions.

Now that shears modified for mulesing are available from stock firms, a few points on their preparation and sharpening may assist farmers in becoming more proficient.

The ordinary five-inch dagging shears have been modified as follows:

- The handle of the blades has been offset about 7 degrees, and this enables the operator to keep his knuckles flat on the sheep without the heel of the blades riding out from the skin.

- The tips of the blades have been rounded off, reducing any risk of injury to the catcher should the sheep struggle.

- The bow spring has been weakened, thus reducing the effort required to close the blades. This is an important point when several hundred sheep are turned out each day.

- The shoulder has been ground back from the cutting edge, enabling the shears to be touched up many times without a major grind.

- Each blade has been held in a vice and straightened where the blade and shaft join. This places the tips of the blades about an inch apart when the shears are closed. The advantage from this adaptation is that the operator is able to run a wider cut with virtual elimination of ragged edges.

As the shears are being closed it is easier to run a cut of diminishing width until it runs out to a sharp point about where the hamstring starts. Also, as less
if a slight "rough" edge will be most effective. A medium to fine aluminium oxide sharpening stone soaked in a mixture of kerosene and oil (equal quantities) has been found suitable.

Sometimes the setting of the blade edges, in relation to each other, is disturbed when the shears were offset. This may make the blades "bite together" so hard that it will be necessary to reduce the angle of the sharpened edges to prevent gapping.

By "gapping" I mean that a notch is cut into the steel of one blade by the other and when the shears are closed together they will only shut as far as the gap.

If the blades are not sprung open far enough, the top side of the sharpening stone will hit the cutting edge of the top blade movement is required, work is easier for the operator.

Unless the shears are opened to their maximum width when commencing the initial V cut, it often happens that the skin is only nicked. Learners often miss the skin completely! It is this critical V cut which the operator picks up with his left hand before making the main cuts.

The correct method of holding the shears is to place the shear handles in the palm of the right hand (even left handers can soon become proficient with their right hand) with the thumb on the top side of the blade near the brand and the tips of the fingers curled around the other handle. This hold enables pressure to be applied to the blades and the edges kept from being forced apart when running a cut.

Sharpening

Unlike shearing blades, which require a fine sharp edge, mulesing shears are used for cutting skin, and if the edges are too fine the blades will gap.

As a combined shearing and sliding action is used to remove the skin section,
blade. This could chip pieces out of the stone as well as severely blunting the shears. To avoid this, some men start sharpening about an inch along from the heel of the blade. In time this wears a scallop in the cutting edge of the blade. This increases the biting together action of the blades and there is more risk of them gapping.

Sharpen along the whole length of the blade at a 45°-50° angle until a slight “burr” is turned over.

This “burr” or “feather edge” can be felt by rubbing the thumb across the sharpened edge (not along it). It feels rough and flimsy to the touch and is not the true cutting edge.

If a “burr” is not raised after a period of sharpening, it means that the angle of the stone is too acute and the stone is only rubbing on the shoulder and not the cutting edge of the blade.

It is most important that the same sharpening angle is maintained at all times.

Shears must never be closed while the “burr” is still raised or the cutting edge will gap.

A light rub along the back of the blade, keeping the stone absolutely flat will remove this “burr.” An alternative method is to close the shears, while at the same time keeping the blades apart, and “backing them off” by pressing the blades together while they spring apart.

Often it will be found that, after sharpening, the blade edges do not meet, or the blades spring too far apart. This can be rectified by firmly grasping each blade by the back, and bending the blade in the direction required to rectify the fault. It is necessary to force the blade further than actually required, as the bow spring will absorb most of the movement. If the heels of each blade spring apart when the shears are opened, there is a risk of serious injury to the operator’s right thumb next time the shears are closed.

With the clamp and sharpening guide illustrated, the sharpening procedure is as follows:

Attach the clamp to the side of a truck or fence rail with a G clamp at a convenient height—just above waist height suits me.

Stretch the shears apart, and wedge open with a stick about 4½ inches long. The ends of the stick fit in the channels of the handle where the blades join the shafts and, in this position, will not slip. The reinforced back of the shear blade slides into the sawn slot of the clamp and is kept firmly in place by tightening a wing nut further down the clamp.

The sharp edge of the shears should be parallel to the guide of the sharpening clamp. On the clamp illustrated, top centre of the “outrigger guide” is 3 inches from the centre of the clamp and 4½ inches from the cutting edge of the blade. This gives approximately a 45° degree sharpening angle.

Even if shears vary slightly in size—thus altering the cutting angle slightly—the important point to remember is that the angle is the same for each blade each time.

By keeping the sharpening stone (a fine aluminium oxide) in a mixture of equal parts of oil and kerosene the stone won’t clog as when using oil, nor will it cut so harshly as when using kerosene.

The stone rests lightly on the clamp guide near one end and the blade edge at the top and with a firm circular action the edge is sharpened. Should the stone dry off, dip it back in the cutting fluid so that the stone continues to cut at its maximum capacity.

Sharpen evenly along the whole length of the blade until a feather edge is turned over from the heel end to the tip.

This blade is taken out of the clamp and the same sequence followed with the other blade.

The feather edges can be removed by lightly rubbing the stone along the back of the blades making sure that it is held absolutely flat. If the stone is tilted with this action, and a “knife edge type” cutting edge is given to the shears, they will not cut properly. Good tools are essential to good workmanship.

**REQUIREMENTS**

- At least two pairs of shears for each operator.
- A light to medium aluminium oxide oil stone.
- A double-sided silicon carbide oil stone (for shears that have been gapped).
- Container to hold oil and kerosene mixture, and sharpening stone. (A gallon tin with one side removed is a handy size).
- A piece of wood 4½ in. long to hold blades apart. This length gives sufficient room to use the sharpening stone but does not overstretch the bow spring.
- Clamp for holding shears when sharpening.
- Non-irritant antiseptic in container—for shears when not in use for cleaning shears between sheep.
- Holding crush for grown sheep.
- Cradle for lambs if mulesing at lamb marking.

Reference

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