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Crutching cradles can work well

By N. M. Marney and R. A. Mills, Sheep and Wool Branch

Crutching cradles allow successful do-it-yourself crutching if a continuous flow of sheep can be maintained. This article describes some units available and discusses costs.

During the early 1970's, falling returns and increasing costs prompted farmers to think about doing more of the sheep work themselves. One result was the development of the “crutching cradle”, now more aptly called a sheep handling unit.

Crutching cradles allow some farmers to save costs by doing their own crutching. The greatest benefit is that crutching can be done at the most favourable time of year and can be combined with other operations.

For best results a continuous flow of sheep to the operator is needed. This is not achieved with present lead-up races however a 180 degree turn leading sheep into the cradle has given acceptable results.

Sheep handling units available commercially in W.A. are generally similar, consisting of a lead-up race, an elevated catching pen and decoy pen, and a work cradle. They can be used for a variety of operations including crutching, wigging and ringing, tooth clipping, foot paring, vaccinating, drenching and inspections related to culling.

Some can also be used for mulesing.

In some units, the catching pen is a pivoted cage which is tipped sideways by the operator. Other units require the operator to grasp the sheep and tip it sideways over a belly-high rail, but both types of unit deposit the sheep upside down in the work cradle. In each case the action must be quick and decisive, and practice is needed to land sheep in the desired position consistently.

For crutching, extra cradles can increase efficiency of sheep movement. This requires extra operators and a sheep pusher to keep things moving, but experienced operators can crutch up to 100 per hour. If units are combined in series, a short section of race is necessary between catching pens to provide work space between cradles and to help the flow of sheep.

If the unit is used for several purposes simultaneously, then one man can handle 300 to 500 sheep per day.

All sheep to be crutched in a sheep handling unit should be mulesed and tailstripped.

Advantages

The greatest benefit is obtained by crutching at the most strategic time and combining crutching with other operations. Crutching should be timed as late as possible but before the likely fly wave period and before sheep become excessively dirty.

Many farmers find that “do it yourself” crutching at this time enables a smaller “bull’s eye” crutching to be used—basically a shortening of the blows out the legs. “Bull’s eye” crutching reduces the amount of wool sold as crutchings and increases the amount of fleece. The increased income from this wool, combined with reduced costs, can be up to 30 cents per sheep.

Efficiency can also be improved by combining other operations with crutching, thus reducing sheep handling.

Some units available

David Payne Crutching Cradle

The David Payne crutching cradle consists of a self-filling race, an open-sided cage in front of which is a decoy sheep pen, and an operating cradle. Hopkins valves prevent sheep from reversing and encourage forward movement by restricting the field of view for each sheep to the legs and rump of the sheep in front.

The open side of the catching cage is filled with a hinged metal flap on a chain, and a canvas flap. The sheep is grasped over its shoulder and rump and tipped onto the metal flap and then into the cradle and immobilised. The cradle...
is tipped sideways to land the sheep on its feet after the crutching operation.

Sheepmaster Sheep Handler
The Sheepmaster Sheep Handler is also known as Husky, Jetstream, or Allbulk self-filling race, tipping cage and cradle.

The race has wing gates one sheep length apart, which are closed by the weight of the sheep on the floor of the race. They open when sheep move off each floor section. The cage is horizontally pivoted and allows the sheep to be tipped sideways onto its back into an operating cradle. This allows crutching, wiggling, ringing and foot paring. The cradle is released by a lever allowing the sheep to fall feet first onto the ground and a spring mechanism returns the cradle to its holding position.

"Harrington VE Sheep Machine"
Designed by Harrington Bros. of Darkan, the Harrington VE Sheep Machine consists of two conveyor belts set in a "V" shape and about 5 metres long. It is powered by hydraulic motors driven by an ancillary petrol motor. The speed of the belts is variable in either direction and is controlled by a foot pedal.

There is no floor in the system, and sheep are suspended between the two belts. The sheep is quite easily positioned for crutching or mulesing by tipping it on its back as it passes the operator.

Hock bars can be placed at the end of the unit for mulesing, and operations such as drenching, and inoculating can also be done at the same time.

Lawloit Park Sheep Handler
The Lawloit Park Sheep Handler is designed by G. Mosely of Williams, and is similar to the Sheepmaster/Allbulk crutching cradle.

The sheep enter up a self-feeding race with floor-actuated non-return fingers and move into a loading cradle. The side of the loading cradle is used to squeeze the sheep and then the cradle is tipped towards the operator and the sheep slides into the crutching cradle. After handling, the sheep is dropped onto its feet and the spring-loaded cradle returns to the loading position.

Lubcke Crutcher
The Lubcke Crutcher consists of a race fitted with hock bars, a catching pen and an optional decoy cage.

A side flap or vertical guillotine slide operated by a foot lever allows access to the sheep. With the hands over the shoulder and rump, a short pull places the sheep over a sloping table and against a restraining bar to allow it to be wiggled, crutched or ringed. The sheep is released by flipping it over onto its feet.

MacLodge Mansaver, Sheep Handler and Race
The MacLodge unit comprises a lead-in race, loading race, tipping cradle, work tables, decoy box and three-way draft. It is made of Marine ply on a steel framework, which is claimed to make it quicker in operation.

The unit has been designed for two-man operation. Work tables are fitted to both sides and the tipping cradle can tip to either side. The loading race is based on the "Sheepmaster" system of non-return gates.

Both working tables tilt inwards to release the sheep under the unit. This places them in a position for release through the three-way draft.

Components of the unit are available separately.

Moffat Virtue Sheep Handler
The Moffat Virtue Sheep Handler was originally developed for foot treatment, but modifications have now made it suitable for crutching, wiggling and ringing.

A sheep enters the machine, is clamped by rib clamps and then rotated to be presented to the operator upside down at a convenient height. In this position a second sheep enters the unit and is also clamped.

After operations are completed on the first sheep, it is revolved to its original position and released. This allows another sheep to enter and be clamped, while the second sheep is presented to the operator.

"Setting-up"—the key to more successful use
When setting up a sheep handling unit, it is often desirable to modify yards or the shearing shed where it is to be used. The unit will not be efficient if sheep do not move readily into it.

One very successful arrangement is to bring the sheep past the operator's back along a narrow (50 cm) race, then round a 180 degree turn into the lead-up race and catching pen (see Figure 1). This allows the operator himself to keep sheep moving with
minimum effort. Experience has indicated that the race should be long enough to hold at least 10 sheep, and should have closed sides to minimise baulking of the sheep. The outside of the curved 180 degree turn may be of open construction to attract sheep forward from the force pen.

Positions of other facilities may also be critical to sheep movement through the race. For instance, a crutching cradle and race next to and approaching a dip may cause sheep to baulk while a turn away from a dip may actually improve movement through the race.

The entire unit and approach race should be under cover for best results. Apart from operator comfort, direct sunlight creates contrasts which tend to baulk sheep. If permanent cover is provided, it can also provide storage for related equipment. The method of crutching may be varied to suit the individual.

Purchase and operating costs
Units range in price from $350 to $1,000, with the “VE Sheep Machine” around $3,200. Assuming a purchase price of $1,000 for the sheep handling unit, $200 for alterations to existing facilities and 10 per cent annual depreciation, ownership cost can be calculated as follows:

| Unit depreciation allowance (10 per cent) | $120 |
| Annual repair allowance (2½ per cent) | $30 |
| Interest on average value (12 per cent of $600) | $72 |

Using the above ownership cost, compared to over the board crutching at 20 cents a head, the break even flock is 1,110. As flock size increases, cost per head reduces; 5,000 sheep costing 4.4 cents a head.

Against this cost saving, extra time must be allowed to crutch the sheep. A further advantage however, is that other jobs can be done more easily through the cradle at the time of crutching.

Owners of flocks of less than 1,100 sheep could reduce ownership cost by syndication.

Comparison of crutching methods
Use of the “bull’s eye” crutching which is feasible with cradles reduces the quantity of short skirtings at shearing.

Assuming a normal crutching removes 300 g of which 180 g is inferior and 120 g is clean, a further 300 g becomes short skirtings at shearing. If a bull’s eye crutching removing only 180 g is used, all is inferior but at shearing only 180 g is short skirtings, while an extra 240 g is good length fleece. The wool income benefit is demonstrated in the Table.

Combining do-it-yourself cradle crutching with these 12 cents a head savings from bull’s eye crutching will increase profits by 24.6 cents a head. This is an example only and will vary according to individual circumstances.

Comparison of crutching methods (cents per head)

<table>
<thead>
<tr>
<th>Bull’s eye crutchings</th>
<th>Normal crutching</th>
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<tbody>
<tr>
<td>180 g inferior crutchings @ 66 cents per kg</td>
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</tr>
<tr>
<td>180 g short skirtings @ 163 cents per kg</td>
<td>120 g good bulk crutchings @ 131 cents per kg</td>
</tr>
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<td>240 g good length fleece @ 200 cents per kg</td>
<td>300 g short skirtings @ 163 cents per kg</td>
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