

Attitude of Farmers to Adoption of the Mules Operation*

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Summary

A mail questionnaire was sent to 982 owners of cattle tail-tags in south-west Victoria enquiring about various strategies of control of blowfly strike and internal parasites of sheep. Usable replies were obtained from 452 farmers who owned more than 200 sheep. Only 37 per cent of farmers stated that they used the Mules operation every year. This paper indicates reasons given by farmers for not using the Mules operation for control of flystrike.

The replies from those not using it indicated that 39 per cent of the wool producers and 80 per cent of the lamb producers do not appreciate the benefits of the operation. The pain caused by the treatment was stated to be a reason for not using it by 16 per cent of wool producers and 7 per cent of lamb producers. Management difficulties seemed relatively unimportant. An illogical answer to a test question indicated some emotional resistance to use of the operation, and this might be based on the pain it causes.

This information indicates that top priority in extension might best be directed to convincing farmers of the benefits of control of blowfly strike by Mules operation. The suffering caused by flystrike might also be emphasised to counteract expressed or implied emotional inhibitions.

Introduction

If farmers are not adopting a practice which is clearly useful for disease control, or some other purpose, the first step in influencing their attitude to the practice may often, if not always, be to find out what their attitudes are. Then one can consider whether these attitudes are soundly based before attempting to influence them. This first step must use some form of survey.

The Mules operation is a well known technique for prevention of flystrike in sheep. It consists of the removal of elliptical portions of skin from either side of the perineum, sometimes with additional pieces of skin being removed from the dorsal and lateral aspects of the tail and adjacent area. The operation is usually performed by the farmer or his employees, or a contractor when the lambs are a few weeks old (at marking time) or at weaning, but sheep of any age may be treated. A skilled operator can complete the operation in less than 20 seconds. The senior author has been timed at 280 per hour. No anaesthetic is used. Liveweight gains appear to be unaffected, and the wounds usually heal rapidly.

The Mules operation is by far the most effective technique available for prevention of flystrike, being almost completely effective against strikes in the perineal region. It costs only about 20c to do and only one treatment per lifetime is necessary. There are

* This report is based on a portion of a project by the Master of Veterinary Studies students of 1978 in Veterinary Epidemiology and Preventive Medicine at the Veterinary Clinical Centre, University of Melbourne, under the supervision of the senior author.

some ancillary benefits such as a reduced need for crutching or other measures to keep sheep clean for shearing, or for slaughter. The technique is described in standard texts on Australia sheep husbandry or disease control.

Despite the effectiveness of the technique a survey in 1970 (BAE 1972) indicated that less than 30 per cent of farmers used it. The sheep blowfly was estimated to cost the Australian sheep industry more than \$28m in 1970. A large portion of such costs would be avoided by use of the Mules operation and much tedious work and animal suffering would be prevented. The operation has been widely publicised and it is unlikely that more than a handful of Australian sheep farmers have not seen it, or are unaware of some of the benefits.

In conversations with extension workers and others associated with the sheep industry the impression is gained that farmers do not use the Mules operation because it is cruel. This and other impressions could be checked in the survey.

The survey conducted was an attempt to estimate the extent to which various strategies for the control and prevention of blowfly strike and nematode parasitism were used. Detailed accounts of the survey and its results will be submitted for publication elsewhere.

The survey

Usable replies to a mailed questionnaire were obtained from 452 farmers in the Western District of south-west Victoria (shires of Dundas, Glenelg, Hampden, Minhamite, Mount Rouse, Portland and Wannon), this being a response of approximately 68 per cent of sheep farmers contacted. These were a random selection, stratified by locations, of sheep farmers whose names and addresses were obtained from a listing of cattle tag numbers. They appeared to be a sufficiently representative sample when various data were compared to information available from the Government statistician. In this context it is of interest that lists of sheep farmers in Victoria are not available.

Subjects were asked to indicate which of nine reasons for not using the operation applied to them. They could indicate up to three reasons, and provision was made for 'Don't know' and 'Other (specify)' replies. The reasons listed are shown in Table 2.

Results

Preliminary analyses showed that about 56 per cent of producers whose enterprises were oriented to wool production regularly used the operation compared with 11 per cent of enterprises oriented to meat production. There was also a strong positive relationship between size of enterprise and use of Mules operation (see Table 1).

Table 1: Flock size, enterprise and use of Mules operation (Figures in parentheses are percentages)

| <i>Number of Sheep in Flock</i> | <i>Oriented to Meat Production</i> | | | <i>Oriented to Wool Production</i> | | | <i>Total</i> | | |
|-------------------------------------|--|------------------------|--------------|--|------------------------|--------------|--------------------------|------------------------|--------------|
| | <i>Regular users</i> | <i>Not Regular</i> | <i>Total</i> | <i>Regular users</i> | <i>Not Regular</i> | <i>Total</i> | <i>Regular users</i> | <i>Not Regular</i> | <i>Total</i> |
| 201-2 000 | 8 (6) | 117 | 125 | 27 (31) | 60 | 87 | 35 (12) | 177 | 212 |
| 2 001+ | 10 (22) | 35 | 45 | 102 (72) | 40 | 142 | 112 (60) | 75 | 187 |
| Total | 18 (11) | 152 | 170 | 129 (56) | 100 | 229 | 147 (37) | 252 | 399 |

Table 2: Answers to the question shown for meat- and wool-oriented enterprises

| | <i>Orientation (%)</i> | |
|--|------------------------|-------------|
| | <i>Meat</i> | <i>Wool</i> |
| If you <i>did not</i> mules, could you please indicate the reason(s) why? (more than one reason may be indicated) | | |
| Fly strike is not a problem in my flock | 29 | 32 |
| Mules operation is of no benefit in my breed of sheep | 22 | 6 |
| Mules operation is cruel | 7 | 16 |
| Mules operation does not prevent body strike | 7 | 17 |
| Mulesing is difficult to organise | 4 | 8 |
| Shortage of labour or contractors | 1 | 2 |
| Too risky because of flystrike in wounds | 2 | 2 |
| I buy replacement sheep too old to mules or already mulesed | 19 | 1 |
| Other and don't know | 9 | 13 |
| Number of reasons given | 190 | 101 |
| Number of replies giving reasons | 140 | 72 |

Therefore the results for the two types of enterprise are given separately, and the findings should be considered applicable largely to smaller enterprises (200 to 2000 sheep).

The distribution of replies differed so greatly between enterprises that there is no point in estimating the average over enterprises. The most interesting results were:

1. About 30 per cent of farmers in both enterprises do not consider flystrike to be a problem. This is most unlikely to be a correct view since flystrike in unmulesed sheep requires frequent inspection of sheep for six or more months of the year if losses are to be avoided. Perhaps the farmers concerned have a large surplus of labour, or enjoy working sheep, and do not recognise a problem. In one sense the Mules operation might not solve any problems for them, but it is more likely that they are not aware of the benefits.
2. Many meat-oriented farmers do not realise that Mules operation can benefit even meat-producing breeds despite results such as those of Lear and Faulkner (1977). This may be a problem for extension, but the fallacy probably reflects some deep resistance to 'new' technology.
3. The proportion who do not use the operation because it 'is cruel' is much smaller than expected. Perhaps it is not wholly surprising when one considers the pain routinely associated with docking and castration, which are accepted routines.
4. The reasoning behind the answer that the operation is not used because it does not prevent body strike is difficult to grasp. The question was inserted deliberately to check the rationality of replies. Clearly many reasons given are not based on rational grounds.
5. Some meat producers buy replacements for their breeders. Frequently these would not be mulesed, but they certainly would not be too old to be mulesed, and to benefit from the operation.

Discussion

The results indicate a variety of reasons for failure to use the treatment. The proportions of different reasons suggest that extension programs may possibly be advised to set the following priorities:

1. Convince farmers that the Mules operation is an almost complete solution to problems associated with blowfly strike. In particular it not only prevents most

strikes (probably over 90 per cent, and close to 100 per cent in most years), but it can reduce the costs of inspection, crutching, and other measures. This message seems to be well known to extension services, but apparently not to large numbers of farmers.

2. Show that replacement stock may be treated with useful results. This may require some investigation of when such sheep are purchased in relation to the suitability of conditions for the operation (absence of bush flies, dates of shearing or crutching), and the time from purchase to joining (mating, tupping).
3. Although relatively few respondents stated that cruelty was a reason for not mulesing, the pain caused may lie behind answers to other questions. It may still be desirable to convince farmers that the pain of the operation may be much less than the prolonged suffering experienced by fly-struck sheep.

The Mules operation should be presented as part of a technological package. This must include other farm activities, and take account of factors such as dates of lambing, shearing, and crutching. In addition the population biology of the sheep blowfly should be appreciated. Perhaps even more important, the frequency and thoroughness of inspection, the seasonal prevalence of body strike, and the availability of labour should form part of the data used in constructing the technological package to include treatment of all sheep which are at risk, including purchased replacements.

Acknowledgment

Part of the cost of this survey was borne by a grant from the Australian Wool Corporation.

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