*Brief communication*

# FARM PRODUCTION GAINS FOLLOWING ADOPTION OF A HILL COUNTRY GRAZING MANAGEMENT SYSTEM

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## INTRODUCTION

A hill country grazing management extension programme was introduced to farmers in the Hamilton advisory region in 1973–4. This programme and interim results were outlined by Smith *et al.* (1976). The programme, which has wide acceptance by farmers of the region, has also been adopted throughout the North Island and parts of the South Island. This paper attempts to evaluate the production gains made by farmers who have received intensive advice from the authors.

## ANALYSIS

As no trial had been completed on the system, the main means of assessing progress was comparison of performance in previous years with performance when the grazing system was operating. Some account has been taken of the influence of season on lambing percentage by comparing each farm with the county average. Wool production cannot be assessed in such a way, as the county averages are not available for the latter years. The only trial related to the system was a winter grazing comparison with hoggets (Smith *et al.*, 1976).

The two major comparisons are on the farms of W. D. Short, Waerenga, who first practised the system, and J. W. Linton, Te Puke, who ran the grazing trial. A supportive comparison is also made on five Raglan County sheep farms.

## RESULTS AND DISCUSSION

Table 1 shows the average lambing performance prior to and after adoption, expressed as percentage deviation from county average lambing performance. The average stock unit increase is also shown.

It should be noted that the after results include the first year after adoption when changes in pasture composition and ewe body

TABLE 1: PERCENTAGE DEVIATION FROM COUNTY AVERAGE LAMBING PERFORMANCE

| *Farm* | *Before (3–5 yr av.)* | *After (3 yr av.)* | *Stock Unit Increase (%)* | *Gain* |
|---|---|---|---|---|
| Short | −1.1 | +2.5 | 6.2 | + 3.6 |
| Linton | −3.0 | +9.2 | 0 | +12.2 |
| Raglan | −0.6 | +7.8 | 7.4 | + 8.4 |

weight were not complete. The gains in lambing performance are supported by information on gains expected from increasing body weight of ewes. Some farms had stock weighed at regular intervals, and these increased by an average of 7 to 10 kg.

Although the programme was not aimed at increasing stocking rates, some farmers became confident enough to increase stocking rates as a result of increased feed supplies and improved allocation techniques plus the introduction of the Livestock Incentive Scheme.

TABLE 2: WOOL PRODUCTION (kg/stock unit/yr) BEFORE AND AFTER CHANGING GRAZING MANAGEMENT

| *Farm* | *Before* | *After* | *Gain* |
|---|---|---|---|
| Short | 5.1 | 6.0 | 0.9 |
| Linton | 4.0 | 4.8 | 0.8 |
| Raglan | 4.7 | 5.4 | 0.7 |

One variable which makes the change in wool produced per sheep stock unit wintered (Table 2) difficult to interpret is changes in stocking rate and/or sheep to cattle ratio. Where possible, these have been allowed for in the calculation.

The gains in per head performance have been generally greater where stocking rate has been maintained at previous levels. Linton and Snodgrass (1978) estimated their gains of 12% in lambing percentage and 0.6 kg of wool per sheep stock unit wintered to be worth $2.50 per ewe wintered.

Success of such an extension programme is dependent on having a receptive audience, people to pass the message, and sound technical knowledge on which to base the message. The message in this case was a simple one based on principles which have been around for a long time. A receptive audience of farmers was present who had not had the opportunity to hear the basic principles or apply them to their farming system. One factor not present was sufficient advisers to allow more individual visits to

be undertaken and ensure that not only are the principles understood but that they are interpreted on each farm in such a way as to maximize their effect on animal production. The increases shown are available to many hill country farmers. The passing on of this information is hampered by the lack of extension officers in the hill country regions.

## REFERENCES

Linton, J. W.; Snodgrass, A. G., 1978. *Proc. Lincoln Fmrs' Conf.* (in press).
Smith, M. E.; Dawson, A. D.; Short, W. D., 1976. *Proc. Ruakura Fmrs' Conf.*: 22.