Paper 15
THERE AND BACK WITH LUCERNE — A FARMER'S VIEW

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INTRODUCTION

In this paper I will explain why I moved from grass to lucerne, how the lucerne system was managed, and finally, why I moved back to grass.

THE PROPERTY

My wife and I farm 165 hectares, 40 kilometres west of Ashburton and about four kilometres from Mt Somers. The farm is flat, and the soil type, Ruapuna stony silt loam — a free-draining fertile soil with scattered boulders. It is 300m above sea level and has an annual rainfall of approximately 1000mm.

When we took over the property 12 years ago, it was running 1400 Romney ewes and 300 hoggets, with 24 hectares of grain crop.

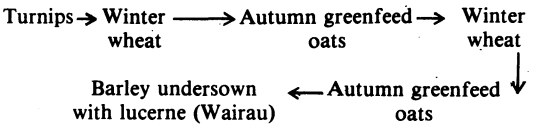
WHY DID I MOVE FROM GRASS TO LUCERNE?

In the first two years on our farm, three problems became apparent: poor lamb thrift, dry summer periods and grass grub. Being anxious to make a success of this, our first farm, I began looking for answers to these three problems. Lucerne appeared a possible solution to all three.

Initial enquiries brought little encouragement. Lucerne just wasn't grown successfully in our area, several paddocks has been tried and had failed. I decided in good Kiwi fashion to have a go, anyway!

The first spring I sowed three hectares which established successfully and then, in conjunction with Winchmore Irrigation Research Station, carried out a trial to determine the carrying capacity of lucerne. The lucerne produced sufficient feed to carry trial mobs of 30 ewes/hectare, (12 ewes/acre), with 120% lambs from lambing to drafting. I was impressed by this and sowed another eight hectares under barley the next spring. This second paddock was a great success and convinced me that I should change to more lucerne for grazing.

By this time, I had changed over to a straight Coopworth flock, mating all the ewe lambs and had increased the cropping, until 50% of the farm was in wheat or barley. The rotation being practiced was:



By following this rotation, I had a clean grass-free seedbed for the lucerne and the lower nitrogen levels were no problem to the vigorous legume. The resulting high quality summer feed, met the needs of the increasing number of lambs and the need for better feed for the hoggets also rearing lambs. Cutting trials showed that contrary to popular belief, the established lucerne was actually producing 20% more feed, even in late September, than the grass.

My mind was made up. All three of my initial problems had been solved by lucerne. Lucerne carried a high stocking rate, right from the first year, even after three straw crops. Lambs were all going away prime, at good weight and ewe lambs were 36-45 kilograms at mating. Grass grub problems were a thing of the past. So we continued on until 71% of the grazing area of the farm was in lucerne.

MANAGEMENT

Each year, I modified the grazing management as I learnt from current research and my own experience.

We wintered on greenfeed, turnips and hay. Lambing commenced in mid-September. Ten days before lambing, we moved to a slow rotation on autumn saved pasture, to spell the lucerne as long as possible. As lambing progressed, lambed ewes were shed off and gradually moved onto lucerne and rotated round the farm. By the third week in

September, when lambing was at a peak, the lucerne was up to the ewe's bellies. I noted that ewes and lambs stayed together well in this long feed. Before tailing, we boxed ewes into mobs of 200 and later doubled these again. This gave us three mobs of 400 ewes. Each mob then had its own rotation of four, five hectare paddocks until weaning at six to eight weeks. At weaning, lambs were drafted into two mobs — ewe lambs and wether lambs. They rotated round their grazing area, followed by ewes cleaning up. Hoggets and their lambs followed the same system. Lucerne was spelled from late autumn until spring; trials having shown that this gave greatest spring feed.

Ewe fertility was increasing due to careful selection and to greatly improved ewe weights, because we could feed them better. Lambing percentage had slowly climbed to 135% and lamb weights remained constant at round 12.8 kg.

The only problem of any consequence was redgut. This usually caused 10-20 deaths in the January/March period. Watching lambs closely and shifting them off lucerne at the first sign of the problem, made it more an annoyance than an economic problem, which was more than offset by other advantages.

WHY DID I GO BACK TO GRASS?

Five or six years ago, we noted yellowing in the lucerne, in November/December. At first, we thought that it was a combination of aphids and wet winters and springs we had at that time. The yellowing became worse in subsequent years and lucerne production dropped during this time of peak feed requirements. The rotation failed when insufficient feed was growing to allow adequate spelling. The snowballing effect of "chasing our tails" resulted in production loss.

Our MAF adviser suspected Sitona weevil from the early stages, and a heavy infestation was later confirmed by Trevor Trought.

I stopped sowing lucerne because of the dramatic change in production and drilled grass seed instead, and direct-drilled Tama into the least affected, and Nui into the worst affected lucerne stands. Two years ago, I drilled one more paddock of lucerne only to find the same thing happened in its first year, so it had the direct-drilling treatment this autumn.

We have now gone the full circle and are facing the same problems we had 10-12 years ago, but now we have double the lambs to fatten (Table 1).

TABLE 1: Sheep numbers in 1968 and 1980.

Class of Stock	1968	1980
Ewes	1400	1400
Hoggets	300	940
Lambs	1400	2800

CONCLUSIONS

This year, we have not been able to fatten all these lambs, or grow the replacements to satisfactory weights, and grass grub is once again a problem in the autumn.

If the problems with lucerne could be overcome economically, I would give serious consideration to going back to the previous system. Under this system I could sustain a high proportion of the farm in profitable cash crops. The lucerne carried a high stocking rate from the first year, even after three years in crop. Lucerne provided high quality feed, even in dry conditions, for growing lambs and hoggets after weaning their lambs. Lucerne is resistant to grass grub.

With careful use of grass, I believe we could cash in on lucerne to achieve high liveweights, then move into saved grass for flushing and tupping and thus achieve lambing percentages as good, if not better, than on grass alone.

For me, in the meantime, I must stick with grass, with its limitations, while waiting for Mr Scientist to come up with an economic answer.

DISCUSSION

Q. With respect to Sitona weevil, what control measures were tried?

Lewthwaite: There are no resistant cultivars, and winter grazing or insecticides were not satisfactory.