

COMPARISON OF THREE CONTRASTING GRASS/CLOVER PASTURES
FOR MILK PRODUCTION AND PROFITABILITY.

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The nutritional superiority for milk production of white clover over perennial ryegrass has been verified over the past six years in thirteen experiments at the Ellinbank Dairy Research Institute. A milk yield response of approximately 20% occurs when cows are fed ad libitum while a response of approximately 10% occurs when cows are fed equal rations of grass or clover at 65% of ad libitum intake.

Following three years monitoring of herbage production from pastures ranging in clover proportion from 15 to 100% white clover, it appeared possible to increase per cow and per hectare milk production by 10% as a result of increasing the proportion of clover in the pasture from 20% to 50% using Fusilade (R) herbicide (fluazifop-butyl). Another alternative for improving milk production using clovers is to introduce red clover (c.v. Redquin) into a pasture based milking system to more closely match feed supply with cow requirements.

In this experiment, milk production and profitability from a farmlet with a traditional pasture system is compared with two high legume pasture systems. One system (high white) consists of white clover-ryegrass pastures with clover proportions between 50 and 60%. The other system (high red) comprises pure red clover pastures on half the farmlet and traditional pastures on the remainder. Each farmlet is 7 ha in area and stocked at two cows per hectare.

TABLE 1 Production (per cow) from August calved cows on three farmlet systems from 29.9.87 to 11.5.88.

Farmlet	Milk (L)	Fat (kg)	Protein (kg)	Lactose (kg)
Traditional	3721	160	121	176
High White Clover	3778	176	122	181
High Red Clover	3548	162	115	168
LSD P = 0.05	210	14	6	12

Milkfat production was increased by 10% (Table 1) as a consequence of increasing the white clover content from 29% to 54%. Over the full lactation this is valued at \$180 per hectare. At a cost of \$50 per hectare for the Fusilade the increase is potentially profitable. As the red clover pasture was in its establishment year, milk production was below potential.

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