

SIMMENTALER JOERNAAL - 1996

DAIRY RANCHING WITH SIMMENTALER

(We summarised this from the M.Sc dissertation of Mr A Rothouge (Univ. of Pretoria) - Ed.)

In a comparative systems trial using Simmentaler cattle on dryland Cenchrus pasture in the sub-tropical region of the Northern Province (Springbok Flats) a dairy ranching system was compared to a conventional beef ranching system under similar environmental, genetic and managerial conditions.

Cows in the beef herd (B) were not milked and calves weaned at 196 days. The dual-purpose cows (DP) were milked for about 8½ months while simultaneously raising their calf until weaning of 200 days. Feeding and management of B and DP cows was the same except that DP cows consumed 3kg of 14% crude protein concentrates during milking. Calves were separated late afternoon and cows milked early morning by machine. Special care was taken with pre-milking stimulation (by the calf) because of the retention of milk in the parlour to the benefit of their calves. Machine stripping was applied as soon as the milkflow stopped.

Rothouge also investigated the problem of ration of fat rich milk for the calf and found that the average DP cows retained 50% of her total morning milk after normal machine milking, with low producing cows retaining up to 70%. Cows also kept back the 'rich milk' for their calves. The fat content of the "parlour milk" before weaning was a low 2% compared to over 4% for cows that had been weaned, or whose calves were taken away shortly after birth. These cows without calves retained only 8% of their milk after milking. Milk production per day was 7,8kg 'suckled milk' for B cows, 4,9kg 'suckled milk' and 6,1 'bucket milk' i.e. 11 kg for the DP cows.

The most important results are presented in the table.

Mr Rothouge concludes: 'This trial confirmed that the dual purpose cattle farming system, a kind of dairy ranching, is indeed biologically productive, economically feasible and ecologically sound. By way of comparison, it is much more productive (be it per individual animal or per area needed to implement the system) than the conventional beef ranching system, while being about equally as profitable.

The dairy ranching system does, however, have certain financial advantages apart from profitability, such as its instant cash flow, which makes it economically more attractive than the beef ranching system. It can therefore be recommended as a viable system to cash crop farmers in the summer rainfall regions who want to decrease their dependence on crops.

He also warns that the low butterfat content could be a problem if it attracts financial penalties (today the demand for low fat milk has increased considerably Ed).

According to Mr Rothouge the biggest advantage of the DP system, apart from its biological and economical productivity, are its flexibility and its holistic approach to animal production. Despite being relatively intensive, the system is still flexible enough to adapt to different local conditions. For example, if for some or other reason the cows cannot be milked for a period of time, the calves can be put in to suckle full-time and the only loss would be milk income. The system could operate in rural areas not served with electricity, where cows would have to be milked by hand and commercial milk sold as sour milk or maas. Perhaps hand-milking would even solve the low fat problem. The emphasis in the dairy ranching system could easily shift from milk to meat and vice versa, depending on the relationship between milk and beef prices, without any changes to infrastructure or expensive alterations. It is generally recognised that, in areas characterised by low and variable rainfall, superior economic results can be obtained by choosing flexible production systems and marketing strategies." The bottom line is that the DP system with locally bred Simmentalers produced 80% more FOOD PROTEIN per cow at weaning than the B system.

Comparison with the Beef (B) and dual purpose (DP) management system with Simmentalers at the Towoomba Research Centre in the sub-tropical Northern Province:

--	--	--

	B	DP
Calving percentage	64%	70%
Weaning rate	89%	86%
Weaning weight 196 days (kg)	247	68
Milk Produced / lactation (kg)	--	239
Butterfat/protein: Before weaning	--	1.8%
Butterfat/protein: After weaning	--	4.6%
Annual biological productivity at weaning		
Kg/cow/hectare: Meat	3.9	2.9 (-25%)
Kg/cow/hectare: Milk	--	21.2
Kg/cow/hectare: Protein	0.67	1.23 (+84%)
Weight at 18 months		
Heifers: Weight (kg)	391	318 (-19%)
Heifers: Daily gain 7-18 mths (kg)	0.42	0.41
Steers: Weight (kg)	408	344 (-16%)
Steers: Daily gain 7-18 mths (kg)	0.42	0.43
Feedlot (70 days) and carcass		
Weight end feeding (kg)	541	530 (-2%)
Average daily gain (kg)	59	1.64 (+3%)
Kg feed/kg gain	2	8.7 (+5%)
Dressing %	55.4%	54.6%
Cold carcass weight (kg)	300	290 (-3%)
Grading points	33.4	33.6
Economic efficiency at 1991/92 prices		
Income : Hay	R29.77	--
Milk (a)	---	93.58
Beef	71.94	71.86
Change in capital value	43.76	50.59
subtotal	145.47	216.03
Variable Costs (b) - General	97.08	110.42
Variable Costs (b) - Dairy	-----	47.50
From margin	48.39	58.11
Less fixed costs (general & dairy)	14.00	23.93
Total	34.39	34.18

(a) At that time, low fat milk was still penalised. Today we have a completely different situation. Prices in shop (Nov.1997): Normal milk varies from R1.95 to R2.30/litre, compared to R2.30 to R2.60 for low-fat (2%)

(b) Pasture, labour, veterinary, licks, concentrates, etc.