

JUSTIFICATION FOR DAIRYING IN A SEMI-ARID AREA

A2 - Ongoing - Smith

A major constraint to dairy production in the semi-arid tropics is the lack of feed. However, these areas are not suited to intensive crop production thereby making livestock production the preferred activity. Whilst beef production has been favoured by the extension services, offtake rates have been low, often 3% per annum. This is because herd size is small (this is a different problem to overstocking which is probably caused by human pressure), reproductive performance and calf survival are low and the major output requirement is draught power. The production of meat is regarded as a terminal function.

Dairy products, whilst popular as a dietary component, are scarce in the rural areas, and when available often priced beyond the reach of the average family. In general, the intake of animal protein by rural people in Zimbabwe is amongst the lowest per capita in this region of Africa. Government policy (National Five Year Plan) is to encourage increased livestock production (including milk production) within the smallholder sector. It is also government policy that construction of one major dam should start in each province each year (this would suggest that at some point some forage will be grown under irrigation). This should be seen against the background of a population that is predicted to double within the next 20 to 25 years.

Feeding of cattle is constrained because of unpredictable (amount and distribution) rainfall and the lack of conservation practices (difficult when the cattle are in private ownership and the grazing is communal).

However, dairying has been perceived by farmers as an option to be considered and several dairy groups have started in the Matabeleland Provinces (Matopos is involved with four of these in a 'collegial mode', at the request of the individual groups: i.e. Our off-station activities and the demand for information is farmer driven and we are collaborators).

The problems of feed are being addressed in a number of ways: Pennisetum hybrids have been evaluated on station and can produce up to 9 tonnes of dry matter under rain-fed conditions (they combine the high yield of Napier grass with the draught tolerance of millets); this work is spilling over onto farms, again at the farmers' request. Naturally occurring protein sources, such as pods and fruits, together with improved utilization of crop residues can also reduce the dry season feed shortage.

There is growing interest in the role of conservation, particularly silage making. Techniques suitable for small batches, such as a smallholder is likely to make, are being considered (not as yet at Matopos). Hay-making using pennisetum crosses has been difficult because of the time needed to dry the thick stem (mid-season drought inadequate). Crimping is not an option for smallholders at present.

Another aspect to be considered is the effect dairy production can have on overall cattle production. A small quantity of milk to sell on a daily basis gives a regular cash income. This can stimulate management: if a cow has a calving interval of two years and a calf mortality of 20%, in five years she will rear two calves (eg. one to replace herself, one to replace an oxen); if in the same time calving interval is 15 months and calf mortality 10%, then 3.6 calves will be reared (still two for replacement, 1.6 for disposal). The driving need for all Zimbabweans to have a cash income, increased by the economic structural adjustment programme, is another spur to make livestock production systems work in difficult circumstances.

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