



Smallholder Dairy Farming: A Solution to Low Milk Production in Zimbabwe



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Abstract

Thirty-five years after the smallholder dairy farming program was initiated, milk intake is still below average in Zimbabwe. Several reasons have been identified to limit optimum milk production and these include; inappropriate breeds, inadequate feed supply, lack of government support, cost of production, poor marketing channels, poor disease control methods, inadequate infrastructure, weak extension support, lack of farmer involvement in production planning, poor social relations between farmers and management. Regrettably none of the limitations have been adequately addressed within the context of a smallholder dairy farmer; therefore, the initiative has not been fully tested for or against. The reliance on well-wisher funds by local authorities in this farming sector cannot be a solution to improving milk production. There is need for control mechanism and proper budgeting of available funds towards capacitating of smallholder dairy farmers.

Keywords: Smallholder; Dairy production; Milk deficit

Abbreviations: DDP: Dairy Development Program; ARDA: Agricultural and Rural Development Authority; NOARD: Norwegian Agency for Development; DANIDA: Danish International Development Agency; PSIP: Public Sector Investment Program; HP: Heifer Project International

Introduction

The demand for milk and milk products in Zimbabwe has been growing over time in synergy with population growth. This trend has outweighed production potential which is currently at 54.3million liters against a demand of 120million liters per annum [1] for over three decades and until now per capita milk consumption remains below world average. The country used to produce 262million liters per annum [2]. In a bid to increase milk output the Zimbabwean government introduced the small-scale dairy farming schemes in 1983 under the Dairy Development Program (DDP). The Agricultural and Rural Development Authority (ARDA) was mandated to spearhead commercialization of this project. At inception, the program was funded by the Norwegian Agency for Development (NORAD), Africa Now (UK), the Danish International Development Agency (DANIDA), Heifer Project International (HP) and the Government of Zimbabwe through the Public Sector Investment Program (PSIP) [3-5]. This developmental program mainly concentrated in the medium to high rainfall areas of Zimbabwe [6,7].

In 1998, the program was then extended to semiarid areas, which were initially described as unsuitable for dairy farming [8]. In addition, the development efforts in these semiarid areas targeted resettled farms that had potential to grow fodder

as it was the major factor limiting smallholder dairy farming [9,10]. Thirty-five years after these initiatives per capita milk consumption has dwindled, and national milk production has gone down by more than 50% making the country a net importer of milk and dairy products. There is therefore needing to revisit the initiatives with the aim of improving milk production throughout the country.

Discussion

Dairying in the smallholder sector is practiced for reasons other than profit making, which are feeding the family, to produce manure to support crop production and to provide dairy animals as insurance, for financing emergency cash needs and for social status [11] then, surplus milk can be sold to nearby markets. From a smallholder dairy farmers' perspective, dairying assists farmers to diversify, spread farming risks and creates opportunity to make use of idle resources like crop residues [5]. This was not the governments' intention for this initiative. There could be several reasons for this farmers' approach including but not limited to failure to conceptualize the business model, lack of adequate support from private and public partners [12], inappropriate breeds [13] cost of production [14], and poor milk yields [15].

Although dairy production in Zimbabwe has been dominated by large scale commercial farmers and company owned dairy farms, the trends in milk production in this sector has also been declining (Table 1), this possess an ample opportunity for smallholder dairy sector to contribute positively and immensely to local milk production. However, the situation is more complex than that, because the smallholder sectors' contribution has also been on the decline. Data available from the DDP indicate that

Table 1: Trends in the Large scale dairy subsector of Zimbabwe.

Year Variable	2000	2001	2002	2003	2004	2005	2006	2010	2012
Registered producers	314	323	283	280	277	281	282	165	165
Cows in milk	29975	28321	28845	27667	23788	22687	23200	18000	20000
Total females' dairy animals	70142	66270	67496	64742	55300	47521	47520	37750	42500
Milk intake (million litres)	177	172	149	111	94	102	96	47.2	64.4
Average production per cow per yr (litres)	4542	4671	4047	3095	3076	3391	3206	2052	2500

Evidence presented by many authors points to the fact that dairy farming is a high capital-intensive adventure, that requires proper planning and a consistent supply of capital goods and services. This has been the greatest challenge for smallholder dairy farming in Zimbabwe. Furthermore, there is lack of government control and direct involvement in directing available funding by NGOs to address limitations already identified, rather each project will have its own objectives and there is lack of collaboration and corroboration within and without government.

Conclusion

There is great potential in smallholder dairy farming, which if tapped, can significantly reduce milk and milk product deficits in Zimbabwe. A holistic approach to famer circumstances coupled with adequate training is necessary to increase productivity. Development of appropriate breeds, adequate feeding and control of diseases are key to smallholder dairy farming.

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milk production within the smallholder sector fluctuated from 2.7 million liters in 1990 to 1.5 million liters in 1998 and 1.13 million liters in 2011. Several reasons have been identified as causes for this low productivity. These include inappropriate breeds, insufficient knowledge on the farming objectives, and poor extension advice which has led farmers to shift from one breed to another [16]. Furthermore; shortage of fodder; limited fodder production and poor disease control measures [17].

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