



**Original Article**

**Beef cattle development initiatives: a case of Matobo A2 Resettlement farms in Zimbabwe**

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**ABSTRACT**

The study was carried out to examine various practices that resettled A2 farmers have adopted to enhance cattle rearing in Matobo district in Matabeleland south province in Zimbabwe. A multi-stage random sampling method was used to select 60 a smallholder farmers to which a structured questionnaire was randomly administered. Statistical Package for Social Sciences, SPSS was used for data computation. It was observed that 47% of the farmers keep local (indigenous) breeds and 67% of the participants indicated that farmers retain steers for draught purposes. There was no significant difference ( $P < 0.05$ ) between the numbers of cattle sold to private butcheries and the one sold to private buyers. Farmers face challenges in cattle feeding especially during winter. Informal cattle marketing systems have resulted in low prices offered to cattle on sale. There is need for farmers to form cooperatives so that they can gain value from their cattle production business.

**Keywords:** Cattle, smallholder, Resettlement, A2 farms.

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**INTRODUCTION**

Livestock play an important role in the socio-economy of the small holder farmers in the communal and resettled areas of Zimbabwe through provision of draught power, milk, meat, occasional sales and use at social functions (Sibanda, 2008 and Barret, 1991). Livestock are a source of risk aversion which allows for survival and adaptability in the event of calamities such as droughts and floods which may cause crop failure. In African culture livestock ownership is a standard measure of wealth and power. However, the need for development of viable cattle production initiatives seems to be a challenge to farmers who own large numbers of indigenous cattle breeds in Zimbabwe, for example in the area under study, a total of 1 232 cattle died in 2012 due to drought and starvation (Livestock Production Department, 2011).

The Fast Track Land Reform Programmed (FTLRP) that started in year 2000 radically changed the agrarian structure in Zimbabwe and provided an opportunity for small holder communal farmers (A2 farmers) to engage in commercial livestock production to some farmers.

This was because the new resettlement farms (A2 farms) are relatively bigger in size than the previous farm holdings (in communal areas), have better grazing and water resources and, to a certain extent, provide a possibility for better control of livestock breeding and other husbandry practices (Scoones et al 2010). New resettlement areas thus provide a new opportunity to revive the beef production enterprise in Zimbabwe.

However, the new cattle production farmers seem to have capacity gaps to sustainably engage in viable cattle production. This paper seeks to explore beef cattle development initiatives that can be employed by cattle producing farmers to enhance cattle production in Matobo district. These strategies can then be collectively adopted with relevant modification by farmers in other semi arid regions to improve cattle production.

## MATERIALS AND METHODS

### Study sites

Matobo district is located south of Bulawayo and is bordered by Gwanda on the East and Mangwe district on the South. It lies along the latitude 21° south, longitude 28° 30' east (Figure, 1). The Southern part of the district is dry and in Natural region 5.

The Northern side of the district is in Natural region 4 and receives more rainfall compared to the South. This is a low lying area on the Northern part of the district closer to Bulawayo town. The average rainfall received in the area is 466 mm per annum.

The study sites are located are ward 23 and 24 located about 70km and 134 km from Bulawayo respectively, in the southeastern part of Matobo District in Matabeleland South Province. The district has a total carrying capacity of 870 LUs (LPD report, 2012) and wards population is 99 836 (World Bank, 2006). Ward 24 has an area of about 25 700ha and is found in Natural Farming Region 5, receiving rainfall of less than 500mm a year.

Ward 23 comprises mostly of A1 farmers with A2 constituting 17%. Ward 23 has an area of about 18 320 hectares and comprises of 22 - A1 farmers and 8 -A2 farmers. The outstanding feature of rainfall in the area is its marked variability and unpredictability from one year to another. Low rainfall interspersed with long dry spells and high summer temperatures of up to 40 degrees means that the area is generally dry.

### Vegetation

The area under study is suitable for cattle ranching because of its expanse sweet pastures. The physiognomic type is Tree Bush Savannah (TBS), mostly on the northern side of ward 23 with predominantly Mopane, Combretums and Acacia trees. The most dominant grass species are the *Panicum maximum*, *Eragrostis curvula* and *Hypperrhenia filipendula* with pockets of setaria and cross grasses. *Heteropogon cortutus* is scattered on mostly rocky and kopjes in the northwestern side of ward 23.

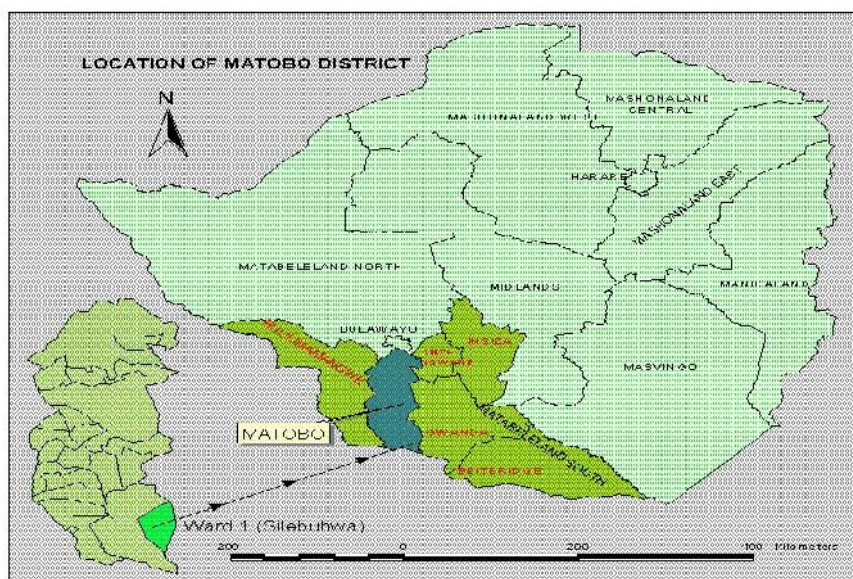


Figure 1: Location of Matobo district

## Objectives

The objectives and key strategies to the study are outlined in Table 1.

Table 1. Objectives and strategies to adoption of cattle development initiatives in Matobo district within period 2012/13

	Objective	Strategies
i	Enhancing economic returns from cattle by scaling up existing good practices	Promoting good stockman-ship and cattle husbandry practices.
ii	Enhancing economic returns by diversifying existing system	Enhancing productivity by minimizing inbreeding in cattle Introduction of ONBS Introducing AI in selected cows and heifers Semi-intensive feeding scheme and supplementary feeding
iii	Enhancing economic returns by introducing sound herd health management	Scaling up production by minimizing preventable diseases and monitoring grazing capacities Institutionalizing health care by block veterinary dispensary Monitoring and managing trans-boundary livestock movement
iv	Enhancing economic returns by improving feed situation	CB of farmers on technologies of fodder production Enhancing fodder availability at HH level through backyard hedge rows of fodder trees CB on preservation and storage of hay and fodder

## SWOT analysis of cattle farmers in Matobo district

Farmers in the district predominantly keep mixed non-descript herd of indigenous cattle breeds. Although the animals are hard they have been subjected to inbreeding and intense selection for individual growth and have suffered great losses in maternal performance. Bratton (1994); Chimoyo (1991) and Cheater (1984) note that Zebu cattle have been produced in situations where their greatest attribute is the ability to survive the harsh environment. Consequently their contributions to commercial beef production have generally been their

maternal influence in early calf growth and their merit in adaptation to tropical and sub-tropical environment (Khombe, 2008). Cattle are allowed to graze during the day in open paddocks and kraaled over night to prevent them from predators (such as leopard, hyena and the Cheetahs) that would have strayed from Matobo National Park. Due to these fears from predators and sometimes poachers, cattle graze for about 4 – 6 hours per day.

**Table 2. SWOT analysis for cattle farmers in the Matobo district during the 2012/3 period**

<b>Strength</b>	<b>Weakness</b>	<b>Opportunity</b>	<b>Threat</b>
<ul style="list-style-type: none"> <li>– Large numbers of local breed ( average of 15 herd per household)</li> <li>– Cattle preference for drought , milk and meat production</li> </ul>	<ul style="list-style-type: none"> <li>– Low herd average body weights</li> <li>– Inbreeding</li> <li>– High mortality rates</li> <li>– Low slaughter weights and poor carcass grade</li> <li>– Extended marketable age</li> <li>– Producers are unaware of cattle fattening schemes</li> </ul>	<ul style="list-style-type: none"> <li>– Selective grading of cattle breed population</li> <li>– CB to impact skills on herd health management</li> <li>– Provision of supplementary feeding in winter and dry season</li> </ul>	<ul style="list-style-type: none"> <li>– Cattle markets through the middle person (s)</li> <li>– Drought</li> <li>– Clorisdiosis diseases and parasites (ticks, tapeworms, liver flukes and roundworms)</li> </ul>

## **Materials and methods**

A qualitative and quantitative approach was used during the research. A preliminary survey of ex-communal farmers that have settled under A2 settlement model in ward 23 and 24 of Matabeleland South province was carried out. The questionnaire was piloted before it was served to selected farmers within the wards.

## **Sampling frame work**

From within each ward resettlement models were stratified into A1 and A2 models and numbered. According to Seinfeld (1988) stratification of research subjects simplifies data analysis since the participants would be grouped according to similar type and model. Research subjects (farmers) were subsequently randomly selected from within each ward. Questionnaires as the main tool of collecting primary data were randomly administered to 60 research subjects of the A1 and A2 resettlement models. Observation recording forms, guide for focus group moderator and content analysis guide were used to assist in qualitative data collection. Creswell (2004) notes that information collected during the course of focus group, like that collected during the face to face interviews is raw data. Therefore, information collected from these interviews was analyzed using the Statistics Package for Social Sciences (SPSS) and descriptive statistics using Microsoft excel.

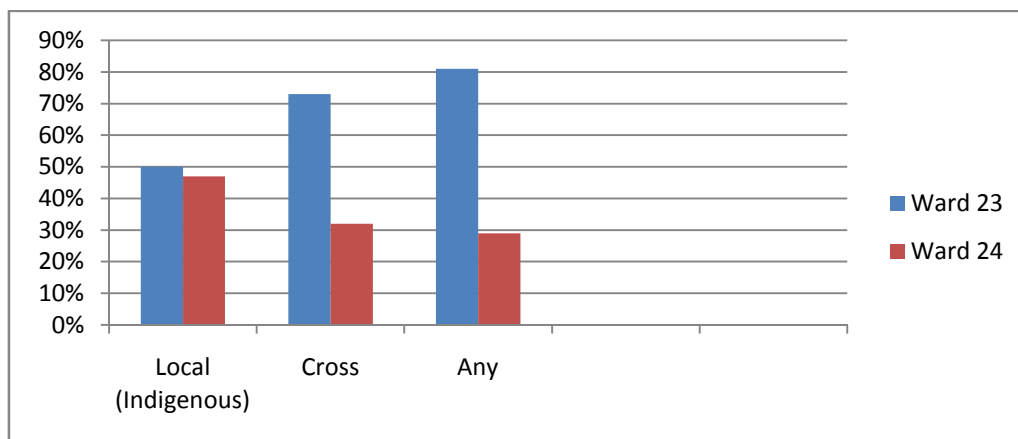
## **RESULTS AND DISCUSSION**

### **Cattle keeping**

Farmers within the district keep large numbers of mixed cattle breeds, abundantly non-descript. There is no defined breeding policy and farmers seem to be concerned about cattle numbers than ‘cattle types’. Cattle are kept in kraals during the night and are released to the grazing areas during the day. Farmers employ ‘communal grazing’ system where herders spend the rest of the day tending cattle in the grazing areas. Herd class composition is highly skewed with more male animals than female animals. The observation made was that about 67% of the respondents highlighted that steers are retained for drought power (during land tillage and sometimes pulling scotch carts). Most farmers (>80%) milk the animals during summer.

### Breed Preferences

Farmers have different tastes and preferences for various breeds. Most farmers (47 %) in both ward 23 and 24 prefer local breeds. The reason cited is that they are hard and can tolerate harsh climate conditions and parasites. Indigenous breeds are also tamable, hence are suitable for drought purposes.



N = 26 (Ward 22); N = 34 (Ward 23)

Figure 2. Breed preferences by small holder-farmers during the 2012/13 period in Matobo district in Zimbabwe

### Cattle Marketing

The most routes through which cattle are marketed is through the middle person. Farmers from both wards emphasized that they are willing to sell cattle only if they come across emergent reasons and formal market channel was not a priority, they preferred private sale or local market. No significant difference in willingness was found between these two study areas.

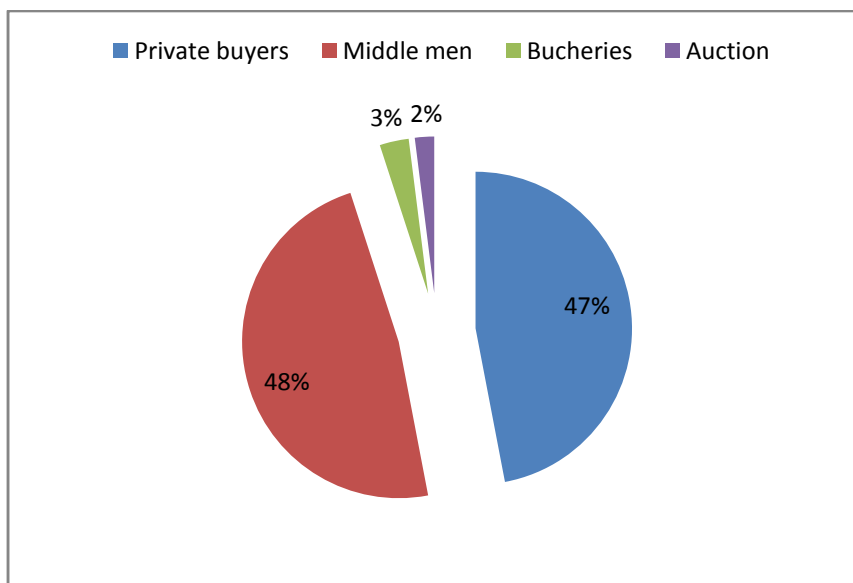


Figure 3. Cattle marketing routes by A2 smallholder farmers at Matobo District in Zimbabwe during the period 2012/13

### Farmers' challenges in cattle production

There is a built in perception among the farmers that their cattle breeds are of poor quality and hence have a low potential to fetch high prizes on the market. As such most of the cattle are sold through the middle person who offers relatively low prizes. 20% of the farmers cited poor availability of market information and absence of an efficient low-risk distribution and payment system. It was noted that most cattle owners (>73%) have skewed herd compositions with large percentages of male (uncatsrated) to female animals. This unbalanced herd class impacts negatively in cattle breeding. Tawonezvi (2003) reports that a successful cattle production system should maintain an optimal cow to bull ratio of 1:25. Livestock productivity and bulling ratio of up to 30 cows per one breeding bull have been mentioned elsewhere (World bank, 2006) as such there is serious inbreeding amongst the herds resulting in poor quality stock.

Grazing availability and management was the most challenge facing farmers in Matobo district. Ward (2008) has identified nutrition as the major success factor towards cattle production in semi-arid areas. Scant grazing has both resulted in high mortalities of more 23% in cattle between 6 months to two and half years and low stocking densities of up to 10 ha per Livestock Unit (LU). Uncontrolled breeding – where cows run with the bull throughout the year has resulted in calves dropped during the time when there is not sufficient grazing. As a result high calf mortality (60%) has been recorded with some farmers losing all the calves born in that year. Calves which survive have low weaning weights and poor growth. While Sibanda (2005) and Khombe (2008) reports calf's birth weight estimates to be 7% of the mature body mass of the dam- it was generally noted that the calves which succumbed to poverty were born will farm less weight. Tick borne disease and predators have been a challenge in particular in ward 23. This is partly as a result of the proximity of the area to Matobo National Park – where carriers of tick born disease are the wild game and due to poor dipping management. 2% of the farmers in ward 24 cited malignant fever disease (vectored by wild beast) as a threat to their livestock. The following table shows farmers' response challenges they are facing in cattle production in Matobo district.

**Table 2. Challenges faced by smallholder cattle farmers during the period 2012/13 in Matobo district in Zimbabwe**

Challenges	MATOBO WARD 23	MATOBO WARD 24
N	26	34
<b>Infrastructure</b>		
Dams	+++	+++
Paddock fence	++	+
Cattle handling facilities	++	+
<b>Cattle management</b>		
Lack of grazing management	+++	+++
Cattle feed shortages	+++	+++
Inadequate veterinary services	++	+
Cattle theft	+	+
Predators	+++	+++
Low calving rates	++	+
Low weaning weights	+	+
<b>Cattle marketing</b>		
Middle person	+++	+++
Low prizes	+	++

Key: + - lowest importance; +++ highest importance

## CONCLUSION

Cattle production in arid and semi arid region of Zimbabwe requires farmers to up their management levels particularly during the dry season. Supplementation of rangeland feed with high protein concentrate will ensure high survivability of livestock during time of drought. Smallholder farmers require capacity building particularly in areas of animal husbandry and marketing systems so that they can benefit from their cattle production enterprises.

## RECOMMENDATIONS

Matobo district has good geo-physical and vegetation landscape for cattle production. However, the region faces perennial dry spells that makes cattle production difficult. Farmers are required to implement programmes that will abate loss of cattle during the dry season by preserving supplementary fodder, avoiding wild fires and culling old aged animals. Breeding for hardiness (chimoyo et al, 1999) can be another strategy that farmers can employ to save animals from drought. Farmers also need to monitor the stocking densities and paddock infrastructure. This will ensure that grazing is available to cattle for the greater part of the year. Health care is important particularly on tick born related disease, which accounts for more than 20% of cattle deaths. Capacity building on use and calibration of dip acaricides ensures that farmers are able to apply the correct dosages to eradicate the parasites. Profit realization from cattle enterprise can be obtained by selling of cattle to formal market such as Cold Storage Company, CC sales and Agric Auctions. These cattle development initiatives, if adopted can improve cattle production within the district.

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