

# The importance of women's participation in animal traction in Zambia

by

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## Abstract

*Although animal traction technology may be said to increase the workload of women, because the use of animal power allows larger areas to be cultivated, it can also provide many benefits, especially if women can own their own draft animals and animal-drawn implements. Increased agricultural production will improve the nutrition and general standard of living of rural women and their families.*

*The development of animal traction technology should be appropriate to suit the conditions under which women operate. Thus women should be fully involved in the development process, they should be consulted on the design of animal-drawn implements and equipment, they should be properly trained in the handling and care of draft animals, and they should be given access to credit facilities for purchasing animals and implements.*

## Introduction

In recent years efforts have been made both by the international community and in Zambia as a whole to integrate women in all aspects of agriculture and rural development. Yet development experts have often tended to introduce technologies and activities that cut women off from critical resources.

It is generally assumed that developing countries will not be able to produce enough food to sustain their predicted populations if traditional methods of farming continue to be used. There have been a number of donor-supported programmes aimed at introducing improved technologies into agriculture and food production. Although improved agricultural technologies can provide rural women with the means to perform their traditional tasks more efficiently, rural women in general lack both access to improved technology and the education necessary to increase their productivity.

This paper discusses some of Zambia's stated objectives for the agricultural sector and the implications and impact of women's access to animal traction technology. The majority of Zambia's rural population depend on agriculture for

their livelihood, and although women make up 53% of this group, their participation in animal traction activities has been minimal. The paper makes suggestions for more and better integration of women in animal traction technology.

## Why the emphasis on women?

Research shows that women play a very important role in agriculture, and the need to integrate women in development is now widely recognised.

This recognition has further been backed up by the inclusion in Zambia's Fourth National Development Plan of some objectives that relate to the issues of women and development of the agricultural sector. These objectives state that, during the period of the plan, the agricultural sector is expected to:

- achieve a satisfactory level of self-sufficiency at household, community and national levels in the production of staple foods
- promote the use of animal draft power, with emphasis on oxenisation
- improve rural employment and incomes
- ensure that rural women and the youth are active participants in, and beneficiaries of, agricultural and rural development activities.

These objectives can only be achieved by giving preferential treatment to traditional and small-scale farmers, the majority of whom are women.

In Zambia's rural population there are, on average, 85 men to every 100 women, and up to one-third of rural households are headed by women. These figures vary by province, and in Northern Province about 16% of households are female-headed.

## Constraints to women's productivity

Women carry out the major part of the workload on subsistence food crops: they plant, apply fertiliser, weed, harvest, market and process for consumption. They are also fully involved in the preparation of this food for their families. Although women are

expected to perform all these tasks, they lack access to production services and resources. The problem stems from the fact that rural women are not perceived as "real farmers" by development officers, especially field extension workers.

A major constraint to increased crop production by women is the lack of labour resources, especially during the peak of the agricultural season. Therefore women cannot grow labour-intensive crops (they thus concentrate on subsistence crops) and they are unable to cultivate large areas of land. The introduction of labour-saving technologies such as ox-drawn equipment could greatly improve women's food crop productivity.

Rural women's lack of access to farm tools and equipment is common in much of Zambia. Even simple tools such as hoes, axes and rakes are normally unavailable. Most agricultural equipment and implements introduced to Africans in the colonial days only benefited men. Today the situation has hardly changed: despite the increase in the use of ox-drawn plows and other equipment, very few women possess farm equipment. A recent study in Mazabuka and Mumbwa Districts found that women in these areas have to hire most of the equipment, such as tractors, plows, farm trucks and cultivators for their field operations (Milimo, 1985).

In a needs assessment survey carried out in Chadiza District in Eastern Province, only 16% of the women interviewed actually owned work oxen and only 11% owned major ox-drawn implements, such as ox plows. Half of those interviewed had access to work oxen through harrowing.

A survey by the Ministry of Agriculture in six provinces where a women's project was being implemented showed that a major problem faced by women was late planting, mainly caused by lack of labour to finish plowing ready for timely planting. This problem was said to be due to the lack of ownership by women of oxen and ox plows. Lack of credit to buy implements and animals was a major problem facing women, most of whom could not afford the prices of implements and animals.

### **Implications of animal traction on women's food productivity**

Most rural women are traditional farmers who cultivate smallholdings of up to 2 ha, growing mainly subsistence crops such as cassava, finger millet, sorghum, beans, groundnuts and various types of local vegetables. Such farmers hardly ever use expensive farm technology such as tractors. They depend largely on family labour and they mainly use simple hand tools such as the hoe, axe

and rake, not because of preference but because they are resource-poor and have no other choice. However, in those areas where they keep cattle, oxen are used to provide draft power and manure.

This animal draft power can be of great use to rural women for plowing and cultivating their fields. Plowing is less tedious than hand hoeing, and enables more land to be cultivated (Beerling, 1986). Animal-drawn carts can be used for haulage of farm produce from the field to storage and to market. Carts can also carry water and firewood and can be a source of income when hired out to transport fellow villagers and their goods.

Although animal traction technology may sometimes increase the workload of women in the field (because of the increased area cultivated) it has many more benefits than disadvantages, especially if women own their draft animals and animal-drawn equipment. Appropriately designed animal traction equipment can greatly reduce the excessive burden of tedious work faced by most rural women. Time and labour saved can be used for other household tasks such as taking care of children.

The development of animal traction technology must be appropriate to suit the conditions under which women operate. Women need to be fully involved and consulted about the design of animal-drawn implements and equipment and they should receive proper training in how to handle and care for the animals, and how to use the implements.

### **Oxenisation programmes in Northern Province**

Cattle have been used as draft animals in Northern Province since the late 1970s. Some animal power schemes have been operating in the area, but they have experienced considerable difficulties with the introduction of oxen, largely because of:

- lack of familiarity in keeping cattle
- problems in obtaining steers
- problems in obtaining implements and spares
- inadequate veterinary facilities
- lack of skilled artisans for repairing and maintaining implements.

In 1992 the Department of Agriculture took over the oxenisation programme from the Village Agricultural Programme (VAP) and the Integrated Rural Development Programme (IRDP) funded by SIDA (Swedish International Development Agency). The programme is now under the Extension Training Support Programme (ETSP) funded by NORAD (Norwegian Agency for International Development).

Programme activities to be carried out include:

- purchase and supply of oxen
- teaching farmers to train and use oxen
- supply of implements and ox carts
- liaison with the Provincial Animal Draft Power Steering Committee

### Constraints causing women to shun the use of animal draft power

In the Northern Province about 16% of households are headed by females but the area cultivated by these households is only 9% of the farmed area, and their use of animal traction is very limited (Table 1).

**Table 1: Some characteristics of farm households in the Northern Province, 1990/91**

<i>District</i>	<i>Method of cultivation</i>	<i>Number of households</i>	<i>Female-headed households (number)</i>	<i>Female-headed households (%)</i>	<i>Total cultivated area (ha)</i>	<i>Area cultivated by female-headed households (ha)</i>
Kasama	Hand	299	48		517	45
	Oxen	6	0		19	0
	Tractor	0	0		0	0
	<b>Sub-total</b>	<b>305</b>	<b>48</b>	<b>16</b>	<b>536</b>	<b>45</b>
Mbala	Hand	204	48		400	51
	Oxen	44	5		187	11
	Tractor	0	0		0	0
	<b>Sub-total</b>	<b>248</b>	<b>53</b>	<b>21</b>	<b>587</b>	<b>62</b>
Isoka	Hand	258	50		614	61
	Oxen	1	1		11	2
	Tractor	2	0		102	0
	<b>Sub-total</b>	<b>261</b>	<b>51</b>	<b>20</b>	<b>727</b>	<b>63</b>
Chinsali	Hand	239	29		389	27
	Oxen	4	0		7	0
	Tractor	0	0		0	0
	<b>Sub-total</b>	<b>243</b>	<b>29</b>	<b>12</b>	<b>396</b>	<b>27</b>
Mpika	Hand	244	33		334	40
	Oxen	8	5		19	10
	Tractor	0	0		0	0
	<b>Sub-total</b>	<b>252</b>	<b>38</b>	<b>15</b>	<b>353</b>	<b>50</b>
Luingu/Chilubi	Hand	190	25		199	18
	Oxen	1	0		3	0
	Tractor	0	0		0	0
	<b>Sub-total</b>	<b>191</b>	<b>25</b>	<b>13</b>	<b>202</b>	<b>18</b>
Mporokoso	Hand	187	32		274	19
	Oxen	0	0		0	0
	Tractor	0	0		0	0
	<b>Sub-total</b>	<b>187</b>	<b>32</b>	<b>17</b>	<b>274</b>	<b>19</b>
Kaputa	Hand	185	20		219	13
	Oxen	0	0		0	0
	Tractor	0	0		0	0
	<b>Sub-total</b>	<b>185</b>	<b>20</b>	<b>11</b>	<b>219</b>	<b>13</b>
<b>Totals</b>	Hand	1806	285		2945	274
	Oxen	64	11		246	24
	Tractor	2	0		102	0
<b>Grand total</b>		<b>1872</b>	<b>296</b>	<b>16</b>	<b>3294</b>	<b>298</b>

Source: Central Statistical Office, Kasama, Zambia

Among the reasons for lack of use of animal traction by women may be:

- shortage of female ox-trainers to encourage women to take up the challenge of animal traction technology
- male extension staff, who are in the majority, seem to favour the male farmers when it comes to procuring steers
- most female-headed households cultivate very small areas (less than 2 ha) and so do not qualify for oxen loans from lending institutions
- draft animals are not included in the loan package by funding agencies who support women's food-producing programmes (eg, UNICEF in Mungwi and Kasama East)
- most animal-powered schemes are only carried out in specific areas, thus limiting widespread participation
- trained oxen are rather too big for women who are not accustomed to handling cattle
- lending institutions need some form of security or contribution from loanees, which the women are unable to provide. A married women would have to produce a letter of consent from her husband before she could be considered for a loan
- steers are too expensive: the 1992 price of steers was 77 Kwacha (about US\$ 0.80) per kg liveweight
- ranches where steers are sold are out of reach
- steers are scarce in the western part of the province (Mporokoso, Luwingu, Chilubi Districts)

We would like to stress that since the Department of Agriculture has taken over the running of the oxenisation programme the female-headed

households should be given first priority in the securing of steers and implements.

### **Suggestions for more integration of women in animal traction technology**

In order to involve more women in animal traction technology, women should continue to be considered a special target group, because of their multiple and diverse responsibilities. We suggest the following:

- more research should be carried out on women, using farming systems research. This can be done using case studies on animal traction technology. In order to facilitate the research, we suggest the use of rapid rural appraisal which can be carried out by interviewing a sample of women from different farming systems. Some problems identified can be solved quickly while others will require more research. Before recommendations are made, on-farm research should be carried out to see whether the solutions proposed will actually work
- a credit package in the form of a pair of trained oxen and appropriate equipment/implements should be given either to individual women or to women's groups
- more female extension workers should be trained in handling ox-drawn implements.

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