

Use of Cows for Draft Work

By

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Introduction

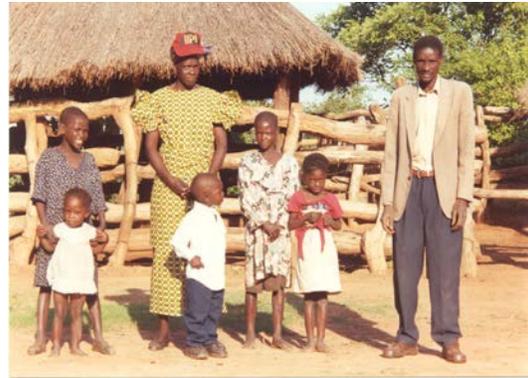
In Zambia the use of draft animals has intensified during the last decade. More farm operations (tillage, planting, weeding and harvesting) as well as transport are being done with animals. Ninety-five percent of draft cattle owning household reside in the Southern, Eastern,

western and Central Zones of the country. Fifty-two percent of cropped area in these zones is done by draft animals. Animal traction constitutes a major aspect of the country's agricultural policy and practices. The successful implementation of this policy has however, been ruined with negative effects of

sudden liberalization of the agricultural policy, drought and cattle diseases. The high cattle mortalities caused by diseases and drought resulted in decline of crop production. This high cattle mortality has left few draft animals to do more work. The proportional of farmers hiring or borrowing can be high. Cows have been employed to meet the short-fall.

Heifer International Zambia recognized and responded to an increased call for animal management and supply in the promotion of animal traction. The organization aims to assist the resource poor households which have a clear potential to improve farming when having access to draft cattle. Currently about 40% of the projects supported by HPI are draft projects. There is higher demand especially from the Southern and central parts of the country which were badly hit by the pandemic.

Implementation of draft Projects



The general criteria for selecting the recipient families are that the household must be resource poor, not own cattle, depend on crop production as the main source of income, and have demonstrated readiness to progress in farming. Before the group receives cattle they attend practical training in the village on animal husbandry and disease control, animal traction, project implementation and community development. The household has to construct a kraal, and crush-pens, store crop residues for dry season supplementary feeding and arrange for savings to purchase veterinary drugs. Bulls are communally owned. One family is selected to keep a bull and need to avail it other members.



Each household receives a pair of heifers. For each heifer received one female off-spring has to be passed on to another needy family in the community.

The initial and subsequent offsprings become the property of the household. The heifers are trained on how to do draft work as soon as they are received at 2 – 3 years old when they are still young. The pass-on families have the advantage of training the heifers while they are still young at 9 months to one year when they are easier to train and handle.



Draft projects are primarily aimed at producing draft power to improve crop production and rural transport. Appropriate use of female animals is encouraged. Other output/benefits are multiplication of the herd, milk for better nutrition and sale and manure to improve soil fertility.

A cow as a draft animal

Use of cows in Zambia has not been common till in the recent years when cows were employed to meet the shortfall of oxen. It is now a widely accepted practice though there are a few isolated areas where the practice is still a taboo.

Females (cows) animals can make good draught animal and perform as well as oxen. However, they need particularly good management if they are to be reproductively efficient. The main advantage of cows is that they can

produce milk and calves as well as work. As farming systems intensifies and management improves, cows tend to be increasingly the most convenient to use for work. Cows are best choice for farmers who

do not use the draft animals through out the year. For such farmers, it is not economical to own oxen as they will be idle during the most part of the year while incurring maintenance costs of feeding, housing and health-care. Male animals can be fattened more efficiently for meat and sold to buy more heifers. Thus use of cows is also appropriate for farmers who are building up their stocks like most of the farmers in Zambia who are now working towards restocking their herds.



Limitations on use of cows for work:

- Working cows need more and better feeding to meet the

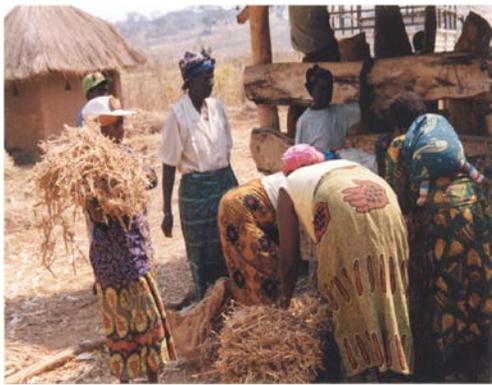
requirement for work, reproduction and lactation,

- Work can reduce milk production
- Work can reduce calving rate
- Cows are not available for work about two months before and one month after calving,
- All 'eggs are in one basket', i.e. if the cow is sick, dies or stolen, both draft power and milk are affected.

Measures taken to offset the limitations

- Emphasis on good animal husbandry is a key characteristic of the activity with two subjects receiving special attention: feeding and disease control. Preparing and dry season supplementary feed is stressed in all areas. If supplementary feeding is neglected animals usually lose weight during the dry season due to poor availability of feed. At the on-set of the rains when the animals are needed for plowing, feed intake is often low because time for grazing and availability of grass are limited. Poorly fed animals are too weak to work, may have difficulties with conceiving or

calving and produce little or no milk. It has to be emphasized that feeding has greater effect on milk yield and reproductive performance than work. The strategy adopted by farmers to alleviate feed shortage is to store crop residues and make hay for feeding their cattle just before and during work period.



Much time is spent on training farmers in prevention and control of common disease. Farmers have to put in place tick control measures. All project animals are brought in one crush-pen for spraying. An initial drug kit is given to farmer when they receive cattle. This kit is on cost recovery basis where farmers are expected to pay for any use

of veterinary drugs. Farmers are encouraged to cooperate with veterinary staff at regular basis. A committee called Community Animal Health Committee is established at the on-set of the project to monitor and coordinator all animal health activities. Adequate supply of quality drinking water is essential at all times.

- **Welfare:** The welfare of animals should encompass and protect the psychological and physical well-being of animals. In addition to protecting the animals from parasites and diseases as mentioned above farmers are encouraged to protect animals from predators, injury (through use of good handling facilities and harnesses), pain and extreme weather. In addition the animal should be worked within its physical capability and treated humanely.



Care should be taken on the extent of use of cows. Over-working cows can reduce calving rate and milk production. Cows should not be used for more than six hours per day. Care should be taken more especially when they are pregnant. It is advisable not to use cows at all in their last two months of pregnancy and one month after calving.



Before receiving animals, farmers are obliged to put up a good housing structure to protect the animals from the sun, rain and wild animals. During the rainy season, cows should be able to lie down and rest at night on a muddy-free ground in preparation for next day's work.

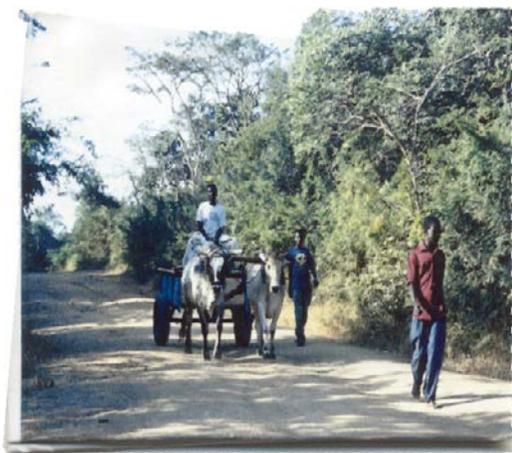
Another basic requirement of draft animals is use of correct fitting harnesses. The work of the harness (yokes and ropes) is to enable the animal work to their fullest potential and should not cause any injury or discomfort.

The 'sharing and caring' cornerstone is not intended to only serve the interest of human being but livestock as well. The co-existence of

livestock and man can be regarded as symbiotic, meaning they both derive benefits from the association. If the animals are well taken care of they will in turn work for the owner and fulfill the needs for milk, power, manure and offsprings.

- **Reproduction:** Another important aspect is good breeding practices in view of multi-purpose use of cattle: draft power, milk and multiplication. It is necessary to plan calving period so that the animal is available for work during the time they are needed most for draft work, especially at the onset of the plowing season.

Perception of farmers on the use of cows for draft work



Farmers appreciate the multi-purpose use of the cow of producing milk, work, offsprings and manure. They are proud of the good performance of cows for work and many have recorded increased hectareage of land cropped as well as timeliness of tillage operations including provision of transport. The main constraint mentioned on use of cows for work is the non-availability of cows for work for approximately three to four months per year around calving period. They are quick to say that the use of cows is a temporal measure and a way to ensure fast rebuilding of the herds after loss of cattle. They prefer use of oxen as they are available through out the year. The use of the cow when it is pregnant at whatever stage of pregnancy worries farmers very much. Rarely is the cow worked until calving day, mostly it is because the owner did not expect his/her cow to calve soon.

Conclusion

Cows are able to perform are able to perform very well like bulls or oxen when they are not in-calf. Besides cows are more gentle and responsive as compared to oxen as they are handled most of the time during milking. However it should be realized that to make optimal use of female animals for breeding and for draft work excellent animal husbandry must be practiced. The multi-purpose uses of cows need to be understood to minimize the negative effects of work or milk production or calving interval.