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Donkeys in Zambia: experiences with their importation and quarantine

by

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Abstract

Donkey traction is relatively new in Zambia and there are only about 2000 donkeys in the country. They are mainly used for transport and are becoming increasingly popular, being viewed as strong and disease resistant. Their placid nature and reputation of being easy to handle makes them popular among women. With a declining number of oxen due to drought and disease, the use of donkeys for tillage and transport is expected to increase. Donkey traction in Zambia is, however, limited by the low availability of donkeys, as well as inappropriate implements and harnesses.

The Zambian Ministry of Agriculture, Food and Fisheries imported donkeys from neighbouring Zimbabwe and Botswana. The preparations for donkeys within and outside Zambia as well as issues and challenges faced by the donkey sellers and buyers are reviewed in this paper. Arrangements for the quarantine and transportation of donkeys to and within Zambia are discussed. It is concluded that the procedures for importing and quarantining donkeys are tedious and expensive. Importation would pose severe problems to individual farmers. In future, emphasis should be placed on breeding donkeys within Zambia and facilitating the private importation of donkeys by groups of farmers in order to keep transport costs to a minimum.

Introduction

Zambia experiences annual long dry seasons and short wet seasons, typical of the southern African region. Increasing deforestation is believed to have contributed to longer dry spells during the last three years, giving rise to a recent four year drought. The nutritional value of pasture has been low leaving many animals, especially cattle, susceptible to disease because of reduced vigour due to malnutrition. The country has experienced sporadic cattle disease outbreaks despite seasonal control measures. This, combined with poor management of animals, has contributed greatly to the decline of the cattle population in Zambia. Many cattle, including draft oxen, have died. This has resulted in a reduction in farm power available for land preparation and transport. This situation stimulated both users and promoters of animal traction to look for alternative sources of farm power. Many farmers realised that though tractors might be more convenient, they were financially unviable. Even tractors for hire are very scarce. This situation has led to a growing interest in the use of donkey power at both farmer and government level.

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Status of donkeys in Zambia

In 1989 it was estimated that there were over 1800 donkeys in Zambia. Out of this total, about 1000 were in Southern Province, 550 in Western, 260 in Central, 40 in the Copperbelt and 10 in the Northern Province. In addition to the above estimates, in 1990, 40 donkeys were imported from Botswana for the purpose of setting up a breeding herd for the International Labour Organisation (ILO) Road Construction Project in the Northern Province. Two of the donkeys died in transit. This herd was subsequently reduced to 12: nine females, two males and one foal. It appears the attempt to increase the population through breeding did not succeed. The project management team reported that the conception rate was very low and many deaths occurred, mainly in the rainy season.

During the same year, 1990, another donkey pilot project (Dundwa Donkey Project) was initiated at Mapanza in the southern part of the country by Danish Volunteer Services. Three donkeys were initially purchased from Gwembe Valley in Zambia and later 25 were imported from Gwanda, southern Zimbabwe. The Dundwa Project reported that seven donkeys died of old age while two died in transit. The donkeys had been transported on

trucks. Two more project donkeys died of unknown causes.

Apart from these projects there are no other reports of donkey sources in Zambia. It is reported that most donkey owners acquired their animals from their relatives across the borders in Zimbabwe and Botswana, either through barter, direct purchase or as gifts or inheritance. Most of the donkeys in Gwembe South are still acquired by bartering. Sometimes one heifer is exchanged for two donkeys or five goats for one donkey.

The reasons for the low donkey population in Zambia are not known. Though not supported by documented evidence, some staff of the Ministry of Agriculture remember that more than 20 years ago the Zambian Government had imported donkeys from Botswana into the Western Province. These apparently perished in large numbers from unknown causes. Many people were not accustomed to rearing donkeys and others did not want them because they were not multipurpose animals, since they were not used for meat, milk, or bridal worth (lobola). More recently, some farmers in Central Province resisted replacing their dead cattle with donkeys. These farmers argued that they were used to cattle and traditionally cattle fitted better into their farming systems than donkeys (Mwenya, 1994).

Despite these hindrances to the adoption of donkey power, responses from donkey owners in Southern and Western Provinces show that donkeys are now highly valued. This is evident from the fact that, when an agricultural project attempted to purchase donkeys from these areas, the owners were not willing to sell their animals, even during times of hunger. Most farmers owning donkeys would not sell their animals because they felt they did not have enough to spare. Even those owning ten donkeys wanted to own more. The largest population of donkeys is found in the Gwembe Valley of Southern Province, where they have been in use for some years. They are also found in the Western Province. They have mainly been used as pack animals, and to a lesser extent for cultivation. Women farmers are becoming especially interested in donkeys. This is because they are much easier to handle then oxen. Indeed, donkeys are often regarded as women's animals (Starkey, 1994). The increasing popularity of donkeys has also resulted from the perception that they seem more drought and disease resistant than cattle.

Donkey traction promotion

Several projects have promoted donkeys during the last two years in different parts of Zambia. These are the Dundwa project in Macha, Southern Province, Masese Project in Sesheke District of Western Province, and Palabana Project in Lusaka Province. These projects have encouraged the use of donkeys among local communities as pack animals, for traction and for tillage. The Masese Project has been involved in harness-making while the Palabana Project has been working on a curriculum to train extension workers in the use of donkeys.

Generally, farmers in Zambia are not familiar with the use of donkeys and the government has to consider educating them in addition to importing donkeys. They have to be educated in the kind of work donkeys can do, since these small animals do not have the same strength and capacity as oxen. Farmers also need to know about methods for harnessing donkeys, which differ substantially from those used for oxen. This requires considerable extension work, utilising the combined efforts of the Departments of Agriculture and Veterinary Services.

The initiative to promote or introduce donkeys to Zambia can be credited mainly to individual farmers and NGOs who started acquiring donkeys from within and outside Zambia. Some farmers and projects procured donkeys from the Western and Southern Provinces of Zambia where the donkey population is relatively high. Beginning in 1991 the Royal Netherlands Government and Government of Zambia projects (National Animal Draft Power Coordination Programme and the Palabana Animal Draft Power Development Programme) started studying ways to improve both the use of donkeys within Zambia and the supply of donkeys from other countries.

In collaboration with the Animal Power Network for Zimbabwe (APNEZ) and the Animal Traction Network for Eastern and Southern Africa (ATNESA) country representative in Botswana, two study tours were conducted to Zimbabwe and Botswana. During these tours the main objectives were to assess the potential and alternative uses of donkeys. This experience, combined with the rising demand by farmers for donkey power in Zambia, challenged the promoters of animal traction in Zambia to find ways of intensifying donkey use. A recommendation was made to

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increase the donkey supply through importation (Mwenya et al, 1994).

Importing donkeys

The study tour report showed that both Zimbabwe and Botswana had many donkeys that could be purchased. Three places were visited in Zimbabwe and two in Botswana. Binga region in Zimbabwe was considered most desirable for purchasing donkeys because of its proximity to the Zambian border. Initially, it seemed that sufficient donkeys (150) could be purchased in Binga. Zimbabwean government officials from Agritex, however, refused permission to purchase donkeys in Binga because they considered it a donkey deficit area and already had plans to import more donkeys into Binga from other parts of Zimbabwe. However, Gwanda and Beitbridge were recommended as sites for the purchase of donkeys. These districts are 600 km and 740 km respectively from the Zambian border town of Livingstone.

Binga had been favoured because of the possibility of walking the donkeys to Zambia from there. Some literature and experts consulted strongly advised that the best way to transport donkeys was by walking them and not by using trucks, since many may die from the stress of truck transport. This was in accord with reports of 65 donkeys earlier imported into Zambia between 1990 and 1994, where 13 (about 20%) died in transit or immediately after arrival. Hence transport of donkeys became the first challenge in the importation exercise.

Challenges during importation

The success of bringing donkeys into Zambia from Zimbabwe depended on several factors. These included organisation of farmers, selection of suitable donkeys, transportation of donkeys to central points for quarantine before export, quarantine on arrival in Zambia and transport to the intended beneficiaries.

Organising farmers to sell their donkeys is one of the important tasks that has to be arranged well in order for the exercise to succeed. The local authorities such as extension workers, veterinary officers, police and village headmen should be involved. Local extension workers who are known to farmers are better able to organise communities and it is important that a veterinary officer provides assurance that the area from which the donkeys come is free of disease, since he/she must furnish animal movement permits.

The police and village headmen are important to ensure that farmers are not selling stolen donkeys. The Zambian team in the company of Agritex and veterinary officials in Zimbabwe found it difficult to organise the farmers. The methods used included announcements at primary schools and the district council and village development committees. But the response was so low that after two weeks only one fifth (30 donkeys) of the intended target number of donkeys had been procured. The main problems in Gwanda appeared to be certain village leaders who encouraged farmers to demand high prices, nearly twice the normal rate, for their donkeys. Farmers were also told not to sell as individuals but to bargain with the foreigners as a group. This became a second challenge for the Zambian team.

The importing team had two alternatives: either to stop the exercise or continue but buy fewer animals. If the exercise had to stop how was the team going to address the expectant recipients in Zambia? Would they have to admit that donkey import was not feasible? The importing team decided to continue trying to purchase animals, hoping the situation in Beitbridge would be different from that in Gwanda. Unfortunately, newspaper articles announced the high prices that had been paid for donkeys in Gwanda, thus encouraging the Beitbridge farmers to likewise raise prices. Eventually the Zambian team succeeded in purchasing 89 donkeys.

During purchase, it was always necessary for a veterinary officer or animal husbandry specialist to verify the condition and age of the donkeys. Some donkeys may look young and yet they are old. Old donkeys have been reported to have a lower survival rate during and after transport. Checking tooth wear provided a rough indication of the age of the donkeys. The donkeys were expected to be between the ages of three and five years, constitutionally fit without any defects, particularly of the limbs, and without visible signs of illness. Ideally only young donkeys should be purchased, free of disease. However, farmers encountered during this import exercise were reluctant to sell their younger donkeys, which they valued highly, and preferred to try and sell old and unhealthy animals.

After purchase, the donkeys were transported to a central collection point. Two to three days were sometimes required before sufficient numbers of animals were purchased in one location to make

truck hire cost-effective. In some cases, rather than wait for truck transport, people were hired to walk the donkeys to the central collection point. This method entailed the risk of the people disappearing with the donkeys or falsely claiming the death of donkeys en route. Such risks were minimised by hiring only persons well known to the local leaders and police. When transporting by truck, the loading and unloading of donkeys was an important part of the exercise. Since, unlike cattle, donkeys may resist being led on and off a vehicle, a number of people were needed to assist in the loading. Loading of recalcitrant donkeys was accomplished by various methods, including pulling donkeys by the ears and lifting them into the trucks. Sometimes it took approximately one and half hours to load ten donkeys and the same amount of time to unload them.

While at the central collection point the donkeys were quarantined and observed by a veterinary officer. The buyer arranged for watering and feeding of the donkeys in quarantine. Taking the donkeys for grazing appeared to be most appropriate as they were animals not familiar with commercial food. However, it was feared that any person employed to look after the animals might find it difficult to handle donkeys not yet accustomed to him, and some animals could stray or attempt to return to their former homes. Therefore, one or two people, depending on the number of donkeys involved, were hired to cut grass and bring it to the paddocks. Payment for this service varied, as some persons charged per animal fed while others were simply paid on a daily basis. When paying per animal, the cost for this type of feeding was about 0.1% of the initial purchase price, per day. Paying labourers on a daily fixed basis was slightly cheaper.

After completing quarantine procedures and obtaining export/import permits, the donkeys were transported, either by foot or by truck. For trucked donkeys, adequate food and water was provided the day before transport. Open trucks were avoided as donkeys tended to be very nervous when looking outside from a moving vehicle. Raising the sideboards on the trucks is recommended for donkey transport. Time of day at which to transport is another important aspect. It is better to transport donkeys by truck when it is cool and preferably dark. Donkeys should not spend more than 24 hours travelling in the truck to the next quarantine station. By adhering to such guidelines the Zambian project managed to transport 89 donkeys, including four foals between six and eight months of age, over a distance of more than 650 km without losing a single donkey.

Quarantine arrangements

The donkeys were quarantined in Zimbabwe for six to eight weeks; no deaths were reported during this time. While in quarantine in Zimbabwe the donkeys were subjected to tests and treatments where necessary. They were said to have been purchased from areas free from diseases such as foot and mouth disease, African horse sickness, equine influenza, dourine, epizootic lymphangitis, equine rhino pneumonitis and glanders. Health checks were performed, including documentation of their health, vaccination history, and a general clinical examination. Serum samples were collected by both the Zimbabwean and Zambian veterinarians to test for the above mentioned diseases. A few donkeys were turned away because of poor health. Many donkeys had wounds resulting from mechanical injuries; those with extensive wounds were turned away. The ones that finally satisfied the Zambian import conditions were then subjected to treatment against worms, babesiosis and external parasites in readiness for departure to Livingstone, Zambia.

All the donkeys arrived at Livingstone in good health. The donkeys stayed in quarantine in Livingstone for six weeks due to a foot and mouth disease outbreak which occurred at the time. They adapted easily to the Zambian environment. Only one donkey fell ill during this period but recovered promptly upon treatment. Three were found to have aborted in the first two weeks of their stay but this was attributed to the stress of movement.

Although animals may have acquired immunity to the diseases of their native areas, when they are moved to a new environment they may face new disease organisms to which they have no resistance. This can lead to illness and death if animals are not properly protected. Imported donkeys were treated against both external and internal parasites and against some common tick borne diseases. The disease challenges they received in Livingstone were probably similar to those in Zimbabwe, given the similar climatic and environmental conditions of the two locations. Other parts of the country, however, proved more difficult for the donkeys. In Eastern Province, four

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out of 24 donkeys died in the first few weeks after being sent there.

Onward transport

Following quarantine the donkeys were distributed to various projects in Zambia, with the nearest project being 200 km from the quarantine site. The furthest distance was over 1000 km. Methods of transport included walking the animals and transport by trucks and by rail. Three donkeys sent to the IFAD smallholder project in Lundazi (situated over 1000 km from the quarantine station in Livingstone) died, two in transit and one after arrival. The causes of these deaths can be attributed to stress and the type of truck the project used. The truck was open and the animals travelled almost two days without food or water. The other donkeys all arrived safely at their destination. One project located almost 700 km from the quarantine station transported 14 donkeys by rail. The journey took more than 13 hours but all animals arrived safely.

Conclusions

Several farmers, farmer groups, and projects in Zambia have taken a keen interest in the importation of donkeys. Some farmers have individually approached the Ministry of Agriculture for permits to buy donkeys from Zimbabwe or Botswana. The number of donkeys these farmers are interested in purchasing ranges from two to six donkeys per farmer. Veterinary regulations of Zambia stipulate that these farmers acquire donkeys from specific disease free areas. On arrival, donkeys are expected to be quarantined at the point of entry for at least 21 days. Depending on the assessment of the individual donkeys, the quarantine period might be less. However, both quarantines, in the country of export and import, will require some financial provision to pay for feeding and watering the animals.

The whole procedure of purchasing, transporting and quarantining donkeys was quite expensive and could pose a major problem for individual farmers. There would be economies of scale if donkeys could be imported in groups so that transport vehicles were used at full capacity. Most important at present is to concentrate on improving reproduction in the donkeys that have already been imported, as a successful breeding programme will hopefully render imports unnecessary in the future.

The Ministry of Agriculture's role in the importation of donkeys is important since it can liaise with counterparts in the neighbouring countries to obtain information pertaining to potential donkey surpluses, disease situations and pricing. The challenges experienced by the Ministry of Agriculture during the importation of 89 donkeys is a lesson for future importers.

References

Mwenya E, 1994. *Tour report: Central Province. National Animal Draft Power (ADP) Coordination Programme*, Ministry of Agriculture Food and Fisheries, Lusaka, Zambia. 4p.

Mwenya E, Sichembe H, Phiri G B M and Songolo A, 1994. *Report on donkey study tour of Zimbabwe and Botswana*. National Animal Draft Power (ADP) Coordination Programme, Ministry of Agriculture, Food and Fisheries, Lusaka, Zambia.

Starkey P, 1994. A world-wide view of animal traction. pp. 66-81 in: Starkey P, Mwenya E and Stares J (eds), *Improving animal traction technology*. Proceedings of the first workshop of the Animal Traction Network for Eastern and Southern Africa held 18-23 January 1992, Lusaka, Zambia. Technical Centre for Agricultural and Rural Cooperation (CTA), Wageningen, The Netherlands. 490p. ISBN 92-9081-127-7

