

A note on improving animal-drawn transport in Uganda

by

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Introduction

Access to animal-drawn transport can offer a simple, manageable and affordable improvement over existing methods of transport, particularly human head-loading. Ownership of a cart or the ability to hire one frees farmers from dependence on tractor services, which are in most cases unreliable and costly.

In villages remote from the road system lack of efficient transport for farm activities results in a considerable loss of potential cash income for farmers. Existing methods of transport are often arduous and time consuming and restrict the ability to produce and consequently limit the incentive to produce more.

Ox-drawn transport alleviates women's drudgery

Over 75% of women in Uganda carry out agricultural work. During harvesting of farm produce a pair of oxen is used to transport farm produce to the store instead of the women carrying baskets on their heads. Produce is also transported from the store to market using oxen. Fuelwood is sometimes transported using oxen, rather than by women, and as some is sold for cash, animal draft power is an income-generating activity. Building materials, such as grasses, which would normally be carried by women can be carried on ox carts, or ox-drawn sledges.

Reduced wear on agricultural implements

Ox plows can be carried to and from the field on sledges or carts, saving the wear that would occur if the plow was pulled along the ground.

Carts

Two-wheeled carts drawn by oxen and donkeys are used commonly for farm transport in the northern part of Uganda and generally in the rest of the country. They have a considerable potential for more widespread use since they:

- are capable of meeting rural movement requirements efficiently
- are affordable and socially acceptable

are not restricted to use on motorable roads can be made widely available because of their low capital cost.

A well-designed cart greatly increases the load that can be moved by animals in comparison with that which can be carried on their backs or pulled on a sledge. Carts should be lightweight yet strong, have efficient wheel/axle systems that are simple to manufacture, and be equipped with an efficient means of harnessing the animals. Experience has shown that if such devices are to be produced and used successfully then they must be:

- adapted carefully to local operating conditions in terms of terrain, type of use and the characteristics of indigenous draft animals
- designed to take account of local production conditions in terms of the availability of components, materials and manufacturing skills
- manufactured in a way and on a scale that matches the capability of local industry
- marketed at a price people can afford with credit available if necessary.

Two-wheeled carts pulled by a pair of oxen are the most common type of animal-drawn cart in Uganda. Two-wheeled carts are relatively simple to make, cheap to purchase and easy to manoeuvre and control.

Double neck yokes can be left permanently attached to the shaft of a cart. For transport use it may be advantageous if the width of the yoke is equal to the wheel track of the cart. This means that the animals walk directly in front of the wheels and are therefore likely to avoid objects that may obstruct or puncture a tyre.

Use of donkeys for transport

Donkey utilisation is being introduced in Uganda, but less than 10% of farmers in the region have started using donkeys. Farmers that do use donkeys use them as pack animals for transporting fuelwood, water and farm produce.