

# CHAPTER 5. TRANSPORT AND LAND FORMING

## 5.1 FARM CARTS

### 5.1.1. TYPES OF FARM CART AND THEIR MAINTENANCE

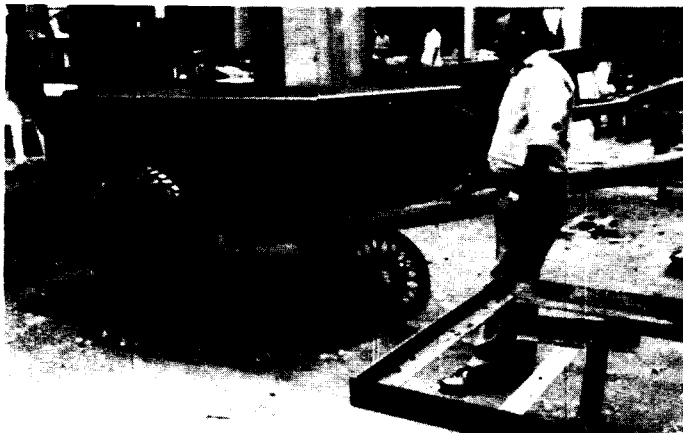
#### TYPES OF CART MADE IN MALAWI

Two main types of farm cart are made in Malawi and they differ principally in the choice of raw material used for their construction. The larger manufacturers, of which three currently make carts, use imported steel sections which are bolted together for the platform frame. This is available either as welded metal sheet or, more commonly, wooden boards for the platform and the sides. The stub axles and hubs are purpose built and bolted to the underside of the frame (Fig.1).



*Fig. 1 Two-wheel cart designed for use with a pair of oxen, manufactured by Petroleum Services (Malawi) Ltd. Photo: J.E. Ashburner*

The second type of cart is made by several different groups of artisans in Malawi. It uses recycled steel sections but the overall design is similar. The running gear is often made from used Land Rover stub axles which are welded to an axle section. In this case, the axle itself should be bolted rather than welded to the cart frame so that it may be easily removed in case of repair (Fig.2).



*Fig. 2 Ox cart made by Bwaila Carpentry Association, Lilongwe. It is fitted with used Land Rover stub axles bolted to the frame.*

*Photo: J.E. Ashburner*



*Fig. 3 An open frame cart made by Brown and Clapperton for logging in the Viphya forestry plantation.*

*Photo: J.E. Ashburner*

Carts designed with an open frame are used in some forestry programmes in Malawi although within the forest, a yoke is employed. One such model of cart is illustrated above (Fig.3).

#### **TYPES OF CART MADE IN WEST AFRICA**

The platform type of cart made in many countries of West Africa was originally manufactured by the company which is today, SISMAR in Senegal. The sides are detachable and the running

gear is custom built and fitted with 145 x 14 tyres. The smaller size cart is used with single donkeys whereas a larger model is designed for pulling with a pair of oxen (Fig.4).



*Fig. 4 A platform type ox cart in Burkina Faso, similar to many designs made in West Africa.  
Photo: Paul Starkey*

The second type of cart used in West Africa consists of a low slung box mounted between the wheels, designed for carrying bulk materials. It is made of sheet metal and the front and rear sides are removable for carrying longer loads (Fig.5).



*Fig. 5 A heavily loaded box type donkey cart made in Burkina Faso, designed for carrying bulk loads.  
Photo: J.E. Ashburner*

**MAINTENANCE OF FARM CARTS**

The farm cart is likely to be used throughout the year and periodic maintenance will ensure that it is kept in good running condition.

Nuts should be routinely checked for tightness, particularly the wheel nuts and those holding the axle unit to the body. The wooden parts should be checked for splitting and repaired as required. Paint will provide protection from the elements.

The tyre pressures should be regularly checked and inflated as the occasion arises, for instance during visits to the market.

Once a year the cart should be taken to the blacksmith for greasing the wheel bearings and adjusting for any play. The complete hub assemblies should be removed, cleaned in petrol, dried and reassembled with adequate grease being applied (Fig.6).

Always ensure that the grease cover is correctly in place and carry out immediate repairs if it becomes damaged so as to protect the bearings.



*Fig. 6 Applying grease to the wheel bearings of the cart.*

*Source: FAO, 1991*