

CHAPTER 2. HARNESSING AND TRAINING

2.1 HARNESSING OF DRAUGHT CATTLE

2.1.3 MAKING THE HEAD YOKE

INTRODUCTION

The head yoke is commonly used with draught cattle derived from breeds such as N'Dama and Holstein which have short necks but no pronounced humps. It is also sometimes used with water buffalo. The head yoke is used for logging operations in some countries (Fig.1) and for continuous cart transport where the positive attachment to the animals can have certain advantages.

The head yoke is attached to the horns and is shaped to fit closely behind and, on top of, the animal's head. It has occasionally been referred to as a neck yoke, but this term is not preferred as it can be easily confused with yokes which are fitted over the withers or shoulders of the animal (called here, the shoulder yoke).

As with the shoulder yoke, several different designs are used throughout the world and tradition plays a major role as to the precise shape adopted in a particular region. Several different examples are illustrated below (Fig.2).



Fig. 1 A head yoke in use for logging in Malawi.

Photo: Paul Starkey

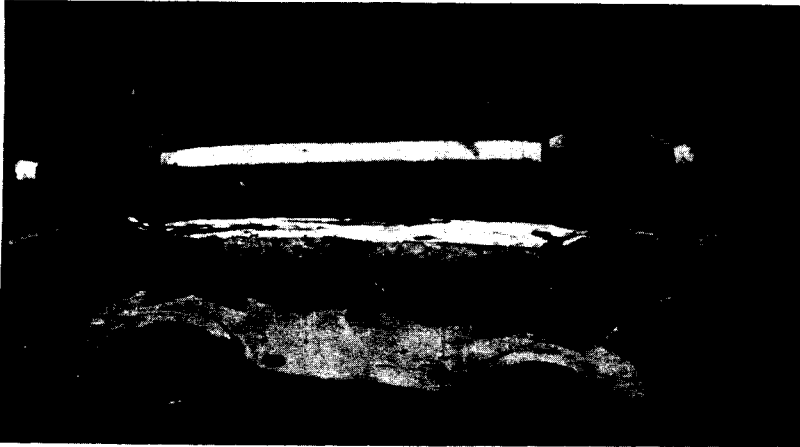


Fig. 2 A selection of head yokes used in the Andean region of Ecuador.

Photo: J.E. Ashburner

ESSENTIAL FEATURES OF THE HEAD YOKE

Although head yoke designs may vary, two features should be carefully checked when inspecting a yoke used by the farmer:

- the head yoke holds the animal's head very firmly. Check that the position adopted by each animal looks reasonable comfortable. Remedial action may well be necessary;
- observe the yoke when in use and inspect the point of attachment of the trek chain to the beam. Make sure that when the animals are pulling, the yoke does not tend to rear or bow the head of the animal. The load should be seen to be evenly carried along the neck of the animals without them taking up an-awkward (and hence tiring) posture.

CHOOSING THE LENGTH OF YOKE REQUIRED

The choice of yoke length depends both on the nature of the operation to be performed and on the size of the draught cattle. When primary and secondary tillage, planting, weeding and transport will all employ the use of draught animals, it is wise to plan row spacing and yoke size so as to reduce the total number of different yokes which will be needed.

A total of three yokes measuring 90 cm, 135 cm and 180 cm will enable all these operations to be carried out in row spacings of 30 cm, 45 cm, 60 cm, 75 cm and 90 cm. Their specific use is described in the Modules which follow (Chapter 4).

Although these three different yokes are recommended during this training course, other sizes may be of greater use where normal row spacing or the size of animals differ considerably. As a general rule, yoke lengths should closely correspond as is suggested in the following table:

OPERATION	YOKE LENGTH SUGGESTED	COMMENT
Ploughing	90 cm	75 cm is common in West Africa
Planting	<u>EITHER</u> : 3 x row width <u>OR</u> : equal to the row width	eg. 135 cm for 45 cm rows; 90 cm for 90 cm rows, etc.
Inter-row weeding	Double the row width	<u>NOTE</u> : the 135 cm yoke can weed rows of either 60 cm or 75 cm without trampling the plants
Ridging	Double the row width	<u>NOTE</u> : the 135 cm yoke can also work with the ridger in rows of either 60 cm or 75 cm
Transport	135 cm	<u>NOTE</u> : shorter yokes of 110 cm or 120 cm are sometimes used, but these do not match the row spacing of 75 cm

Table 1. Choice of yoke length

MAKING A WOODEN HEAD YOKE

Having considered the size of the yoke which is required, a stout log should be cut to about 90 cm longer than the nominal length. The carpenter can then shape the head pieces and provide notches for the rope or straps which will bind it to the animal's horns.

A very simple design from Latin America is illustrated below (Fig.3) together with an experimental yoke which can be adjusted (Fig.4).



Fig. 3 A head yoke as used in the Sierra region of Ecuador.

Photo: J.E. Ashburner



Fig. 4 An experimental head yoke developed in Ecuador which allows rapid adjustment of the nominal length with the adjustment clamps on the metal tube.

Photo: J.E. Ashburner