

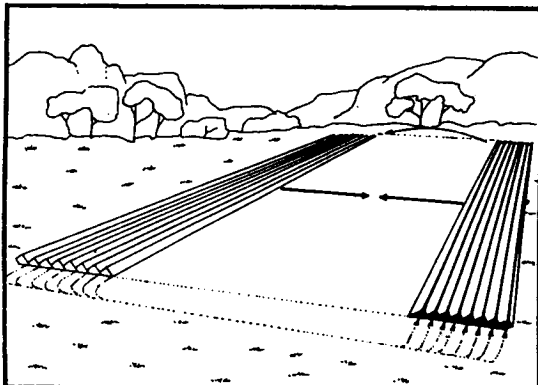
CHAPTER 3. SEEDBED PREPARATION

3.3 TECHNIQUES OF PLOUGHING

3.3.4 METHODS FOR MAKING OPENING FURROWS

INTRODUCTION

A level field with complete surface burial can only be achieved if both the opening and closing furrows are made correctly. Few farmers achieve this in practice and uneven surfaces may frequently be observed.



The correct techniques depend upon how the field is to be ploughed. The "casting" method starts along the outside of the field, working towards the centre. The "gathering" method commences from a crown made in the middle of the field and working towards the borders (Fig.1). The

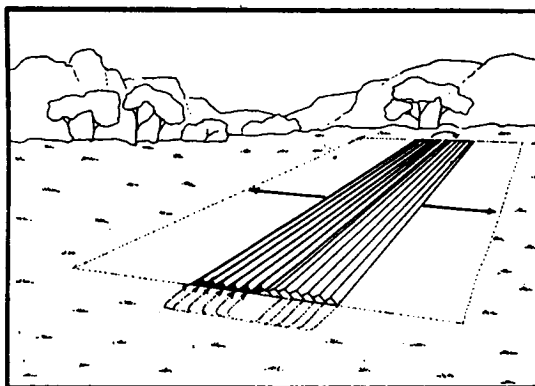


Fig. 1 The "casting" method (above) and "gathering" method (below) for ploughing a field.

Source: AETC, 1986

techniques for starting to plough a field are different for the two methods.

STARTING "CASTING" WITH A SINGLE FURROW

If the border of the field is straight, a stake should be placed at each corner just inside the border to line up the opening furrow.

For an irregularly shaped field following the contours, it should be possible to follow the border without the use of stakes.

The opening furrow is made in a clockwise direction, throwing the soil towards the inside of the field. The plough is set to work shallow, only cutting to a depth of about 8 centimetres (Fig.2).

NOTE: THE OPENING FURROW WITH A REVERSIBLE PLOUGH SHOULD ALSO BE PREPARED IN THIS MANNER.

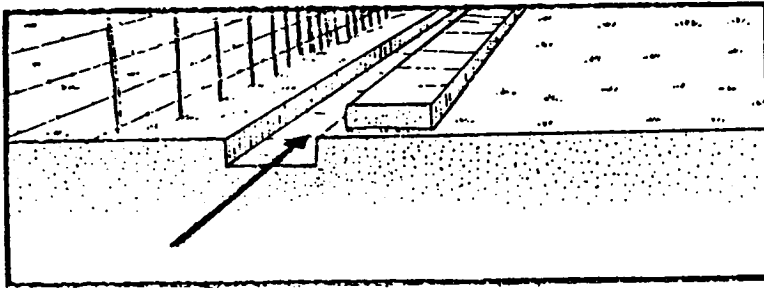


Fig. 2 The opening furrow is shallow when "casting" and throws the soil towards the centre of the field.

Source for Figs.2 & 3: AETC, 1986

The second run is made in the opposite direction with the plough set to normal depth (about 15 cm). The objective is to undercut the previous sod and turn it over into the opening furrow (Fig.3).

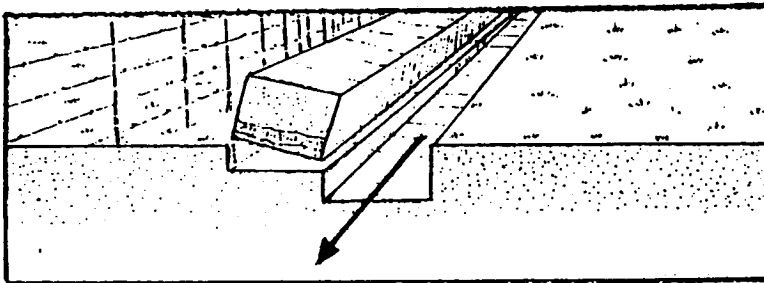


Fig. 3 The second run is made with the plough at full depth. It undercuts the sod and turns it back into the furrow. Ploughing in the "casting" pattern then proceeds normally.

OPENING WITH A DOUBLE SPLIT WHEN "GATHERING"

Sighting stakes will be found necessary for this operation and they should be placed down the middle of the field or "land" as shown (Fig.4). Carefully cut the first shallow furrow (about 8 cm in depth).

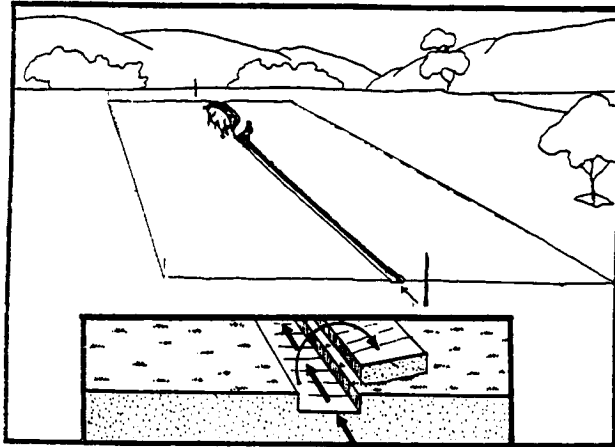


Fig. 4 Firstly mark out the run for the opening furrow when "gathering" (left). Then cut a very shallow furrow for the first run of the double split (right)

The return run is made throwing the soil to the other side with the plough pressed slightly deeper to form the "double split" (Fig.5).

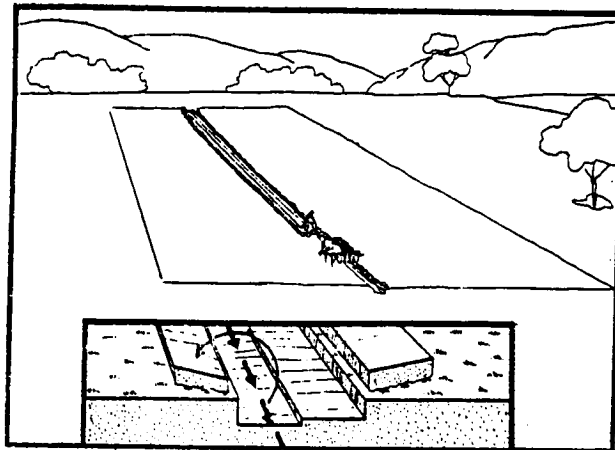


Fig. 5 The second run of the double split should be slightly deeper than the first run, pressing on the handles.

Sources for Figs.4 & 5: AETC, 1986

FORMING THE CROWN WHEN "GATHERING"

The third run is made at full working depth and undercutting the second run just made. One side of the crown is formed (Fig.6).

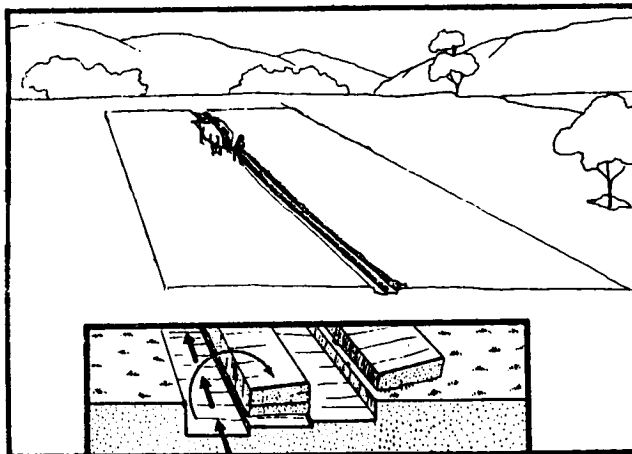


Fig. 6 The third run at full depth makes part of the crown.

Source for Figs.6 & 7: AETC, 1986

Now the final run, at full depth, undercuts the first sod and forms the completed crown (Fig.7). Normal "gathering" may be continued

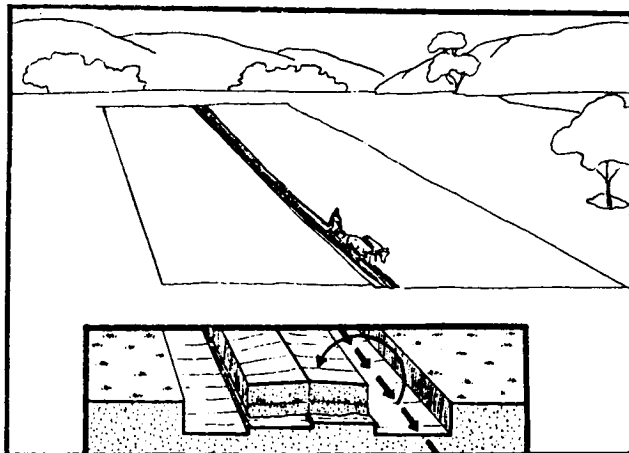


Fig. 7 This fourth and final run, turns the first sod back over and forms the crown. Normal ploughing in a "gathering" method may now proceed, maintaining the field level.