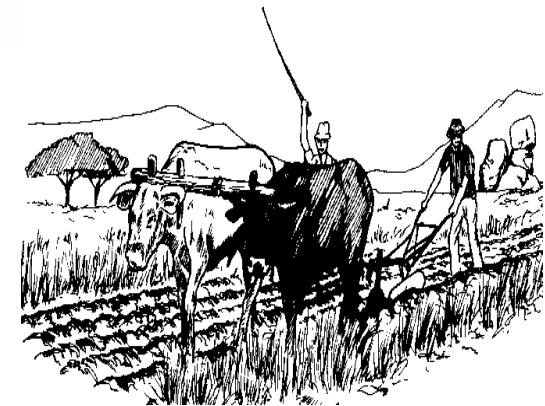
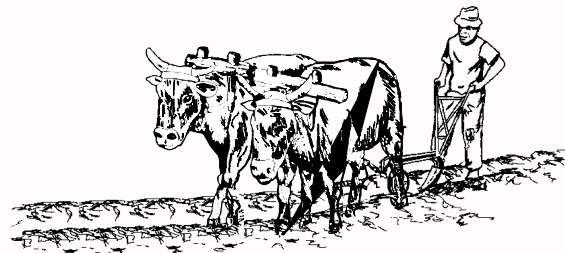
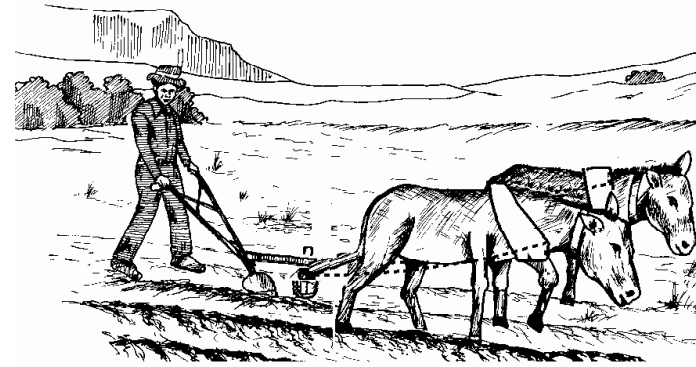


LAND PREPARATION, SOIL AND WATER CONSERVATION, CROP ESTABLISHMENT AND WEED MANAGEMENT

MODULE 3: CROP ESTABLISHMENT



This is the third of 7 training modules

A GROUP EXTENSION GUIDE USING PICTURES

Cotton-maize - 1 - Module 3: Crop establishment

PICTURE CE1: THIRD FURROW PLANTING

Question: Do you recognise what this picture is?

Answer: Planting in every third furrow, often combined with ploughing after the rains have arrived to save time.

Explain

Third furrow planting is a traditional planting method that is combined with late spring ploughing. The whole field is ploughed and the seed and fertiliser (or manure) is dropped behind the plough, in every third furrow only. **It is usually carried out after the first rains and is suitable for maize only and not cotton.**

When to use Third Furrow planting

- When the rains arrive and you have access to draught animals and a plough.
- If you want early crop establishment.
- When you want to plant along the contour.
- When you do not have draught power shortages and want to have a weed free seed bed.



Cotton-maize - 3 - Module 3: Crop establishment

PICTURE CE2: OPEN PLOUGH FURROW PLANTING

Question: Do you recognise what this picture is?

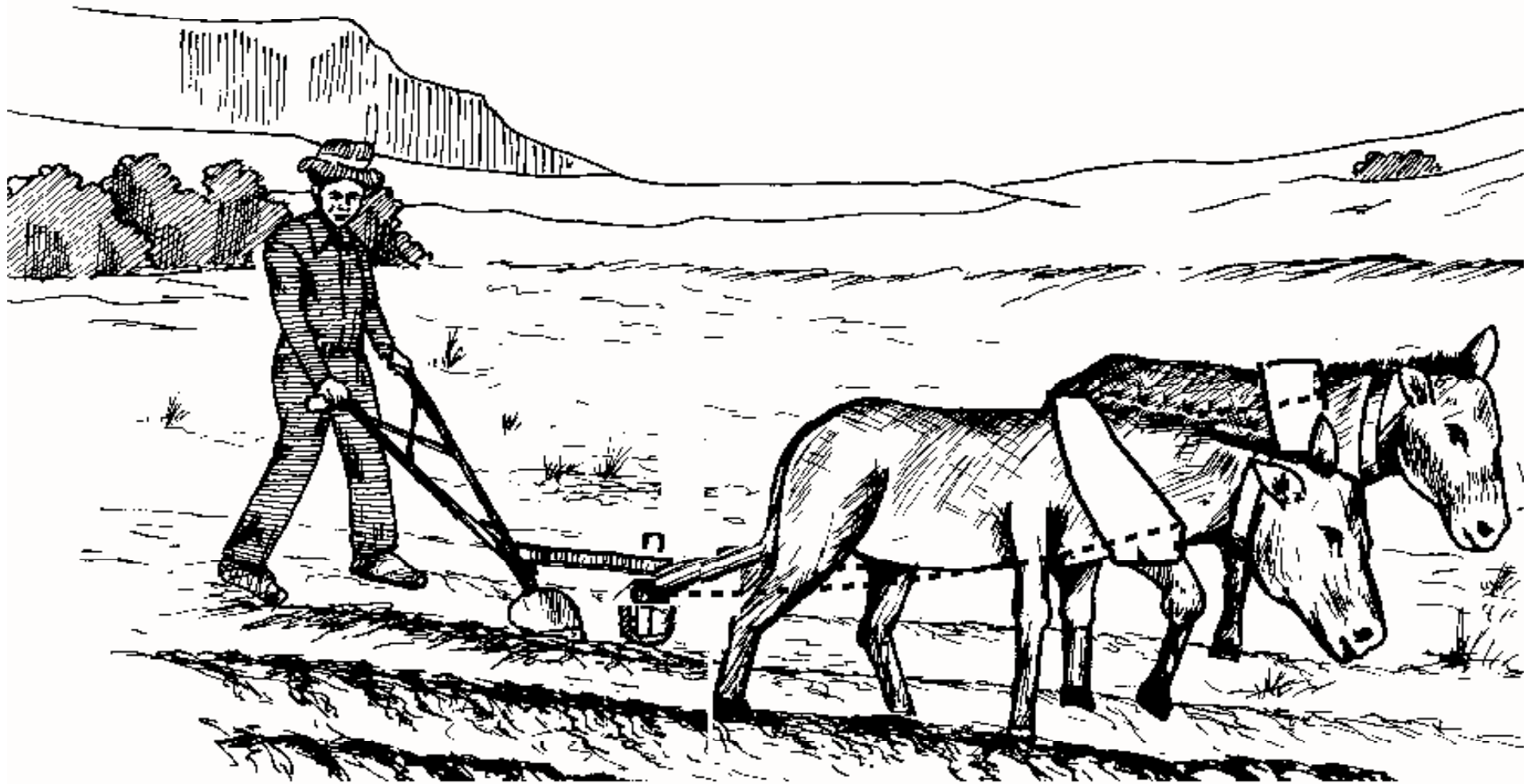
Answer: Open Plough Furrow Planting of cotton or maize.

Explain:

Open Plough Furrow Planting is a traditional cultivation and planting method. Only planting lines are opened with a plough and the seed and fertiliser (or manure) is dropped into the furrow behind the plough. The furrow is then covered with soil using a plough or a hoe. The system does require the use of draught animals, but planting can be carried out just prior to the rains in Natural Regions II and III, or as soon as possible after the first spring planting rain in Natural Regions IV and V.

When to use Open Plough Furrow planting

- When the rains arrive and you have access to draught animals and a plough.
- If you want early crop establishment.
- After opening the planting furrow and applying the fertiliser, drop the seed mid way down the furrow slice.
- A single animal can be used if a full team is not available. If a single animal is used it must be harnessed properly.
- For small seeded crops like cotton or sorghum, which do not have to be planted very deep, some farmers remove the dish (mouldboard) from their plough and use the plough share to make the planting lines.



PICTURE CE3: RIPPER PLANTING

Question: Do you recognise what this picture is?

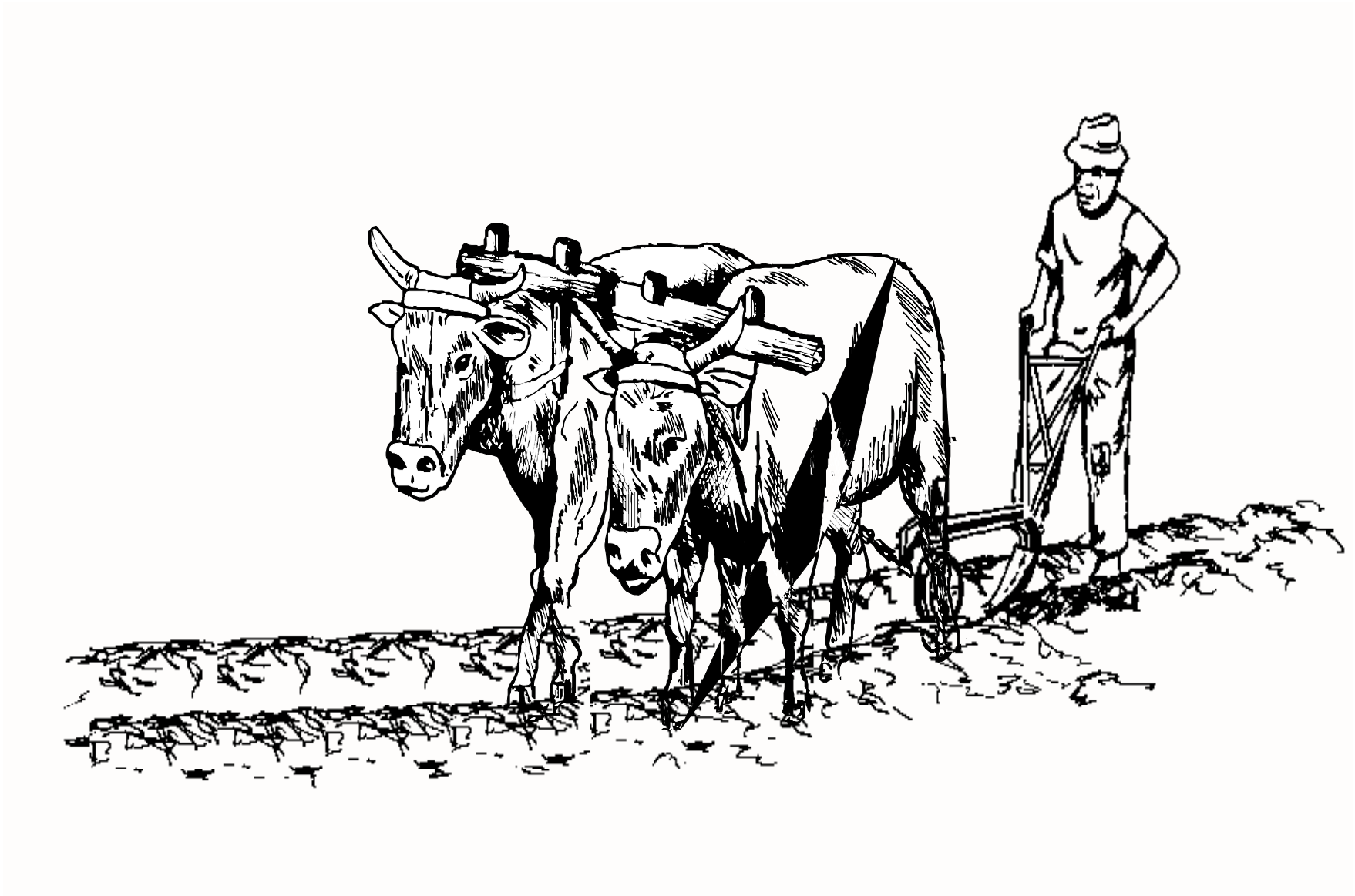
Answer: Ripper Planting.

Explain

Ripper planting is a low input tillage system which can help conserve soil moisture, reduce soil erosion and improve soil structure. A **Ripper Tine** can be used to open a planting line for easy crop establishment. A ripper tine requires less draught power than a plough and can provide good soil conditions for rooting by breaking hard layers in the soil, which are called '**Plough Pans**'. Crops can be quickly established on previously cropped or fallowed land. This system can save draught animal power and labour at planting time and conserves soil moisture for improved yields.

When to use Ripper planting

- When the rains arrive and you have access to draught animals and a ripper tine.
- If you want early crop establishment.
- When you want to plant along the contour.
- When you have draught power shortages and want early crop establishment.
- When land has been winter ploughed and left fallow during the winter



PICTURE CE4: HAND PLANTING

Question: Do you recognise what this picture is?

Answer: Someone planting by hand

Explain

Hand planting can be carried out by everyone. It is a technique that allows crops to be planted on ploughed or fallowed land. The system does not require the use of draught animals and allows people to carry out planting when they have time.

When to use hand planting

- When the rains arrive and you have no draught animals.
- If you want early crop establishment.
- Any time you face draught or power shortages.

