



BAL BHARATI PUBLIC SCHOOL, PITAMPURA, DELHI – 110034

SUBJECT:- Biology

Class 8

CHAPTER:-Crop Production and Management

TOPIC: Preparation of Soil

Guidelines

Dear Students

- Please refer to the following content of the chapter – **Crop Production and Management** - and do only assignment questions in the Biology notebook.
- You may follow the given link to refer to Class 8 Science NCERT

http://ncertbooks.prashanthellina.com/8_Science.html

Sub Topics

1. Preparation of soil

Ploughing or Tilling (loosening of the soil)

Levelling

2.Sowing

Method of selection of healthy seeds

Agricultural Implements for sowing

1. Preparation of Soil

• **PLOUGHING.** One of the most important tasks in agriculture is to upturn the soil and loosen it. The process of loosening and turning the soil is called **tilling or ploughing**.

Importance of loosening the soil

- Allows the roots to go deeper into the soil and breathe easily (allowing air to reach the roots - **aeration** of soil)
- Helps in growth of microbes and earthworms that add humus to the soil and upturn and loosen the soil further.
- Nutrient-rich soil comes to the top and can be used by plants.

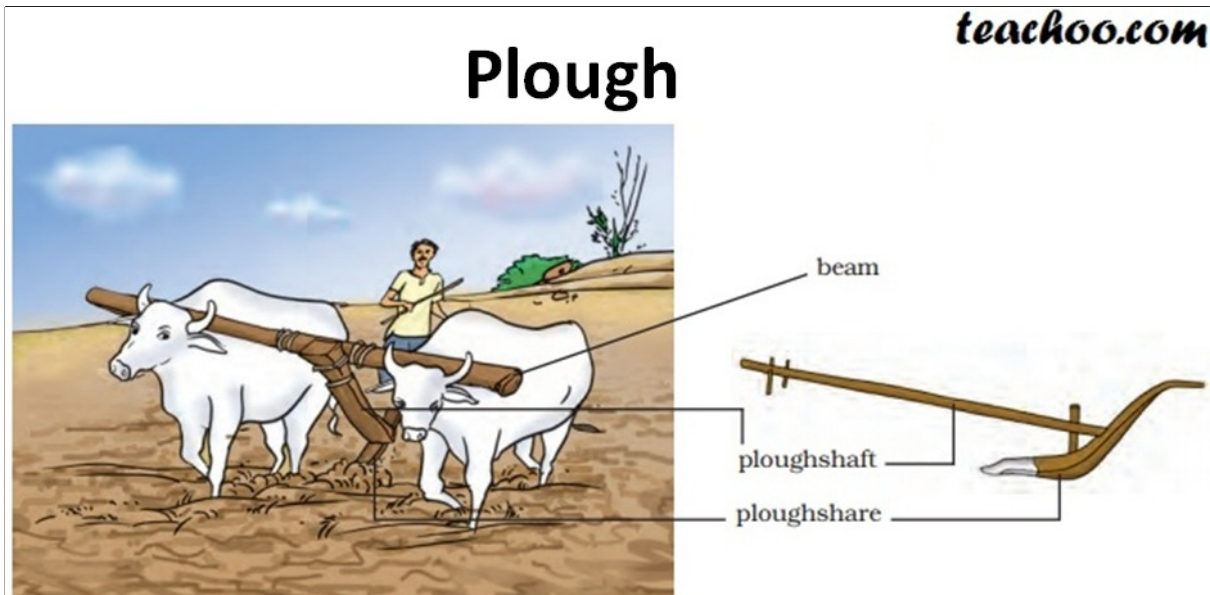
AGRICULTURAL IMPLEMENTS (TOOLS) USED

PLOUGH: The process of tilling or ploughing is done by a plough.

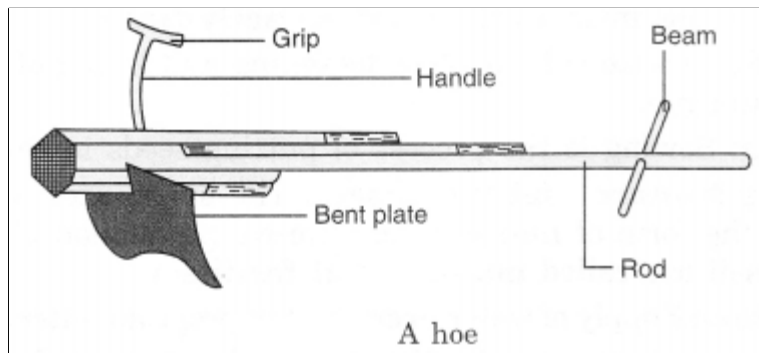
- Ploughs are made of wood or iron and are drawn by a pair of bulls or other

animals (horses, camels, etc).

- It contains a strong **triangular iron strip** called **ploughshare**.
- The **main part of the plough** is a long log of wood which is called a **ploughshaft**.
- The **last part** is attached to a beam which is placed on the **bulls' necks**.



>**HOE**: It is a simple tool which is used for **removing weeds and for loosening the soil**.



>**CULTIVATOR**: Nowadays ploughing is done by tractor driven cultivator.



Advantages of Cultivator: The use of cultivator saves labour and time.
Please refer to the links and look at the videos twice for better understanding.

<http://smartpathshala.com/signup>

www.youtube.com › watch

• LEVELLING

After tilling, levelling is done in which the field is levelled for sowing as well as for irrigation purposes.

The process of levelling is done by leveller.

2.Sowing: Sowing is the most important part of crop production.



Which kind of seeds should farmers use?

Farmers should use **good-quality seeds** that are **clean, healthy and give high yield**. Selection of the right variety of seeds depends on the soil, climate, irrigation method and other regional factors.

ACTIVITY TIME :

Take a beaker and fill half of it with water. Put a handful of seeds and stir

Seed selection is done by soaking the seeds in a beaker containing water.



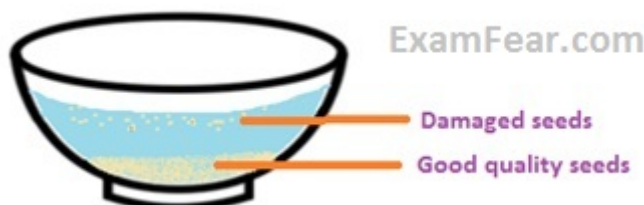
well .Wait for some time,

Observation:

Some seeds float on water and some seeds sink in water.

Conclusion:

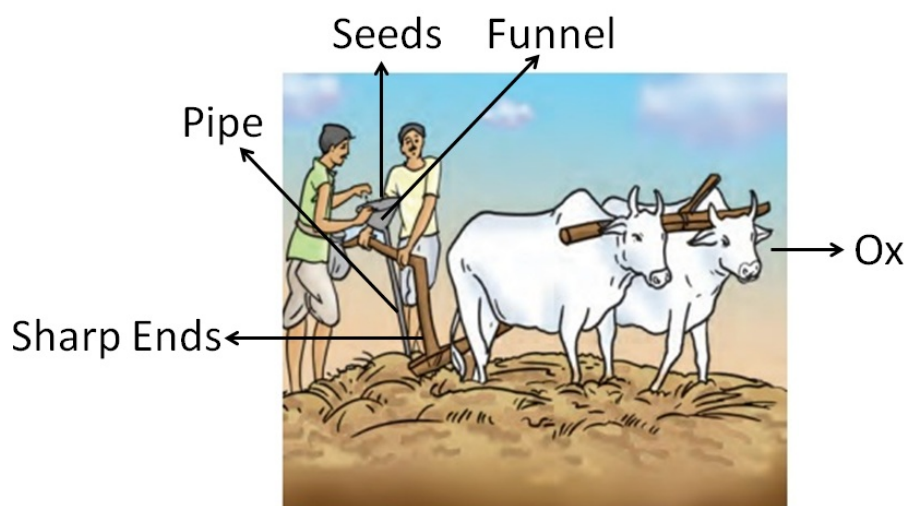
- 1.Damaged seeds are hollow and lighter thus they float on water.
- 2.Good and healthy seeds sink in water and settle down.



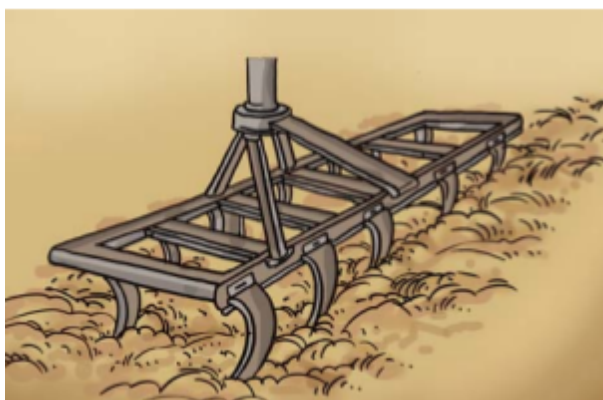
AGRICULTURAL IMPLEMENTS USED FOR SOWING

>**Traditional tool** : The tool used traditionally for sowing seeds is shaped like a funnel. The seeds are filled into the funnel, passed down through two or three pipes with sharp ends. These ends pierce into the soil and place the seeds there.

Traditional method of Sowing



>**Seed drill** : Nowadays seed drill is used for sowing with the help of tractors. This tool sows the seeds uniformly at proper distances and depths.



Please refer to the link given below and watch the video twice for better understanding.

<https://www.youtube.com/watch?v=P7Cj3OuFPr8>

WHAT PRECAUTIONS SHOULD BE TAKEN WHILE SOWING?

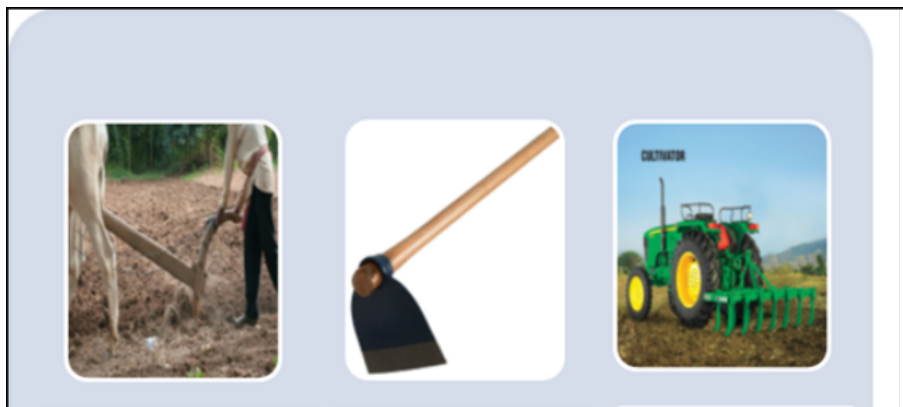
While sowing seeds, it is essential to make sure that -

- Seeds are healthy and of high quality
- They are planted at correct distance from each other so that they can get proper light, water and nutrients from soil.
- They must be sown deep enough to protect them from animals and birds (which might eat them) and wind (which might blow them away) but not so deep that they may not get enough air to germinate.

WHY ARE PLANTS KEPT IN SMALL BAGS IN NURSERY?

A few plants (such as paddy, forest plants and flowering plants) are first grown in a nursery into seedlings and then transplanted manually. Keeping the seedlings in bags makes it easier to transfer them to another place.

LET'S SUMMARISE



PLOUGH

HOE

CULTIVATOR

Plough: consists of ploughshare, ploughshaft and beam.

Uses: .Tilling
.adding

HOE:Used for removing the weeds and loosening the soil.

Cultivator: It is modern, saves time



Sowing

Traditional Tool for Sowing

Seeds are filled in the funnel, which is attached to two or three pipes with piercing ends. These ends pierce into the soil and place seeds there.



Seed Drill

Today, seed drills are used with the tractors to sow seeds.

They are better because they:

- Sow seeds uniformly - at equal distance and depth,
- Cover seeds with soil after sowing so that birds do not eat them, and
- Save time and labour.

Assignment:

Q1. Fill in the blanks.

1. _____ is used to till the soil in agriculture.
2. _____ can make their own food.
3. The first step before growing crops is _____ of soil.

Q2. Choose the correct option in the following:

(i) Which of the following tools does a farmer use to remove weeds and to loosen the soil from the field?

- (a) Hoe (b) Axe (c) Plough (d) Cultivator

(ii) What is the process of loosening and turning of soil called?

- (a) Irrigation and manuring
(b) Tilling and Ploughing

(c) Digging and winnowing

(d) Harvesting and storage

Q3. Design an activity to separate good and healthy seeds from the damaged ones.

Q4. Enlist three characteristics of good quality seeds.

Q5. State the importance of sowing seeds in proper rows and at appropriate depth.

Name any one agricultural implement used for carrying out this agricultural practice .