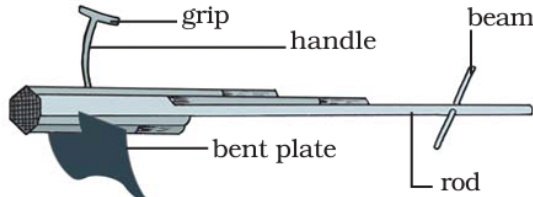


works like a blade. It is pulled by animals [Fig. 1.1 (b)].



**Fig. 1.1 (b) :** A hoe

**Cultivator :** Nowadays ploughing is done by tractor driven cultivator. The use of cultivator saves labour and time. [Fig. 1.1 (c)].



**Fig. 1.1 (c) :** Cultivator driven by a tractor

## 1.4 Sowing

Sowing is the most important part of crop production. Before sowing, good quality seeds are selected. Good quality seeds are clean and healthy seeds of a good variety. Farmers prefer to use seeds which give a high yield.

### Selection of Seeds



One day I saw my mother put some gram seeds in a vessel and pour some water on them. After a few minutes some seeds started to float on top. I wonder why some seeds float on water!

## Activity 1.1

Take a beaker and fill half of it with water. Put a handful of wheat seeds and stir well. Wait for some time.

Are there seeds which float on water? Would those be lighter or heavier than those which sink? Why would they be lighter? Damaged seeds become hollow and are thus lighter. Therefore, they float on water.

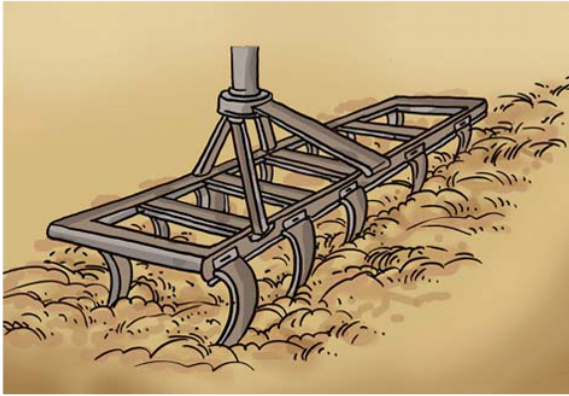
This is a good method for separating good, healthy seeds from the damaged ones.

Before sowing, one of the important tasks is to know about the tools used for sowing seeds [Fig. 1.2 (a), (b)].

**Traditional tool :** The tool used traditionally for sowing seeds is shaped like a funnel [Fig. 1.2 (a)]. The seeds are filled into the funnel, passed down through two or three pipes having sharp ends. These ends pierce into the soil and place seeds there.



**Fig. 1.2 (a) :** Traditional method of sowing



**Fig. 1.2 (b) :** A seed drill

**Seed drill :** Nowadays the seed drill [Fig. 1.2 (b)] is used for sowing with the help of tractors. This tool sows the seeds uniformly at proper distances and depths. It ensures that seeds get covered by the soil after sowing. This prevents damage caused by birds. Sowing by using a seed drill saves time and labour.

There is a nursery near my school. I found that little plants were kept in small bags. Why are they kept like this?



Seeds of a few plants such as paddy are first grown in a nursery. When they grow into plantlets, they are transplanted in the field manually. Some forest plants and flowering plants are also grown in the nursery.

An appropriate distance between the seeds is important to avoid overcrowding of plants. This allows plants to get

sufficient sunlight, nutrients and water from the soil. Sometimes a few plants have to be removed to prevent overcrowding.

4

## 1.5 Adding Manure and Fertilisers

The substances which are added to the soil in the form of nutrients for the healthy growth of plants are called **manure** and **fertilisers**.

I saw a healthy crop growing in a farm. In the neighbouring farm, the plants were weak. Why do some plants grow better than others?



Soil supplies mineral nutrients to the crop. These nutrients are essential for the growth of plants. In certain areas, farmers grow crop after crop in the same field. The field is never left uncultivated or fallow. Imagine what happens to the nutrients?

Continuous growing of crops makes the soil poorer in certain nutrients. Therefore, farmers have to add manure to the fields to replenish the soil with nutrients. This process is called manuring. Improper or insufficient manuring results in weak plants.

Manure is an organic substance obtained from the decomposition of plant or animal wastes. Farmers dump plant and animal waste in pits at open places and allow it to decompose. The decomposition is caused by some microorganisms. The decomposed matter is used as organic manure. You have already learnt about vermicomposting in Class VI.

*Read section 1.4 and answer the questions below:*

Questions:

- 1. How is selection of seeds done? Why is it done?**
- 2. Explain the traditional method of sowing seeds? Draw a diagram.**
- 3. With the help of a diagram explain a seed drill.**
- 4. What important point is to be kept in mind while sowing seeds and why?**

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*PGT PHYSICS*