



FLORENCE INTERNATIONAL SCHOOL  
CLASS- VIII  
WORKSHEET NO: 14  
SCIENCE

NAME:

DATE: 17.4.20

**TOPIC: CROP PRODUCTION AND MANAGEMENT**

Please follow the previous link and learning content before attempting the worksheet.

**KEYWORDS**

**Sources of Irrigation**

The various **sources of irrigation** are rivers, canals, wells, tubewell, dams, ponds, lakes, rain.

**Traditional method of Irrigation**

The various traditional method of irrigation are

- 1) Moat(pulley system)
- 2) Chain pump
- 3) Dhekli
- 4) Rahat(lever system)

Traditional method of irrigation are cheaper but less efficient. Pumps are commonly used for lifting water. These pumps run by electricity, diesel, biogas or solar energy. When a pump is used to draw out water from a narrow well, it is called **tube-well**. They are used increasingly for lifting underground water to be used for irrigation in agriculture.

**Modern methods of irrigation**

The two main modern methods of irrigation are:

- 1) Sprinkler system

A main pipeline is laid in the field. Perpendicular pipes having rotating nozzles at the top are joined to the main pipelines at regular intervals. When water from a tube-well is allowed to flow through the main pipelines under pressure with the help of a pump, it escapes from the rotating nozzles. This water gets sprinkled on the crop plants as if it is raining.

**Advantages**

- 1) It is more useful for the uneven land where sufficient water is not available.
- 2) It is very useful for sandy soil.
- 3) Drip system

There is network of narrow pipes with small holes in the fields. When water flows through the narrow pipes, it fall drop by drop at the position of roots of the plants. This water is absorbed by the soil in the root zone of the plants and utilised by the plant. There is no wastage of irrigation of water.

**Advantages**

- 1) It provides water to plants drop by drop. So water is not wasted at all.
- 2) It minimises the use of water in agriculture. It is useful in those regions where the availability of water is poor.

**Weeding**

The unwanted plants which grow along with a cultivated crop are called **weed**.

The type of weed vary from field to field, crop to crop, season to season.

For Ex: Wild oat, grass, Amaranthus, Chenopodium etc.

The process of removing weeds from a crop field is called **weeding**.

Weeding is necessary

Weeding is necessary because

- 1) Weeds compete with crop plant for water, sunlight, nutrients, space and hence affect plant growth.

2) Some weeds are poisonous for human and animals whereas some weeds interfere in harvesting.

Methods of removal of weeds

1) Removal of weeds by pulling them out with hand.

2) Removal of weeds by using a trowel (khurpa)

3) Destroying the weeds by spraying weedicides: The poisonous chemicals which are used to kill weeds in the fields are called as weedicides.

For Example: 2,4-D, MCPA, Butachlor etc.

The weedicides kill the weeds but do not damage the main crop.

### **Harvesting**

It normally takes about three or four months for a crop to mature.

The cutting and gathering of the matured food crop is called **harvesting**.



Manual Harvesting

The crops like wheat or rice are cut close to the ground by hand using a cutting tool called **sickle**.

This is called **manual harvesting**.

**Harvester**-In large fields, wheat and paddy crops are cut by a motorised machine called **harvester**.

**Threshing**-The process of beating out the grains from the harvested crop plant is called **threshing**.

**Threshing** is done to take out the grain from its outer covering called **chaff**.

In the **traditional method of threshing**, the harvested crop is spread on the ground in a small area and various cattle are made to walk over it again and again in a circle. The cattle's feet crush the harvested crop plant due to which the chaff breaks up and the grain comes out.

### **Thresher**

A motorised machine called **thresher** is also used for the threshing process.



### **Winnowing**

The process of separating grain from chaff and hay with the help of wind is called **winnowing**.

When the grains mixed with chaff and hay is made to fall from a height in blowing wind, the grains, being heavy falls straight to the ground whereas the chaff and hay being much lighter are carried some distance away by the wind.



**Figure: Winnowing**

After harvesting, separating chaff from grain can be done through **threshing** and **winnowing**. There is a machine called 'Combine' which works as a harvester as well as a thresher.



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**Q1. Name few traditional methods of irrigation?**

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**Q2. Describe the sprinkler system of irrigation?**

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**Q3. What are the advantages of sprinkler system of irrigation?**

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**Q4. Describe the drip system method of irrigation?**

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**Q5. What are the advantages of drip system method of irrigation?**

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**Q6. Define the term harvesting? What is manual harvesting?**

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**Q7. Name the process of beating out the grains from harvested crop?**

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**Q8. What do you mean by winnowing?**

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