

## **Experiment No.8**

### **Study on Methods of Herbicide Application**

#### **8.1 Objectives**

To study the herbicide application methods.

Methods of herbicide applications are decided based on their mode of action and selectivity. Most important methods to crop and non-crop lands are given below

#### **8.2 Method of herbicide application**

The herbicide application is grouped into the following ways:

##### **A) Soil active herbicides**

It is applied primarily to the soil rather than to the vegetation. Therefore, in crop fields a soil-active herbicide eliminates early weed-crop competition for the period of 4 to 8 weeks, depending upon the herbicide and its rate used. **Eg: Simazine, Alachlor, Trifluralin and EPTC.** On non-crop lands, the soil-active herbicides used are soil sterilants and fumigants.

##### **Different soil application methods:**

**a) Surface application:**

**b) Sub surface layering**

**c) Broadcast and band application:**

**a) Soil fumigants**

Depending upon the nature of the soil fumigant it can be applied either by-

- (i) Soil injection (Ex: Chloropicrin)
- (ii) Releasing under sealed plastic covers (Ex:Methyl bromide)
- (iii) Soil surface application (Ex:Metham)

**B) Foliage active herbicides**

These herbicides are applied to weeds after their emergence from the soil. They are absorbed by the plant foliage and these are translocated to the other plant parts. Ex: 2,4,5-T, Paraquat, Diquat, MCPB, Amitrole.

**Different foliage application methods:**

**a) Blanket application**

**b) Directed spraying**

**c) Protected spraying:**

**d) Spot treatment:**

## **D. Other methods of herbicides application**

a) **Direct contact application (DCA):**

b) **Soil injection:**

### **Exercise:**

1. Write down the precautionary measures to be followed while spraying a herbicide?
2. Why spraying should not be carried against the wind direction? Substantiate?
3. Differentiate between blanket applications and directed spraying?

## **8.3 Conclusion**

**Signature of faculty**