

Topic: Weeds(II)

Methods of dispersal of weeds

1. By wind – The fruits and seeds of many weeds are carried by winds and they are spread from one place to another
2. By Animals – Animals like rabbits, rats, squirrels and man are involved in the dispersal of weed seeds. Animal dispersed seeds usually have sticky fruits or seeds which may adhere to the coat of the animal and they are carried from one place to another
3. By Water – Seeds of weeds may fall into water and are thus transported as the water carries it along as it moves.

Examples of Common Weeds

1. Common Name: Spear grass

Botanical Name: Heteropogon contortus

Family: Poaceae

Habitat: They grow on poor soil as well as soil with high acidity.

Description of Characteristics:

They are cool season tufted perennial grasses

The foliage grows from 10 -20cm high.

Most species flowers in spring.

Common Name: Day flower

2. Botanical Name: Commelina communis

Family: Commelinaceae

Habitat: It thrives in edges of garden and yards, fence row; vacant lots and waste areas.

Description of Characteristics:

- It is about 1-3m long
- It can be erect or spraw across the ground like vine .
- The round stems are smooth and hairless.
- Their margins are smooth and veins runs parallel to each other .
- Upper edge of the sheath is usually hairless.
- Each flower blooms during the morning for a single day.

3. Common Name: Elephant grass

Botanical Name: Pennistrum purpureum

Family: Poaceae

Habitat: It is found on wide range of soils.

Description of Characteristics:

- It is a tall grass.
- It grows in dense clumps of up to 10 feet tall.
- In the savannah of Africa, it grows along lake beds and rivers where the soil is rich.
- They are yellowish or purple in colour .
- The stems are coarse and hairy
- The leaves are 2-3 feet long
- The edges of the leaves are razor sharp.

3. Common Name: Turbina

Botanical Name: Turbina corymbosa

Family: Convolvulaceae

Habitat: It grows along rainforest margins and water ways

Description of Characteristics:

- It is a scrambling vine growing to at least 8 meters in height.

- Its leaves are heart shaped.
- It produces many branched flowers.

Classification of herbicides

1. Based on mode of action (i) selective herbicide – kill a particular type of weed e.g 2,4-D used in grassy/monocot plants (maize farm. Fusillade super used in cowpea farm.
2. Non-selective herbicide – kill both broad leaf and narrow leaf weeds e.g paraquad, gramoxone, round up.
3. System – active ingredient goes from the root into the weed system and kills it. e.g Primextra, alachor, fusillade super.
4. Contact herbicides – has immediate effect on the weeds upon contact with them e.g paraquat, diquat, gramoxone.

Time of application of herbicides

Pre-plant herbicides – applied before seed are planted.

Pre-emergence herbicides – applied before planted seeds emerge e.g Galex for maize, Diurron for cassava.

Post emergence herbicides- applied after the emergence of both crops and weeds. Post – emergence herbicides are context in action.

Benefits of herbicides

- Easy to apply
- Fast in action
- Cover large area of land
- Saves labour

Disadvantages of using herbicides

- Some beneficial organisms may be killed
- They are poisonous to man and animals
- Air, water and soil are polluted
- Requires technical knowledge

Integrated Control Method: Combination of two or more of the methods discussed.

Effects of cultural control method

- Fire may kill beneficial organisms
- Burning may be difficult to control
- Fire destroys organic matter
- Tillage operations destroy soil structure that may lead to erosion

Effects to biological control

- Predators may later feed on the crops
- Introduced plant may be difficult to be controlled

Wind dispersal methods

- By wind

- Seeds are very small and light
- Possession of pappus hairs e.g. Emilia
- Possession of parachute – e.g. Tridax
- Some seeds are fluffy outgrowth – e.g. Cotton

- By Man/Animal

- Some are edible, pass through the alimentary canal and deposited in soil
- Some possess adhesive hook e.g. desmodium, Boerhavia diffusa

- By water

- Water proof epicarp and light e.g. coconut from seeds of some legumes and grasses.

- Explosive Mechanism

- Dry pod of weed Sph+ open and throw the seeds to some distance e.g. water leaf para rubber, calopogonium, puerana, centrose sida acuta

– Farm tools – Tools and equipment such as cutlass, plough may have seed of weed stuck on them. If not cleaned properly before use may transfer seeds of weeds to new areas.