

Experiment No. 12

Weed Survey in Crop Fields and Other Habitats

12.1 Objectives

To know the type of weed flora dominant in a region amongst grasses, sedges and broad leaved weeds

12.2 Materials required

1. Conveyance to visit area
2. Note book to note the information

12.3 Procedure

After reaching the site, select spots in the farm or in farmer's field of a village randomly. Take at least 10 minimal sample area of size 0.5 m x 0.5 m or 1.0 m x 1.0 m as per convenience with a quadrat. Identify the weeds associated with different crops and count. Collect data in the same way in different seasons as per the proforma. Calculate % occurrence of weeds with respect to total number of weeds. Find out the dominant weed species as per the % occurrence of weeds in different crops and other habitat. Provide ranking as 1st, 2nd and 3rd in each category of grasses, sedges and broadleaved weeds in order to know the prevalence of weeds in that locality/ region/ farm.

12.4 Calculation

The student should count the weed species present separately from all the 10 sample areas and find out the mean weed population species wise by averaging the data taken over the 10 sample areas. Then calculate the occurrence (intensity) of each type of weed species in the following ways.

$$\text{Intensity (\%)} = (\text{Gross total number of weeds} / \text{number of weeds of a species}) \times 100.$$

This gives an idea about the dominance of a particular weed species based on total weeds and also dominance of a weed from each category of grasses, sedges and broad leaved weeds.

Table 12.1 Observation on survey of weeds

Particulars	No. of weeds in a quadrat	% Occurrence of a weed	Ranking for dominance
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Grasses			
<i>Echinochloa colonum</i>			
<i>E. crusgalli</i>			
<i>Digitaria sanguinalis</i>			
<i>Dactyloctenium aegyptium</i>			
<i>Sporobolus diander</i>			
<i>Cynodon dactylon</i>			
<i>Paspalum scrobiculatum</i>			
Total of grasses			
Sedges			
<i>Cyperus rotundus</i>			
<i>C. difformis</i>			
<i>C. iria</i>			
<i>Fimbristylis miliacea</i>			
Total of sedges			
Broad leaved weeds			
<i>Amaranthus viridis</i>			
<i>Ageratum conyzoides</i>			
<i>Alternanthera sessilis</i>			
<i>Ammania bacifera</i>			
<i>Borreria hispida</i>			
<i>Cleome viscosa</i>			

<i>Commelinabenghalensis</i>			
<i>Euphorbia hirta</i>			
<i>Eclipta alba</i>			
<i>Oldenlandiacorymbosa</i>			
<i>Phyllanthusniruri</i>			
<i>Portulacaoleracea</i>			
<i>Trianthemaportulacstrum</i>			
Total of broad leaved weeds			
Parasitic weeds			
<i>Cuscutachinensis</i>			
Gross total (Grasses +sedges + dicots)			

12.5 Conclusion

Signature of faculty