

Abstract

The present ecological study was conducted to record the distribution of weeds in wheat and rice crop fields of Tehsil Zafarwal, District Narowal, Punjab. Two different villages were selected for each crop. The plants collected from the selected fields were identified and floristic composition was prepared. Quadrat method was used to find out the distribution of different weed communities. The phytosociological attributes were calculated as percentage (%) frequency, density and percentage (%) cover. On the basis of these three basic parameters, the relative values of each of these calculated to find out the Importance Value (IV) and Importance Value Index (IVI).

The highest IVI important value index of *Cynodon dactylon* were (9.78), *Medicago denticulata* (6.49) and *Euphorbia helioscopia* with (6.25) recorded in wheat fields. The weeds having the highest IVI important value index in rice fields were *Marselia quadrifolia* (10.25), *Cynodon dactylon* (9.74) and *Cyperus rotundus* (7.57).

Overall, sixty weed species were reported from the study area i.e 35 weed species in wheat fields, 25 in rice fields. It is interesting to note that 8 families and 6 weed species were found common in both of the fields. It was found that *Convolvulus arvensis*, *Cynodon dactylon*, *Cyperus rotundus*, *Parthenium hysterophorus*, *Polygonum plebejum* and *Solanum nigrum* were common in both of the crops. Analysis of soil samples was also carried out from the respective field of each of both crops. Analysis included the determination of the organic matter, moisture content, soil texture, pH, E.C, HCO_3^- , Cl^- , SO_4^{2-} , Ca^{++} , Mg^{++} , and Na^+ .