B-97: Aquatic weeds in rice waterways in Southern Sri Lanka

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Most of the world's population, predominantly in Asia including Sri Lanka, depends on rice as a staple diet. The conditions favourable for rice culture are equally well suited for growth and reproduction of terrestrial and aquatic weeds. The rice agrosystem can be divided into 3 broad habitat types (field, bund and ditch or irrigation canal). The main purpose of the irrigation canal is to irrigate these rice-field areas and also to provide efficient water supply particularly during the dry period. It also provides suitable habitats for several weeds.

Water samples were collected from 50 waterways situated at least 2 km distance apart in the Southern province. Aerial coverage and fresh weight yield of the weeds were recorded using $1m^2$ quadrat for fresh weight measurements. In addition, the phosphate, ammonia- nitrogen and pH values were also measured.

There were 21 species of weeds which were commonly found in irrigation and drainage canals, 6 species of floating plants, 10 species of submerged plants and 5 species of emergent plants including those rooted plants with floating leaves. In addition, there were about 11 species which were generally found along the banks of the canal.

Eichhornia crassipes, Monochoria vaginalis and *Salvinia mollesta* were the 3 most common floating weeds. Among the submerged plants *Hydrilla verticillata* and *Ceratophyllum demersum* were at the top 2 positions. *Blyxa aubertii*, *Chara* and *Vallisnaria* were the commonest submerged rooted plants with floating leaves. *Echinochloa crus-gali* and *Echinochloa colona* were the major semi-aquatic plants which lined the hanks of the canals and help in preventing soil errosion.

Certain species of aquatic weeds are known to provide a good habitat for mosquitoes. The leaching of fertilizer which is generally high in phosphate from adjoining rice-fields has provided continuous supply of nutrients to the weeds in waterways. Coupled with favourable climate, weeds seemed to thrive well in almost all waterways with high nutrient concentrations.