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Research Notes

Floristic composition of weed flora in banana plantation

M. MEYYAPPAN AND RM. KATHIRESAN

Department of Agronomy, Faculty of Agriculture, Annamalai University, Annamalainagar - 608 002.

Banana *(Musa paradisiaca)* in India ranks second in terms of area and production and it accounts for 12 percent (4,33,000 ha) of the total area under fruit crops and 30 percent (10.46 mt) of the total fruit production. In Cuddalore district of Tamil Nadu, banana is cultivated in 3827 ha with a total production of 34,563 t and the productivity is lowest in Tamil Nadu (9.3 t ha^{-1}). The fruit is inexpensive, possesses medicinal values and used in all auspicious occasions in South India. Weed menace in banana is severe due to its wider spacing, lesser tillage operation and slow canopy coverage during early growth phase. Under normal planting distance rhizomatous and stoloniferous weeds and many broad leaved weeds competed severely with banana especially during its early stages of crop growth (Chacko and Reddy, 1981). For effecting weed management for such situation, basic understanding of the floristic composition of weeds in that particular locality becomes imperative.

A phytosociological survey of weed flora was undertaken in banana plantations concentrating in and around nearby villages of Chidambaram *viz.,* Sivapuri, Mutlur and Vallampadugai during August 2000. The survey was conducted using the procedure outlined by Sen (1981). Banana plantations not lesser than 800m^2 in area were selected wherein no weed control measure had been taken upto 6 months from planting, preceding the survey at every 3 km distance, covering a total distance of 12km in each of the villages. The number and size of sample quadrats used in each plantation were 10 and 0.25 m^2 respectively.

The weed flora comprised of five grasses, one sedge and nine broad leaved weeds. The

Table 1. Floristic composition of weed flora in banana plantation

Weed name	Relative abundance (RA)	Relative density (RD)	Relative frequency (RF)	Important Value Index (IVI)	Important Value Percentage (IVP)	Sum dominanced ratio (SDR)
Acalypha indica Linn.	5.52	4.70	7.82	18.04	6.01	6.26
Cassia occidentalis Linn.	2.69	1.15	3.77	7.61	2.54	2.46
Cleome chelledonii Linn. F.	4.56	3.89	7.82	16.27	5.42	5.86
Commelina benghalensis Linn.	4.56	1.92	3.77	10.25	3.42	2.85
Croton sparciflorus Monong	1.77	1.51	7.82	11.10	3.70	4.67
Cynodon dactylon Pers.	20.18	40.49	16.98	77.65	25.88	28.74
Cyperus rotundus Linn.	14.47	27.71	16.98	59.16	19.72	22.35
Dactyloctenium aegypticum Beauv.	8.11	5.13	5.84	19.08	6.36	5.49
Digilaria sanguinalis (L.) Scop	16.21	21.89	12.21	50.31	16.77	17.05
Echinochloa colonum Link.	9,55	1.92	1.92	13.39	4.46	1.92
Eragrastis minor Host	7.49	3.09	3.77	14.35	4.78	3.43
Euphorbia hirta Linn.	2.69	2.29	7.82	12.80	4.27	5.06
Leucas aspera Spreng	6.84	4.30	5.84	16.98	5.66	5.07
Phyilanthis niruri Linn.	3.61	1.52	3.77	8.90	2.97	2.65
Solanum elaengifolium Cav.	2.69	1.15	3.77	7.61	2.54	2.46

results showed that *Cynodon dactylon* predominated the weed flora with a relative abundance of 20.18, RD of 40.49, RF of 16.98, IVI of 77.65, IVP of 25.88 and SDR of 28.74. The weed next in the order of co-dominance was *Cyperus rotundus* with RD of 27.71, RF of 16.98, IVI of 59.11, IVP of 19.72 and SDR of 22.35. Among the broad leaved weeds, dominance of *Acalypha indica* was seen.

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