Sri Lanka Association for the Advancement of Science

Proceedings of the 64th Annual Sessions

1 - 6 December, 2008

Part I - Abstracts

Sri Lanka Association for the Advancement of Science - 2008

Sri Lanka Association for the Advancement of Science - 2008

ISSN 1391 – 023X

131/B

Investigation on pest and disease incidence on brinjal (*Solanum melongena* L.) intercropped with groundnut (*Arachis hypogaea* L.)

S Umarajini[1*] and T H Seran[2]
Department of Crop Science, Faculty of Agriculture, Eastern University, Sri Lanka[1&2]

A field study was conducted at the Agronomy farm of Eastern University, Sri Lanka to evaluate the prevalence of pest and disease incidence on brinjal when intercropped with groundnut compared with brinjal monocropping. This experiment was designed as Randomized Complete Block Design with four treatments [T1: brinjal monocropping (90 cm x 60 cm); T2: brinjal (90 cm x 60 cm) with groundnut (45 cm x 30 cm) in alternative rows; T3: 60/150 cm paired row planting of brinjal with two rows of groundnut; T4: 75/120 cm paired row planting of brinjal with one row of groundnut] and five replications. Observations were made at weekly intervals on pest population, especially on whitefly and leafhopper and also on disease infestation in leaves of brinjal. The results revealed that intercropping system reduced the population of whitefly and leafhopper adults and the disease incidence in brinjal plants than those in monocropping. Average number of whitefly and leafhopper adults per leaf and average number disease affected leaves per plant showed significant ($P<0.05$) differences between treatments. Brinjal monocropping had the highest number of whitefly (6.2±3.45) and leafhopper (6.6±2.89) adults per leaf and also highest number of disease affected leaves per plant (15.2±2.23) among the treatments whereas alternative intercropping system had the least number of whitefly (1.67±0.82) and leafhopper (1.54±0.62) adult populations per leaf and number of disease infected leaves per plant (9.0±1.16). Further it was noted that both insect pest attack and disease incidence were significantly ($P<0.05$) reduced in alternative row cropped brinjal plants with groundnut (T2) followed by paired row planting of brinjal with two rows of groundnut (T3) compared to those in monocropped brinjal plants. The present study suggests that intercropping can form a component of an integrated pest and disease management programme in Sri Lanka.

*umarajini@gmail.com Tel: 065-2240760