Evaluation of Beneficial and Insect Pests of Soybean in the Organic Transition Experiment

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Major pest and beneficial insect species were monitored each year with a 15-inch diameter sweep net. Two samples of either 10 sweeps (2001, 2002, 2003) or 25 sweeps (2004, 2005) were taken weekly in randomly selected locations. Pest species recorded included bean leaf beetle (*Ceratoma trifurcata*), corn earworm (*Helicoverpa zea*), and stink bugs (*Acrosternum hilare*, *Nezara viridula*, and *Euschistus servus*). Adults and immatures of predatory insects were also recorded. Species included big-eyed bug (*Geocoris* spp), damsel bug (*Nabis* spp), Minute pirate bug (*Orius* spp), lady beetles (primarily *Hippodamia convergens* and *Coleomegilla maculata*) and spiders (primarily green lynx, *Peucetia viridans,* and striped lynx*, Oxyopes salticus)*. All data were subject to ANOVA (SAS Ver 8.2) for each year and start date. Treatment effects were not significant for any beneficial insects and insect pests except for stink bugs in 2004. In 2004 stink bug levels in all crops in North Carolina were at historic high levels and exceeded established economic thresholds in all plots. A single application of an insecticide in the conventional plot provided control of this pest. No insecticides were applied in the organic plots. This was the only instance of insecticides being used in the soybeans during the period reported.