

a preventive control measure against early season pests of cotton in Sudan. Three different kinds of experiments: visual counts in the field, no-choice semi-field laboratory tests, and no-choice laboratory tests were used to evaluate the effects of seed dressing treatments. The relationship between damage caused at different periods after sowing and cotton seed yield was also determined during the study. Flea beetle damage was assessed by counting shot-holes resulting from adult feeding. Results showed that using the antimicrobial tebuconazole alone did not prevent flea beetle damage. Treatments containing imidacloprid significantly reduced damage in the three experiments, but not 10 weeks after sowing in field experiments. A moderately strong relationship ($R^2 = 0.4 - 0.5$) was measured between flea beetle damage caused during early stages of growth (ca. 30 days after sowing) and reduction in yield. On the other hand a weak relationship was measured ($R^2 > 0.1$) between the late flea beetle damage and the reduction in yield.

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Development time, thermal constant and low temperature threshold for the Syrian race of *Bemisia tabaci* and the parasitoids *Eretmocerus mundus* and *Encarsia Formosa*

Development time of *Bemisia tabaci* and the parasitoids *Eretmocerus mundus* and *Encarsia Formosa* was studied at 15, 20, 25, 30 and 35 °C. Development time from egg to adult for *B.tabaci* took 66, 36, 20, 16 and 14 days, respectively at the above mentioned temperatures, whereas it took 54, 28, 18 and 14 days for *E. formosa* and 66, 30, 19 and 15 days for *E. mundus*. Thermal constant and low temperature threshold were calculated

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White Sticky Traps : an Environmentally Safe Approach to Control Onion Fly in Syria

During the last few years, onion yield losses caused by the onion fly *Delia antiqua* (Meigen) (Diptera: Anthomyiidae) in Syria have been increasing, especially in the Ghab area. This increase damage could be due (i) imported onion varieties are susceptible to infestation, (ii) extensive use of pesticides which affected the population of natural enemies, (iii) emergence of resistance to pesticides in the pest population, (iv) development of new more aggressive types of the pest. This led to reduced area planted to onion and increased price. Consequently, efforts at the Faculty of Agriculture - Aleppo in Syria focused on development of practical, low cost and environmentally safe approach to control this pest. Experimentation focused on the use of sticky colored traps, and the identification the color which can attract the largest number of insect adults. The glassy white color was the most effective and attracted around 95 % of the pest population in the field. Experimentation should that the use of white glassy sticky traps, 30 x 30 cm (Rebell traps) fixed on a pole in the field 60 cm above soil level and posted during the third week of October at the time of the adults emergence, led to the trapping of 98 % of the pest population. The pest has two generations per year in Syria, the first generation being the most damaging. By using the white glassy sticky traps, pest infestation was kept below 1 % in the years 2005 and 2006 as compared to 60 - 70 % during the previous seasons, where chemical pesticides were used.

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Ergebnisse eines mehrjährigen Feldversuchs zum Einfluss von Pflanzgut aus Gewebekultur und traditionellem Pflanzgut auf Ertragswirkung und Nematodenbefall bei Bananen

Die phytosanitäre Bedeutung sauberen Pflanzguts für die Etablierung einer mehrjährigen Kultur wurde bei Bananen bereits demonstriert. Während in den Plantagen, die Bananen für den Export produzieren, Pflanzgut aus Gewebekultur mittlerweile Praxis ist, werden Bananen in Ostafrika überwiegend mit Schösslingen angepflanzt. Ergebnisse eines mehrjährigen Feldversuchs in Uganda werden vorgestellt; in diesem Experiment wurde unter zwei Anbauverfahren (mit oder ohne Mulch) der Einfluss von Pflanzgut aus

Gewebekultur, von gesäuberten Schösslingen (suckers), heißwasserbehandelten oder unbehandelten Schösslingen auf den Ertrag von Bananen und die Entwicklung der Nematodenpopulation untersucht. Ertrags- und Wachstumsparameter wurden über den gesamten Zeitraum erhoben. Mulch erhöhte den Ertrag der Bananen in allen Varianten. Es zeigte sich außerdem, dass mit Bananen aus Gewebekultur im ersten Jahr signifikant höhere Erträge erzielt werden können; dieser Effekt konnte in den Folgejahren nicht beobachtet werden. Nematodendichten in Wurzeln von Bananen aus unbehandeltem Pflanzgut waren höher als in Wurzeln von „sauberem“ Pflanzgut. Ebenso wurden Bananen aus sauberem Pflanzgut weniger durch die Nematodenarten *Radopholus similis* und *Helicotylenchus multicinctus* geschädigt. Zwischen den Versuchsgliedern mit sauberem Pflanzgut konnten keine Unterschiede im Nematodenbesatz festgestellt werden.