INFLUENCE OF CERTAIN BIO AND CHEMICAL TREATMENTS ON SUGAR PEA PRODUCTIVITY AND PROTECTION OF SOME INSECT PESTS

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Abstract

This study was carried out during the winter seasons of 2007/2008 and 2008/2009 at the Experimental Farm of El Kassasein Research Station, Ismailia Governorate, to investigate the effect of spraying with vitamins (B_1 and C) at rates 50 and 100 mg/L, yeast at rates 2 and 4 g/L and different combination treatments of them as well as control on vegetative growth, yield and its components, chemical constituents and protection from pea leaf miner (*Liriomyza pisi*), leguime aphids (*Aphis craccivora* Koch) and two spotted spider mite (*Tetranychus urtica* Koch) attacking pests of sugar pea cv. Gaint grown in sandy soil under drip irrigation system. plants were sprayed three times at 20, 34 and 48 days after sowing

The results indicated that vegetative growth, yield and its components and chemical constituents were promoted with all spraying materials as compared to control (sprayed with water), and spraying plants with vitamins (B_1 and C) at two concentrations recorded the uppermost values of growth, pod quality, total yield and chemical constituents than yeast .

Generally, spraying plants with mixture vitamins (B_1 and C) and yeast at all concentrations significantly increased vegetative growth, yield and its components and chemical constituents than sprayed by vitamins (B_1 or C) or yeast alone as well as control.

The previous results are supporting through the entomological study which indicted that:

1- The important role of vitamins (B_1 and C) in plant physiological healthy which capable to resist the three pests.

2- Plants treated with yeast were more expose to infesting with pests because the yeast was more suitable to insect feeding.

3- Plants treated with 4 g yeast + 100 mg/L vitamin B_1 + 100 mg/L vitamin C were sufficient nutrient for plants and the same time to feeding the pests.

For this, the results show the great current of pest control concern about the environment indicates a need to limit application of chemicals for lank pests control.