INDUCING RESISTANCE IN COTTON PLANTS, *GOSSYPIUM BARBADENSE* L. AGAINST SOME INSECT PESTS BY PLANT GROWTH REGULATORS

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Abstract

Induced resistance in cotton plants *Gossypium barbadense* L. against some insect pests was studied by application of the plant growth regulators, Pix , Uniconazole and Amcoton in green house and field experiments during 2007 and 2008 seasons. The Pix and Uniconazole treatments reduced the entering of 1st larval instars of spiny bollworm (SBW) and pink bollworm (PBW) to bolls, significantly. The percentage of larval penetration and development in bolls were (35.0, 36.37 %) and (48.7, 53.89%) for SBW and PBW, respectively as a compared with control (56.57, 88.33 %) during 2007 season in green house experiment. The plant growth regulators, Pix and Uniconazole increased significantly some chemical constituents of cotton plants such as carotenoids and the total phenol content in both seasons.

In the field experiments, the plant growth regulators, Pix and Uniconazole caused earliness than control by 17.2, 10.96 % in the early planting date, and it was 12.59 and 10.37% in the late planting date. Pix and Uniconazole were the most effective treatments against cotton bollworms. The seasonal average bollworm infestation were (10.77, 11.47), and (13.5, 15.27) when applied in two planting dates, respectively, as compared with 16.07 and 19.33 in the control. The plant growth regulator, Amcoton produced the lowest and non significant effect against cotton bollworms. All treatments produced non significant effect against Jassids , Aphids and mature stage of white fly.