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Summary

The present investigation was carried out at the ornamental flower farm in Abu Ghaleb village, Giza governorate throughout two successive growing seasons 2013 and 2014 to evaluate:

5.1. Survey of insect occurred on *Gladiolus grandiflorus* L. and *Lilium candidum* L.

5.2. Efficiency of various traps

5.3. Pests monitoring by determine the seasonal dynamics of the main pests.

5.4. Effect of paper traps under various soils fertilizer rates.

5.5. *Thrips tabaci* (lind.) chemical control.

5.1. Survey of insects occurred on *Gladiolus grandiflorus* L. and *Lilium candidum* L. and their identification during 2013-2014.

Results indicated the following:

5.1.1. *Lilium candidum* L. insects:

Pests, predators and visitor insects were 9 recorded species belong to 6 families under 5 orders, these pests various in nature of damage, mode of occurrence and status of insects, and also mode of plant infection. Harmful species are *Myzus persicae* (Sulz.), *Macrosiphum rosae* (Linnaeus), *Aphis gossypii* (Glover) belonging to family Aphididae and *Bemisia tabaci* (Genn.) belonging to

family Aleyrodidae, and both of these families are under hemiptera order. *Macrosiphum rosae* (Linnaeus) , was the highest population density on the liliun plants.

5.1.2. *Gladiolus grandiflorus* L. Insects:

Pests, predators and visitor insects were 10 recorded species belong to 8 families under 6 orders, these pests various in nature of damage, mode of occurrence and status of insects, and also mode of plant infection. Harmful species are *Myzus persicae* (Sulz.), *Macrosiphum rosae* (Linnaeus), *Aphis gossypii* (Glover) belonging to family Aphididae and *Bemisia tabaci* (Genn.) belonging to family Aleyrodidae, and both of these families are under hemiptera order. *Thrips tabaci* (lind.), *Taeniothrips simplex* (Morison) belonging to family Thripidae under Thysano ptera order. *Aphis gossypii* (Glover) and *Thrips tabaci* (lind.) were the highest population density on the gladiolus plants.

5. 2. Efficiency of various traps:

5.2.1. Traps efficiency on *Macrosiphum rosae* (Linnaeus) population infested *Lilium candidum* L.

For 2013, 2014 obtained data indicate that for the paper traps, the highest aphid population mean was (102.4, 22.5) aphid/trap respectively on 1/5, the lowest population mean was (0) aphid/trap on 25/3 in both years and for the paper and water trap. The highest aphid population mean in water traps, was (50.5, 8) aphid/trap respectively, on the same date 1/5, the results revealed significantly higher mean number of aphids catches on yellow paper traps with general mean

(36.3, 6.9) respectively and the lowest for yellow water trap with general mean (14, 3.27) aphid/trap respectively.

5.2.2. Traps efficiency on *Aphis gossypii* (Glover) population infested *Gladiolus grandiflorus* L.:

During 2013, 2014 the paper traps were the highest aphid population (193.4, 106) aphid/trap respectively on 1/5, the lowest population mean was (0) aphid/trap on 25/3. For the water traps, the highest aphid population mean was (22.6) aphid/trap, on 8/5/2013 and (30.5) aphid/trap on 1/5/2014, the lowest population mean was 0 on 25/3 for both years. The results revealed significantly higher mean number of aphids catches on yellow paper traps with general mean (62.62, 38.6) aphid/trap respectively and the lowest for yellow water trap with general mean (7.83, 12) aphid/trap respectively.

5.2.3. Traps efficiency on *Thrips tabaci* (lind.) population infested *Gladiolus grandiflorus* L.:

For 2013, 2014 for the paper traps were the highest thrips population mean (3.6, 4) thrips /trap respectively, in the water traps, the highest thrips population mean was (3, 2.5) thrips/trap respectively on 22/5. During 2013 the results revealed not significantly differences of thrips catches on yellow paper trap or the water trap, paper trap with general mean (1.23) thrips /trap, for yellow water trap with general mean (1.31) thrips/trap but during 2014 There are significantly differ between thrips . With general mean (1.37) thrips/trap for paper trap and (0.83) thrips/trap for water trap. As a result paper and water traps are not effective in thrips monitor.

5.3. Pests monitoring by determine the seasonal dynamics of the main pests.

5.3.1. Seasonal activity of *Macrosiphum rosae*(Linnaeus) population on *Lilium candidum*L.

During 2013, 2014 the obtained result showed that the lowest peak collected from five traps was (0) aphid/trap on 25/3. 2013 prevailing field condition (max. temp, min. temp, R.H.%) were (23.5 °C, 12.5 °C, 51.2%) for 2013, (22.5 °C, 13.4 °C, 47.4%) for 2014. while on 1/5 reached the peak highest population mean collected from five traps was (102.4, 22.6) aphid/trap for the two years respectively. prevailing field condition ranged (34.6 °C, 19.1 °C, 36%) for 2013 and (31.1 °C, 18.5 °C, 42.2%) for 2014. There were high significant correlation between aphid population mean number and high, low temperature with R values (0.72, 0.73) respectively for 2013 and there were no significant correlation during 2014, R values (0.67, 0.57) respectively.

5.3.2. Seasonal activity of *Aphis gossypii* (Glover) population on *Gladiolus grandiflorus* L.:

During 2013, 2014, lowest population mean collected from five traps was (0) aphid/trap.in the both years. 2013 prevailing field condition (max. temp, min. temp, R.H. %), ranged (23.5 °C, 12.5 °C, 51.2%) for 2013, (22.5 °C, 13.4 °C, 47.4%) for 2014. Highest peak on 1/5, (193.4, 106) aphid/trap respectively, prevailing field condition ranged. (34.6 °C, 19.1 °C, 36%) in 2013 and (31.1 °C, 18.5 °C, 42.2%) for 2014. There were high significant correlation between aphid population mean number and high, low temperature, R values (0.63, 0.58) respectively for 2013 but for 2014 There were no significant correlation R values were (0.71,0.47) respectively.

5.3.3. Seasonal activity of *Thrips tabaci* (lind.) population on *Gladiolus grandiflorus* L.:

Thrips infested gladiolus reach the highest peak on 22/5 during 2013 at prevailing field condition ranged 34.7°C (max. temp.), 21.4°C (min. temp.), and 40% (R.H) with overall mean 7.25 thrips/plant and 2014 at prevailing field condition ranged 30.5°C (max. temp.), 18.8°C (min. temp.), and 47.6% (R.H.) with overall mean 6 thrips/plant, while the lowest population were on 25/3 to 17/4 in the both years, and it was about 0 thrips/plant. In 2013 there were very high significant correlation between thrips population mean number and high, low temperature R values (0.77, 0.93) respectively and for 2014 there were high significant correlation, R values were (0.50, 0.56) respectively.

5.4. Effect of paper traps under various soils fertilizer rates:

5.4.1. Effect of paper traps under various soil fertilizer rates on *Macrosiphum rosae* (Linnaeus) population mean infested *Lilium candidum* L.

During 2013 under trapped kristalon (20-20-20) recorded the highest reduction percent (87%) with general mean (2.05) aphid/plant, while it was lowest (67%) for under trapped nitrogen with general mean (5.16) aphid/plant.

During 2014, under trapped compost recorded the highest reduction percent (58%) with general mean (5.22) aphid/plant while it was lowest reduction percent (47%) for under trapped nitrogen with general mean (6.66) aphid/plant.

5.4.2. Effect of paper traps under various soil fertilizers on *Aphis gossypii* (Glover) population mean infested *Gladiolus grandiflorus* L.

During 2013, under trapped compost recorded the highest reduction percent (49%) with general mean (10.27) aphid/plant, while no reduction effect (2-), for the under trapped high nitrogen level (25-20-20), with general mean (20.5) aphid/plant.

During 2014 the highest reduction rate was (48%) for under trapped high potassium (20-20-25) with general mean (8.77) aphid/plant, the lowest reduction percent (8%). for the under trapped high nitrogen level (25-20-20), it records with general means (15.38) aphid/plant.

5.4.3. Effect of paper traps under various soil fertilizers on *Thrips tabaci* (lind.) population mean infested *Gladiolus grandiflorus* L.

During 2013, there were no significant differences between various under trapped fertilizers rate, and untreated compost plot, except high nitrogen (25-20-20) was the significant lowest thrips population density with general mean (3.30) thrips/plant.

During 2014 increasing potassium rate (20-25-20), gets the pest flowering, and it recorded high thrips population density with general mean (10.36) thrips/plant, and the significant lowest mean was for under trapped compost with general mean (3.91) thrips/plant.

5.5. *Thrips tabaci* (lind.) chemical control.

During 2013, (3, 7, 14) days after treatment the corresponding general means (26.08, 18.82, 15.56) comparing with 59.9 in pretreatment, The Mlathion (37%), Actra (52%), Ashok (60%) and Bovaria (63%) respectively, Ashok was highly effective in controlling *T.tabaci* in fertilizing gladiolus without fertilizing (

0,0,0) which has lowest general mean (24.6), reduction percentage after 3, 7, 14 days were (60%, 62%, 68%) respectively and the lowest one was Mlathion (41%, 42%, 48%).

During 2014 (3, 7, 14) days after treatment the corresponding general means were (52.68, 45.2, 33.96) comparing with 78.5 in pretreatment. The Mlathion (39%), Actra (50%), Bovaria (59%), Ashok (72%), respectively, Ashok was highly effective in controlling *T.tabaci* in fertilizing gladiolus without fertilizing (0, 0, 0) which has lowest general mean (45.9.6), reduction percentage after 3, 7, 14 days were (63%, 69%, 83%) respectively and The lowest one was Mlathion (37%, 39%, 42%).