Salahaddin University - Erbil
Collage of Agricultural Engineering sciences
plant protection Department

زانکۆی سەلاحەدین - هەولێر
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5th Lecture
Identification of insect pests of citrus and their damage and symptom

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Citrus

Citrus paradisi
Citrus Sinensis
Citrus tangerina

Leaf feeders

1- Citrus swallowtail Butterfly

(Citrus leaf Caterpillar) lemon butterfly

Scientific Name: *Papilio demoleus*
Family: Papilionidae
Order: Lepidoptera

Description of the pest:

Adult : large brightly colored wingspan ranges from 80-100 mm.

The upper portion of the forewing is largely black and the outer wing margin has a series of irregular yellow spots.

The upper hind wing has a red spot is dusted with yellow scales.

The under side is paler yellow with the black areas more heavily dusted with yellow.

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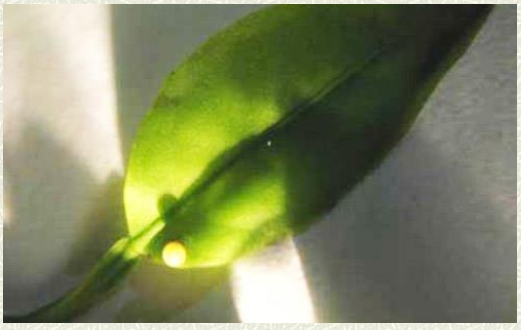
Eggs:

The eggs are pale yellow, nearly spherical,
about (1.5) mm, basally flattened, and smooth.
Females lay eggs singly near the ends of the food plant leaves.



Larvae:

First instars are black with a black head. Second, third, fourth, and fifth instars have a dark green and shiny head capsule. Mature larvae are green with white or pink markings and eyespots

Pupae:

The pupae are sensibly stout , wrinkled, and about (30)mm long. They are attached to the thicker stems of the host plant, or to adjacent sticks and rocks. typical for many swallowtails, being either pale green or pink-brown.

Host plants:

feed on nearly all species and varieties of citrus.

Damage:

The larvae are a serious pest of citrus nursery stock and other young citrus trees, where they are capable of defoliating entire nursery orchards reducing the plant's ability to photosynthesis and stunting its growth.

3- Citrus leaf miner

Phyllocnistis citrella

Family: Gracillariidae

Order: lepidoptera

Description

Adults are minute moths with a 4 mm wingspread. They have white and silvery shimmering scales on the forewings, plus a black spot on each wingtip. The hind wings and body are white, with long fringe scales spreading from the hindwing margins.

Eggs: (0.2) mm in length and (0.3)mm in width laid singly on the underside of leaves of the host plant. They hatch in 2-10 days

Larvae:

Four instars. (3)mm in length. greenish-yellow.

Found in tunnels that wind through the epidermis on the both surfaces of host leaves.

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Citrus leaf miner Larva

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Nature of Damage:-

On hatching larvae feed on leaf tissues between upper and lower surface of leaves making leaves zig-zag galleries.
The infested leaves turn pale, get distorted and dry up.
The larval damage may lead to secondary infection by bacteria causing ‘citrus canker’.

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Sap feeders

2- Citrus Mealy bug

Planococcus citri
Order: Hemiptera
Family: Pseudococcidae

Description:

Adults: Are oval shaped, segmented, soft body insects.

The female citrus mealy bug is wingless. It is light yellow , short, filaments of equal length around its body, and is covered with white powder. Adult males are winged and thus capable of flying to new host plants for mating purpose.

Eggs: Eggs are deposited as white, cottony masses, called ovisacs, on the trunk and stems of citrus plants, giving the appearance of cotton spread on the plant.

Nymphs: Female nymphs resemble the larger adult females. Male nymphs are narrower and often occur In a loose cocoon.

Crawlers and Nymphs

it is polyphagous pest feeds
ornamental plant,
fruit crop,
vegetables
and field crops

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Economic significance

Citrus mealy bugs damage hosts by sucking out plant sap and excreting honeydew in which sooty mold can grow, and by causing distorted growth and premature leaf drop with their toxic saliva. They further disfigure plants by secreting cottony wax.

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4. Black citrus Aphid

Toxoptera aurantii
Family:Aphididae
order:Homoptera

Description

Adults :

Adults are shiny, small (2 mm) and black, and can be with or without wings.

Nymphs are small (1-2 mm), pear-shaped and range from red-brown to black-brown in colour.

Damage :

Infested new growth in citrus trees in the early spring and the infestation increases during the May. Nymphs and adults suck the sap from underside of the leaves and young growing apical part.

the aphids produce honeydew as they feed; this is a sweet watery fluid that is attractive to ants, but when it falls onto leaves it is colonised by sooty mold fungi and the leaves turn black.

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5- Brown Soft Scale

Coccus hesperidium

(Coccidae : Hemiptera)

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Description

Female brown soft scales are pale yellowish-green to yellowish brown, often mottled with brown spots.

The body is usually oval Crawlers and young nymphs are yellow and almost flat in profile

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Damage:

Heavy feeding by the soft brown scale reduces tree vigor, kills twigs, and reduces yields. Sooty mold grows on excreted honeydew and may affect fruit grade. The honeydew also attracts ants.

symptom

Scales on plant stem