

Insects of Importance for Home Gardens in the Texas Panhandle and Beyond

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Aphids (*Aphis* spp., *Myzus persicae*, others)

- Damage plant by sucking the sap, stunting plants, deforming leaves, but most damage is due to aphid transmission of viruses.
- *Aphis gossypii* is known as the melon aphid and can attack cucurbits, okra, cotton, and citrus. It can transmit cucumber mosaic virus, watermelon mosaic, and zucchini yellow mosaic.
- *Myzus persicae*, known as the green peach aphid, can attack solanaceous crops, cucurbits, sunflower, cabbage, okra, and mustard. It transmits viruses such as potato virus Y.
- Management:
 - 1) In some crops, biological control using lady beetles, lacewings, and parasitic wasps can be useful.
 - 2) Infected plants need to be buried.
 - 3) If feasible, silver reflective mulches can repel aphids.
 - 4) Insecticides need to be timed properly and before populations greatly increase. Organic sprays of insecticidal soaps, rosemary oil, and other oils may work in organic and homegarden use.



Aphis gossypii

Whitney Cranshaw, Colorado State University, Bugwood.org



Myzus persicae

Mississippi State University Archive, Mississippi State University, Bugwood.org

Whiteflies (*Bemisia* spp., *Trialeurodes* spp., others)

- Tiny winged insects that suck the sap from plants, can turn leaves yellow, can distort plant, and cause silvering of certain plant leaves.. Most damage is done by transmission of virus diseases
- The sweetpotato whitefly (*B. tabaci*) and the silverleaf whitefly (*B. argentifolii*) are known to transmit the tomato yellow leaf curl begomovirus (TYLCV)
- Adult whiteflies normally do not cause a problem unless they are transmitting a virus
- Management:
 - 1)Prevention: natural enemies normally provide enough control, so insecticide applications kills beneficial insects too. Remove leaves, or plants that have high infestation and, in small gardens, vacuuming insects help to lower populations. Do this before they build up.
 - 2)Reflective mulches or aluminum foil can repel whiteflies
 - 3)Yellow sticky-traps can be used for monitoring and lowering populations
 - 4)Biocontrol with lacewings, small lady beetles, and minute pirate bugs can be of help
 - 5)Insecticidal soaps and oils (neem oil) can manage whitefly nymphs



Bemisia tabaci
Biotype B

Jeffrey W. Lotz, Florida Department of Agriculture and Consumer Services, Bugwood.org



Don Ferrin, Louisiana State University Agricultural Center, Bugwood.org

Spider mites (*Tetranychus spp.*)

- Very common pests in gardens. Also known as webspinning mites.
- Tiny but can be seen with naked eye up close or with a magnifying glass.
- A common spider mite in many gardens is the two-spotted spider mite, *T. urticae*.
- If webbing is observed, this is an indication that the spider mite is present and not other mites.
- Damage is caused by sucking sap from leaves.
- Webbing is a good indication of high populations.
- Leaf loss in vegetables can affect fruit yield.
- Management:
 - 1) Prevention: because this pest is favored by water stress, proper and sufficient watering needs to be done. Scout for yellow leaves.
 - 2) Since spider mites are not insects, insecticides may kill beneficial insects and competitors.
 - 3) Biological control can occur with predatory mite applications
 - 4) Regularly, water pathways where dust promotes spider mites.



Tetranychus urticae

Eugene E. Nelson, Bugwood.org



Spider mite damage and web on tomato leaves

Ronald French, Texas AgriLife Extension Service, Amarillo.

Leaf miner (*Lyriomyza* spp., others)

- It is the larvae that cause damage by feeding between the leaf surface of a plant and leaving what are known as “tracks or mines” (pictures, top and middle right).
- The tomato leafminer is common and belong in the genus *Liriomyza*.
- On tomato, the adult of this leafminer is black and yellow (picture, on bottom right).
- Damage causes leaves to drop and may be an entry point for bacterial plant pathogens.
- Management:
 - 1)Prevention: conserving natural enemies is key. Application of non-specific/general insecticides may kill these biological control organisms. Use insecticides that do not kill them.
 - 2)Parasitic wasps, which attack the larvae, can help manage populations of leafminers.
 - 3)If transplanting, inspect them and discard any infested ones.
 - 4)For organic agriculture, organically labeled spinosads can be of benefit in managing leafminers.



Plant Protection Service Archive, Plant Protection Service, Bugwood.org.



Ronald French, Texas AgriLife Extension Service, Amarillo.



W. Billen, Pflanzenbeschaustelle, Weil am Rhein, Bugwood.org

Cutworms (*Agrotis* spp., *Feltia* spp., *Peridroma* spp.)

- Cutworms are the larval stage of moths that hide in litter or soil and come at night to feed.
- Larvae can reach up to 2 inches in length
- Specially damaging when vegetables or other plants are at seedling stage.
- Can affect a wide range of plants, from vegetables (turnips, tomatoes, cucurbits, beans) to grain crops (ie. corn).
- Management:
 - 1)Prevention: control plant/weed residues before planting as they might sustain these cutworm populations.
 - 2)Reseeding or planting only in areas affected can be economical and less time-consuming.
 - 3)Since cutworms are localized in a field, any treatment should focus on those areas.
 - 4)Some insecticides are labeled against cutworms but may not be needed.
 - 5)aluminum or cardboard collars around the stem could prevent or suppress cutworm attack.



W.M. Hantsbarger, Bugwood.org



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Thrips (*Thrips tabaci*, *Scirtothrips dorsalis*, others)

- Tiny and elongated, they are barely visible with the naked eye and tend to feed on new growth.
- Cause damage by sucking the cell contents of a plant.
- Unless damage is observed, there may be no need for control measures.
- A common thrip is the chile thrip (*Scirtothrips dorsalis*)
- Can transmit viruses such as impatiens necrotic spot virus and Tomato Spotted Wilt Virus (TSWV)
- In pepper, leaf symptoms are seen as concentric rings.
- Management:
 - 1)Prevention: because they have a wide host range (including winter crops) do not plant close to weeds or grasses. Some crop varieties may have some tolerance mentioned or labeled.
 - 2)Prune infected tissue if feasible.
 - 3)Reflective mulches or films can repel insects from finding a host
 - 4)Insecticides are usually not warranted unless sprayed once thrips are detected early on when their number are low. Even if viruses are a concern, once the thrips get established, the insecticides will not kill the thrips fast enough.
 - 5)Insecticidal soaps and oils may help to reduce thrip numbers.



Chile thrip (*S. dorsalis*)



Symptoms of TSWV on Chile pepper

Stinkbugs (*Nezara viridula*, *Thyanta* sp., others)

- Adults are usually brown or green but may have some areas that are colored red, pink, and yellow.
- In some crops, more than one stinkbug species can attack. On tomato, the consperse stinkbug (*Euschistus* spp.), red shouldered stink bug (*Thyanta* spp.) and southern green stink bug (*Nezara viridula*) may be found.
- The adults and immatures look similar. In the process can facilitate secondary pathogen attack.
- Stinkbugs puncture plant tissue and suck the sap.
- Early damage can lead to deformities and dropping of leaves, fruit, flower and/or seed.
- Management:
 - 1)Prevention: monitoring is key as some crops may have a threshold level.
 - 2)Parasitic wasps may be available. They will target the eggs.
 - 3)Control weeds that can overwinter (ie. Legumes, Russian thistle).
 - 4)For organic plots, maintaining natural insect enemies, good weed management, and using insecticidal soaps, can be of great benefit.
 - 5)Insecticides need to reach the ground as many stinkbugs are found there.

Southern green stink bug



UGA1233119

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Russ Ottens, University of Georgia, Bugwood.org

UGA5203025

Red shouldered stink bug

Potato psyllid (*Bactericera cockerelli*)

- Also known as the tomato psyllid, it is very small.
- Feed by sucking on plant juices.
- Tomatoes: When nymphs, feeding is complemented by toxic saliva which results in “psyllid yellows”, a slight yellow or purple discoloration along the midribs and the edges of the top leaves. The entire plant can end up this way and growth stopped.
- On potatoes: If psyllid is present before tuber set, aerial tubers on the stolon will form.
- Can transmit a bacterium pathogen that has been linked to “Zebra Chip” disease/complex of potato. Tubers will have stripes, carbohydrate content affected, and tubers fry purple.
- Management:
 - 1)Prevention: Monitoring for the psyllid is important (via sticky traps and in plant canopy) or check with your Texas AgriLife Extension Service county agent for updates or pest alerts on this psyllid.
 - 2)High temperatures (high 90s F) may reduce or slow psyllid growth
 - 3)Commercial insecticides are available for psyllid control.
 - 4)For organic agriculture, sprays with Entrust formulation of spinosad are available.

Nymph and adult of the potato/tomato psyllid



Whitney Cranshaw, Colorado State University, Bugwood.org

Zebra Chip on Potato



Ronald French, Texas AgriLife Extension Service, Amarillo.