

Controlling The Most Common Vegetable Bugs

Below is a detailed guide on the most common insect pests in Oklahoma vegetable gardens - who they are, how to identify them, and best management tactics, all from OSU-based research and extension recommendations.

1. Beetles

a. Colorado potato beetle, cucumber beetles, blister beetles, bean beetles

These hard-bodied beetles (Coleoptera) chew foliage, stems, buds, and fruit in home gardens. Key culprits include:

- **Colorado potato beetle:** Striped yellow-and-black adult and plump, reddish larvae that defoliate potatoes and tomatoes.
- **Cucumber beetles** (spotted or striped): Attracted to cucurbits; they not only chew leaves but also spread bacterial wilt and mosaic viruses.
- **Blister beetles:** Smooth, elongate beetles that feed on vegetables like beans and tomatoes.

Management:

- **Row covers** over transplants block entry.
- **Hand-picking** adults and larvae is effective early in infestation.
- **Organic sprays** of neem oil, pyrethrum, or insecticidal soaps can work well.

- **Chemical treatments** like pyrethrin or Spinosad (especially for young nymphs) may be necessary, following label guidelines.
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2. Caterpillars and Cutworms

These are soft-bodied larvae (Lepidoptera) that chew plant parts, sometimes severing seedlings at the base. Typical pests include:

- **Cutworms:** Nocturnal and cut young plants at or just below soil level.
- **Hornworms and tomato fruit worms:** Large green caterpillars that strip tomato foliage and bore into fruit.

Management:

- **Collars** (e.g., cardboard or plastic) protect transplants from cutworms.
 - **Bt products** (*Bacillus thuringiensis* var. Kurosaki) target young caterpillars without harming beneficial insects.
 - **Hand-picking** is effective for larger caterpillars, especially hornworms.
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3. Grasshoppers

Grasshoppers (Orthoptera) chew irregular holes in foliage, rapidly defoliating plants during population surges.

Management:

- Row covers and maintained borders can reduce grasshopper entry.

- Broad-spectrum insecticides or organic sprays (neem or pyrethrum) may be required during outbreaks; reapplication is often necessary.
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4. Aphids, Whiteflies, and Thrips

These are small, piercing-sucking insects that cause distorted growth, honeydew, and transmit viruses:

- **Aphids** cluster on new growth, producing sticky honeydew and attracting sooty mold.
- **Whiteflies** appear as tiny white flies that release honeydew and can spread viral diseases.
- **Thrips** damage leaves and flowers, sometimes vectoring tospoviruses (e.g., tomato spotted wilt).

Management:

- **Shoulder-tapping plants** with strong water jets can dislodge these pests.
 - **Insecticidal soaps and horticultural oils** are effective against all three groups.
 - **Soft insecticides** preserve beneficial predators like ladybugs and lacewings.
 - **Monitoring** with early detection is critical—heavy infestations are harder to control later.
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5. Squash Bugs

A major pest of cucurbits, squash bugs suck plant sap and transmit diseases. They overwinter nearby and return in spring.

Identification:

- Adults are gray-black, shield-shaped (~ $\frac{5}{8}$ inch long).
- Eggs are copper-colored clusters beneath leaves.
- Young nymphs are small and reddish before turning gray.

Management:

- **Resistant varieties** like zucchini may fare better than squash types.
 - **Floating row covers** prevent access before flowering.
 - **Egg mass removal** and **board traps** (place boards to attract and collect bugs overnight) are effective.
 - **Targeted insecticides**: Spinosad for nymphs and pyrethrins or cypermethrin for adults.
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6. Spider Mites

Although not insects (they're arachnids), spider mites cause serious damage by sucking plant juices:

- Leaves develop a bleached, stippled look and may show fine webbing.
- Populations explode in hot, dry weather, especially after pesticide use that kills their predators.

Management:

- **Frequent use** of insecticidal soaps or horticultural oils at the first sign; weekly applications may be needed.
- **Avoid broad-spectrum insecticides** during hot weather to preserve predator mites.

- **Severe infestations** may require miticides like Kelthane, with strict label adherence for vegetable use.
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7. Cabbage Loopers

These inchworms feed on soft greens (cabbage, lettuce, spinach), creating holes and rapid defoliation.

Management:

- **BT sprays** kill loopers while sparing beneficial insects.
 - **Scout for larvae** and treat early for best results.
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Best Practices & Integrated Pest Management (IPM)

1. **Scout routinely** for early detection, especially for small pests like aphids, thrips, and mites.
2. **Use cultural controls:**
 - Remove garden debris to eliminate overwintering sites.
 - Rotate crops to break pest life cycles.
 - Introduce row covers to protect vulnerable stages.
3. **Preserve natural enemies** (ladybugs, lacewings, parasitic wasps):
 - Favor selective (soft) insecticides and avoid broad-spectrum chemicals.
4. **Choose resistant varieties and timing:**
 - E.g., zucchini over yellow squash for reduced squash bug risk.
 - Delay planting susceptible crops to avoid peak pest periods.

5. **Targeted chemical controls** only when thresholds are reached:

- BT, insecticidal soaps, horticultural oils, Spinosad, pyrethrin, miticides, depending on the pest and their life stage.

When to Seek Professional Help

If pest identification or management becomes confusing, OSU offers resources like:

- Plant Disease & Insect Diagnostic Lab for lab-based confirmation.
- Digital Diagnostics for virtual consultation.
- A library of extension publications and regional fact sheets.

In Summary

Oklahoma gardeners frequently contend with beetles, caterpillars, grasshoppers, squash bugs, aphids, whiteflies, thrips, spider mites, and cabbage loopers: all of which can damage yield and plant health. The best defense is vigilance: frequent scouting, cultural sanitation, selective physical and biological controls, resistant varieties, and timely interventions with soft or targeted treatments. By combining these strategies with classic integrated pest management, you can maintain a healthy, productive vegetable garden while preserving beneficial insect populations.

References

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