

Dragoons Pest & Disease Quick Reference

The high-frequency offenders · distilled from Guide 10

PEST CATALOG Identification + first-line treatment

Pest / disease	Identification	First-line treatment
Harlequin bug (<i>brassic</i> <i>cas</i> , Aug–Nov) • signature	Vivid orange-and-black shield-shaped bug, 8–12 mm. Yellow-white stippling on leaves; tidy double rows of barrel-striped eggs under leaves. Not affected by Bt.	Sanitation in spring (remove all brassica debris within 100 ft) + floating row cover from transplant through October. Hand-pick adults into soapy water morning + evening. Row cover transplant → first flowering. Blue Hubbard trap-crop row. Pyrethrin at dusk within 48 h of first big monsoon. Cull wilt-symptomatic vines within 48 h (trash, don't compost).
Cucumber beetle (<i>cu</i> <i>curbits</i> , Jul–Sep) • signature	Small (5–7 mm) yellow beetles with stripes or spots. Vectors bacterial wilt — no cure. Threshold: any beetle, anywhere on a cucurbit.	Aluminum foil collar wrapped around base of every squash stem May–Aug. Second sowing late July as insurance.
Squash vine borer (<i>squash</i> , Jul flight)	Sudden wilt despite full moisture; frass at stem base; cream caterpillar inside split stem.	Hose blast every 3 days. Predators (ladybug, syrphid) usually handle green peach. Insecticidal soap on cabbage aphid — wax resists, be thorough.
Aphids (<i>green peach</i> : <i>peppers</i> , <i>peach</i> ; <i>cab</i> <i>bage</i> : <i>brassic</i> Nov– <i>Feb</i>)	Clusters on growing tips/undersides; curl of new growth; sticky honeydew; sooty mold. Cabbage aphid has waxy gray coat.	Daily dusk scouting + hand-pick. Leave parasitized larvae alone (white rice-grain cocoons = <i>Cotesia</i> wasps). Bt if heavy.
Tomato hornworm (<i>Solanaceae</i> , Jul–Sep)	Pellet frass on lower leaves; sudden single-stem defoliation overnight. Large green caterpillar with curved spine.	Pheromone traps; threshold 5+ moths/trap/week. Bag fruit at thumbnail size, or spinosad at first egg-hatch (~250 degree-days).
Codling moth (<i>apple</i> , <i>pear</i> , May–Aug)	Wormy fruit; caterpillars enter at blossom end; frass at hole; premature drop. 3 generations: late Apr, late Jun, late Aug.	Two dormant copper sprays — mid-January and mid-February at full label rate. Once symptoms appear in spring, control is impossible.
Peach leaf curl (<i>stone</i> <i>fruit</i> , <i>dormant trigger</i>) • signature	Red puckered, thickened, curled leaves on peach/nectarine in March–April. Severe defoliation; reduced bloom following year.	K-bicarb (Kaligreen, MilStop) every 14 d from late June. Milk spray (1:9) weekly. Sulfur every 14 d — not above 85°F.
Powdery mildew (<i>grape</i> , <i>cucurbit</i> , Jul– <i>Sep</i>)	White powdery coating on upper leaf surfaces. Triggers: first dew, 60%+ overnight humidity 3 nights, afternoon thunder.	Plant the fence before the trees. 5-ft welded-wire perimeter minimum, OR 6-ft fence with one hot wire at 12 in. Trunk wraps on every young fruit tree.
Javelina (<i>orchard</i> , <i>year</i> <i>round</i>) • signature	Pig-like, 30–60 lb adults, gray-black with pale collar. Herds of 6–15. Strips bark from young trees; eats figs, pomegranates, melons, sweet potatoes.	Habitat reduction — move woodpiles, dead cholla, junk away from garden. Largest snap trap baited with peanut butter at midden entrances. Fix any unintended drip on hose bibs.
Packrat (woodrat) (<i>year-round</i>)	Stick middens 2–4 ft across in cholla, prickly pear, woodpiles. Chewed irrigation lines. Squash/melon fruit gnawed.	Quarter-inch hardware-cloth basket (24-in cube) around every root ball at planting. Macabee/Cinch traps in fresh mounds.
Gopher (<i>orchard</i> , <i>year</i> <i>round</i>)	Fan-shaped soil mounds. Sudden wilt of young fruit tree with no above-ground cause; trunk wobbles when pushed (roots gone).	

SPRAY DECISION TREE Guide 10 §19.1 — walk top down; stop at the first step that resolves it

- Above action threshold?** If not — wait and scout. Most damage is cosmetic; predators are coming.
- Cultural fix?** Mulch, prune, adjust watering, exclude with row cover, rotate next year. Solves more problems than any spray.
- Mechanical fix?** Hand-pick, hose-blast, sticky trap, pheromone trap. Effective for low-to-moderate populations.
- Targeted biological?** Bt (caterpillars), spinosad (thrips), beneficial nematodes (soil grubs). Species-specific.
- Targeted soft chemical?** Insecticidal soap, hort oil, sulfur, copper, K-bicarb. Short residual; **spray at dusk.**
- Broad-spectrum (last resort).** Pyrethrin only, dusk only, never on flowering plants. Accept the collateral.

DUSK TIMING. Most bees stop foraging at sunset; most pest insects feed at dusk and night. **Spray within 30 minutes of sunset.** Avoid at midday: pyrethrin, neem, spinosad, sulfur (above 85°F burn), hort oil (above 85°F burn), copper. Safe any time: insecticidal soap, hose-blast, iron-phosphate slug bait.

THE THREE HARD RULES Guide 10 §19.3

- Never spray during bloom.** Not pyrethrin, not neem, not spinosad — if pollinators are visiting, don't spray.
- Never apply copper near waterways.** Acutely toxic to fish, frogs, aquatic life.
- Never use broad-spectrum during an outbreak you don't understand.** Pyrethrin makes spider mites worse; carbaryl makes aphids worse. **Diagnose first.**