The Pest Plan

Organic IPM for Real Life — Prevent, Monitor, Respond

Introduction

Pest Management the Way Farmers Actually Do It

Walk into a commercial organic operation and ask the growers how they handle pests. They won't say they spray on a schedule. They won't say there is zero tolerance on every bug that they find. They'll say they scout, know the thresholds, and respond to what's actually happening, not to what they are afraid might happen.

That system is called Integrated Pest Management, or IPM. It's been the standard framework for serious organic production for decades. It works by putting prevention first, monitoring second, and intervention last, and by treating intervention as a graduate ladder rather than a first reflex.
This toolkit translates this farmer framework for the home garden. You'll learn how to set up a garden that's harder to infest, how to run a five-minute weekly scout that catches problems early, how to identify what you're actually looking at, and how to decide when a pest population requires action, and what that action should be.

The goal is not a pest-free garden. The goal is a garden that produces food without unnecessary chemical inputs, and a grower who knows the difference between a nuisance and a crisis.

CROSS-REFERENCE: Soil health is the foundation of pest-resistant plants. A crop grown in well-amended, biologically active soil is significantly more resistant to pest and disease pressure than one grown in depleted ground. See Toolkit No. 1: How to Make Great Soil for full soil guidance.

SECTION 1

Prevention First: Building a Garden That's Hard to Infest

The cheapest, most effective pest management happens before any pest arrives. A well-designed garden with the right spacing, airflow, timing, and biodiversity is a much harder target than one that's crowded, stressed, and monocropped.

Spacing and Airflow

More plants per square foot does not mean more food per square foot. Overcrowded plants compete for light and water, stay damp longer after rain, and create microclimates where fungal disease and soft-bodied pests thrive.

- Follow the crop's actual spacing requirement, not an optimistic estimate. Squash needs 24–36 inches. Tomatoes need 18–24 inches. Crowding them doesn't increase yield, it increases disease and pest vulnerability.
- Prune lower leaves and suckers on tall crops to improve ground-level airflow. Wet leaves touching the soil are an invitation to fungal disease and slug damage.
- Orient rows and beds to catch prevailing wind and dry leaves faster after rain or irrigation. In most of the continental US, this means a north-south orientation.

Crop Rotation

Pests and diseases that overwinter in the soil are strongly controlled by rotation, moving crops to different beds each season so that the pest that specialized in one crop's roots or residue finds nothing to feed on.

PLANT FAMILY	COMMON MEMBERS	ROTATION RULE
Solanaceae (Nightshade)	Tomato, pepper, eggplant, potato	Don't plant in same bed more than once every 3 years
Cucurbitaceae (Cucurbit)	Squash, cucumber, melon, zucchini	Rotate annually; squash vine borer and powdery mildew build up fast
Brassicaceae (Brassica)	Kale, cabbage, broccoli, collards, arugula	Rotate annually; cabbage loopers, aphids, clubroot persist in soil
Fabaceae (Legume)	Beans, peas, cowpeas	Can follow any crop; nitrogen-fixing; good to follow heavy feeders
Apiaceae (Carrot family)	Carrot, dill, fennel, parsley, cilantro	Beneficial insect attractors; use as borders or succession filler

Timing and Seasonal Planning

Many pest pressure peaks are predictable. Planting ahead of or after those peaks dramatically reduces exposure.

- Plant brassicas so that heads are forming before peak cabbage looper season; in most climates, this means very early spring or fall plantings.
- Succession plant rather than putting all one crop in at once. Staggered plantings mean that when one planting takes a pest hit, others are at a different, less vulnerable stage.
- Remove crop residue promptly after harvest. Don't let spent plants sit in the bed, they harbor overwintering pests and disease.

Biodiversity as Pest Control

A monoculture, one crop repeated across a large area, is a pest buffet. A diverse polyculture confuses pests, provides habitat for beneficial insects, and distributes risk.

- Interplant flowers among vegetables. Marigolds, nasturtiums, and zinnias attract beneficials and confuse or repel some pests.
- Allow some herbs to flower; basil, cilantro, and dill flowers attract parasitic wasps that prey on caterpillar eggs.
- Avoid spraying anything during bloom time on any plant in your garden, you're looking at a beneficial insect habitat, not a pest target.

WARM CLIMATE NOTE: In South Florida and the Gulf Coast, year-round warm temperatures mean pest populations never fully crash between seasons. Prevention practices matter more here than anywhere, there is no cold-weather reset. Pay extra attention to clearing spent crops quickly, maintaining airflow, and rotating beds on a defined schedule even in the short transition between warm and warm-wet seasons.



SECTION 2

Monitoring: The 5-Minute Weekly Scout

You cannot manage what you don't see. Early detection changes the scale of the problem entirely, a colony of aphids caught in its first week is a five-minute job. The same colony at week three is a whole-bed problem that may require crop removal.

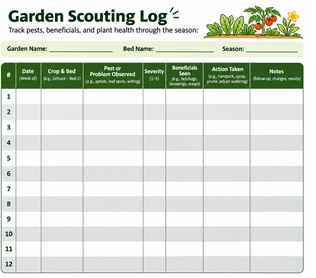
Scouting isn't a complicated system. It's a habit: five minutes, once a week, same route, same questions.

How to Scout

- Walk the same path through your garden every time. Move slowly. You're not just looking for problems, you're comparing this week to last week.
- Look at the undersides of leaves. Most soft-bodied pests, aphids, whiteflies, spider mites, mealybugs, lay eggs and shelter on the underside where it's protected and more humid.
- Check the growing tips and newest leaves. Many pests concentrate where the plant tissue is softest and most nutritious.
- Examine the soil surface near the base of stems. Fungus gnats, cutworms, and soil-dwelling larvae are visible here.
- Look for indirect evidence: sticky residue (honeydew from aphids or whiteflies), webbing (spider mites), frass/excrement (caterpillars), distorted growth (thrips, viral damage from pest vectors).
- Note predators too. Ladybugs, lacewings, parasitic wasps, and predatory beetles are assets, their presence means the ecosystem is working. Don't spray when you see them.

The Scouting Log

You don't need an elaborate system. A simple weekly entry tells you whether a problem is growing, stable, or resolving, and that's the information you need to make a decision.



TIMING TIP: Scout in the morning, when temperatures are cooler. Many pests are most active and visible in the early hours before heat drives them into shelter. It also keeps you out of the garden during peak pollinator foraging, which happens mid-morning to afternoon.

WARM CLIMATE NOTE: In warm climates, scout every 5–7 days year-round, there is no dormant season for pest populations. During the wet season (June–September in Florida), check for disease and fungal problems in addition to insects, as humidity dramatically accelerates both.



SECTION 3

Pest Identification Cards: Know What You're Looking At

Before you do anything, identify the pest. Treatments for sucking insects are different from treatments for chewing caterpillars, which are different from fungal disease, which is not a pest at all and requires a completely different approach. Misidentification leads to wasted product and continued damage.

PEST ID CARD — APHIDS

Also called: Plant lice, greenflies, blackflies

What to look for: Tiny (1–3mm), soft-bodied, pear-shaped insects. Green, yellow, black, gray, or pink depending on species. Often clustered. Look for shed white skins (exuviae), a sign of an active colony.

Where to look: Undersides of leaves, growing tips, stems, especially on new soft growth. Colonies build fast.

Damage caused: Piercing-sucking damage causes curled, distorted, yellowing leaves. Secrete sticky honeydew that grows black sooty mold. Can vector plant viruses.

Action threshold: Act when you see a colony, don't wait. A small cluster on one tip in week one becomes a whole-plant infestation by week three in warm weather.

First response: Strong water spray to dislodge. For persistent colonies: insecticidal soap spray to the underside of leaves. Check for ants farming the colony and remove them first, ants protect aphids from predators.

PEST ID CARD — WHITEFLIES

Also called: Silverleaf whitefly, greenhouse whitefly

What to look for: Tiny white moth-like insects (1–2mm) that fly up in a cloud when you disturb a leaf. Nymphs are flat, oval, and scale-like, pale yellow, attached to leaf undersides.

Where to look: Leaf undersides, especially on tomatoes, peppers, squash, sweet potato, and most warm-season vegetables.

Damage caused: Sucking damage causes yellowing, wilting, reduced vigor. Heavy infestations stunt plants. Honeydew leads to sooty mold. Some species vector serious viruses.

Action threshold: Act at first adult sighting, whitefly populations double every 10–14 days in warm weather. Don't wait for visible damage.

First response: Yellow sticky traps near plants to monitor and reduce adult population. Insecticidal soap to undersides of leaves, targeting nymphs. Reflective mulch deters adults. Remove heavily infested lower leaves.

PEST ID CARD — SPIDER MITES

Also called: Two-spotted spider mite, red spider mite

What to look for: Barely visible to the naked eye, look for very fine stippling (tiny pale dots) on leaves, and fine webbing on leaf undersides and between stems. Mites are visible under a 10x hand lens as tiny moving dots.

Where to look: Undersides of leaves, especially in hot, dry conditions. Tomatoes, cucumbers, beans, and strawberries are common hosts.

Damage caused: Stippled, bronzed, or silvery leaf surface. Severe infestations cause leaf drop. Populations explode in hot, dry conditions (above 85°F) or after broad-spectrum sprays kill predators.

Action threshold: Act when stippling appears on more than 2–3 leaves. Mite populations can triple in less than a week in heat.

First response: Strong water spray to undersides of leaves daily for several days (mites hate water). Increase humidity if container growing. Neem oil or insecticidal soap to undersides. Avoid broad-spectrum sprays that kill predatory mites.

PEST ID CARD — THRIPS

Also called: Florida flower thrips, western flower thrips

What to look for: Very small (1–5mm), slender, fast-moving insects. Silver or tan. Difficult to see, tap flower or leaf over white paper to see them fall. Look for silver streaks and distorted or scarred tissue.

Where to look: Inside flowers (primary feeding site), growing tips, leaves. Most damage happens inside blooms before you see the pest.

Damage caused: Silver or bronze streaking on leaves, distorted petals and growing tips, premature flower drop, scarred fruit surfaces. Also vectors serious plant viruses including TSWV.

Action threshold: Act when you see distorted tips or streaked leaves on multiple plants, thrips are often invisible until damage is visible.

First response: Blue sticky traps (thrips are attracted to blue). Spinosad-based spray (OMRI-listed) for active infestations, apply late evening to protect pollinators. Remove and bag heavily damaged tissue.

PEST ID CARD — CATERPILLARS (LEPIDOPTERA LARVAE)

Also called: Cabbage looper, tomato hornworm, corn earworm, armyworm, cutworm

What to look for: Varies by species from small green worms (loopers) to very large green horned caterpillars (hornworms). Look for frass (dark green or brown pellets) on leaves and at the base of stems.

Where to look: On or inside leaves, stems, fruit, and growing tips. Cutworms work at soil level at night, look for severed seedlings at the base.

Damage caused: Chewing damage, holes in leaves, eaten fruit, severed stems. Hornworms can defoliate a tomato plant in days. Earworms enter fruit directly.

Action threshold: Act when you see feeding damage on multiple leaves or plants. One hornworm per plant is your action threshold, they're big feeders.

First response: Hand-pick large caterpillars and hornworms (wear gloves, drop in soapy water). Bt (Bacillus thuringiensis) spray for widespread small-caterpillar pressure, it's specific to Lepidoptera larvae and safe for everything else. Apply in late afternoon.

PEST ID CARD — FUNGUS GNATS

Also called: Sciarid flies, soil gnats

What to look for: Tiny dark flies (2–3mm) hovering near the soil surface or on soil in containers. Adults are mostly a nuisance; larvae are the problem, white maggots in the top 2–3 inches of soil feeding on roots.

Where to look: Top 2–3 inches of soil, especially in containers with consistently moist, organic-rich growing media. Worse in overwatered conditions.

Damage caused: Larvae damage root tips and root hairs, reducing uptake of water and nutrients. Seedlings and young plants are most vulnerable, wilting and yellowing without obvious above-ground cause.

Action threshold: Act when you see adults emerging regularly and the soil stays wet. If you're seeing wilting in well-watered seedlings, check the soil for white larvae.

First response: Let the top 2 inches of soil dry completely between waterings, this breaks the larval cycle. Yellow sticky traps to capture adults. Beneficial nematodes (Steinernema feltiae) applied to soil for serious larval infestations.

PEST ID CARD — SCALE INSECTS

Also called: Soft scale, armored scale, brown soft scale

What to look for: Flat, oval, immobile bumps on stems and leaves, tan, brown, or white. Look like part of the plant until you try to scrape one off. Soft scale looks like small brown domes; armored scale has a flat, waxy cover.

Where to look: Stems, leaf midribs, and leaf undersides. Particularly common on woody herbs, citrus, and ornamentals near vegetable beds.

Damage caused: Sucking damage weakens plants over time. Honeydew leads to sooty mold. Heavy infestations cause branch dieback and stunted growth.

Action threshold: Act when you see more than a few clusters on the same plant. Scale is slow-moving but persistent, it doesn't self-resolve.

First response: Scrape off by hand with a soft toothbrush or cloth. Neem oil or horticultural oil spray smothers immature crawlers (the mobile phase). Multiple applications two weeks apart.

PEST ID CARD — MEALYBUGS

Also called: Citrus mealybug, grape mealybug

What to look for: White, waxy, cottony clusters at leaf axils, stem joints, and root crowns. Oval, segmented insects visible inside the cottony mass. Slow-moving.

Where to look: Protected spots: where leaves meet stems, at the base of plants, in dense foliage. Roots (root mealybugs are an underground version that only shows when you pull the plant).

Damage caused: Sucking damage causes yellowing and leaf drop. Heavy infestations cause significant plant decline. Honeydew leads to sooty mold.

Action threshold: Act at first sighting, mealybugs spread plant-to-plant slowly but build serious populations if ignored.

First response: Isolate affected plants if possible. Dab individual clusters with isopropyl alcohol on a cotton swab. Insecticidal soap or neem oil spray for broader coverage. Predatory insects (Cryptolaemus mealybug destroyer) for serious infestations.

PEST ID CARD — LEAFMINERS

Also called: Serpentine leafminer, vegetable leafminer

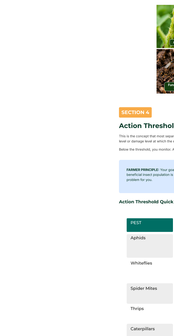
What to look for: Pale, winding tunnels visible inside leaves; look like thin white or tan lines tracing a path through the leaf tissue. The larvae are inside the leaf, not on the surface.

Where to look: Inside leaf tissue of tomatoes, peppers, lettuce, beets, spinach, and many other vegetables. Look for the distinctive winding mine pattern on the upper leaf surface.

Damage caused: Mining creates visible trails and weakens the leaf's photosynthetic capacity. Severe infestations cause early leaf drop. Rarely kills an established plant but can reduce yields.

Action threshold: Act when more than 20–30% of leaves on a plant show active mines. One or two mined leaves on a healthy plant is a monitoring note, not a crisis.

First response: Remove and dispose of heavily mined leaves, do not compost. Beneficial parasitic wasps naturally control leafminers in an undisturbed ecosystem. Avoid broad-spectrum sprays that kill the parasitoids. Spinosad is effective for severe cases.



SECTION 4

Action Thresholds: The Number That Tells You to Act

This is the concept that most separates farmers from anxious home growers: not every pest sighting is a pest problem. An action threshold is the population level or damage level at which the economic cost of not acting, harvest loss or stand failing, outweighs the cost of intervening.

Below the threshold, you monitor. Above it, you act. The threshold keeps you from spraying a healthy garden because you saw one aphid.

FARMER PRINCIPLE: Your goal is not a pest-free garden. Your goal is a productive, harvest-quality garden. A few aphids on one plant while your beneficial insect population is building is not a crisis. It's the ecosystem working. Intervening too early kills the beneficials that would have solved the problem for you.

Action Threshold Quick Reference

PEST	MONITOR (DON'T ACT YET)	ACTION THRESHOLD	ACT IMMEDIATELY IF
Aphids	Small cluster on 1-2 leaves, beneficials present	Colony spreading to 3+ leaves or multiple plants; honeydew visible	Spreading rapidly; ants forming the colony; no beneficials visible
Whiteflies	Occasional adults at scout	Adults flying up in clouds when plant is scouted; nymphs on leaves	Any visible population on a crop that's a known virus host
Spider Mites	A few stippled leaves, no webbing	Stippling on 5+ leaves, any webbing visible, hot/ dry conditions	Visible bronzing across multiple plants or webbing on fruit
Thrips	Occasional adult in flower	Silver streaks or distortion on new growth on 2+ plants	Any on known virus-susceptible crops (pepper, tomato, impatiens)
Caterpillars	1 small caterpillar, minor chewing on outer leaves	Active feeding on 20%+ of leaves; any damage to tomatoes/pepper;	Cutworm severing seedlings; armyworm spreading across bed
Fungus Gnats	Occasional adult, good watering practice	Consistent adult emergence, seedlings wilting in moist soil	Young seedlings wilting with larvae visible in soil
Scale	1-2 insects on a healthy plant	Clusters on multiple branches or 2+ plants	Any on stressed or young plant; spreading to other plants
Mealybugs	A few isolated at stem joints	Multiple clusters, honeydew leading to new growth	Any on a plant being propagated — they spread cuttings
Leafminers	1-3 mines on outer leaves of established plant	20–30% of leaves actively mined; new damage weekly	Any on seedlings with less than 4 true leaves

THRESHOLD EXCEPTION: Virus-vectoring pests, thrips, whiteflies, and some aphid species, have near-zero thresholds on susceptible crops. One whitefly on a young tomato or pepper seedling can introduce a virus that will ruin the entire plant. Act fast on these, especially in warm climates where vector populations are year-round.

SECTION 5

The Response Ladder: Escalate, Don't Start at the Top

Once you've confirmed a pest and it's at or past threshold, work up the ladder. Start at the bottom rung. Only move up when the lower rung isn't working.

This isn't about being restrictive with sprays, it's about being effective. The right tool for the right situation is always the most effective one. Broad sprays kill beneficials, create resistance, and contaminate the harvest. Targeted responses preserve your ecosystem and solve the problem faster.

Rung 1: Cultural and Physical Controls

- Hand-pick large pests (hornworms, caterpillars, squash bugs). Drop in soapy water. Wear gloves.
- Strong water spray to dislodge aphids, spider mites, and whitefly adults. Repeat daily for 3-5 days.
- Prune out heavily infested leaves, stems, or whole plants. Bag and dispose, don't compost.
- Row cover fabric to exclude flying pests (caterpillar moths, whitefly adults, leafminer flies). Must be secured at edges.
- Sticky traps (yellow for whiteflies and fungus gnats, blue for thrips) to monitor and reduce adult populations.
- Copper tape or diatomaceous earth for slugs and snails around bed edges.

Rung 2: Biological Controls

- Release beneficials already there: avoid any spray during the day when beneficials are active. If you must spray, spray after dark.
- Introduce predatory insects: ladybugs (aphids), lacewings (aphids, thrips, mites), Trichogramma (leafminer eggs), predatory mites (spider mites).
- Apply beneficial nematodes (Steinernema feltiae) for fungus gnat larvae and soil-dwelling pests. Apply to moist soil, late afternoon or evening. UV degrades it.
- Beneficial nematodes (Steinernema feltiae) for fungus gnat larvae and soil-dwelling pests. Apply to moist soil, keep moist for 48 hours.
- Encourage natural predators with habitat: flowering plants, reduced disturbance, no broad-spectrum sprays.

Rung 3: Low-Impact Sprays

- Insecticidal soap: contact-kill only, no residue. Works on soft-bodied insects, aphids, whiteflies, spider mites, mealybugs. Must hit the pest directly to work. Rinse off after 12 hours to avoid leaf damage in hot weather.
- Neem oil: disrupts insect growth and reproduction, some repellent effect. Also has antifungal properties. Apply in the evening. Can burn foliage in direct sun or high heat.
- Horticultural oil (lightweight): smothers scale and mealybug crawlers, spider mite eggs. Apply when temperatures are between 40–90°F. Do not use when frost is expected within 24 hours.

Rung 4: OMRI-Listed Botanical Sprays

- Spinosad: derived from soil bacteria, highly effective on caterpillars and thrips. Apply in late evening, bees to bees until dry. Do not apply on open flowers. Toxic to bees when wet.
- Pyrethrin: fast knockdown on a broad range of insects, including beneficials. Use only as a last resort. Short residual, kills on contact. Minimal effect on pollinators if applied during the day.
- Azadirachtin: the active in neem. Use even if you've used the product before. Concentration, application rate, pre-harvest intervals, and environmental restrictions vary by formulation.

RESISTANCE WARNING: Rotating spray classes matters. If you use insecticidal soap every week all season, pest populations can develop tolerance. Rotate between classes: physical → soap → neem → soap → biological. Never spray the same product more than 2-3 applications in a row without switching modes of action.

SECTION 6

Building a Spray Schedule Framework

The biggest mistake home growers make with pest management is spraying on a calendar rather than on a scout. A spray schedule tells you when you're allowed to spray, not that you should spray, regardless of what you're seeing.

Build your spray approach around three situations: preventing a known seasonal problem, responding to an identified pest at or above threshold, and protecting a vulnerable crop at a high-risk window.

Three Legitimate Spray Situations

SITUATION	EXAMPLE	APPROPRIATE RESPONSE
Seasonal prevention, timeline	Beginning of whitefly season in early July in zone 8b, and you've had problems every year	Reflective mulch, sticky traps, row cover, NOT preventative spray
Identified pest at threshold	Aphid colony confirmed at week 3 scout, spreading	Start at Rung 1. Document. Reassess in 5 days.
High-risk crop window	Young tomato seedlings in whitefly pressure area	Scout every 3–4 days (shorten cycle). Act immediately at first adult sighting.

Sample Spray Decision Sequence

- Scout confirms pest above threshold.
- Apply Rung 1 response (physical removal, water spray).
- Scout again in 5-7 days. If population is decreasing, continue monitoring, no spray.
- If population is stable or increasing, move to Rung 2 or Rung 3 (soap or neem).
- Scout in 5-7 days. If responding, continue monitoring only.
- If not responding after 2 applications, reassess identification, consider Rung 4, or consider crop removal.



WARM CLIMATE NOTE: In Florida's year-round pest season, it's tempting to spray on a calendar because something is always present. Resist this. Beneficial populations in warm climates can suppress pests quickly if you're trying to establish, and costs money on interventions that aren't needed. Scout, set your thresholds, and respond to what's actually there.

SECTION 7

Protecting Pollinators: Non-Negotiable

Every organic pest management commitment is incomplete without a pollinator protection protocol. Many of the sprays that control pest insects, including organic-approved ones, are toxic to bees, butterflies, and other pollinators that are essential to your garden's productivity. Losing your pollinators while controlling your pests is not a trade-off that works out.

The Basic Rules

- Never spray any plant that has open flowers during daylight hours. This includes weeds in flower near your garden. Foraging bees are on open flowers from roughly sunrise to sunset. Spray in the evening.
- Time sprays for dusk or after dark whenever possible. Most pollinators are not active after dark. Allow at least 6 hours of dark before sunrise, this rules out very late evening applications in summer when nights are short.
- Spinosad and pyrethrins are especially hazardous to bees before they dry. The dry residue is significantly less toxic, but still best avoided on open flower surfaces.
- Soaps and insecticidal soap have relatively low toxicity to bees at labeled rates when dry. They're still safer applied in the evening when bees aren't foraging.
- Never spray during windy conditions. Drift carries spray into non-target areas and onto flowers you didn't intend to treat.

Identifying Pollinators in Your Garden

WHAT YOU SEE	WHAT IT IS	WHAT NEXT
Fuzzy yellow-and-black, hovering, doesn't sting	Bumblebee — highly effective pollinator, important to protect	Do not spray anything nearby. Note location. Protect.
Small, dark, fast-flying bee, 5-10mm	Native solitary bee — critical for many vegetable crops	Protect. These are your primary pollinators for squash and tomato.
Classic striped honeybee, visiting flowers	Honeybee — managed hive nearby	Do not spray during foraging hours. This affects a neighbor's hive.
Large black bee hovering over flowers	Carpenter bee — can bore into wood, but rarely damaging	Protect and know next beds. Do not kill. Not aggressive.
Small wasp or fly on flower	Likely parasitic wasp — good predator, not a pollinator	Protect. These are free pest management. Do not spray.

WARM CLIMATE NOTE: Florida has 215+ native bee species, one of the most diverse native bee populations in the country. Most are solitary ground-nesters and highly sensitive to any soil disturbance or spray drift. Winter in Florida is still pollinator season. Protect accordingly year-round.



SECTION 8

What Works in Humidity — and What Quietly Does Not

Most home garden pest management resources were written for dry climates or for the middle of a temperate growing season. In humid regions, the Gulf Coast, the Southeast, the Pacific Northwest, the calculus changes. Some products break down faster, some pests explode faster, and some practices that work in Colorado are nearly useless in Miami.

Humidity-Specific Pest Pressure

PEST / DISEASE	WHAT HUMIDITY DOES	ADJUSTED APPROACH
Whiteflies	Populations explode in year-round warmth; adults can't fly as far in humidity	Scout weekly all year. Yellow traps always on. Reflective mulch.
Spider mites	Struggle in high humidity; prefer dry conditions	More likely in dry indoor growing or during dry periods. Less of a summer problem than a winter one.
Fungal disease (powdery mildew, downy mildew, early blight)	Thrives in wet conditions, spreads on wet foliage, humidity above 50%	Airflow is the primary control. Drip irrigation (not overhead). Remove lower foliage. Scout for disease as often as pests.
Aphids	Humidity generations per year, no seasonal reset	Colonies build fast. Act at smaller populations than in temperate climates.
Slugs and snails	Active during wet season, cool nights	Major problem. Copper barriers, iron phosphate. Cleanup between seasons. Diatomaceous earth when dry.
Root rot and soil-borne disease	Saturated soil during wet season creates root stress	Raised beds, drainage, and excellent drainage are essential. See Toolkit No. 5.

What Doesn't Work as Well in Humidity

- Diatomaceous earth loses effectiveness when wet. Reapply after every rain. Best used under cover or in containers.
- Kaolin clay: similarly disrupted by rainfall. Good in dry periods, limited in the wet season.
- Overhead irrigation: wets foliage, promotes fungal disease, and washes off sprays in a regular condition in Florida summers. Avoid during peak heat.
- Copper fungicides can accumulate in soil with repeated heavy applications. Use sparingly and rotate with non-copper options.
- Sticky traps need to be checked and replaced frequently in humid conditions — traps fill with moisture, debris, and non-target insects quickly.

FLORIDA NOTE: Florida's wet season (June–September) means 60+ inches of rain in roughly 4 months. During this period, disease management becomes as important as insect management. Overhead irrigation should stop entirely, use drip or soaker hoses only. Prune for airflow aggressively. Accept that some crops (large-fruited tomatoes, for example) are not suited to this season and plan accordingly.

SECTION 9

When to Pull the Crop — and Why It's Often the Right Answer

The hardest pest management decision is sometimes no management at all, because the right decision is to pull the plant, not the bed, and start fresh. A grower who can make that call clearly and without sentiment is a more effective grower than one who nurses a failing plant through another month of intervention.

Pest Situations That Usually Mean: Pull

SITUATION	WHY PULLING IS THE RIGHT CALL	WHAT TO DO NEXT
Confirmed virus infection (mosaic, curling, stunting, yellowing) that doesn't respond	No cure, spreads to other plants, pest vectors keep reinfecting	Remove and bag immediately. Do not compost. Sanitize tools. Scout surrounding plants.
Heavy whitefly infestation on young plant, near harvest, with virus-risk crop	Inflated plant is a reservoir that keeps reinvesting pressure on neighbors	Pull and remove the source. Replant with more vine protection.
Crop at or past its productive window with declining vigor	You're spending management on a crop delivering a bed that needs to be turned	Pull, amend bed, succession plant. The space is worth more than the plant.
Root system compromised (rot, severe nematode damage, lodging past pressure	A plant that can't take up water and nutrients can't outgrow or recover from pest pressure	Pull, diagnose the root cause, address drainage or soil-borne problems replanting.
Pest has spread to more than 50% of plants and has reached the harvest window	Ecosystem has been disrupted and the remaining harvest is at maximum exposure	Pull if past threshold for 2+ applications. Protect surrounding healthy crop.

FARMER MINDSET: A plant is not a pet, attachment to individual plants is normal — you grew it, you wanted it, you know it. But the bed is what matters, and the season is what matters. Pulling a compromised plant on time is what lets the next planting succeed.

AFTER PULLING AN INFESTED PLANT: Always inspect the surrounding plants at the base and underside immediately. Pests move when their host is disrupted. Change your gloves or wash hands before touching adjacent plants. Bag and trash, do not compost diseased or heavily pest-infested material.

WARM CLIMATE NOTE: In year-round warm climates, the decision to pull and replant is less traumatic because the growing calendar has more flexibility. A pulled tomato in March can be replaced with a heat-tolerant crop by April, and back to tomatoes in October. Think in seasons, not in individual plants.

Tracker 8

My Scouting Log — Weekly Record

Use this log to record weekly scout findings across your beds. Your data over time is your most valuable diagnostic tool.

DATE	CROP & BED	PEST OR DAMAGE OBSERVED	SEVERITY (1-5)	BENEFICIALS SEEN	ACTION TAKEN (IF ANY)

Severity scale: 1= isolated (1 leaf or stem) | 2 = minor (a few leaves) | 3 = moderate (multiple plants) | 4 = widespread (whole bed) | 5 = severe (crop at risk)

Checklist

IPM Season Checklist

PREVENTION — Do this before the season starts

- Plan crop rotations — no same family in the same bed as last season
- Check spacing for every crop before transplanting — adjust to allow airflow
- Plan interplantings of pest-confusing flowers and beneficial attractors
- Set up sticky traps before transplanting vulnerable crops
- Have row cover and pest cloth ready for high-risk seedling window

MONITORING — Do this every week

- Scout all beds on the same day each week — 5 minutes, same route
- Check leaf undersides on at least 3-5 leaves per plant per bed
- Log what you see — pest, severity, location, beneficials
- Check and replace sticky traps if full or wet
- Note any beneficial insect activity — ladybugs, lacewings, parasitic wasps

RESPONSE — Do this when threshold is reached

- Start at Rung 1 — physical removal, water spray, pruning
- Document the response and the date in the scouting log
- Scout again in 5-7 days before escalating to spray
- If spray: apply after dark, away from open flowers, avoid windy conditions
- Rotate spray class — do not use the same product more than 2-3 times in a row
- If crop is compromised beyond recovery: pull, bag, amend bed, move on

SUPPLY GUIDE: For specific product recommendations referenced in this toolkit — insecticidal soaps, neem oil, Bt, spinosad, beneficial nematodes, and sticky trap options — refer to the NFLPGA Supply Guide available at neighborhoodfarmsusa.org/knowledge-hub/.