

## Natural & Organic Pest Control Guidelines from Future Growing

Below are several natural and organic sprays that have given our urban farmers tremendous success, even in a place like Florida during the hot and wet summer months. Constant scouting and spraying are key, identifying a problem before it becomes one. Connect with your local county agriculture extension agents in your state that work with conventional and organic vegetable growers. Their resources are usually free.

Some beneficial insects can be used strategically on certain pests at specific times of the year. Specifically vegetable leaf minor which is hard to spray for.

### CONTROL OF INSECT PESTS:

#### Organic spray for many insects like aphids, mites, thrips, whiteflies, and other small insects.

[This formula even serves as a mild fungicide.](#)

#### Mixing instructions follow:

- Horticultural grade **insecticidal soap**, 1 tablespoon per gallon of water
- Horticultural grade **neem oil**, 1 tablespoon per gallon of water
  - Mix everything well, and then continue to shake periodically during use.
  - Always spray in morning, before sunrise, or in late evening. **Never** spray in sunlight.
  - Spray plants liberally — soak them — and be sure to get the undersides of leaves where the insects feed.
  - Discard old spray. **Do not save!**
  - Clean sprayer well after each use.

[Apply this formula once a week during light pest season — or twice a week during heavy pest season.](#)

#### Organic spray for all worms or caterpillars:

- 1 tablespoon per gallon of water (or label rate), of *Bacillus thuringiensis* (BT, brand name **Thuricide**)
  - Follow label and mix well.
  - Always spray in morning, before sunrise, or in late evening. **Never** spray in sunlight.
  - Spot spray in the region where you see sign of the pests.
  - Spray plants liberally — soak the plant well — and be sure to get the undersides of leaves where the worms or caterpillars feed.
  - Discard old spray. **Do not save!**
  - Clean sprayer well after each use.

[Apply this formula at first sign of worms or caterpillars.](#)

#### Organic spray for Thrips, beetles, stinkbugs, and many other large insects:

- **Natural Pyrethrin Concentrate** is derived from the chrysanthemum flower and has been used for decades as an insecticide. There are synthetic versions of Pyrethrin that are more dangerous so stick with natural sources. Johnny's seeds sells one called Pyganic and Future Growing, Growers Store sells one called Natural Pyrethrin Concentrate
- Use low to low-middle range of suggested rates. Strong rates can easily burn many vegetable crops.
  - Follow label and mix well.
  - Always spray in morning, before sunrise, or in late evening. **Never** spray in sunlight.
  - Spray plants liberally — soak the plant well — and be sure to get the undersides of leaves where the pests feed.
  - Discard old spray. **Do not save!**
  - Clean sprayer well after each use.

[Apply this formula at first sign of pests. During Thrips season spray twice a week.](#)

## CONTROL OF DISEASES:

### Organic spray for leaf fungus like damping off, leaf spot, and powdery mildew:

- **Liquid Copper Fungicide** is a good way to protect all kinds of seedlings plants from problems caused by bacteria and fungi pests including damping off.
- Future Growing store sells a copper product called - Liquid Copper Fungicide
- Follow instructions on label, and mix well. You can also add horticultural grade **insecticidal soap**, 1 tablespoon per gallon of water. This serves as a spreader sticker for the copper.
- **WARNING:** Copper can build up in a closed system and can be toxic to plants with extended periods of use. Copper also stains white plastic so use with caution on the Towers. Great for seedling production.
  - Always spray in morning, before sunrise, or in late evening. **Never** spray in sunlight.
  - Spray plants liberally. Soak the plants well.
  - Discard old spray. **Do not save!**
  - Clean sprayer well after each use.

Apply this formula once a week.

### Organic spray for leaf fungus like powdery mildew:

- Potassium bicarbonate, or **Mil-Stop** brand.
- Follow instructions on label, and mix well.
  - Always spray in morning, before sunrise, or in late evening. **Never** spray in sunlight.
  - Spray plants liberally. Soak the plants well.
  - Discard old spray. **Do not save!**
  - Clean sprayer well after each use.

Apply this formula once a week during light fungus season — or twice a week during heavy fungus season.

### Organic spray for leaf fungus like powdery mildew TO ROTATE WITH MIL-STOP:

- Wettable **Sulfur** for fungicide applications.
- Follow instructions on label, and mix well.
- **WARNING:** Sulfur gas that is released after spraying and is highly corrosive to plastic over long term use, including your greenhouse.
  - **WARNING:** Careful on dosage rates, and always start on the low end. Sulfur easily burns plants.
  - Always spray in morning, before sunrise, or in late evening. **Never** spray in sunlight.
  - Spray plants liberally. Soak the plants well.
  - Discard old spray. **Do not save!**
  - Clean sprayer well after each use.

Rotate weekly with Mil-Stop