

## Statement of Purpose

The management practices, products, and cultivars discussed in this publication are the research- and experience-based recommendations of the institutions associated with the contributing editors and authors. These recommendations are not exhaustive and other practices and products not mentioned in this guide might also be effective. *Read and follow label instructions before using any pesticide product.*

## Acknowledgements

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- A grant from the North-Central IPM Center provided to the Great Lakes Vegetable Working Group
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## What's New in 2020?

### New and Revised Sections

- The online guide at [mwveguide.org](http://mwveguide.org) has been updated to be searchable and accessible on computers, tablets or data phones. Online users of the guide are asked to choose a crop, pest or control to begin a search.
- Information for each product in the online guide has been expanded to include greenhouse use, bee precautions, mode-of-action information and much more.
- The printed version of the guide has a new look as well. Users will note that common names of pesticides are now included with each product as well as restricted entry intervals (REI) and pre-harvest intervals (PHI).
- The Organic Vegetable Production section has updated contacts for certifiers.

### Disease Management

- All fruiting vegetable crops — eggplant, pepper and tomato — have been combined in the same disease section (pages 143-152 in the printed version).

Likewise, all cucurbit crops have been combined in the same disease section (pages 122-132).

- In the printed version of the guide, scientific names are now included with disease names at the beginning of a section. For example, see *bacterial spot of tomato/peppers-Xanthomonas bacteria* on page 146.
- Because scientific names are now included in the disease names, some of the names appear differently. For example, Septoria leaf blight of tomato is now *leaf blight of tomatoes-Septoria fungus*.

### Weed Management

- Zidua® has been added as a preemergence herbicide for potatoes under an updated 24c label.
- Dual Magnum® has expanded uses in some states under updated 24c label.
- Certified applicators must successfully complete an EPA-approved training program before mixing, loading and/or applying paraquat. The training provides important information about paraquat's toxicity, new label requirements and restrictions, and the consequences of misuse. For more information and a link to the training visit: <https://www.epa.gov/pesticide-worker-safety/paraquat-dichloride-training-certified-applicators>

### Insect Management

- Harvanta® has been added to the Cole Crops, Vine Crops, Fruiting Vegetables, and Okra sections for caterpillar, aphid, beetle, and stink bug management.
- The Torac 15E® label has been expanded for thrips to include Cole Crops, Onions and Tomatoes.
- PQZ® and Versys Inscalis 0.83DC® are both labeled for aphids on leafy green crops.
- In some chapters, entries have been condensed into generic headings — “Caterpillars,” “Stink Bugs,” “Leafhoppers” and “Mites.” Some products are not for use on all caterpillars, stink bugs, leafhoppers or mites. While application notes call attention to these details, be sure to check the label for specifics.
- We have included Lorsban® (active ingredient, chlorpyrifos) in the Asparagus, Cole Crops, Leafy Greens, Legume, Mint and Sweet Corn sections of this guide. However, at this writing, the U.S. EPA is in discussions with stakeholder groups concerning possibly revoking tolerances for this product. Check with an extension specialist or company contact.