



This is a section from the

2023/2024

New Jersey Commercial Tree Fruit Production Guide

The recommendations are **NOT** for home gardener use.

The **full guide** can be found on the Rutgers New Jersey Agricultural Experiment Station (NJAES) website at: <https://njaes.rutgers.edu/pubs/publication.php?pid=e002>. The guide is revised biennially.

Cooperating Agencies: Rutgers, The State University of New Jersey, U.S. Department of Agriculture, and New Jersey Board of County Commissioners. Rutgers Cooperative Extension, a unit of the Rutgers New Jersey Agricultural Experiment Station, is an equal opportunity program provider and employer.

PESTICIDE USE DISCLAIMER

THE LABEL IS THE LAW

A pesticide applicator is legally bound by the labeling found on and with the pesticide container in their possession. Before using a pesticide, check and always follow the **labeling distributed with the product at the point of sale for legally enforceable rates and restrictions.**

In addition to the pesticide products listed in this Production Guide, other formulations or brands with the same active ingredient(s) may be commercially available.

ALWAYS CHECK THE LABELING ON THE PRODUCT CONTAINER ITSELF:

- a) to ensure a pesticide is labeled for the same use,
- b) to ensure the pesticide is labeled for the desired crop,
- c) for differences in rates and percent active ingredient, and
- d) additional restrictions.

Check the physical product label for the maximum amount of pesticide per application and the maximum number of applications per year.

IMPORTANT: DO NOT RELY ON ELECTRONIC LABELING (unless it is “web labeling” found directly on the product container). *Online pesticide labels may not be the same as the labeling distributed with the product. Some services include: Proagrica’s CDMS <http://www.cdms.net/>; Agworld DBX powered by Greenbook <https://www.greenbook.net/>; or Agrian <https://www.agrian.com/labelcenter/results.cfm>.*

These electronic label services provide use disclaimers, and in some cases legally binding User Agreements assigning ALL liability to USER of service. For example, Agrian’s webpages* cite (in red): *The material and content contained in the Agrian Label Database is for general information only. Agrian Inc. does not provide any guarantee or assurance that the information obtained through this service is accurate, current, or correct, and is therefore not liable for any loss resulting, directly or indirectly, from reliance upon this service. This Label Database does not replace the official manufacturer issued label. Users of this database must read and follow the actual product label affixed to the container before use of the product. Use of the Label Database is subject to the Terms of Use and Privacy Policy * [date accessed: 12/23/2022].*

See a detailed regulatory discussion of this and other essential information on Pesticide Safety and the Pesticide Label in Chapter 1. Electronic labeling is discussed in section 1.3.1.

If you are having a **medical emergency** after using pesticides, always **call 911** immediately.



In Case of an Accident

- Remove the person from exposure
- Get away from the treated or contaminated area immediately
- Remove contaminated clothing
- Wash with soap and clean water
- Call a physician and/or the National Poison Control Center (1-800-222-1222).
Your call will be routed to your State Poison Control Center.
- **Have the pesticide label with you!**
- Be prepared to give the **EPA registration number** to the responding center/agency

12 Additional Resources

Weather Information and Pest Modeling <http://newa.cornell.edu/>

Network for Environment and Weather Applications (NEWA). Delivers weather information and timing for fungicide and insecticide applications based on weather data collected that support and advance integrated pest management (IPM) and best management practices for agricultural and green industries.

Rutgers Fact and Information Sheets

Available at: <https://njaes.rutgers.edu/pubs/> or from your Rutgers Cooperative Extension County Office; phone number can be found in the blue pages of the phone book under “county government” or at: www.njaes.rutgers.edu/county.

Farm Safety

FS619 Farm Machinery and Equipment Safety Part I: Recognizing and Understanding the Hazards (2019)

FS620 Farm Machinery and Equipment Safety Part II: Preventing Machinery Accidents during Operation (2019)

Food Safety

FS1230 Worker Health and Hygiene; FS1230SP Salud e higiene del trabajador (2014)

FS1261 What Is On-Farm Food Safety? (2017)

Rutgers On-Farm Food Safety <https://onfarmfoodsafety.rutgers.edu/>

Marketing

E337 Marketing 101 For Your Agritourism Business 2011

FS1172 Developing a Mission Statement for Your Agricultural Business 2012

Pest Management

FS002 Brown Marmorated Stinkbug - A Non-native Insect in New Jersey (2008)

FS936 Getting Started with an Effective Integrated Pest Management Program (1999)

FS1246 Spotted Wing Drosophila: A Key Pest of Small Fruits in New Jersey (2015)

FS1270 Ecological and Economic Importance of Bats in Integrated Pest Management (2020)

FS1315 Best Management Practices for Copper Fungicide Use (2020)

Pesticide Use and Safety

CPA000CORE Pesticide Applicator Training Manual: Core (2009)

CPA000PRIV Pesticide Applicator Training Manual: Private (2013)

E358 Respiratory Protection for Occupational Users of Pesticides (2018)

FS603 Pesticide Storage Facilities (2001)

FS761 Cleaning Pesticide-Contaminated Clothing (1994)

Right to Farm Act

FS1253 New Jersey's Right to Farm Act - What It Is and How It Works (2016)

Tree Fruit Production

E359 Think Twice, Plant Once: Does a Tree Fruit Orchard Make Sense for your Farm? (2019)

E363 Active Frost Protection Methods for Your Orchard (2020)

F-130 Apple Tree Pruning and Training (English and Spanish) (2007)

FS319 Turfgrass for Orchard and Nursery Floor Management (2000)

FS627 Leaf Analysis for Fruit Trees (2001)

FS685 Nurseries and Nursery Dealers with Fruit Trees for New Jersey (2012)
 FS719 Soil Fertility Test Interpretation - Phosphorus, Potassium, Magnesium, and Calcium (2006)
 FS871 Understanding Fertilizer Labels (1997)
 FS902 Liming New Jersey Soils for Fruit Crops (1998)
 FS905 Agricultural Liming Materials (1998)
 FS1074 Flat Peach Varieties for New Jersey (2008)
 FS1083 Plum Varieties for New Jersey (2008)
 FS1136 Soil Organic Matter Level and Interpretation (2012)
 FS1201 Yellow-Fleshed Peach Varieties for New Jersey Commercial and Home Orchardists (2013)
 FS1203 White-Fleshed Peach Varieties for New Jersey Commercial and Home Orchardists (2013)
 FS1204 Nectarine Varieties For New Jersey Commercial and Home Orchardists (2013)
 FS1300 Five New Peach and Nectarine Varieties for New Jersey Commercial and Home Orchardists (2019)
 FS1303 Classic and Novel Dessert Apple Varieties for Commercial Orchards in New Jersey (2019)
 FS1306 Irrigating Your Orchard - Water Monitoring with a Tensiometer (2019)

Wildlife Management

FS888 Portable Electric Fencing for Preventing Wildlife Damage (1998)
 FS889 High-Tensile Woven Wire Fences for Reducing Wildlife Damage (2010)
 FS1017 Regulations Governing the Management of New Jersey Wildlife (2003)
 FS1293 Voles in the Orchard (2018)

Other Publications

NJ Dept. of Agriculture: (609)292-8896 - <https://www.nj.gov/agriculture/pub/>
 Farmland Stewardship Deer Fencing Grants (updated 2022)
<https://www.nj.gov/agriculture/sadc/documents/publications/deerfencinggrants.pdf>
 Farmland Stewardship Deer Fencing Program. Application for Cost-Share Grant Funding for the
 Installation of Deer Fencing on Permanently Preserved Farmland
<https://www.nj.gov/agriculture/sadc/documents/farmpreserve/postpres/deerfencingapplication.pdf>

NJ State Horticultural Society, Horticultural News. A quarterly publication of the NJ Horticultural Society, serving the fruit and vegetable growers of NJ. Annual subscription and membership \$55.00. <http://www.njshs.org/>

The following and many more publications are available from eCommons Open Scholarship at Cornell, Cornell University Library at: <https://ecommons.cornell.edu/>

- Tree Fruit Field Guide to Insect, Mite, and Disease Pests and Natural Enemies of Eastern North America (NRAES 169), 2006
- Mid-Atlantic Orchard Monitoring Guide (NRAES 75). H. Hogmire (editor), 1995, 361pp
- Refrigeration and Controlled Atmosphere Storage for Horticultural Crops (NRAES 22), 1990, 45 pp
- Bacterial Canker of Stone Fruit, J. Carroll, 2020
- Orchard Nutrition Management, 1991, 22 pp, W.C. Stiles and W. Shaw Reid
- Training and Pruning Apple Trees, 1999, 23pp, C.G. Forshey

Southeastern Peach, Nectarine and Plum Pest Management and Culture Guide 2022. UGA Cooperative Extension Bulletin 1171. - https://secure.caes.uga.edu/extension/publications/files/pdf/B%201171_16.PDF

Compendium of Apple and Pear Diseases and Pests, 2nded.
<http://my.apsnet.org/ItemDetail?iProductCode=44303>

Compendium of Stone Fruit Diseases. - <http://my.apsnet.org/ItemDetail?iProductCode=41744>

ADDITIONAL RESOURCES

Smartphone Apps on Google Play and the App Store

MyIPM Fruits (Clemson University)

MyIPM fruits provides Integrated Pest Management (IPM) information for conventional and organic production of important small fruits, stone fruits and pome fruits. The target audience is commercial growers (conventional and organic), farm advisors, and specialists, but homeowners may also find useful information.

Mix My Sprayer (Clemson University)

Mix My Sprayer was created to aid with quick, accurate calculations of product mixes to be applied with spraying equipment. Users can create custom lists of favorite products by category. Simply add or select a product, insert values in each input box, and the app automatically calculates the amount of product to include in the user-defined mix size. Units for each input can be customized by tapping the unit buttons. Products are saved with the user settings last used.

Calibrate My Sprayer (Clemson University)

Improperly calibrated pesticide spraying equipment may cause either too little or too much pesticide to be applied. This free mobile app was created to aid in the proper calibration of spraying equipment. Simply select the type of sprayer you want to calibrate (Broadcast or Banded), insert values in each input box, select what you want the app to calculate (Volume/Area or Catch/Nozzle), and tap 'Calculate'. Each input's units can be customized by tapping the units. Sprayers can be saved with user-defined names.

How to Reduce Bee Poisoning from Pesticides (Oregon State University)

Farmers and beekeepers can now remotely consult the publication's pesticide tables on their phones or tablets. The popular guide lists 150 insecticides, fungicides, miticides, slug killers and growth disruptors—all of them now searchable by trade name or chemical name in the app. (Revised 2016)

Malusim (Cornell University)

The Malusim app lets apple growers record, retrieve and analyze data to optimize fruit production. For a specific growing location, data on irrigation and fruit growth rates can be used to predict fruit yields. The app uses voice recognition to make it easier for growers to record fruit measurements in the field, even when offline.

Internet E-mail Discussion Group

Apple-Crop. Discussion group, with topics focusing on apple crop production since January, 1994. - <http://virtualorchard.com/applecrop.html>

Fruit Related Websites

Cornell Fruit Resources, Resources for Commercial Growers - <http://fruit.cornell.edu/>

Crop and Pest Management Guidelines, Cornell Cooperative Extension - <https://cropandpestguides.cce.cornell.edu/>

International Fruit Tree Association - <http://www.ifruittree.org>

NC-140 Regional Rootstock Research Project - <http://www.nc140.org/>

NEtreefruit.org. The Online New England Tree Fruit Management Guide - <https://netreefruit.org/>

New Jersey Peach Promotion Council. This website contains information from the "Wholesale Buyers Guide" and other important information. - <http://jerseypeaches.com>

Penn State Extension, Fruit Resources - <https://extension.psu.edu/forage-and-food-crops/fruit>

Penn State Fruit Research and Extension Center - <http://frec.cas.psu.edu>

ADDITIONAL RESOURCES

Pesticides for New Jersey - <https://njaes.rutgers.edu/pubs/pesticides-for-nj/>

Rutgers Agricultural Research and Extension Center (RAREC) - <https://njaes.rutgers.edu/centers/rarec/>

Rutgers Cooperative Extension Pest Management Office - <https://pestmanagement.rutgers.edu/>

Rutgers Peach Science - <https://njaes.rutgers.edu/peach/>

Rutgers Plant and Pest Advisory. The blog for growers from the New Jersey Agricultural Experiment Station. Provides timely information and updates for events, horticulture, pest management, regulations, and opportunities. - <https://plant-pest-advisory.rutgers.edu/>

Rutgers Snyder Research & Extension Farm - <https://snyderfarm.rutgers.edu>

The Mid-Atlantic Regional Fruit Loop: The Virginia Fruit Page. Information on all aspects of tree fruit production in the Mid-Atlantic region. - <http://www.virginiafruit.ento.vt.edu>

USDA National Invasive Species Information Center - NJ - <https://www.invasivespeciesinfo.gov/us/new-jersey>

Virginia Cooperative Extension, Virginia Tech, The State University of Virginia - Tree Fruit
<https://ext.vt.edu/agriculture/commercial-horticulture/tree-fruit.html>

Washington State University Tree Fruit Research and Extension - <http://treefruit.wsu.edu/>

West Virginia University, Kearneysville Tree Fruit Research and Education Center -
<https://www.davis.wvu.edu/about-davis-college/farms-and-forests/kearneysville-tree-fruit-research-and-education-center>

