



Guide to ATTRA's Organic Publications

A Publication of ATTRA—National Sustainable Agriculture Information Service • 1-800-346-9140 • www.attra.ncat.org

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Since 1987, the National Center for Appropriate Technology's ATTRA – National Sustainable Agriculture Information Service has provided the organic farming community with timely and helpful information on production and marketing. Now that organic agriculture has entered a new era of expanding growth, sophistication and federal regulation, the need for information has moved to a new level. To meet that demand, NCAT has sharpened its focus on certified organic agriculture.

We are forming new partnerships with other organizations, creating new materials and updating old ones, tackling new issues and bringing fresh perspectives to familiar questions. In order to assist you in using our service, we've created this guide to our organic publications. In it, you will learn what these publications contain and how to use them.



Photo by Susan Tallman, NCAT.

Organic rule and compliance

Organic Certification Process—IP262

This publication is designed to help organic producers and handlers

understand, prepare for and get the most from the process of organic certification to U.S. Department of Agriculture's National Organic Standards, including the purposes and benefits of the inspection and a description of the process and the role of the organic inspector.

To view and download the publications in this guide (except those labeled print only), visit the **Organic farming** section of the ATTRA Web site at www.attra.ncat.org/organic.html. For a free print copy of any of these publications or to speak with a specialist, call 1-800-346-9140 (English), 7 a.m. to 7 p.m. Central Time or 1-800-411-3222 (Español), 8 a.m. to 5 p.m. Pacific Time, Monday through Friday.

ATTRA—National Sustainable Agriculture Information Service (www.ncat.attra.org) is managed by the National Center for Appropriate Technology (NCAT) and is funded under a grant from the United States Department of Agriculture's Rural Business-Cooperative Service. Visit the NCAT Web site (www.ncat.org/sarc_current.php) for more information on our sustainable agriculture projects.



Organic Standards for All Organic Operations: Highlights of the USDA's National Organic Program Regulation—IP325

This publication describes the key requirements of the National Organic Program (NOP) for all organic operations. It should be used in conjunction with specific standards for crop production, livestock production and handling (processing).

Organic Standards for Crop Production: Highlights of the USDA's National Organic Program Regulations—IP332

This publication describes the key requirements of the National Organic Program (NOP) for organic crop production including land management, seed and planting stock, crop rotation and pest management. It also provides lists of allowed and prohibited substances.

Organic Standards for Handling (Processing): Highlights of the USDA's National Organic Program Regulations—IP333

This publication describes the key requirements of the National Organic Program (NOP) for handling and processing organic materials including facility pest management, contamination prevention, product composition and labeling. It also provides a list of accepted and prohibited materials.

Preparing for an Organic Inspection: Steps and Checklists—IP261 (companion to IP262)

A companion to Organic Certification Process, this publication is designed to help organic producers and handlers understand, prepare for and get the most from their annual inspections.

Organic Farm Certification and the National Organic Program—IP222

This publication discusses considerations in going organic, basic steps to

certification and the sole exemption to mandatory certification.

National Organic Program Compliance Checklist for Producers—IP232

This publication will help you learn how to assess the compliance of your farm or ranch operation with National Organic Program (NOP) standards.

National Organic Program Compliance Checklist for Handlers—IP301

This publication guides you through assessing the compliance of your handling or processing operation with the National Organic Program (NOP) standards.

Organic System Plan (OSP) Templates for Certifiers—IP213

This publication addresses the essential elements of a completed Organic System Plan (OSP) and provides certifiers with models that they are encouraged to apply when creating their own applications or OSP documents.

Organic Field Crops Documentation Forms—IP230

These forms provide farmers with a clean and organized way to document information that may be important for compliance with the National Organic Program (NOP) standards.

Recordkeeping and Budgeting Workbook for Organic Crop Producers (draft version)

This publication contains a set of forms for farmers to use to keep records required for organic certification.

Organic Materials Compliance—IP313

This publication discusses three main ways to ensure compliance with the National Organic Program (NOP) regulations of agricultural materials and substances. The goals are 1) an understanding of the

For a free copy of any of these publications, or to speak with a specialist, call 1-800-346-9140 or 1-800-411-3222 (en Español) 7 a.m. to 7 p.m. Central Time, Monday through Friday, or visit our Web site at: www.attra.ncat.org

regulations, 2) the creation of an Organic System Plan (OSP) with your certifier, and 3) thorough recordkeeping of all purchases and use of materials.

The Organic Chronicles No. 1: Mysteries of Organic Farming Revealed–IP314

This illustrated story briefly explains the ecological ideas behind organic agriculture, including information about switching to organic methods.

Organic Crop Production Overview–IP170

This is an overview of key concepts and practices of certified organic crop production, with perspectives on many notions, myths and issues that have become associated with organic agriculture.

Forms, Documents and Sample Letters for Organic Producers–IP276

This publication includes supplementary letters, forms and other documents producers can use to demonstrate compliance.

Organic Orchard, Vineyard, and Berry Crop Documentation Forms–IP238

Orchardists and viticulturists can use the forms in this publication for documenting practices, inputs and activities that demonstrate compliance with regulations or that assist in farm recordkeeping.

Organic Market Farm Documentation Forms–IP285

The 23 forms in this package are provided as tools that market gardeners and produce farmers can use for documenting practices, inputs and activities that demonstrate compliance with regulations or that assist in other aspects of farm recordkeeping.

Organic Field Crops Documentation Forms–IP230

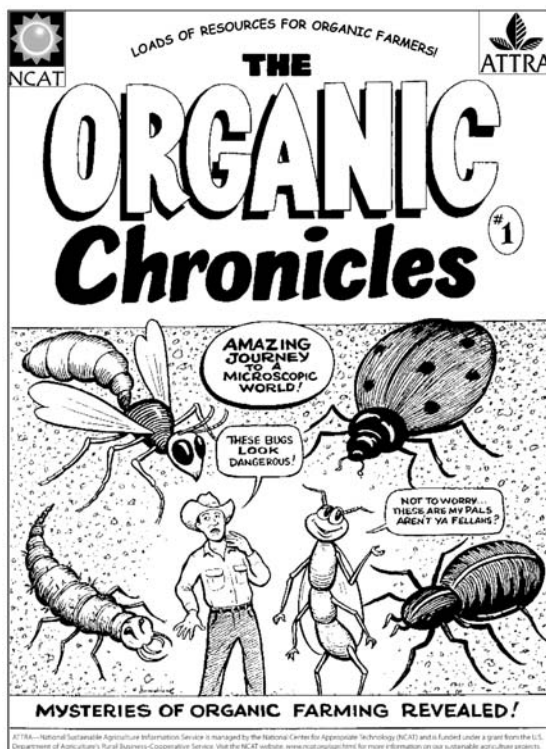
This publication contains tools farmers can use for documenting practices, inputs and activities to demonstrate compliance with regulations. The forms can also assist in farm recordkeeping.

Organic Livestock Documentation Forms–IP237

This publication contains tools that livestock producers can use for documenting practices, inputs and activities that demonstrate compliance with regulations. The forms can also assist in farm recordkeeping.

Organic Standards and Certification Presentation–(online only)

This is a PowerPoint presentation overview of the National Organic Program standards and steps to become certified. It was designed as a training tool for cooperative extension agents, the Natural Resources Conservation Service and other technical service providers. www.attra.ncat.org/downloads/organic_cert/organic_standards_certification.pdf



Organic Integrity in the Field: Preventing Contamination and Seeking Compensation– (online only)

This PowerPoint presentation, with speaker notes and a ready-to-print workshop handout, outlines strategies for preventing crop contamination with synthetic pesticides, fertilizers and other prohibited materials and the steps to be taken if contamination occurs. www.attra.ncat.org/risk_management/srmgateway.html

Southern Organic Resource Guide– IP279 (online only)

This publication was designed to help certified and transitioning organic farmers in Arkansas, Louisiana, Kentucky, Mississippi and Tennessee minimize and manage risks associated with obtaining and maintaining organic certification. www.attra.ncat.org/sorg/downloads/sorg.pdf

Transitioning to Organic Production–IP241 (Sustainable Agriculture Network publication, print only)

This publication includes conversion strategies, covering typical organic farming production practices, innovative marketing ideas and federal standards for certified production.

Farm inputs

Suppliers of Seed for Certified Organic Production–RL040 (online only)

This publication will help you locate sources of seed certified organic or otherwise acceptable in accordance with the 2002 National Organic Program (NOP) regulations. It includes suppliers of open-pollinated, heirloom vegetable seed and seed for agronomic crops, with a focus on regionally suitable varieties. www.attra.ncat.org/attra-pub/organic_seed/

Seed Production and Variety Development for Organic Systems–IP272

Research to develop seed varieties for organic production and technical information is increasing. The USDA is training farmers on participatory breeding practices to increase the availability of organic seed. This publication provides information on these issues.

Sources of Organic Fertilizers and Amendments–RL044 (online only)

Resource list for farmers and gardeners to identify specialty input suppliers in the U.S. and bordering countries. Categorized by product type. www.attra.ncat.org/attra-pub/org_fert

Organic Livestock Feed Suppliers– IP171 (online only)

This is a searchable online database of suppliers offering certified organic livestock feed. It is categorized by region and by type of livestock feed. www.attra.ncat.org/attra-pub/livestock_feed/index.php

Organic Alternatives to Treated Lumber–CT170

Organic producers need to remember that treated lumber is not allowed under the Final Rule of the National Organic Program. This publication includes information on alternative products.

Farmscaping to Enhance Biological Control–CT065

This publication provides information about increasing and managing biodiversity on a farm to favor beneficial organisms, with emphasis on beneficial insects. Topics covered include plants that attract beneficials; pests and predators; seed blends to attract beneficial insects; farmscaping; hedgerow establishment; maintenance budgets; and a flowering period table.

Biointensive Integrated Pest Management (IPM)—IP049

This publication provides the rationale for biointensive integrated pest management (IPM) and outlines the concepts and tools of biointensive IPM. It suggests steps for implementing IPM and provides information resources.

Organic Integrated Pest Management Pictorial Field Guide (English)

Guía de Campo Sobre el Manejo Integrado de Plagas Organico (Español)—SP257

These pictorial guides examine concepts of organic IPM and the role of beneficials, focusing on ecologically based strategies to prevent pests. The guides are available on CD or online and include these sections:

- 1) Beneficials, beneficial habitat and insect pests
- 2) Plant disease management
- 3) Weed management
- 4) Vertebrate pest management

Sources of “Spraying Prohibited” Signs for Organic Farms—RL035

Manufactured signs are cost-effective and available from several suppliers whose products and prices are listed.

Protecting Water Quality on Organic Farms—IP214

This publication discusses strategies for preventing water pollution on organic farms in relation to concerns such as transition to organic and nutrient management.

Southern Organic Resource Guide—IP279 (see Organic Certification for Southern Farmers) (online only)

Designed to help certified and transitioning organic farmers in Arkansas, Louisiana, Kentucky, Mississippi and Tennessee, this publication covers minimizing and managing risks associated with obtaining

and maintaining organic certification. www.attra.ncat.org/sorg/downloads/sorg.pdf

Determining and Documenting the Acceptability of Organic Farm Inputs (see Organic Certification for Southern Farmers) (online only)

This PowerPoint presentation with speaker notes and a ready-to-print workshop hand-out will help producers determine which fertilizers, amendments, pesticides, seeds and planting stock are allowed in crop production. It includes organics basics and how to reduce dependence on off-farm inputs. Go to www.attra.ncat.org/risk_management/srmgateway.html and look under Training Materials.

Comparing Energy Use in Conventional and Organic Cropping Systems—IP339

Energy consumption in conventional and organic production systems can vary greatly depending on direct energy inputs as well as the indirect energy involved in manufacturing, shipping and applying pesticides and nitrogen-based fertilizers. This publication examines several studies that reviewed energy use in various cropping systems.

Marketing and business

Enterprise Budgets and Production Costs for Organic Production—RL041

This resource list contains Internet-based sources of enterprise budgets and production cost information for organic production of horticultural and agronomic crops and for organic livestock enterprises.

Organic Marketing Resources—IP124

This publication provides market resources for organic food and fiber products, including organic prices, sales data, market trends and data, organic trade associations, directories and other

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organic marketing publications and resources, with contact information.

Marketing Organic Grains—CT154

This publication discusses food grains, oilseeds and pulses, with an overview of feed grain markets and marketing. It also presents several key ways in which organic grain marketing differs from conventional grain marketing.

Southern Organic Resource Guide (online only)

This user-friendly reference handbook is designed to help certified and transitioning organic farmers in Arkansas, Louisiana, Kentucky, Mississippi and Tennessee minimize and manage risks associated with obtaining and maintaining organic certification. www.attra.ncat.org/sorg/downloads/sorg.pdf

Federal Resources for Sustainable Farming and Ranching—IP294

This overview of the major federal conservation programs provides resources for farmers and ranchers to enhance and maintain sustainable farming and ranching practices.

Horticultural crops

Fruits

These publications provide detailed information on the sustainable and organic production methods of a variety of fruits as well as strategies for pest management.

Organic and Low-Spray Apple Production—IP020

Considerations in Organic Apple Production—IP184

Organic and Low-Spray Peach Production—IP047

Organic Pear Production—IP167

Low Spray and Organic Plum Production—CT122

Grapes: Organic Production—IP031

Blueberries: Organic Production—IP021

Organic Culture of Bramble Fruits—IP022

Strawberries: Organic Production—IP046

Tree Fruits: Organic Production Overview—IP028

Vegetables, herbs and flowers

These publications provide detailed information on the sustainable and organic production of a variety of vegetables, herbs and flowers.

Organic Allium Production—IP138

Organic Asparagus Production—CT100

Organic Garlic Production—IP320

ATTRA Grapes: Organic Production
A Publication of ATTRA - National Sustainable Agriculture Information Service • 1-800-346-9140 • www.attra.ncat.org

By Rex Dufour
NCAAT Agriculture Specialist
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Organic grape production provides a fairly predictable economic return in irrigated parts of the arid West. In the East, organic grape production is complicated by a climate that fosters insect and disease problems. Production is compounded by consumer preferences for grape cultivars (both dessert and wine grapes) that are difficult to grow in the East. This guide presents organic management options for diseases, insects and weeds, discusses cultivar choices in terms of disease resistance, and briefly presents marketing ideas for eastern labrusca-type grapes and organic wines. References and an appendix on disease resistance rating follow the narrative.

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ATTRA—National Sustainable Agriculture Information Service (a partnership of the National Center for Appropriate Technology and the United States Department of Agriculture's Rural Business Cooperative Service) is the NCAAT (National Center for Appropriate Technology) website. For more information, visit www.attra.ncat.org. Photo by Rex Dufour, NCAAT.

Introduction

Grapes are grown in many parts of the U.S., in a wide range of climates and conditions. Certain considerations and practices in grape production will be the same for both organic growers and conventional growers within a given region. For instance, site selection, pruning and training, and planting techniques are similar for both conventional and organic grape culture. Information on these topics is available through the Cooperative Extension Service, grape growers associations, and common vineyard texts, bulletins, and trade magazines. Accordingly, this publication focuses primarily on organic controls for pests, diseases, and weeds. For general information on organic fertility management in tree and vine crops, refer to ATTRA's *Tree Fruits: Organic Production Overview*.

"Simply put, the principles of organic farming and sustainable practices are the single most important tools you can employ to improve wine quality." John Williams, owner, Frog's Leap Winery, Baberford, California, speaking at the 54th Annual Meeting of the American Society for Entology and Viticulture (ASEV), June 20, 2003, Reno, Nevada.

In some parts of the country, grapes are among the easiest fruit crops to grow organically. Diseases can be managed with a combination of cultural strategies (including specific pruning and training techniques, cultivar selection, and proper siting of the vineyard) and organically acceptable oils and soaps, and mineral- and biologically-based fungicides. A similar range of products, but including pheromonal controls, can be relied upon to control most mite and insect problems. Cover crops, mulching, mowing, and mechanical cultivation can be used to control weeds, and fertility needs can be met with ecological soil management practices and purchased organic fertilizers, when necessary.

Herb Production in Organic Systems–IP224

Hops: Organic Production–CT115

Organic Pumpkin and Winter Squash Production–CT172

Sweet Corn: Organic Production–IP336

Sweetpotato: Organic Production–CT128

Organic Tomato Production–CT073

Specialty Lettuce and Greens: Organic Production–CT117

Cole Crops and Other Brassicas: Organic Production–IP275

Resource Guide to Organic and Sustainable Vegetable Production–IP188

Plug and Transplant Production for Organic Systems–IP160

Flame Weeding for Vegetable Crops–CT165

Flame Weeding for Agronomic Crops–CT157

Greenhouse production

These publications provide information on various aspects of sustainable and organic greenhouse production of various horticultural crops as well as information about the greenhouse industry.

Organic Greenhouse Vegetable Production–IP078

Potting Mixes for Certified Organic Production–IP112

Plug and Transplant Production for Organic Systems–IP160

Herbs: Organic Greenhouse Production–IP164

Organic Greenhouse Tomato Production–IP190

Other organic horticultural crops topics

Organic Crop Production Overview–IP170

This publication provides an overview of key concepts and practices of certified organic crop production, with perspectives on many notions, myths and issues that have become associated with organic agriculture over time.

NCAT's Organic Crops Workbook–IP225

This workbook is for organic and transitional producers with cropping or mixed crop and livestock operations. It was created to assist in understanding the range of practices and materials allowed under the NOP Regulations.

Field crops

These publications provide information about sustainable and organic production of various field crops including information relating to soil and weed management, planting and tilling methods and alternate crops.

Organic Alfalfa Production–IP234

Organic Cotton Production–IP233

Organic Field Corn Production–CT113

Hops: Organic Production–CT115

Organic Rice Production–CT143

Organic Small Grain Production–CT160

For a free copy of any of these publications, or to speak with a specialist, call 1-800-346-9140 or 1-800-411-3222 (en Español) 7 a.m. to 7 p.m. Central Time, Monday through Friday, or visit our Web site at: www.attra.ncat.org

Organic Soybean
Production–CT120

Organic Tobacco Production–IP322

Peanuts: Organic Production–IP329

Other organic field crops topics

Organic Crop Production
Overview–IP170

This publication provides an overview of key concepts and practices of certified organic crop production, with perspectives on many notions, myths and issues that have become associated with organic agriculture over time.

NCAT's Organic Crops Workbook–
IP225

This workbook is for organic and transitional producers with cropping or mixed crop and livestock operations. It was created to assist in understanding the range of practices and materials allowed under the NOP Regulations.

Marketing Organic Grains–CT154

This publication discusses food grains, oilseeds and pulses, with an overview of feed grain markets and marketing. It also presents several key ways in which organic grain marketing differs from conventional grain marketing.

Pursuing Conservation Tillage
Systems in Organic Crop
Production–IP183

This brief look at conservation tillage for organic cropping systems focuses on annual cropping systems for agronomic and vegetable systems.

Flame Weeding for Agronomic
Crops–CT157

This publication provides information about the techniques and economics of flame weeding, which has resurfaced as an alternative to chemical control.

Flame Weeding for Vegetable
Crops–IP165

This publication discusses different strategies for preemergent flame weeding and postemergence flame weeding, as well as infrared weed control and steam and hot water weed control.

Livestock

Organic Standards for Livestock
Production: Highlights of the
USDA's National Organic Program
Regulations–IP334

This collection of excerpts from the USDA's National Organic Program provides the reader with general requirements for organic livestock management, including information about origin of livestock, feed, health care and living conditions, as well as lists of substances both allowed and prohibited in production.

Parasite Management for
Natural and Organic Poultry:
Coccidiosis–IP245

This publication discusses the life cycle of coccidiosis, as well as transmission in free-range production, management in the brooder and on pasture, natural treatments, drugs and vaccines.

Considerations in Organic Hog
Production–IP185

This publication provides information about hog production compliance with the National Organic Program, as well as insight into sustainability and animal welfare.

NCAT's Organic Livestock
Workbook–IP228

This publication is for organic and transitional producers with livestock or mixed crop and livestock operations. It is meant especially for producers contemplating conversion to, and those in the early years of transition to, organic production.

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Predator Control for Sustainable and Organic Livestock Production—IP196

This publication examines how to identify livestock predators and how to control them. It focuses primarily on the control of coyotes and dogs through management practices, such as fencing and secure areas, and the use of guard animals, such as dogs, donkeys and llamas.

Organic Livestock Feed Suppliers—IP171 (online only)

This is a searchable online database of suppliers offering certified organic livestock feed. It is categorized by region and by type of livestock feed. www.attra.ncat.org/attra-pub/livestock_feed/listings.php

Organic Alternatives to Treated Lumber—CT170

This publication reminds producers that treated lumber is not allowed under the Final Rule of the National Organic Program. It includes information on alternative products.

Arsenic in Poultry Litter: Organic Regulations—IP266

This publication discusses the potential for arsenic in poultry litter, which is often used by organic producers as a fertilizer and source of organic matter for soil.

Organic Poultry Production in the United States—IP331

This publication provides information about the National Organic Program standards for organic poultry production, including living conditions, genetics, feed and processing.

Dairy Resource List: Organic and Pasture-Based—IP307

This annotated resource list offers many sources of information helpful to organic and pasture-based dairy farmers. Topics include general organic dairying, pasture

productivity, animal management, milk marketing and farm energy.

Pastures: Going Organic—IP297

This is an introduction to regulations related to organic pasture and rangeland in the United States, including allowed activities and materials, fertility, weed and insect pest management issues, as well as organic integrity and recordkeeping.

Building a Montana Livestock Industry—IP346

This report begins with the cost of production survey and includes a report on how Montana Organic Producers Cooperative members can better access regional and national markets. In a broader sense, this report provides an understanding of the value chain of the organic grass-finished beef market from the producer to consumer.

Soils and compost

Soil Management: National Organic Program Regulations—IP270

The image shows the cover of the ATTRA publication "Pastures: Going Organic". The cover features the ATTRA logo at the top left, which consists of a stylized green leaf. To the right of the logo is the title "Pastures: Going Organic" in a large, bold, black font. Below the title is a subtitle: "A Publication of ATTRA - National Sustainable Agriculture Information Service • 1-800-346-9140 • www.attra.ncat.org". The cover also includes a table of contents on the left side, listing sections such as "Introduction", "What Does 'Organic' Mean?", "Organic as a Biological System", "Organic Integrity", "Conclusion", "References", and "Further Resources". The main body of the cover contains an "Introduction" section with a large initial letter 'T' and a photograph of sheep grazing in a field. Below the photograph is a caption: "Dense, diverse pastures produce healthy animals. Photo by Linda Colley, NCAT." At the bottom of the cover, there is a "Definition: Pasture" section with a green background and white text, defining pasture according to the National Organic Standard. The cover also includes a small text block at the bottom left providing information about ATTRA's funding and contact details.

This publication provides management guidelines for meeting the objectives of the National Organic Program and explains why these objectives are essential for maintaining sustainable, organic production systems.

Assessing the Pasture Soil Resource–IP128

This technical note provides methods to determine biological activity of pasture soils and practical tips on improving the usefulness of typical soil and plant samples.

Sustainable Soil Management–IP027

This publication covers basic soil properties and management steps toward building and maintaining healthy soils.

Pursuing Conservation Tillage Systems for Organic Crop Production–IP183

This brief look at conservation tillage for organic cropping systems focuses on annual cropping systems for field crops and vegetables.

Sources of Organic Fertilizers and Amendments–RL044 (online only)

This database allows users to search for suppliers of organic fertilizer by state, product category or keyword. www.attra.ncat.org/attra-pub/org_fert

Manures for Organic Crop Production–IP127

This publication addresses the challenges of raw and composted manures including produce quality concerns, pollution and fertility imbalances in relation to the National Organic Program.

Arsenic in Poultry Litter: Organic Regulations–IP266

This publication discusses the potential for arsenic in poultry litter, which is often

used by organic producers as a fertilizer and source of organic matter for soil.

Potting Mixes for Certified Organic Production–IP112

This publication will aid producers in finding sources of acceptable potting media or making their own that comply with National Organic Program standards.

Pest management

These resources provide an array of sustainable techniques for the reduction or elimination of insects, weeds and diseases without jeopardizing soil health or water quality.

Disease pest management

Asian Soybean Rust: Notes and Organic Control Options for Farmers–IP282 (online only)
www.attra.ncat.org/attra-pub/asian_soy_rust.html

Organic Control of White Mold on Soybeans–IP133

Downy Mildew Control in Cucurbits–CT111

Notes on Compost Teas–IP118

Use of Baking Soda as a Fungicide–IP130

Organic Alternatives for Late Blight Control in Potatoes–IP131

Insect pest management

Bug Vacuums for Organic Crop Protection–IP194

Colorado Potato Beetle: Organic Control Options–CT107

Cucumber Beetles: Organic and Biorational Integrated Pest Management–IP212

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Greenhouse IPM: Sustainable Aphid Control—IP149

Greenhouse IPM: Sustainable Thrips Control—IP148

Greenhouse IPM: Sustainable Whitefly Control—IP168

Kaolin Clay for Management of Glassy-winged Sharpshooters in Grapes—IP175

Insect IPM in Apples—Kaolin Clay—IP176

Flea Beetle: Organic Control Options—CT114

Squash Bug and Squash Vine Borer: Organic Controls—IP298

Weed pest management

Flame Weeding for Vegetable Crops—CT165

Flame Weeding for Agronomic Crops—CT157

Other organic pest management topics

Deer Control Options—CT131

This publication details several deer control strategies including fencing techniques, scare devices, repellants and culling.

Farmscaping to Enhance Biological Control—CT065

This publication contains information about increasing and managing biodiversity on a farm to favor beneficial organisms, with emphasis on beneficial insects.

Biointensive Integrated Pest Management (IPM)—IP049

Targeted to individuals interested in agriculture at all levels, this publication provides the rationale for biointensive IPM, outlining concepts and tools, with suggested steps and informational resources for implementing IPM.

Integrated Pest Management for Greenhouse Crops—IP144

This publication provides information about IPM for both vegetable and ornamental greenhouse crops, including monitoring, sanitation, biological controls, biorational controls, insect growth regulators and disease control strategies.

Organic Integrated Pest Management Pictorial Field Guide – in English and Spanish (Guía de Campo Sobre el Manejo Integrado de Plagas Organico)—SP257 (online and on CD only)

This pictorial guide examines concepts of organic IPM and the role of beneficials, focusing on ecologically based strategies to prevent pests.

Cucumber Beetles: Organic and Biorational Integrated Pest Management

A Publication of ATTRA—National Sustainable Agriculture Information Service • 1-800-346-9140 • www.attra.ncat.org

Updated by Steve Diver and Tammy Heiman, NCAT Agriculture Specialists © 2008 NCAT

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Introduction

Cucumber beetles are present throughout the United States and cause serious damage to cucurbit crops. Overwintering adult insects cause feeding damage on young plants, larvae in the soil feed on plant roots and second-generation adults cause feeding damage on plant leaves, blossoms and fruits. Adult insects transmit bacterial wilt and squash mosaic virus. Organic and biorational integrated pest management measures include delayed planting, trap crops, floating row covers, parasitic organisms and botanical pesticides. Field scouting or yellow sticky traps can monitor insect populations.

Cucumber beetles are pests of cucurbits in most areas of the United States. Cucumber beetles transmit bacterial wilt, squash mosaic virus and can increase the incidence of powdery mildew, black rot and fusarium wilt. They also damage plants directly by feeding on roots, stems, leaves and fruits.

This publication will focus on organic and biorational control methods that fit into an integrated pest management approach. Organic control measures include delayed planting, floating row covers, trap crops and using predatory organisms and botanical or biorational insecticides.

Biorational pest controls are commonly known as least toxic pest controls or soft pesticides. Biorational pest controls are preferred in bio-intensive integrated pest management because they usually target the pest and spare beneficial organisms, are relatively non-toxic to humans and have few environmental side effects.

Species of cucumber beetles

There are six species of cucumber beetle in the United States. Striped cucumber beetles in the *Acalymma* genus and spotted cucumber beetles in the *Dialloctenia* genus are collectively known as diatrotic or diatrotic beetles. The *dialloctenias*, which include the closely related species known as western

corn rootworm (*Dialloctenia virgipes virgipes*) and northern corn rootworm (*Dialloctenia barberi*), have similar yet distinct ecological and behavioral characteristics. Correctly identifying the pest that occurs in each geographical region is the first step toward devising a pest management strategy.

The striped cucumber beetle (*Acalymma vittatum*) is found mostly east of the Mississippi River and the western striped cucumber beetle (*Acalymma trivittatum*) is found mostly west of the Mississippi.

Striped cucumber beetle. Photo by Kim Gray, courtesy of Oregon State University.

Sources of "Spraying Prohibited" Signs for Organic Farms—RL035

Manufactured signs are cost-effective and available from several suppliers whose products and prices are listed.

Publicaciones en Español/ Spanish publications

Escarabajos del Pepino: Manejo Integrado de Plagas—MIP Orgánico y Bioracional—SP212

(Cucumber Beetles: Organic and Biorational Integrated Pest Management)

La Certificación Para Granjas Orgánicas y el Programa Orgánico Nacional—SP264

(Organic Certification and the National Organic Program)

Fresas Orgánicas y Opciones Para El Manejo Integrado De Plagas—SP246

(Strawberries: Organic and IPM Options)

Las Crónicas Orgánicas No. 1: No Tenga Pánico Vuélvase Orgánico—SP310

(The Organic Chronicles No.1)

Producción Orgánica de Lechugas de Especialidad y Verduras Para Ensalada—SP260

(Specialty Lettuce and Greens: Organic Production)

Guía de Campo Sobre el Manejo Integrado de Plagas Orgánico SP257 (online and CD only)

(Organic Integrated Pest Management Pictorial Field Guide)

To view and download the publications in this guide (except those labeled print only), visit the **Organic farming** section of the **ATTRA Web site** at www.attra.ncat.org/organic.html. For a free print copy of any of these publications or to speak with a specialist, call 1-800-346-9140 (English), 7 a.m. to 7 p.m. Central Time or 1-800-411-3222 (Español), 8 a.m. to 5 p.m. Pacific Time, Monday-Friday.

ATTRA Sources of "Spraying Prohibited" Signs for Organic Farms

A Publication of ATTRA, National Sustainable Agriculture Information Service • 1-800-346-9140 • www.attra.ncat.org

By George Kuepper updated by Katherine Adam, NCAT Agriculture Specialist © 2006 NCAT

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Organic producers are required to prevent contamination of their crops by spray drift originating from adjoining lands, roadsides, and rights-of-way. The use of warning signs is one practice, among many, that can aid the effort. While some farmers and ranchers make their own signage, manufactured signs are often well worth the cost. Several suppliers of appropriate signage are listed, with information on their products and prices.

Catnip Farm

Erica Dana
P.O. Box 72
Victor, IA 52347
319-653-4270
Erica@catnipfarm.com
www.catnipfarm.com

Three designs:
"Organic Farm—Please Do Not Spray
Watch Wind Speed and Direction"
"Organic Farm—Do Not Spray
Chemical Trespass Will Be Prosecuted"
"Organic Garden—Please Do Not Spray"

Sizes:
12" x 18" (farm sign) and
12" x 12" (garden sign)

Colors:
Black wording on bright yellow
background

Material:
Heavy gauge aluminum

Prices:
farm signs
\$18.50 each for 1–5 signs; \$16.50, 6–11;
\$12, 12–23

garden sign
\$16.50 each, 1–5. Includes shipping in
48 states.

Before ordering, contact Erica Dana to
make sure signs are in stock.

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Photo by Ann Baker, NCAT

Midwest Organic and Sustainable Education Services (MOSES)

P.O. Box 339 Spring Valley, WI 54767
715-772-3153
715-772-3162 FAX
caho@mosesorganic.org
www.mosesorganic.org/mosesgeneral/booklist.htm

One design:
"Toxic Spray Prohibited"

Size:
18" x 24"

Colors:
Red with black border, waterproof inks

Material:
UV-resistant corrugated plastic

Price:
\$6 each for 1–4 signs; \$5 each for 5 or more

Shipping:
\$3 for first sign; \$1 each additional. Sales tax of 5.5% applies to Wisconsin sales.

El Proceso de la Certificación Orgánica—SP262

(The Organic Certification Process)

Cómo Prepararse para la Inspección Orgánica—SP261

(Preparing for an Organic Inspection)

Guide to ATTRA's Organic Publications

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Amy Smith, Production

This publication is available on the Web at:
www.attra.ncat.org/attra-pub/organicpubs.html
or
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