Organic Vegetable Production

Organic vegetable farming is a production system that relies on biological processes and natural materials to manage soil fertility and pest populations, and to promote healthy crop growth. With the federal Organic Foods Production Act, use of the term “organic” to describe an agricultural product in the marketplace is regulated. Vegetables sold as “organic” must be grown and handled according to the National Organic Rule and any applicable state regulations. The National Organic Rule prohibits the use of most synthetic chemicals (fertilizers, pesticides, etc.), and requires farmers to write and follow organic production plans, as well as keep farm and field records. Fields used to grow organic crops may not have had any prohibited material applied to them in the previous three years. In addition, USDA-accredited organic certification agents must inspect and certify all operations with more than $5,000 in gross annual income from sales of products labeled “organic.”

Growers interested in transitioning to organic production should educate themselves about practices used in their area and plan carefully. Experience suggests that it can take a number of years for pest populations and soil nutrient cycles to adjust enough for successful organic production. Portions of this guide related to soil sampling, nutrient availability, and crop nutrient requirements include information relevant to organic production, as do the overviews of Insect Management Strategies, Disease Management Strategies, and Weed Management Strategies.

In this guide, products that may be allowed in organic production are denoted by the symbol: ☀. Growers should always check with their organic certification agents before using any product to make sure it meets their certifier’s criteria.

Other organic production resources include:

eXtension, the national extension website, offers resources on organic agriculture at www.extension.org.

Organic Vegetable Production (Purdue Extension publication ID-316) is an introductory guide covering the basics of soil fertility and pest management (available online at www.extension.purdue.edu/extmedia/ID/ID_316.pdf).

Organic Vegetable Gardening Techniques (University of Missouri Extension Guide G6220) provides an introduction to organic production techniques (available online at muextension.missouri.edu/xplor/agguides/hort/g06220.htm).

Resource Guide for Organic Insect and Disease Management (Cornell University) provides specific recommendations for pests and diseases of major vegetable crops (available online at www.nysaes.cornell.edu/pp/resourcguide).

Appropriate Technology for Rural Areas (ATTRA) offers a number of publications on their website: www.attra.org.

The National Organic Program (NOP) offers a program handbook that provides a list of materials allowed for use in organic production, plus a complete list of accredited certification agents on their website: www.ams.usda.gov/nop.

The Organic Materials Review Institute (OMRI) publishes a list of products they have found to meet certified organic production criteria. For details, visit www.omri.org.

The Sustainable Agriculture Research and Education (SARE) program offers a number of research-based publications about pest management, including organic options. A complete catalog is available at www.sare.org/Learning-Center.

If you desire organic certification, you should contact a certification agent during the period of transition to organic production. The organizations on page 39 have been accredited by the USDA as of September 2015. Contact them directly for information about fees and the certification procedure. Although they are listed by state, many organizations work across state lines; you do not have to choose an organization in your state. Additional accredited organizations are listed at www.ams.usda.gov/nop.

Consult your local Extension office for other resources available in your area.
Illinois
Illinois Organic Growers Association
illinoisorganicgrowers.org

Indiana
Ecocert ICO
PO Box 158
Plainfield, IN 46168
(888) 337-8246
(317) 865-9700
Fax: (317) 865-9707
www.ecocertico.com
info.ecocertico@ecocert.com

Iowa
Iowa Department of Agriculture and Land Stewardship
Organic Certification Program
Maury Wills
502 East 9th Street
Des Moines, IA 50319
(515) 281-5783
www.iowaagriculture.gov/AgDiversification/
organicCertification.asp
AgDiversification@iowaagriculture.gov

Kansas
There is no certification agent in Kansas, however agencies located in other states serve Kansas growers.

OCIA International, INC
1340 North Cotner Blvd.
Lincoln, NE 68505
Phone: (402) 477-2323
Fax: (402) 477-4325
info@ocia.org
www.ocia.org

Minnesota
Midwest Organic Services Association, Inc. (MOSA)
122 W. Jefferson St.
P.O. Box 821
Viroqua, WI 54665
(608) 637-2526
www.mosaorganic.org
mosa@mosaorganic.org

Minnesota Crop Improvement Association
1900 Hendon Ave.
St. Paul, MN 55108
(612) 625-7766
(800) 510-6242
www.mncia.org
mncia@mncia.org

Missouri
There is no certification agent in Missouri, however agencies located in other states serve Missouri growers.

Ohio
Ohio Ecological Food and Farm Association
Certification Program
41 Croswell Road
Columbus, OH 43214
(614) 262-2022
www.oeffa.org
organic@oeffa.org

Table 12: Yields of Vegetable Crops

<table>
<thead>
<tr>
<th>Crop</th>
<th>Expected Yields in Tons per Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average</td>
</tr>
<tr>
<td>Asparagus</td>
<td>1</td>
</tr>
<tr>
<td>Bean, snap</td>
<td>2</td>
</tr>
<tr>
<td>Cabbage</td>
<td>13</td>
</tr>
<tr>
<td>Cantaloupe</td>
<td>10</td>
</tr>
<tr>
<td>Cucumber (slicing)</td>
<td>9</td>
</tr>
<tr>
<td>Cucumber (pickling, hand harvest)</td>
<td>6</td>
</tr>
<tr>
<td>Onion</td>
<td>13</td>
</tr>
<tr>
<td>Pepper, green</td>
<td>14</td>
</tr>
<tr>
<td>Potato (fall)</td>
<td>10</td>
</tr>
<tr>
<td>Pumpkin</td>
<td>10</td>
</tr>
<tr>
<td>Spinach</td>
<td>6</td>
</tr>
<tr>
<td>Summer squash</td>
<td>10</td>
</tr>
<tr>
<td>Sweet corn</td>
<td>4.5</td>
</tr>
<tr>
<td>Sweet potato</td>
<td>7</td>
</tr>
<tr>
<td>Tomato (fresh market)</td>
<td>11</td>
</tr>
<tr>
<td>Tomato (processing)</td>
<td>25</td>
</tr>
<tr>
<td>Watermelon</td>
<td>15</td>
</tr>
</tbody>
</table>