

Cornell University
College of Agriculture
and Life Sciences

Meeting the Needs of Organic Growers

IMPACTS 2005



SUMMARY

The demand for organic foods has doubled in the past decade and continues to grow. Organic food sales have increased approximately 20% annually. Over the last 10 years, the number of farmers and the acreage dedicated to organic farming has been steadily increasing. Cornell University, the land-grant institution of New York State, is devoting more resources to research to improve all aspects of organic agriculture, including soil health, seed availability, dairy health and crop production.



THE ISSUE

According to Anu Rangarajan, associate professor of horticulture in the College of Agriculture and Life Sciences, in the past five years Cornell has become a predominant player in organic agriculture research. More than \$3 million in funding has been devoted to several major organic agricultural projects as researchers meet the challenges of the growing demand for organic products. Among the many research and extension projects relating to organic agriculture are:

DAIRY:

A study of milk quality and herd udder health on five farms that are making the transition from conventional dairying methods to organic milk production to develop a list of best practices for dairies interested in producing hormone-free and organic dairy products.

SEEDS:

The Organic Seed Partnership to improve organic seed quality and farm profitability by building a large community of growers and breeders in the Northeast who want to share information from organic seed-breeding field trials.

EDUCATION:

In-depth training of agricultural field staff on all aspects of organic vegetable production.

CULTURAL PRACTICES:

Studies of organic grain and vegetable crop rotation systems to research more effective growing and disease-prevention methods and to determine how tillage and nitrogen affect growth and quality of crops.

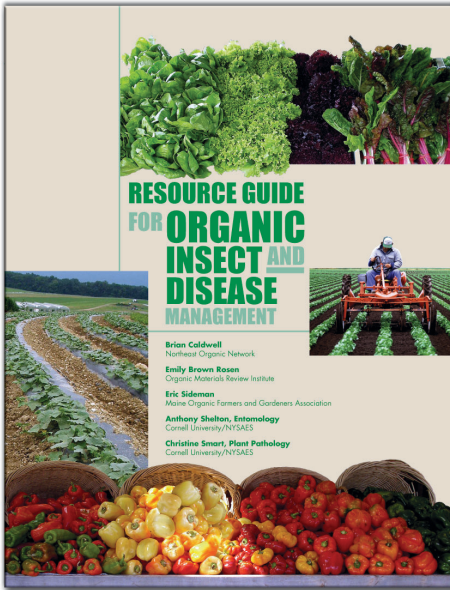
FRUIT:

A study to develop a system of organic apple production for the eastern United States.

FARM MANAGEMENT:

A study of 11 exemplary organic farms in the Northeast to better understand how farm practices and pest management strategies are integrated for successful organic farming.



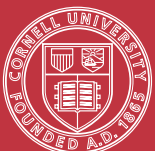


IMPACTS

- Cornell has published a *Resource Guide for Organic Insect and Disease Management* which is based on published research, to help organic growers control insects and diseases. It describes detailed crop management practices for five of the most important vegetable groups, provides a comprehensive assessment of 13 of the most commonly used pesticides in organic production, and provides options for preventive management.
- The Freeville Organic Research Farm, a 30-acre site adjacent to the Homer C. Thompson Vegetable Research Farm in Freeville, N.Y., managed by Cornell's Department of Horticulture, aims to optimize organic vegetable production systems for the Northeast. Summer projects include potato variety trials; a cropping systems study exploring the interplay of cover crops, rotations, tillage and nutrient management; a tomato trial using different potting mixes; organic seed breeding trials of cucurbits, peppers and others; a cover-crop demonstration; cultivation experiments; and a multi-species buffer planting.
- The Cornell Willsboro Research Farm, in Willsboro, N.Y., works on certified organic grain rotational trials, particularly alfalfa and timothy.
- The Long Island Horticultural Research Center in Riverhead, N.Y., has two acres devoted to four experiments related to organic agriculture: two looking at fertility and weed control in heirloom tomato varieties; one examining stale seedbed techniques and fertilizer types for leafy green and mesclun production; and a fourth evaluating eight spring cover crops.
- The Dilmun Hill Student Farm, a 3-acre organic farm, provides experiential learning opportunities for Cornell students, faculty, staff and the local community to explore sustainable food and organic agricultural systems. Student research projects recently have included a survey of the insect populations in the different beds, how beneficial insects were affected by flowering ground covers and mowed grass between crop rows, and an extensive soil sampling to evaluate nutritional qualities and such problems as pH levels, fertility and heavy-metal concentration.
- The New York State Agricultural Experiment Station, in Geneva, N.Y., is evaluating pest and crop management systems in a program sponsored by the Integrated Pest Management Program using an 8-acre site to compare an organic rotational system growing, sweet corn, zucchini, melon, pumpkin and cucumber.
- The Northeast Organic Network (NEON), is comprised of farmers, researchers, land-grant university personnel, nonprofit organizations and government agencies who work together to improve organic farmers' access to research and technical support. NEON is producing farmer resources on organic practices to enhance production and consumption of locally grown organic food in the Northeast.

CONTACT:

Anu Rangarajan
 Department of Horticulture, 121 Plant Science, Cornell University
 Ithaca, NY 14853; ar47@cornell.edu; 607-255-1780



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