Agriculture in the Hudson Valley

The soils, climate, and topography of the Hudson Valley are well suited for fruit production. Despite increasing urbanization, the Hudson Valley supports more than 500 fruit and vegetable farms that occupy more than 18,000 acres. Farmgate revenues at these farms exceeded $105 million in 2007. Ulster County has the second largest apple crop among all counties in New York State.

The lower Hudson Valley encompasses several river-bottom and black-dirt regions that support a concentration of sweet corn and onion farms. Fresh-market sweet corn is produced in the Roundout and Wallkill River Valleys. To the south in Orange County, organic soils created by an ancient lake now support black-dirt farms that encompass 5000 acres ideally suited for producing onions and other vegetable crops.

Many farms market directly to consumers via U-pick, farm stands, and farmers markets in New York City and other towns and cities.

Rationale for Research in the Hudson Valley

The topography, soils, climate, and geographic location of the Hudson Valley provide farmers with opportunities and challenges:

Opportunities

- Slopes on hillsides along river valleys provide the soils and frost-free sites needed for fruit production. Organic soils and river bottoms provide ideal land for vegetable production.
- The Hudson Valley’s proximity to the New York City metropolitan area provides farmers with the opportunity to market horticultural products to millions of local consumers.
- Increasing awareness of food security issues and interests in locally produced foods is causing more people to seek out

Challenges

- Hudson Valley farmers survive only as they remain competitive with producers in other regions while farming in an increasingly suburbanized environment.
- The warm, humid climate favors the development of diseases and insect pests not usually found in cooler regions of the state.
- Pests from the south appear first in the Hudson Valley.
- Hudson Valley farmers need pest management strategies for mites, insects, plant diseases, and wildlife pests (e.g., deer) that are compatible with the sensitivities of non-farm neighbors from urban backgrounds.

For more information, contact:

Dr. David Rosenberger
Hudson Valley Lab Superintendent
3357 Route 9-W
P.O. Box 727
Highland, NY 12528
Ph: 845-691-7151
Email: dar22@cornell.edu

http://www.nysaes.cornell.edu/hudson/
Purpose and Impact

Cornell University scientists and staff at the Hudson Valley Laboratory (HVL) conduct applied research to improve the production of fruit and vegetable crops grown in eastern New York. Research-based information is provided to New York farmers through educational programs organized by Cornell Cooperative Extension (CCE) and participating CCE associations from Suffolk County in Long Island to the Canadian border.

The Cornell scientists stationed at HVL live and work in the Hudson Valley. They understand the local economy, experience directly the impacts of seasonal weather patterns, and can react quickly when unique production or pest-control problems develop during the growing season.

Access to statewide, national, and international resources available through Cornell allows HVL scientists to review the best available information, tailor that information to meet the needs of regional agricultural producers, conduct additional on-site research as necessary, and deliver the appropriate information to farmers in a timely manner.

HVL scientists also act as the “eyes and ears” for their campus-based colleagues keeping them informed of research needs and technological innovations in the eastern New York horticultural industries.

Objectives of Current Research

- Use plant growth regulators to adjust crop load on apple trees so as to maximize fruit quality, tree health, and farm profitability.
- Increase winter hardiness and reduce cold injury to apple trees through novel use of nutritional supplements and plant growth regulators.
- Evaluate new strategies and products for improved pest management.
- Manage postharvest decay of apples to minimize losses during long-term storage.
- Test disease-resistant apple varieties in super-productive slender spindle using organic or sustainable pest management strategies.
- Assess impacts of plant management systems on plant health and productivity.
- Develop management strategies for two newly introduced pests, brown marmorated stink bug and spotted wing drosophila, that are destroying fruit and vegetable crops in the Hudson Valley as they move into the state from the south.

Facilities and Staffing

The Hudson Valley Laboratory and associated buildings were constructed by the Hudson Valley Research Laboratory, Inc., a non-profit farmer-owned corporation dedicated to supporting research that will benefit the fruit and vegetable industries. Cornell leases the lab building and owns 25 acres of research orchards located on the hill behind the laboratory.

The 7,000 square-foot laboratory building houses four labs that are well-equipped for applied research. Other buildings include two greenhouses, three walk-in cold rooms, a shop, and an eight-bay parking garage, a pole barn for farm equipment and a modern pesticide storage facility.

HVL provides a base of operations that allows Cornell scientists to conduct research on problems not easily investigated by scientists at Ithaca or Geneva. HVL scientists conduct much of their research on commercial farms with assistance and support provided by the farm owners.

HVL is permanently staffed with research scientists specializing in horticulture, plant, pathology, and entomology, along with related support personnel. Each scientist is a faculty member in their respective department at Cornell University.

The four Cornell Cooperative Extension educators located at the Hudson Valley Lab are specialists in tree fruit, berries and grapes, and organic production.