NORTHEAST
**EXTENSION
RISK MANAGEMENT
EDUCATION**

UNIVERSITY OF DELAWARE. | Cooperative Extension
COLLEGE OF AGRICULTURE &
NATURAL RESOURCES

Managing Risk through a System Approach to Concord Grape Productivity and Fruit Quality

This project was created by a team from **Cornell** and **Penn State Universities** in response to the need for Concord grape growers to develop new vineyard management plans to meet new quality standards of grape processors in the Lake Erie region of **New York** and **Pennsylvania**. The new quality standards, combined with the closing of an area processor and contract cancellations by another, created a teachable moment for growers to examine the economics of implementing a "whole system" approach of current research-based inputs into their vineyard management strategies.

The project provided education and support for growers to assess and potentially adopt new management strategies including: 1) GPS-sensor technology; 2) GIS mapping of vineyards; 3) mechanization of vineyard practices; 4) using web-based resources to manage inputs for pests; and 5) marketing. While the majority of participants did not implement all the new strategies available to them, they used information from the project where it provided the largest return on investment. GIS

mapping was the largest success of the project as the program partnered with National Grape Cooperative to create maps for 356 growers, representing 21,870 acres, in New York and Pennsylvania. Having a GIS map provided participants the ability to fully implement any of the remaining strategies of the whole system approach.

A Concord grape grower with vineyards in North East, PA and Portland, NY was an early adopter of the GIS mapping and NDVI sensing (normalized difference vegetation index), and expressed how impressed he was with the information these two maps provided him. His example was a vineyard block where he knew that he had an area with weak vines. After having the GIS and NDVI sensor maps created for the block, he was able to accurately determine that the area with low vine vigor was much larger than he was able to see with his naked eye. Using this information, he and a project team member determined the likely cause of the weak growth and were able to look at the economics of incorporating different methods of water management to address the problem.

Although this project initially targeted the Lake Erie grape growing regions of **New York** and **Pennsylvania**, as it progressed the information was picked up in newsletters of grape programs in other areas. Many of the resources developed have application in all vineyards east of the Rocky Mountains.

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"Having a GIS map provided participants the ability to fully implement...the whole system approach." - Project Team Member
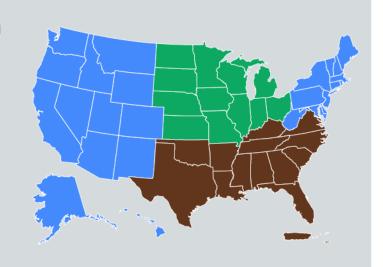
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"Educating America's farmers and ranchers to manage the unique risks of producing food for the world's table."

Extension Risk Management Education (ERME) is delivered through four regional centers that provide grant funding and leadership within their regions.

Projects are producer-focused, results-based and encourage public-private partnerships. Funded projects must identify targeted results that will help producers manage risk and then describe how the project will measure those results.

Extension Risk Management Education has funded innovative programs that have generated tangible results for producers in every state. ERME is committed to funding results, providing transparent accountability, and encouraging collaboration. View the accomplishments of all funded projects on our website.
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