



## News from the Northern New York Agricultural Development Program

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### **NNY Apple Growers Evaluating Orchard Improvement Techniques**

To help the Northern New York apple industry with a farm gate value of \$16 million, the farmer-driven Northern New York Agricultural Development Program is funding orchard improvement research and grower education focused on improving fruit quality through systems management, precision orchard thinning, and precision irrigation techniques.

"Controlling the final fruit number on an apple tree is a critical process for profitable fruit growers," says Cornell University Horticulture Professor Terence Robinson. "Only 3 to 10 percent of the initial flowers and fruitlets should be carried to harvest for the best economic value."

Robinson and his research team have developed a precision thinning technique that helps growers prevent too many fruits from reducing apple size and yield.



This summer the research team demonstrated the use of motorized platforms for hand thinning orchards as well as use of mechanized sidewall shearing at Everett Orchards in Peru. In the photo above, Dr. Robinson, 2<sup>nd</sup> from right, demonstrates the hand-thinning technique to growers aboard a mechanized platform; photo: Kevin A. Iungerman/Cornell University Eastern NY Commercial Horticultural Program.

***“Dr. Robinson has had trials comparing four different growing systems in our orchards since 2002. His research work has been the clearest indicator of what types of systems work best for our operation. He has calculated the best return on investment for the different systems and that has helped us and all the growers in the region,” Tom Everett says.***

The NNYADP-funded apple research also includes the development of a precision irrigation calculation model to help apple growers boost crops in dry years. Forrence Orchards in Peru has hosted the NNYADP irrigation trials.

Robinson says. “Until now the amount of irrigation has been estimated by ‘feel.’ Over the last decade we have developed a model for estimating the amount of water needed each day or week in young, medium and old apple orchards. In dry seasons, growers need to add precision irrigation to precision thinning to assure good fruit size and protect crop value.”

Once the fall 2013 harvest is complete, Robinson will begin evaluating data on fruit set, size, quality, and yield, and will calculate gross crop value for the apples grown using the thinning techniques and the irrigation technique at three Northern New York apple orchards.

The results will be presented to growers at the Cornell Winter Fruit School in February 2014 and reported in a 2014 issue of the NY Fruit Quarterly Magazine sent to nearly 700 commercial apple growers in New York State.

**NY Apple Association President Jim Allen** says the value of this regional research will benefit growers statewide.

***“Apple growers constantly identify thinning apples as one of the most difficult growing practices that they are confronted with each spring. Finding just the right thinning procedure is key to a successful apple crop. We applaud the Northern New York Agricultural Development Program for providing support for this important research,” Allen said.***

Northern New York Agricultural Development Program funds on-farm research, technical assistance and outreach to help all types of agricultural producers in Clinton, Essex, Franklin, Jefferson, Lewis and St. Lawrence counties. To learn more about fruit production and other NNY agricultural sectors, visit the NNYADP website at [www.nnyagdev.org](http://www.nnyagdev.org) or contact your local Cornell Cooperative Extension office.