

CONSERVATION INNOVATION GRANT FINAL Report

Grantee Name: Red Tomato	
Project Title: Market Incentives for Conservation Practices by Northeast Tree Fruit Growers (NRCS CIG 68-3A75-6-164)	
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Period Covered by Final Report: September 1, 2006 – August 31, 2010 (includes no-cost extension timeframe)	
Project End Date: August 31, 2010	

Summary of Project:

Economic incentives and a strong market position enhance the adoption of conservation-based advanced-IPM practices for apple production in the U.S. Red Tomato (RT) in collaboration with the IPM Institute of North America, has developed and implemented a Protocol and marketing program for ecological apple production in the Northeast region. Apples grown to this standard were successfully introduced to the marketplace as Eco Apples in 2005.

Building on that introduction, in this project we have strengthened and expanded the Protocol; incorporated quality control and safety criteria into the program; developed innovative marketing support linking environmental benefits to other product attributes—locally-grown, highest quality, family farm identity--via packaging, brand, and simple messaging, thereby making Eco Apples more recognizable and more valuable to customers.

We trained RT staff in the science behind the Protocol and developed programs to educate supermarket buyers and store-level produce managers. We delivered our message to consumers and the public through in-store signage, packaging and PR activities. We developed evaluation measures for communications and grower satisfaction, and put in place an ongoing program leading to growth in Eco Apple sales, more growers and more apple acreage grown using the ecological protocol. We have identified best potential for developing similar programs with additional crops.

Growers typically earn premium prices and gain access to new markets, and have a network of peers with whom they exchange information and coordinate supply and marketing. The project's successes and failures have been shared with farmers, scientists, Extension agents, and others at conferences, through the RT website, packaging, pamphlets, posters, in-store demos, media coverage, and trade and scientific reports and presentations. The project offers a successful model that can be extended to other crops and regions.

Location/Size of Project Area. Overall project area: New England states, plus New York and Pennsylvania. Project growers are located in CT, MA, NH, VT, ME, PA and NY with product sales within and outside of this region.

Participants: Over the course of the project, the Eco Apple advisory group has grown from the six original growers to includes a total of nineteen growers who have joined the program over the project period. (Most participating growers remained with the program but a small number have joined and then left for reasons including difficulty meeting the protocol and marketing needs that did not match the program.) See Attachments for a complete list of participating orchards. The advisory group has also expanded over the course of the project, and includes: independent crop advisors Rob Koch and Kathleen Leahy, M.S.; land grant scientists: A. Richard Bonanno, Ph.D., Extension Weed Mgt. Specialist; Dan

Cooley, Ph.D., Plant, Soil, and Insect Science, UMass; Juliet Carroll, Ph.D., Plant Pathology; Jon Clements, Extension Tree Fruit Specialist, UMass; Bill Coli, M.S., Plant Science, Entomology, UMass; Tracy Leskey, Ph.D. Research Entomologist, Appalachian Fruit Research Station, West VA.; Art Agnello, Ph.D., Entomology, NYS Agr. Experiment Station; Harvey Reissig, Ph.D., Entomology, Cornell; Arthur Tuttle, Extension Educator, Plant, Soil, and Insect Science, UMass, Lorraine Los, University of Connecticut.

a. Project Description. Northeast land-grant scientists have made great gains in new conservation practices for apple production, including replacing broadly toxic pesticides with target-specific, low-impact alternatives. These new options, though with many benefits, can add cost and be labor-intensive for growers, who are often unrecognized in the marketplace for their extra efforts. Our successful and transferable model incorporates economic incentives, advanced production protocols, and support from a network of peers and advisors, which greatly enhances adoption of these beneficial practices.

Red Tomato (RT) is a non-profit produce company whose mission is to build a better food system in which small and medium-sized family farmers--the best stewards of the land—survive and thrive. RT markets regional and ecologically grown fruits and vegetables from family farms to the supermarket industry. With over a decade of experience in the marketplace, RT has developed, tested and built a successful Eco Apple program for Northeast apple producers that provides technical assistance for conservation practices, and market incentives for advanced integrated pest management, based on a progressive pest-management protocol and certification system. Grower participation and sales have grown steadily: In 2005, there were six orchards, with sales of \$18,000. In 2010, 13 orchards were certified and over \$1.4 million of produce sold. In 2011, the program will add six new orchards to total 19, and sales are growing at around 18% per year. RT's program adds value and price premiums, opens new markets, and differentiates products for regional growers.

RT initiates the variety choices, product development, packaging, branding, message development, promotion and education that turn commodities into highly differentiated food products. Relationships with apple growers, food industry buyers, land grant scientists, crop advisors and sponsors create a solid foundation for the “Eco Apple” program. RT orchestrates the supply chain; growers manage production and post-harvest handling; scientists and crop advisors develop, test, refine, and certify for proper adoption and use of Eco Apple standards (the “Protocol”). The various players are tied together by their mutual commitment to see the program grow, constantly improve, and produce and sell the highest quality fruit available.

An independent evaluation of farmers who work with RT is conducted annually, and indicates a high degree of grower satisfaction—near 95% in each year of this project. Access to markets, plus price and net return, are seen as the most important benefits. An additional benefit, not identified in the original proposal, has been the support of the grower network in managing supply and maintaining markets in the face of increasing severe weather—hail in summer and late frost in spring-- that affected several orchards each of the past three years. By collaborating to meet customer needs, and coordinating marketing under the Eco Apple brand, growers affected were able to manage their crop losses effectively and keep the overall program operating.

The grower and scientist advisory team reviews the crop protocol annually with a goal of continually moving toward more stringent, least-toxic practices, as well as addressing insect resistance issues and changing pest pressures in the region. One important result has been the steady reduction in use of organophosphates (OPs) as part of the protocol. In 2008 all OPs were moved to Do Not Allow category, with the exception of one post-harvest trunk application permitted to treat for borers only after monitoring indicates. In 2010, the entire Eco Apple crop was produced 100% without OPs. This coincided with release of new studies linking OPs to significant health concerns, especially for children, and a corresponding increase in buyer questions and consumer concerns about OP use on apples. Through retail buyer training, consumer handouts, and press releases, we were able to deliver the message that top quality Northeast apples can be produced without OPs, and this strengthened sales and market

position with a number of key customers. Going forward, growers have identified this as a significant benefit, one they intend to sustain in spite of new pest pressures (such as Brown Marmorated Stink Bug). The grower commitment to the protocol and the marketing message is an indication of the value of this program to both producers and consumers.

Project objectives: The objectives and methods outlined in the original proposal have been organized into five areas:

1. **Refine the IPM production protocol and increase its adoption** by updating annually and adding new soil, water and air resource conservation criteria consistent with NRCS approaches; and by adding quality control standards, food safety and security criteria to the Protocol.
2. **Improve and disseminate market messages** by identifying attributes, refining messages to position our eco-products for long-term market growth. The message needs to be truthful, science-based, and simple. Where appropriate, RT will explain the active partnership among farmers, scientists, public research institutions and Extension, sponsors, and NGOs that makes the Eco Apple project possible. Through newly designed packaging, signage, and in-store tastings, plus a focused PR effort, RT will target consumers where they shop and via the media.
3. **Develop evaluative indicators of marketing materials** to measure the impact and reach of packaging, print and internet media, educational materials, and in-store, on-farm and community events, including web-based metrics that allow for simple, ongoing evaluation.
4. **Educate buyers and retail produce managers** about the benefits of Eco Apples and how to utilize these benefits to achieve their own business goals. In addition to developing a comprehensive four-hour training curriculum for RT staff dealing with conservation, pest management, and related science issues, develop a shorter version of this content for the trade, grounded in science, to prepare store-level produce managers to answer questions and educate consumers. Pamphlets, posters, and other support materials will be provided to the trade.
5. **Explore feasibility for program expansion to other products.** Evaluate grower and market receptivity, current and potential eco-practices, available land grant support, Extension and crop advisory resources, as well as funding possibilities for the next eco-protocol/marketing program.

Red Tomato executed the objectives successfully through the period covered by this project, and continues to maintain and develop an ongoing program based on this success. The one-year no-cost extension of the time frame, due to careful allocation of resources, allowed us to further strengthen the apple program, both by advanced production practices (i.e. elimination of organophosphates) and by building sales. The extension also allowed us to go beyond the original scope of Objective 5, in identifying Stone Fruit as the next crop to develop. A pilot Stone Fruit protocol was tested in 2010 and is in the process of being brought to market.

The following details activities by objective over the course of the project, September 1, 2006 – August 31, 2010 (includes no-cost extension timeframe).

Objective One: Refine the IPM production protocol and increase its adoption

Each year in March, IPM growers, RT advisors, UMass Extension scientists and IPM Institute representatives convene at an annual meeting. Proposed changes to the IPM Protocol were developed through monthly meetings of the Working Group (see Appendix for current team members) throughout

the reporting time period, Calls and meetings addressed the Eco-Apple protocol, improvements, Eco-Apple program management, stakeholder perspectives, and review of marketing and promotion activities. Meetings also include education on future issues (such as pest management issues and variability use of pesticides) for example a keynote talk by Greg Krawczyk from Penn State on pest management issues in Pennsylvania and the New England region. Growers report that these meetings are an indispensable aspect of their relationship with RT. This dynamic working group is the foundation for an ongoing feedback loop to improve product, protocol and process.

Protocol updates:

In 2007, the project team and participating growers implemented several changes and improvements to the Eco-Apple protocol. Specifically, they: Lowered the allowable application of Imidan; moved 2,4D to the not-allowed list; reduced Allowable application of Paraquat to one; and tightened rules for application of fungicides. Growers also agreed to eliminate phosmet for applications to fruit starting in the 2007 season, leaving only one allowable application, post-harvest, on tree trunks. Overall, the minimum score required on the point-based part of the protocol was raised from 16 to 20, a higher threshold.

In 2008, the Eco Apple protocol was modified to: add a definition for systematic sampling, and the required practice description was modified for mites, tarnished plant bug, codling moth, oblique banded leafroller, plum curculio and apple maggot; add requirements for post-harvest disease and disorders; add two formulations of granulosis virus for codling moth to the Use with Justification and Use with Restrictions; move Thiamethoxam from the Do Not Use category to Use with Restrictions; place two new insecticides, Delegate and Altacor, in the “Use with Justification” category after being reviewed against our criteria for least toxic.

In 2009 protocol updates included: revised summer pruning requirement to specify semi-dwarf or standard-sized trees and exception for fire blight; added details about codling moth pheromone trap thresholds; added suggestion to increase number of traps in small blocks or blocks with lengthy perimeters; added chlorantraniliprole (Altacor), flubendiamide (Belt), spinetoram (Delegate) and spirotetramat (Movento) to the category of “*Insecticides, Use with Restrictions*”; in a review of fungicides within the IPM protocol, febuconazole (Indar) was added to “*Use with restrictions*”; and difenoconazole (Inspire) ferbam, thiram and esfenvalerate (Asana), were moved to ‘*Do not Use*’.

For 2010 growing season, the following revisions were made to the Eco Apple protocol and quick guide and presented at the annual Growers’ Meeting: more points awarded for on-farm research in the category of ‘*Grower education and self-improvement*’; addition of thiacloprid (Calypso), fenpyroximate (Portal/Fujimite) to the category of “*Insecticides, Use with Restrictions*”; in a review of fungicides within the IPM protocol, difenoconazole-cyprodinil (Inspire Super MP) was added to the category of ‘*Use with restrictions*’; clarification on pesticide labels and/or registration status and/or use restrictions for the Eco Apple protocol for paraquat (Gramoxone), flumioxazin (Chateau herbicide), fenbuconazole (Indar), chlorantraniliprole (Altacor), spirotetramat (Movento); addition of optional points for using carbaryl alternative when using chemical fruit thinners in the category of ‘*Pesticide Use and Hazard Reduction*’; clarification for post-harvest use of aerosol applications of diphenylamine (DPA) in the category of ‘*Other*’ on the pesticide list ‘*Use with restrictions*’.

All growers who joined Eco Apple in 2006 or later were requested to provide their pesticide application records from the year prior to joining. Spray and fertilizer application records, program self-assessment forms and scouting records are collected by growers for each year in the program. A requirement that pesticide cost must be reported by August 1 of each year was added to the Eco Apple protocol in 2008. Post-Harvest IPM application records have been obtained for all Eco Apple collaborating orchards. All records have been entered into the monitoring database. The collection and

analysis completed during each recording period further informs discussions and revisions of the Eco Apple protocol.

Juliet Carroll, creator of Trac software, and Becky Stracener, IPM Institute program assistant, contacted each Eco Apple grower numerous times over course of the growing season to assess their concerns and questions with Trac program to ensure better adoption of Trac software by growers. This proved to be successful, as seven of the nine growers who were certified for 2008 sent in Trac records as opposed to handwritten records. Eight of these nine growers included cost data as well.

Food safety & quality: To expand the reach and thoroughness of the Eco Apple protocol to incorporate food safety practices, Red Tomato conducted the following activities:

- Committed to work with growers to facilitate their compliance and achievement of a widely accepted food safety certification, such as Global GAP; and selected a consultant to develop a food safety protocol that can be adopted and customized to the different farms that produce for the Eco Apple label.
 - Interviewed wholesale and retail customers about increasingly stringent current and planned requirements around food safety and certifications
 - Interviewed growers and packers about current processes, systems and protocols
 - Created a Food Safety Advisory council that included scientists and growers
 - Selected and hired Bruce Wilkins of Agricultural Consulting Services (ACS)
 - Recruited 21 partner growers (2009 goal was 12) for participating in the Food Safety Program
 - Launched and completed Phase I of the ACS designed Food Safety Program for Red Tomato consisting of one-on-one farm visits by Wilkins of ACS to learn about each farm's operations and assess each grower's readiness for the program
 - All participating farms (21 farms) were visited and assessed.
 - Assessment reports were sent to each participating farm.
 - Other Results and benefits of Phase I work included:
 - A pre-audit for one participating farm preparing for certification audit;
 - Three growers either currently certified or on track for certification (note pre-audit above for one of these three growers);
 - Fourteen growers scheduled to be certified by year end 2010;
 - Two growers scheduled to be certified by year end 2011; and
 - Two growers with timeline as yet undetermined.
- Launched **Phase II** of the Food Safety Program.
 - Designed, wrote and sent to growers the generic set of program protocols—which are consistent with USDA GAP requirements.
 - Crafted a voluntary Food Safety/ Recall Program for Red Tomato, which includes the following components:
 - Traceability system for Red Tomato and our growers for capturing all necessary information and tracing products back to the farm of origin;
 - Crisis Management plan in the case of a food safety issue; and
 - Roles and responsibilities for Red Tomato staff.

Held **Training Session** on March 9, 2010 as part of the Annual Growers' Meeting for growers, advisors, Red Tomato staff and IPM Institute of North America.

Quality Control: An additional expansion of the Eco Apple protocol is being developed, building on the USDA Standards for Fresh Fruits, and specifically, focusing on individual packing guidelines and requirements for each retail customer. A decision was made to make a top priority of *apple firmness* as a

quality control improvement in 2009. Research shows apple firmness to be one of the top, if not the top, critical determinant of consumers' sense of apple quality.

In recognition of the possible expansion of Eco Apple into Wisconsin and Minnesota, the protocol and quick guide were reviewed and revised for upper Midwest growing conditions.

Objective Two: Improve and disseminate market messages

- Marketing material and packaging messages completely revised with new wording aimed at consumers; added significant new messaging re: individual orchards with customized farm profile for each orchard on packaging. Eco Apple PLU stickers for apples sold as counts (loose) were introduced, raising the visibility of the Eco Apple brand in packaging and labeling.
- Frequently asked Questions handout developed for use by retailers, growers and RT staff.
- Developed new Point of Sale material: signs, and banners, with new text and new slogan (Trust the Farmer, Know the Orchard, Love the Fruit, plus explanation of Eco Apple) Also new Eco Apple consumer brochure and program flyer.
- RT staff and growers spoke at numerous conferences and meetings about Eco Apple program, including Harvest New England, panel on marketing;
- Consumer Outreach Program conducted apple tastings and educational events in retail stores and elementary schools (supported in part by additional funding from Toms of Maine.)
- Eco Apple program and fruit presented at variety of trade shows and events, including AG NE trade show Whole Foods Market vendor show, New England Produce Association annual trade show. A presentation of the Eco Apple program was featured at the 6th International IPM Symposium (held in Portland, Oregon, March 24-26, 2009) as part of a panel discussing IPM in the Marketplace. The Eco Apple presentation used at the Symposium is posted on International IPM Symposium website. A workshop on regional distribution and marketing, with the Eco Apple program and packaging as a primary example of RT's approach, was presented at the annual conference of the Community Food Security Coalition, Oct 2009 in Des Moines, IA. A poster describing the Eco Apple program and highlighting its results was produced for display at the Soil and Water Conservation Society (SWCS) annual national conference, and the Eco Apple program was represented at the conference by Tom Green of the IPM Institute.
- Media/PR plan developed and media training and message development session was held with Red Tomato staff in February 2008. A number of media features including a cover/feature in Growing magazine, Fruit Growers News, Edible South Shore, and the Boston Globe. See links to all Red Tomato media stories, many of which mention Eco Apple: <http://www.redtomato.org/news.php> and "Ecological Apples", cover story, *American Agriculturalist* magazine: <http://magissues.farmprogress.com/AMA/AM05May09/ama001.pdf>
- Orchard tours were organized and conducted with key retail buyers each year, including Sunrise Orchards and Scott Farm in VT, Clark Brothers Orchards in MA, and Lyman Orchard in CT.
- The new Red Tomato website was launched in January 2009. The new site includes profiles of all Eco Apple collaborating orchards, general information about apples, and specific information highlighting apple varieties and the Eco Apple program. To highlight the website launch and drive initial visitor traffic, the website was promoted through a variety of media channels, including e-news, signature links on all Red Tomato mail, blog links, and trade materials. The site is located at: www.redtomato.org.
- A seven-minute video describing the Eco Apple program and the benefits of IPM was produced and distributed. A DVD version of the video, which features Sunrise Orchards of VT, is available, and a web link to the video is in place. Copies of the video are regularly distributed to current and potential customers as part of sales presentations. Two additional, short-form videos (3 minutes each)

presenting details on apple IPM production, and Eco Apple Marketing were created, produced, and posted on the Red Tomato website.

- A quarterly e-newsletter was launched in January 2009. The newsletter, *Red Tomato Juice*, includes coverage of Eco Apple and other programs. *Red Tomato Juice* provides a pro-active outreach mechanism to deliver progress updates, news, grower profiles, and brand highlights to subscribers. A feature story in the fall issue focused on the Eco Apple network and the response of RT and its growers to hail damage at several farms, as evidence that the Eco Apple network offers greater stability and protection of product placement in the wholesale market for individual growers.
- Red Tomato supported growers with marketing material, banners and press materials, to promote Eco Apple to customers through a variety of direct channels including Greenmarket, farmers markets, farm stands and special events.
- In the fall of 2009, Red Tomato was the subject of a Harvard Business School case study describing the operating model and history of Red Tomato and highlighting the challenges involved in making locally grown produce available to large consumer markets. This study was published in the *Harvard Business Review*: see <http://hbr.org/product/red-tomato-keeping-it-local/an/510023-PDF-ENG?Ntt=Carne+Ross>

Objective Three: Develop evaluative indicators of marketing materials

- A matrix of media and other Eco Apple brand reach indicators was developed, and used for tracking press mentions, number of packaging imprints, conference presentations and other quantitative measures of Eco Apple message reach, on an annual basis.
- Accompanying the launch of the Eco Apple website, site usage and traffic are being evaluated using Google Analytics. The analysis has provided direction for marketing tool management based on the results of consumer website visits and traffic to individual elements of the website. A major review of the first year of web activity was conducted during January 2010 and recommendations were outlined for some updates and improvements, including updating of text and links on the Eco Apple program.
- An evaluation process was used to determine the efficacy of weekly buyer-eneus materials used during the 2007 season, in the form of an email newsletter issued weekly to store-level produce department managers, plus higher level warehouse trade buyers. Based on evaluation by produce buyers, who indicated that regular phone contact with Red Tomato staff was sufficient and their preferred means of communication, the buyer eneus was discontinued after the 2007 season.

Objective Four: Educate buyers and managers

- Annual orchard tours conducted for key regional buyers.
- Frequently asked Questions and other support material developed (see Objective Two)
- Packaging and Point of Sale materials developed in first half of 2007 were introduced in marketplace in fall of 2007.
- Additional RT staff was hired to expand capacity in sales, customer service, product management, food safety, and marketing.
- Whole Foods newsletter issued weekly to store-level produce department managers, plus higher level warehouse trade buyers; 2 issues featured IPM on fruit (strawberries, apples), and 1 issue focused entirely on Eco Apples.
- Retail buyer training: Red Tomato conducted a 2 ½ hour training on June 12, 2009 with the Whole Foods North Atlantic region's In-Store Educators. The Northeast region consists of 30 Whole Foods stores in Massachusetts, Connecticut, Rhode Island and Maine. In-Store Educators are responsible for educating consumers (as well as the internal produce teams) about products offered throughout the stores. The training included a discussion with John Lyman from Lyman Orchards, education by Dan Cooley from UMass Amherst about the IPM protocol and information about Red Tomato and Eco Apples provided the Red Tomato trade team. The success of the initial training prompted a similar training on August 18, 2009 with the Produce Team Leaders from the 30 stores in the region.

Intensive one-on-one **buyer orientation** and training was provided to other key retail buyers re: how to work with the Eco Apple program and growers.

- **Southern tier expansion:** Red Tomato has taken significant steps to increase its sales presence in the southern tier of the Northeast region (New York, New Jersey and Pennsylvania) sourced from existing New England growers and as well as new New Jersey and Pennsylvania growers, through a series of educational sales meetings, farm tours and promotional activities. King's Supermarkets in New Jersey (26 stores), D'Agostino's (18 stores in New York) and a number of independent retail outlets have begun carrying Eco Apple products.
- **Hail adjustment:** RT staff had to rework all apple programs with customers after massive loss of product in summer 2009 due to repeated strikes of hail at Eco Apple orchards. Four of the largest orchards in the network were either struck hard or wiped out completely by hail between June and July 2009.
- Meetings are held with all key customers annually during Jan-Feb for pre-season planning. This includes planning for Eco Apple support such as in-store merchandising, apple tasting events, promotion through sales flyers, etc.

Objective Five: Explore feasibility for program expansion to other products

- **Eco Peach:** In March 2009 Red Tomato met with three Connecticut peach growers who belong to the Red Tomato network, and advisors involved in stone fruit research to move toward the development of an Eco Peach program. In late 2009, a protocol was drafted by the IPM Institute in conjunction with Lorraine Los from the University of Connecticut who is the lead scientific advisor on the protocol. A draft of the protocol was presented at the Red Tomato Annual Growers' Meeting in March 2010 to the participating growers and other Eco Peach advisors. During this meeting it was agreed to expand the peach protocol to include additional stone fruits. The 2010 Eco Stone Fruit Pilot includes peaches, nectarines, apricots and plums. Lorraine Los of University of Connecticut was identified a lead scientist for the program. A pilot test of the protocol in 2010 was successful, and marketing program will be launched for 2011.
- **Midwest apple growers:** A partnership between Red Tomato, the IPM Institute, and the Center for Integrated Agricultural System (CIAS) at the University of Wisconsin-Madison was formally created during the reporting period to explore the feasibility of extending the Eco Apple program into Wisconsin and Minnesota. A group of growers in Minnesota are currently using a version of the Eco Apple protocol on their own and a group of Wisconsin growers have also expressed interest. Red Tomato conducted a visit to the Midwest growers in August 2009, including a tour of a Minnesota packer as a possible partner. The August visit produced concerns regarding the existence of a basis for a real marketing program in the region. Red Tomato, the IPM Institute and CIAS have agreed to continue their quest on expanding into the Midwest through more discussion and investigation.
- Because of the success of Eco Apple and the promising outlook for Stone Fruit, vegetable growers in Red Tomato network are exploring options for creating a new IPM-based protocol for summer vegetables in the future.
- Initial research conducted on manufacturing and marketing value-added Eco Apple products: focusing on applesauce and cider. This avenue was placed on hold after evaluation of costs and marketing requirements.

Significant Results and Accomplishments:

* Eco Apple Protocol and Quick Guide (Implementation guide) posted to Red Tomato website for wide access by growers and others, updated annually.

* Growth of participating **Eco Apple** growers, acreage and sales (**Updated 4/01/11**)

Year	# Orchards participating	# Acres participating	#Orchards certified*	# Acres certified*	Sales (by case)
2004 pre Eco					7000 cs
2005	6 growers	462 acres	6 growers	462 acres	\$400,000, 18,000 cs
2006	6 growers	475 acres	6 growers	475 acres	\$600,000, 24,000 cs
2007	12 growers	771 acres	12 growers	771 acres,	\$1.3 million, 54,000 cs
2008	13 growers	824 acres	9 growers	635 acres	\$1.9 million, 87,000 cs
2009	14 growers	800 acres	11 growers	734.2 acres	\$1.4 million, 56,809 cs**
2010	16 growers	830 acres	16 growers	820 acres	\$1.4 million, 58,363 cs**
2011	22 growers	1025 acres			

* The difference between participating orchards/acres and certified reflects orchards in transition into the program and orchards with pest issues that require them to drop blocks out of the protocol during the season.

** Major hail and spring frost damage in 2009 and 2010 limited availability of apples and therefore sales. Capacity has increased in 2011 with addition of new growers and additional acres.

*** Marketing and Education**

- Point-of-sale signage with new messages and new apple tote bags highlighting individual orchard name and location, farmer story told in the farmer's voice (54,000 cases sold (8 totes/case), conservatively estimating 2 impressions / consumer at home, resulted in 432,000 impressions annually, with many more viewing the totes on display in stores.)
New apple case box with Red Tomato messages and orchard name raised profile among trade buyers and produce departments
Frequently Asked Questions Fact Sheet on Eco Apples, consumer brochures and educational flyer on Eco Apple program

- Media outreach on Eco Apple program and value to NE apple growers, including feature article in the Boston Globe, reaching over 360,000 readers
- Red Tomato Community Outreach Program staff conducted 5 supermarket demos, 350 shoppers sampled 7-8 apple varieties. Classroom education sessions, held in 15 Massachusetts public schools, educated 239 third grade students
- Presentation at the Carlton School Sustainability Fair reached 94 students, parents and teachers
- 2 newspaper articles published, with circulations of approximately 300,000 readers
- 5 RT Eco-Apple growers participated in farmer speaking tour, positive response from audiences of over 375 activists, many remarking that they rarely have the opportunity to hear directly from farmers and appreciated the stories and information
- An Eco Apple video has been produced and distributed, highlighting the Eco Apple program and growing practices.
- The Eco Apple website was launched in January 2009. It includes a comprehensive description of the Eco Apple program, its grower participants, and general information on apple varieties. Website with Eco Apple video receives hundreds of views per month.
- A quarterly e-newsletter, Red Tomato Juice, highlights Eco Apple and other programs. It provides a mechanism for direct communication with consumers and retailers, sent to mailing list of 600 Red Tomato friends and supporters.
- Presentations, seminars and conference workshops reach food system advocates; media pieces reach general public. For example, Eco Apple program poster at the annual Conservation Innovation Grant Showcase held in conjunction with the 2009 Soil and Water Conservation Society Annual Conference in June 2009.
- Retail Staff Trainings reached retail buyers in 3-4 major grocery chains.
- Farm Tours
- Expansion of production and marketing efforts into new geographic areas

Conclusion and the Transferability of Results:

Beneficiaries include participating growers who will improve on-farm soil, water and air resource quality, realize price premiums and gain market access; other growers they influence by sharing their experience; consumers who gain awareness and appreciation for local producers, land grant research, Extension, and supply chain challenges and solutions; scientists and educators who will improve their knowledge base; taxpayers who benefit from improved soil, air and water quality; and NRCS staff who will have a top quality protocol to use to evaluate prospects for incentive and technical assistance. Results will be communicated continuously at regional and national conferences, through our project websites, packaging, pamphlets, posters, in-store demos, media coverage, and trade and scientific reports and presentations. The methodology, general elements of protocol, marketing messages, formats and delivery mechanism are directly transferable to additional apple growers, geographic regions, and other crops.

As evidenced by this project, Red Tomato and the growers participating in the Eco Apple network continue to demonstrate leadership in sustainable agriculture by balancing the economics of producing exceptional fruit with high standards for environmental quality, human health, and social responsibility.

In accordance with the Environmental Quality Incentives Program (EQIP) and CIG grant agreement provisions:

EQIP-eligible producers participating in project, 2006-2010:

See attachment

No direct or indirect payment from this grant has been made to individual producers or entities for any structural, vegetative, or management practices.

Project Funding Received and Expended – final reimbursement (SF-270) and financial report (SF-269)
submitted November 22, 2010

Attachment A – Participating Producers, 2009

Alyson's Apple Orchard

Robert & Susan Jasse, proprietors
Homer Dunn, orchard manager
57 Alyson's Lane
Walpole, NH 03608
603.756.9090

Apple Acres

Bob Rigdon & Walt Blackler
4633 Cherry Valley Turnpike
LaFayette, NY 13084
315.677.5144

Beekman Orchards

Calvin Beekman
732 Franklin Road
Boyertown, PA 19512
610.369.1568

Breezy Hill Orchard

Elizabeth Ryan
828 Centre Rd.
Staatsburg, NY 12580
(845) 266-3979

Clark Brothers Orchards

Aaron Clark
580 Apple Valley Road
Ashfield, MA 01330
413.625.2492

Connecticut Valley Orchard

Russell Allen
Box 74
Westminster Station, VT 05159
(802) 722-3340

Indian Ladder Farms

Peter and Laurie Ten Eyck
342 Altamont Road
Altamont, NY 12009
518.765.2956

Lyman Orchards

John Lyman

105 South Street
Middlefield, CT 06455
860.349.6001

Rogers Orchards

John Rogers
336 Long Bottom Rd.
Southington, CT 06489

Saxtons River Orchards

Norman Freedman, proprietor
Glen Schreiter, orchard manager
PO Box 680
335 Leach Road
Saxtons River, VT 05154
802.869.3150

Scott Farm

David Tansey, Executive Director
Zeke Goodband, orchard manager
707 Kipling Road
Dummerston, VT 05301

Sunrise Orchards

Barney & Chris Hodges
1287 N. Bingham Street
Cornwall, VT 05753
802.462.3500

The Apple Farm

Steve Meyerhans
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Fairfield, ME 04937
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Truncali Orchards

Bill, Joel & Vito Truncali
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Marlboro, NY 12542
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Attachment B – Sample Packaging and Point-of Sale marketing material





eco apples™

BORN AND RAISED HERE™

Grown on Northeast family farms, by stewards of land, water and wildlife, using natural methods and minimal spray, closing the distance from farm to table.



Trust the Farmer. Know the Orchard. LOVE the Fruit.

red tomato
Fresh produce. Fresh thinking.

Eco Apple™: Good for you. Good for the Earth.

- Eco Apple™ fruit is grown by a network of Northeast family farmers.
- Eco Apple farmers use advanced Integrated Pest Management (IPM)* and other ecological methods suited to the region's climate to control insects, weeds and diseases in their orchards.
- Eco Apple growers do extensive monitoring of trees, pests and weather in order to choose the least-toxic options for producing healthy fruit.
- Eco Apple is not the same as certified organic, but respects and uses many of the same methods. Organic apples are extremely tough to grow in commercial quantity and quality in the northeastern US, due to climate and pests specific to the region.
- Eco Apple supports local farms and contributes to farm stability and farmland preservation by bringing the best-tasting regional apples to consumers in the grocery stores where they shop.
- Eco Apple protocol restricts the use of a class of pesticides called organophosphates, which have been linked to serious health concerns. The 2010 Eco Apple crop was grown 100% without organophosphates.
- *Eco Apple orchards are 3rd party certified by the IPM Institute of North America

**eco
apples™**



*Eco Apple™ is brought to you by Red Tomato,
behalf of Northeast farmers: www.redtomato.org

red tomato

**Attachment C – Eco Apple Protocol and Quick Guide, 2010
(Submitted separately)**

Attachment D – Eco Apple Project manager and Red Tomato Director Michael Rozyne discussing a good harvest with John Lyman of Lyman Orchards, Middlefield, CT



Attachment E –Website video posting

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Fresh Thinking Eco Apple™ Program

- **The Big Picture**
 - Consulting
 - Resources
 - FAQ
- **Beyond Local**
 - Why Regional?
 - What Is Eco
 - **Eco Apple**
 - Fair Trade
 - Other Programs
- **News and Events**
 - News
 - Press Room

For more information about our Eco programs, including our Eco Stonefruit pilot, [click here](#). Downloads available: [Eco Apple Grower Guide and Self Assessment](#), [Eco Apple Quick Guide](#), [Eco Stonefruit protocol](#).

Eco Apple orchards are family-owned, small to medium-size farms; (one, Scott Farm, is owned by a preservation land trust.) All are in the northeastern U.S. Only apples grown by orchards which are certified as partners in this non-profit marketing program are labeled Eco Apple. Visit our grower page to see a complete list of [Eco Apple orchards](#). Below are some [frequently asked questions](#) about Eco Apple.

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Eco Apple™ farmers use an advanced IPM protocol for pest control that is designed for apple production in the northeastern United States. [Learn more](#)

2010 Grower Protocol: An important part of the Eco Apple™ program is an annual review of the protocol, working closely with a group of scientists from Cornell University and the University of Massachusetts. [Learn more](#)

Did you know there are over 2000 varieties of apples produced in the U.S., some that have been around for centuries? [Learn more](#)

DID YOU KNOW?

Attachment F – Grower Evaluation Questionnaire and Executive Summary, 2009
Appendix: Grower Questionnaire – 2009 Growing Season

- 1) Overall, HOW SATISFIED WERE YOU last year with your Red Tomato experience and relationship?

- 2) What were the major ADVANTAGES for you last year of working with Red Tomato, compared with other wholesale marketing channels? I'm going to read some possible advantages of marketing product through Red Tomato. For each one, could you please tell me if this was Very Important, Somewhat Important, or Not Important?

 - Access to markets I wouldn't have time to pursue on my own
 - Relationship with Red Tomato staff and access to their expertise
 - Volume and/or steady volume sales
 - Access to more stable markets [than you would have accessed through other channels]
 - Help with marketing grades that would otherwise have been difficult to market
 - Price [in relation to other wholesale marketing channels]
 - Having Red Tomato handle paperwork and billing
 - Red Tomato assistance with transportation/storage
 - Having Red Tomato manage ordering and customer service
 - on-farm technical assistance or enhancements
 - Red Tomato in-store [promotion] and other promotional efforts
 - Red Tomato brand and packaging
 - Red Tomato "transparency"
 - The opportunity to work with other growers

Are there any other advantages that come to mind?

- 3) Were there DISADVANTAGES OR RISKS that you incurred last year by working with Red Tomato? If so, what were they?

- 4) What CHANGES would you like to see in your work with Red Tomato in 2010?

- 5) Any other comments or suggestions?

- 6) Are there any of your responses that you want presented to Red Tomato anonymously?