

Cornell Cooperative Extension Submissions to “Impact 2006”

1. Health Issues – Animal Disease

Title: Dairy Herd Health Management Program

Nugget: More than 100 dairy and livestock farmers improved their bio-security, calving procedures, ability to administer treatment and medicine to cattle.

Issue: Disease outbreaks around the world now mandate that farmers set up protocols to prevent the spread of disease to their herds from visitors or from their own management practices. Dairy and Livestock farmers need to be able to handle routine and emergency herd health problems on their farm.

What has been done: Extension educators and the New York Orange/Ulster Counties dairy advisory committee identified the need for an in-depth dairy herd health management program. Over 115 participants attended the resulting Dairy Herd Health Management program workshops and seminars. Foci of the workshops included: improving bio-security, calving procedures, and administration of treatments and medicine to cattle; understanding of Bovine Spongiform Encephalopathy (BSE), how it started, how it spreads and how to identify symptoms in cattle; and, anatomy of a cow’s hoof, to detect lameness, restrain and use proper techniques to solve the problem. Workshops included: Bio-Security and Herd Health Management - New York State Cattle Health Assurance Program (NYSCHAP) workshop on a local dairy farm, Obstetrics and Cattle Health Care informational meeting, Reviewing Cattle Treatment Procedures Farm Workshop at a local dairy farm, a BSE Producer Informational meeting, and, a hands-on Hoof Care and Trimming Workshop at a local dairy farm.

Impact: Dairy and livestock farmers improved their bio-security, calving procedures, and ability to administer treatment and medicine to cattle. They also increased their level of understanding of Bovine Spongiform Encephalopathy (BSE) and their ability to identify and properly treat lame and injured cattle on their farms. Follow up consultations with several farmers saw an increase of 3 to 4 pounds of milk per cow per day for an increase of \$80–240 per day based on herd size. Other farmers saw a savings of \$10,000 per year by decreasing their culling rate by 7 percent, reducing the need to purchase additional animals.

Impact Area: Extension

Funding: County: government appropriation

Topic: Animal Disease

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1. Health Issues – Health education

Title: Healthcare Services: Decreasing Supply + Increasing Demand = Change!

Impact Nugget: Community leaders and planners are using health workforce projections for health policy and planning for health services in a rural New York region.

Issue: Providing access to health services in rural areas has long been a challenge for health planners and policymakers. Demographic and workforce changes are conspiring to make access to rural health services even more difficult in coming years. Local elected officials, health administrators and planners often lack access to reliable information on which to base long-term planning, resulting in reactive rather than proactive health policy formation.

What was done: The Delaware County Rural Healthcare Alliance (DCRHA) led by Cornell University Cooperative Extension of Delaware County facilitated a health policy forum to address this issue. The Director of the State University of New York (SUNY) Albany School of Public Health, Center for Health Workforce trends presented compelling new regional and national data demonstrating the breadth and depth of health workforce shortages and factors leading to healthcare worker dissatisfaction. These data clearly show that serious shortages in many health care professions across the nation are threatening our ability to deliver services. These shortages are exacerbated in rural areas. The DCRHA Coordinator presented trend data depicting local demographic projections over the next decade. Delaware County, NY anticipates significant increases in its senior population over the next decade. By 2015, over 35% of county residents will be ages 60 and over, compared with 25% in New York's other rural counties. This significant growth in the elderly population will, among other things, result in less working people contributing to the local economy and an increased demand in health services. In addition to an aging local population, data show that the proportion of young and well-educated residents is declining. These trends result in increasing demand for local health services at a time when supply of healthcare workers is declining.

Impact: County administrators and officials are using data presented at this forum for long-range health policy development and health services planning, particularly for senior citizens. For example, the county Office for the Aging is engaging in strategic planning of programs and services through 2015. Schools and universities are using these health workforce data to enhance the educational pipeline through new educational programs, training initiatives and careers marketing. For example, a local university has recently added a 4-year nursing program in addition to an existing 2-year program. Health administrators are using this information to improve health workforce retention through improved working conditions, increased access to education and training, and through restructured wages and benefits. Healthcare providers are seeking new ways of delivery high-quality, cost-effective care. For example, home health service providers are developing plans to reduce demand for labor-intensive care by using new technologies to increase efficiency. One local home health provider has plans to purchase and implement over a dozen tele-homecare units next year.

Funding Sources: State: New York State Department of Health, Office of Rural Health, Local: county government appropriation

Topic: Health education

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2. Environmental and Natural Resource Issues – Invasive Species

Invasive Species: Controlling Swede Midge

Impact Nugget: Early detection of the Swede Midge, an invasive pest, minimizes negative impact to NYS vegetable farmers.

Issue: New York State is the nation's second leading cabbage producer, with an annual crop value of \$42.5 million. Broccoli, cauliflower, Brussels sprouts, Chinese cabbage and other related crops are grown on numerous farms in western New York and contribute more than \$2 million in revenue annually. Swede midge is a destructive insect pest of these crops that was detected in Niagara County in 2004. This was the first reported discovery of swede midge in the United States and was considered an immediate threat to farmers and gardeners in the greater Rochester region.

What was done: In 2004, extension educators introduced highly sensitive pheromone traps at 42 locations in eight western New York counties, including Erie, Genesee, Monroe, Niagara, Ontario, Orleans, Wayne, and Yates. Monitoring and associated education programs continued in 2005.

Impacts: In 2005 the swede midge was detected on a few farms in four counties in western New York, and efforts focused on helping growers control and/or minimize the impact of the swede midge using best practices. Cornell Cooperative Extension's early intervention and expertise in monitoring, networking, and grower education has helped mitigate a potentially devastating insect pest for farmers and gardeners alike.

Funding Sources: Cooperative Agricultural Pest Survey (CAPS) program and the Integrated Pest Management (IPM) program of NYS Department of Agriculture & Markets

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2. Environmental and Natural Resource Issues – Invasive Species

Title: Weeds Watch Out! Stop Invasive Aquatic Plants

Location: Cayuga

Nugget: Volunteers in Cornell Cooperative Extension of Cayuga County's Weeds Watch Out! project are currently monitoring over 75 miles of shoreline in the Finger Lakes region for invasive aquatic plants.

Issue: Invasive aquatic plants can alter lake ecosystems and cause significant economic losses to communities. Invasive plants disrupt the growth of native plants and hinder fish reproduction. In addition, infestation can impair recreational activities such as boating and fishing, reduce waterfront property values, and cause a reduction in tourism revenues.

What was done: Cornell Cooperative Extension of Cayuga County collaborated with several other local and regional organizations to develop the Weeds Watch Out! Program. Weeds Watch Out! is an early detection and monitoring system for invasive aquatic plants in the Oswego River Basin. Nearly 740 residents participated in workshops and presentations. An additional 50 volunteers received in-depth training on identification, monitoring techniques and control. Ten-thousand Weeds Watch Out! Invasive Weed Identification Guides and 108 educational signs were developed and distributed.

Impacts: Prior to 2005 a region-wide effort did not exist. In 2005, as a direct result of the Weeds Watch Out! project, over 75 miles of shoreline on Skaneateles, Oneida, Oswego, Cayuga, Seneca and Onondaga Lakes as well as the Three Rivers System and Sterling Creek are currently being monitored by volunteers for invasive aquatic plants. Volunteer monitoring efforts in 2005 resulted in the identification in Cayuga County of two water chestnut infestations and a European frog-bit infestation which were previously unknown. Control efforts, including chemical control and volunteer hand pulling, began in 2005 on the water chestnut infestations.

Funding Sources: Other: Great Lakes National Program Office, National Fish and Wildlife Foundation; Local: county government appropriation

Topics: Invasive species

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2. Environmental and Natural Resource Issues – Water

Title: Applied Research and Extension Engineering Program Addresses Animal Waste Management Issues in New York State

Impact Nugget: Several new manure treatment projects, including 4 new anaerobic digester projects valued at approximately \$5 million, and several smaller solid separation/composting projects were initiated in 2005.

Issue: Environmental and waste management issues and practices is a major area of concern for New York dairy farms. New federal and state regulations for air and water quality are directly affecting the way that manure is being managed on farms, and dairy producers need cost-effective practical solutions to achieve regulatory compliance. Researchers and extension educators allied with the Cornell Manure Management Program (CMMP) have been actively engaged in integrated efforts to provide useful solutions on waste management to the industry.

What Was Done? Manure treatment research conducted by the state-funded PRO-DAIRY Team in 2005 included two projects, one to monitor and evaluate manure digester performance on 5 dairy farms, and another to evaluate the financial viability of digestion, and also a sand separation project examining the effectiveness of mechanical manure-sand separation to recover sand for use as bedding. Furthermore, new farm technologies or practices relating to energy use and consumption on farms and by manure treatment systems, air ammonia emissions, long-term manure storage and separation of manure solids and liquids were conducted.

The results of these applied research efforts were shared and disseminated through various extension approaches, including conferences, workshops, industry communications vehicles, websites, and producer meetings. A major conference on manure treatment, which drew over 250 attendees and featured over 30 presentations (many by Team members), was sponsored by the Natural Resource, Agriculture and Engineering Service (NRAES). Five articles on dairy manure treatment were printed in Northeast Dairy Business magazine, while 4 research project reports and 2 factsheets were authored and then posted on the CMMP website (<http://www.manuremanagement.cornell.edu>) and the CIG technology transfer website (<http://northeast.manuremanagement.cornell.edu>).

Impacts: Collectively, the CMMP and PRO-DAIRY Team have had a positive impact on the NY dairy industry in several ways. Beyond a palpable generally improved understanding within the industry about cost-effective dairy manure management options available, the program has spurred the implementation of several new manure treatment projects in NY in 2005 alone, including 4 new anaerobic digester projects valued at approximately \$5 million, and several smaller solid separation/composting projects. IN addition, business and financial planning consultations carried out by team members have resulted in awards of over \$100,000 in grants to dairy farm to demonstrate and/or evaluate innovative value-added manure treatment systems. Lastly, effective educational and communications leadership efforts in 2005 resulted in the signing of the EPA Air Emissions Consent Agreement by over 150 dairy farm owners in the state, indicative of progressive and forward-thinking environmental stewardship of the state's dairy industry.

Funding Sources: State Appropriation, Smith-Lever, Hatch

Topics: water

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2. Environmental and Natural Resource Issues – Water

Title: Finger Lakes Grape Growers Reduce Nitrogen Use and Modify Timing of Applications (indicated as “priority”)

Location: Fingerlakes Grape Program

Nugget: Grape growers have reduced the amount of nitrogen fertilizer applied to Finger Lakes vineyards and have adjusted application timing to better match it with periods of peak uptake by vines.

Issues: Excess and poorly-timed nitrogen applications waste resources, promote leaching of nitrogen into ground water, and also pollute surface water. Excess nitrogen in vineyards promotes canopy shading through excessive growth, ultimately reducing quantity and quality of wine and juice grapes harvested. The 'old' practice was to routinely apply 100 lb nitrogen by early April to make sure it was 'available' for vines. Nitrogen fertilization was viewed as 'cheap insurance' by traditional growers.

What was done: In an effort stretching back at least 10 years, extension educators produced numerous articles, e-mail updates, and meeting presentations on making decisions on nitrogen timing and use. Research on 'Concords' and other varieties showed the following: vines start taking up nitrogen from the soil around bloom (mid June), early growth depends entirely on stored reserves, maximum demand is from about 2 weeks before bloom to 3-4 weeks after bloom. In a 40 year experiment in Fredonia, increasing N fertilization from 0 to 50 lb/acre increased yield and vine size; increasing it from 50 to 100 lb/acre produced no additional crop and did not increase vine size (pruning weight).

Our program stressed (for Concord growers): 1) delaying N applications until after bud burst (mid to late may), 2) using split applications before and after bloom to better match availability to the timing of uptake, 3) Stressing the use of vine size, vigor, and canopy fill to adjust N amounts, and 4) noting that even high-yielding Concord vines don't often benefit from more than 50 lb/acre nitrogen fertilization.

Impacts: Five years ago, 300 lb per acre of ammonium nitrate was 'standard' for Concord and Bulk Wine hybrid varieties. This year, growers are indicating that they adjust amounts on a vineyard by vineyard basis, and that their 'default' rate is 200 lb ammonium nitrate, or 70 lb/acre of actual nitrogen. This represents 100 lb per acre less fertilizer. For a 100-acre farm, that's equivalent to a 5 ton saving, or \$1500-2000 annually. If applied to the 5,000 acres of Concord-type grapes in the Finger Lakes, that would equal 250 fewer tons of N fertilizer applied. Most growers now delay N application until a few weeks after bud burst. Several use split applications, with 1/2 applied before bloom and 1/2 applied after bloom.

Funding Sources: Smith-Lever, County Appropriations

Topic: Water

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3. Value added/New products/Rural economy issues

Title: Regional “Come Farm With Us” Marketing Effort

Impact Nugget: The regional Come Farm With Us program is a marketing initiative among four New York counties that is attracting new farm families, agricultural entrepreneurs, and agribusiness to the region.

Issue: The northern New York State region is a large agricultural infrastructure including equipment dealers, veterinarians, feed mills, processing and manufacturing plants, along with many support agricultural services. In recent years, it has been challenging to attract new farm families and agribusiness as sustain that strong economic activity.

What was done: The regional Come Farm With Us program is a marketing initiative involving Lewis, Jefferson, Oneida, and St. Lawrence counties with facilitation support from Cornell Cooperative Extension. Established four years ago, the effort concentrates on promoting the success of agriculture in this North Country region, ensuring a continued strong agribusiness infrastructure, quality rural lifestyle, competitive crop yields, and affordable land prices. It is an effort to promote, educate, and encourage farmers from outside the region to discover all that is available in northern New York.

Impacts: The Come Farm With Us program is credited with the sale or rental of at least 65 farms in four counties over the past four years. Those farms annually generate \$9.75 million in milk sales, based on an annual per-farm average of \$150,000.

Funding Sources: County Appropriations, NYS Legislature, Niagara Mohawk

Topic: Rural and community economic development

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4. Families and Youth Issues – Youth Development

Title: Youth Take Charge to Assist Birds of Prey Center

Impact Nugget: 4-H youth in Niagara County, New York are assisting in development of a Birds of Prey Center to promote environmental understanding and promote tourism.

Issue: Niagara County is home to many different species of raptors. Many residents view birds of prey as a threat and have dealt with them harshly. Others in the community see them as an opportunity for attracting tourists in to the area to see and learn about birds of prey. A group of Niagara County 4-H members saw a need to educate citizens about the environmental issues surrounding raptors and build support for the Birds of Prey Center at the Joseph Davis State Park in Lewiston by providing environmental educational opportunities to support a blossoming local eco-tourism industry.

What was done: Sometimes when adults hear that teens want to help, they envision giving youths the “easy tasks.” But, in fact, teens often have much more to offer. Such was the experience of the Niagara County 4-H Outdoor Club when they first began to help the Buffalo Audubon Society and the new Birds of Prey Center in Lewiston, New York. With an action plan and with local partnerships and supportive leaders, it didn’t take long for the teens to move from rock picking to computer programming. They were inspired to learn more about raptors and technology, and they were motivated to teach others what they were learning.

“It was a natural progression,” teen member Marie Erck explains. “While looking for interested stakeholders we teamed up with the Buffalo Audubon Society. We learned new skills and knowledge from their educational workshops and field trips. And we helped them with community events.” Club members also attended eight training meetings on handling birds of prey.

Impacts: As club members became more familiar with birds of prey, their activities became more intensive. The club received a grant to create educational kiosks and an interactive computerized touch-screen quiz game for the center. The second project required learning how to use new computer software, identifying effective questions, and researching correct answers. The teens also created a videotape to promote the opening of the new Birds of Prey Center. A 4-H youth-run Lockport Cable Television show aired the video.

As the group became more passionate about birds of prey and the process of Youth Community Action (YCA), they shared their story with others. In addition to formal 4-H public presentations on these topics, Niagara County teens participated in a panel discussion on YCA on the Cornell campus in October that was video-streamed to audiences across New York State.

Funding sources: county appropriations, Buffalo Audubon Society

Topic: Youth development, 4-H

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4. Families and Youth Issues – Adult and Youth Life Skills

Title: Relatives as Parents Program (indicated as “priority”)

Impact Nugget: The *Relatives as Parents Program (RAPP)* offers support for kinship caregivers, particularly grandparents, to provide a caring, safe and supportive environment for the children and youth in their care.

Issue: In New York 140,000 children less than 18 years of age are being cared for by kin, mainly grandparents, with an estimated 5 million children being raised by relatives in the US. The *Relatives as Parents Program (RAPP)* offers support for kinship caregivers to provide a caring, safe and supportive environment for the children and youth in their care, while also developing the supports, skills and resource networks needed to promote the retention of their relative children and build strong and healthy kinship families.

What was done: The NYS Office of Children and Family Services (OCFS) recently awarded funds to operate the core RAPP program in Orange County NY, expand services provided in the core program (i.e. adding mental health counseling and legal consultation), and to replicate the Cornell Cooperative Extension (CCE) Orange County model for use with grandparent and relative caretaker families in Dutchess and Ulster Counties as the Hudson Valley Regional RAPP Program. Approximately 20 additional CCE county associations conduct grandparents as parents programs and have a strong connection with a Cornell faculty member’s research.

The RAPP program has collaborations across New York including with the NYS Office on Aging and AARP. Teaching materials developed, entitled *Parenting a Second Time Around (PASTA)*, won first place for Educational Curriculum Package through the National Extension Association of Family and Consumer Sciences and Orange CCE received the *Help for Caretaker Relative Award* from the NYS OCFS. The curriculum can be ordered at: <http://store.cce.cornell.edu/>. Over 300 copies of the teaching curriculum are in use by educators throughout the US.

Impacts: Grandparents who are participating in RAPP in Orange County made comments such as: “I now have the knowledge to help my grandson and myself.” “The first workshop helped me to deal with my own frustrations as a grandparent caregiver.” “I liked the way *discipline* was explained. I tried some of the suggestions and they helped.”

Over 200 parenting professionals were trained to deliver *PASTA* by CCE Orange and CCE Ontario educators in 2004 via the Caregiver Forum series for the NYS Association of Area Agencies on Aging, thus extending the potential impact of the workshops. Parenting educators trained to deliver *PASTA* are enthusiastic about curriculum: “Relative caregivers have so many needs; *PASTA* did a wonderful job of choosing the most important to highlight.” “Having worked for many years in adult literacy, I was pleased to see the effort to make the text easy to read and understandable.” “This is an excellent program and can be easily used to train those who work with kinship care families across the nation.”

Funding Sources: NYS Office of Children and Family Services, County Appropriations

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4. Families and Youth Issues – Financial Security

Title: “EmPower New York” Financial and Energy Education Program

Impact Nugget: Nearly 12,000 limited-income households received energy saving devices and specific training in financial management as related to energy costs.

Issue: Limited-income households have trouble meeting the cost of energy used in their homes. Energy is a major expense, often consuming resources needed for other basic living expenses. The dramatic rise in energy costs has created extreme stress for many individuals and households, often forcing choices between food, medicine and heat.

What was done: Cornell Cooperative Extension educators collaborate with Honeywell DMC, Inc. to conduct educational programs for customers enrolled in the New York State Energy Research and Development Authority’s limited-income energy assistance “EmPower New York” program. Participants have the opportunity to enroll in Cornell Cooperative Extension energy-use management (“Save Energy, Save Dollars”) and financial management (“Making Ends Meet” and “Exploring Credit/Debt Management Issues”) workshops. Extension educators from Cortland and Tompkins counties provide statewide leadership for the program.

Currently, 28 Cornell Cooperative Extension units offer workshops in 30 counties throughout the New York State Electric and Gas (NYSEG) and National Grid service areas. During 2005, extension educators conducted 334 workshops, reaching 3,072 participants.

Impacts: Program participants received an assortment of energy-saving items at the energy workshop which they can put to immediate use and gain money-management tools at the financial management workshops. Nearly 12,000 households are enrolled in EmPower New Yorksm, and the number continues to grow. Enrolled, income-qualified families have access to low or no-cost energy services and participants in the associated money management programs demonstrate improved ability to effectively manage their resources.

Funding Sources: NYS Energy Research and Development Authority, NYS Electric and Gas, National Grid, County appropriations

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