

FIVE Agricultural Nutrient and Pest Management

New England farms lie within compact, rural watersheds that contribute to drinking water supplies and an abundance of fresh and coastal water resources. Close proximity to high population densities, a high cost of living and limited land base have prompted New England farmers to intensify crop production,

as well as diversify and adopt alternative crops, markets, and practices. Increases in organic agriculture have created new opportunities for eliminating pesticide use, as well as challenges for nutrient management. Focus area activities provide research and

education on sustainable cropping systems and nutrient and pest management tools and technology that reduce pollution risks to ground and surface waters.

PARTNERSHIPS

PARTNERS INCLUDE USDA NRCS, USDA SUSTAINABLE AGRICULTURE RESEARCH AND EXTENSION (SARE), USDA AGRICULTURAL RESEARCH SERVICE (ARS), U.S. EPA, AGRICULTURE AND AGRI-FOOD CANADA, STATE AGENCIES, AGRICULTURAL SERVICE PROVIDERS AND FARMERS. Joint grants to multiple Land Grant Universities to support on-farm trials have been particularly helpful in improving water quality from organic dairy farms in the Region.

For example, on-farms trials in Maine and Vermont complemented trials at the Universities of Maine, New Hampshire and Vermont, and USDA ARS Maine. These trials yielded research results, educated growers and evaluated practices. In keeping with the needs of organic farmers, research was geared to eliminate pesticides, reduce risks of nutrient loss and improve soil health. Funding for these efforts has totaled over \$975,000 from 2004 through 2009 and was received from the University of Maine, USDA Northeast SARE and USDA CSREES Integrated Organic Program.



SELECTED ACCOMPLISHMENTS

TO ENCOURAGE THE ADOPTION OF AGRICULTURAL BEST MANAGEMENT PRACTICES THAT PROTECT WATER QUALITY,

the University of Maine Cooperative Extension conducts an annual Regional Inservice Training for Agricultural Service Providers and Certified Crop Advisors. At the 11th annual training in 2007, some 56 professionals attended from New England, New York and Canada. In addition, the University of Maine led a summer field training program for service providers while hosting the USDA Northeast SARE Professional Development Program summer tour in 2006. About 20 certified crop advisors from New England and 60 Northeast SARE representatives attended.

RESEARCH-BASED TRAINING AND EDUCATION TO NEW ENGLAND EXTENSION FACULTY AND STAFF, FARMERS AND PARTNERS

included workshops on organic dairy forage and grains cropping systems throughout northern New England and presentations at regional and national conferences.

THE UNIVERSITY OF VERMONT (ALONG WITH OREGON AND ILLINOIS) IS SPEARHEADING THE DEVELOPMENT OF AN eORGANIC COMMUNITY of Practice for Extension through a more than \$600,000 grant.

THE UNIVERSITIES OF MAINE AND MASSACHUSETTS DEVELOPED THE 2007

NEW ENGLAND GUIDE TO WEED CONTROL IN FIELD CORN, which incorporates research on non-chemical weed controls. In addition, the University of Maine produced the Potato Pest Management Guide which outlines both chemical and non-chemical control methods.

ADOPTED PRACTICES

IN 2006, A PILOT COURSE DEVELOPED AT THE UNIVERSITY OF VERMONT DEMONSTRATED THAT ENCOURAGING AND ENABLING FARMERS TO CREATE THEIR OWN NUTRIENT MANAGEMENT PLANS

that meet the NRCS 590 standard has led to increased plan implementation. Thirty farms have taken the five-week course and 28 farms have developed plans on 14,342 acres. As a result, 50 percent of the farmers expect to apply less nitrogen and phosphorus and 67 percent expect to save money. This curriculum, which fosters research-based education and cost-effectiveness, is available to all states involved in the New England Program. At least one other state (Rhode Island) plans to pilot a similar program in 2008.

PARTICIPANTS IN THE UNIVERSITY OF MAINE'S IN-SERVICE TRAINING PROGRAM

assisted 328 farmers to implement ten pest management practices on 53,000 acres. Thirty-three percent of the farmers saved \$6 to \$50 per acre implementing these practices for a total savings of \$300,000 to \$2.6 million.



AGRICULTURAL NUTRIENT AND PEST MANAGEMENT