

Situation:

Sullivan County's agricultural industry is comprised of more than 242 small family farms and horticulture businesses, offering a diverse selection of plant and animal crops and landscape services. These family farms consist of over 36,000 acres of land, generating a reported market value of \$11,937,000. In addition to the fruit, vegetables, woodlots, hay and pasture lands, Sullivan County farms reported over 8,500 animals including sheep, goats, horses, cows, beef cattle, llamas, alpacas and chickens. (2002 USDA Census of Agriculture Report)

UNH Cooperative Extension's Public Value:

Keeping Sullivan County's open land in profitable farm production not only improves the rural character and contributes to the overall economy of the county, it also provides locally grown food and open space that helps support tourism and increase the value of homes and businesses.

UNH Cooperative Extension's Response:

For the farming community to thrive, it must remain economically and environmentally sustainable. UNH Cooperative Extension in Sullivan County is uniquely positioned to provide educational and research-based programs to help agricultural businesses and natural resource firms meet these goals. Seth Wilner, Sullivan County Agricultural Resources Educator, and campus-based Extension specialists, understand the challenges and opportunities faced by New Hampshire farms and have forged important partnerships within the region. Sullivan County citizens turn to UNH Cooperative Extension as a source of non-biased, research-based information. In the past year:

- Over 150 farm visits were made, reaching 35 individual farms, involving 78 individual farmers. The farm visits helped assess crops, solve plant or production problems, work with growers on economic and marketing issues, develop whole farm or transition plans, and provide other forms of educational outreach.
- Over 144 soil samples from Sullivan County farms and gardens were analyzed. Additionally, all Sullivan County commercial fruit operations had leaf samples analyzed as a means of monitoring nutrient levels. These tools help producers and homeowners guide fertilizer applications for their crops. These analyses save growers money by reducing fertilizer inputs while protecting the environment from over-application of fertilizers. Another 11 samples submitted to the UNH Cooperative Extension Plant Diagnostic Laboratory helped determine diseases and recommendations for treatments.
- There are 52 licensed pesticide applicators residing and/or spraying pesticides in Sullivan County. UNH Cooperative Extension's Pesticide Safety Education Program teaches pesticide applicators the responsibilities of environmental and human safety, sprayer calibration, pesticide storage, proper disposal of pesticides, and Integrated Pest Management. Our educational programs offer growers recertification credits, required to maintain their licenses.
- In addition to the 309 phone and 36 drop-in inquiries by the public handled by the Agricultural Resources Extension Educator this past year, Extension's Family Home and Garden Education Center answered 200 Sullivan County inquiries with questions about trees and shrubs, vegetable gardening, household insects, fruit production, wildlife, lawn care, and annual and perennial production. Over 53 homeowners also benefited from Extension programming on fruit tree production, apple and blueberry pruning, home vegetable production, and soil health and management.

How We Make a Difference:

- Alan Eaton, Extension specialist in entomology conducted a study that showed birds alone cause \$365,000 in damage to New Hampshire fruit. He followed it with educational programs in bird control that helped Sullivan County growers deal with this issue which can cost Sullivan County blueberry growers \$43,000/year and strawberry growers, \$2,400/year in damage. One grower put up netting to cover two acres of blueberries, increasing his yield by 40 percent and his farm profits by \$7,200. Additionally, educational programs in

Integrated Pest Management helped Sullivan County apple producers save an estimated \$4,000 in 2008 through reduced pesticide use.

- Seth Wilner and retired state Extension specialist in fruit, Bill Lord, worked with tree fruit growers to refine their pesticide applications, improve the timing of their applications, and reduce the total amount of pesticide used. As a result, one grower saved \$1,020 (\$170/acre on his six-acre orchard), while another grower saved \$680 (\$340/acre on his two-acre orchard), reducing the amount of applied pesticides to the environment. Additionally, these educational activities helped increase fruit yield and quality by an estimated 30 percent or \$2,700 in gross farm income. Another commercial grower changed his pruning techniques, increasing his potential yield by 60 bushels per acre, valued at \$1,800.
- Seth Wilner worked individually with 32 farmers to develop 11 farm plans. These plans helped the growers diversify their farm enterprises, develop transfer plans, assess revenues and expenses to increase farm profitability, and make decisions on farm labor and equipment purchases. Two farms directly attribute development of a farm plan to their decision NOT to sell the farms for private home development. These farms are currently being operated by new owners and managers.
- UNH Cooperative Extension assisted Sullivan County highbush blueberry growers with nutrient and pH management, resulting in increased yields estimated at 2,000 pounds per acre. These growers manage a combined 11 acres of blueberries totaling \$44,000 in potential increased profits. Additionally, two growers received help in rejuvenating older blueberry plantings that increased yield potential by an estimated 3,000 pounds per acre, adding \$12,000 in gross farm revenue to these farms.
- One major strawberry grower needed expert advice to address a strawberry clipper and tarnished plant bug problem, saving an estimated \$1,250 on five acres through reduced pesticide inputs.
- Six commercial greenhouse operators learned more about nutrient and pH management to help improve the production of their high valued petunia and geranium crops. Two producers saved their struggling crops by adjusting their fertility management. Another four operations changed their management practices and improved crop quality.
- Stan Swier, state Extension specialist in entomology worked with a major county golf course and with homeowners associations to address turf grass pest problems. The golf course is threatened by three turf pests and, if left uncontrolled, could result in yearly lost golfing revenue in the tens of thousands of dollars. His recent research found two new low-risk products that provided excellent control of these pests, reducing the need for pesticide inputs by 70 percent.
- Thirteen active Master Gardeners contributed over 460 hours of time in Sullivan County during 2008. Calculated at the current Independent Sector rate for volunteer time of \$19.15/hour, (independentsector.org) this represents \$8,975 in value. By serving as volunteer educators, Master Gardeners help UNH Cooperative Extension programs reach more people.
- A large garden was developed at the Sullivan County Complex in collaboration with the Sullivan County Dept. of Corrections. With help from eight inmates, the project successfully produced hundreds of pounds of fresh vegetables delivered to Claremont's Soup Kitchen and Homeless Shelter.

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