

## Commercial Agricultural

### **Situation:**

Agriculture in Hillsborough County is an ever-changing dynamic business. It includes the traditional, vegetable, fruit, livestock and dairy farms, along with the high-value greens industry representing greenhouses, garden centers and field cut flower operations. The total value of agriculture in Hillsborough County is over \$14,767,000 excluding the value of landscaping operations (Census of Agriculture 2002), making it extremely important to local economic vitality. The 481 farms in Hillsborough County represent 40,105 acres of land in production.

### **UNH Cooperative Extension's Public Value:**

Educational programs and technical support to agricultural industry improves the health and value of farmland and provides financial resources to the agricultural industry. In turn, property values, tax revenues and opportunities to promote tourism increase, providing a stronger economy and quality of life for people who live and visit the county.

### **UNH Cooperative Extension Response:**

Hillsborough County Cooperative Extension Agricultural Educators work directly with farmers, growers or owners and employees of agricultural businesses including ornamental horticultural, by providing technical information in all aspects of their businesses. To keep local farmers on the leading edge, we provide information at informal meetings, farm meetings, personal visits, written recommendations, phone contact and email. Sixteen commercial agriculture meetings were organized and/or hosted by Extension in Hillsborough County with over 520 people and an additional six commercial agriculture meetings hosted jointly were held outside the county with over 360 people attending.

- Growers from 40 different farms attended "Plant Disease Control Options for Vegetable and Small Fruit Growers," a three-evening series attended with presentations by three Extension Specialists and faculty from New Hampshire, Massachusetts and New York, bringing some of the best expertise in the region to Hillsborough County growers.
- Orchard managers, professional and amateur beekeepers attended a UNH Cooperative Extension workshop in Goffstown that highlighted recent research and management practices to help them keep their bees healthy and productive. Honey bees are vital to New Hampshire's \$24 million fruit and vegetable industries, providing pollination required for fruit to set in tree fruit, vine fruit and vegetables. Maintaining farm bee hives is a critical task for producers and the number of professional beekeepers has dwindled dramatically. The workshop focused on honey bee viruses and their transmittal between hives, specifically Colony Collapse Disorder (CCD) - a highly contagious and devastating honey bee disorder.
- There are 435 licensed pesticide applicators residing and/or spraying pesticides in Hillsborough 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 (IPM). Educational programs offer growers recertification credits, required to maintain their licenses.
- Attended by more than 1,300 people, a three-day New England Vegetable and Fruit conference and trade show held in Manchester featured 27 half-day educational sessions including 135 individual presentations on a wide range of vegetable and fruit production, marketing, and management topics. There were also 10 farmer-to-farmer discussion sessions on special issues from crop planning to season extension. Pesticide applicator recertification credits were offered for 23 out of the 27 sessions; 238 commercial growers received credits.
- Over 560 soil samples from Hillsborough County farms and gardens were analyzed. Soil testing determines the rate the farmer/grower should apply a particular plant nutrient to soil to assure good plant growth without any negative affects to the environment. These analyses save growers money by reducing fertilizer inputs while protecting the environment from over-application of fertilizers. Another 146 samples submitted to the UNH Cooperative Extension Plant Diagnostic Laboratory helped determine diseases and recommendations for treatments.

- The Hillsborough County Farm Bureau, Coos County Farm Bureau, New Hampshire Vegetable & Berry Growers Association and UNH Cooperative Extension sponsored two Farm Safety Twilight meetings in Litchfield and Lancaster. These meetings included presentations from a farm safety expert from Pennsylvania State University and were held to remind farmers that, in the rush of completing tasks on their farms, they need to take time to act safely and to repair or replace safety devices that protect them, their family members, and employees from injuries and fatalities.

### **How We Make a Difference:**

During the 2007 growing season, 14 Hillsborough County farms monitored European Corn Borer, Corn Earworm and Fall Armyworm (sweet corn insect pests) with pheromone traps. Corn Earworm and Fall Armyworm are unpredictable pests that can cause major damage and monitoring this year resulted in large savings.

- The greatest savings were on farms of direct participants (439 acres of sweet corn). Overall, growers saved two insecticide applications per acre ( $\$21/\text{acre} \times 439 \text{ acres} = \$9,219$ ). Late in the season, there was an increase in earworm and fall armyworm numbers, and monitoring reduced the work of culling earworm-damaged corn. This news quickly passed to other Hillsborough County and New Hampshire sweet corn growers. With these IPM controls in place, a \$110,000 savings was realized as a result of 50 dozen ears additional saleable corn per acre on 439 acres.
- After scouting at a participating IPM sweet corn farm, 19 of 25 plants (72 percent) were infested with European Corn Borer larvae. In this case, the farmer had missed the infestation on a prior check and was able to successfully treat the field that same day. No worms were found at a follow-up in the fall and the farmer was convinced he would have lost the entire field if the damage hadn't been discovered, saving him more than \$2,000.

Over the last three years, statewide annual impacts of the apple IPM program have been \$190-200,000 per year in reduced spraying, plus a 5 percent increase in the incidence of unblemished fruit, compared to pre-IPM levels. For Hillsborough County, that represents \$64,000/year in reduced spraying costs.

Of the 74 people who completed evaluations of the "Plant Disease Control Options for Vegetable and Small Fruit Growers" educational series, 64 percent said they would adopt a new practice the following year as a result.

Post-conference evaluations were completed by 206 people attending the New England Vegetable and Fruit conference. Ninety-four percent said information they obtained would help them improve pest management, 89 percent said it would improve soil or nutrient management, and 76 percent said it would help improve farm profitability.

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