



**Situation:**

Agriculture in Cheshire County is an ever-changing, dynamic business. It includes the traditional, dairy, livestock, vegetable and fruit operations, along with the high-value greens industry representing greenhouses and garden centers. The total value of agriculture in Cheshire County is over \$15,406,000, excluding the value of landscaping operations (according to 2007 Census of Agriculture). The 419 farms in Cheshire County represent more than 11,800 acres of land in production.

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

Participants in UNH Cooperative Extensions programs are able to make changes on their farms or at their homes that result in higher crop yields, better use of pesticides and fertilizers, improved safety to employees or family members, or improved soil conservation. By taking better care of their land, farmers are able to make a living providing a wide selection of locally-produced agricultural goods to the public, and Cheshire County citizens enjoy a clean working landscape that doesn't pose risks to their health.

**UNH Cooperative Extension's Response:**

For the farming community to thrive, it must remain economically and environmentally sustainable. UNH Cooperative Extension in Cheshire County is uniquely positioned to provide educational and research-based programs to help agricultural businesses and natural resource firms meet these goals. Carl Majewski, Cheshire 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. Cheshire County citizens turn to UNH Cooperative Extension as a source of non-biased, research-based information. In the past year:

- Over 90 farm visits – 25 with Extension Specialists – reached 112 individual farmers. Farm visits helped assess crops, solve plant or production problems, work with growers on economic and marketing issues, develop management or transition plans and provide other forms of educational outreach.
- There are 20 licensed pesticide applicators residing and/or spraying pesticides in Cheshire County. UNH Cooperative Extension's Pesticide Safety Education Program teaches pesticide applicators the responsibilities of environmental and human safety, sprayer calibration, pesticide storage, proper pesticide disposal, and Integrated Pest Management (IPM). These educational programs offer growers recertification credits, required to maintain their licenses.
- Over 570 soil samples from Cheshire County farms and gardens were analyzed. Soil testing determines the rate to apply a particular plant nutrient to the soil to assure good plant growth without negative affects to the environment. These analyses save growers money by reducing fertilizer inputs while protecting the environment from over-application of fertilizers.
- Agricultural Resources and 4-H staff, with help from R.N. Johnson's in Walpole, organized and conducted a Tractor Safety course. Those attending increased their understanding and awareness of safe tractor operation and agricultural safety hazards, and seven youth became certified in tractor safety by the National Safe Tractor and Machinery Operation Program. This certification enables youth ages 14-16 to operate agricultural machinery as part of farm employment.
- Majewski, with other Extension educators and specialists, provides training to Master Gardener volunteers in soil science, IPM, fruit and vegetable production, lawn care and landscaping. In addition to the 750 phone and email inquiries by the public handled by Majewski this past year, Extension's Family Home and Garden Education Center answered 167 phone calls from Cheshire County citizens on topics such as vegetable gardening, fruit tree pruning, lawn care, poisonous plant identification, and landscaping.
- Ten active Master Gardener volunteers worked with staff and volunteered 366 hours, reaching youth and adults with gardening education and information. This represents a cost benefit to the county of \$7,141 when calculated at the 2007 value of \$19.51/hour for volunteer time (independentsector.org).

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

- According to responses from 23 questionnaires handed out at the Corn and Forage meeting:
  - Nine said they learned new crop production practices,
  - 14 said they learned new pest management practices,
  - 20 said they were able to improve their understanding of NH pesticide regulations, and
  - 12 were able to use what they learned to identify ways they could improve their farm management.
- Seven licensed pesticide applicators learned how to calibrate a boom sprayer properly, and perform pre-season sprayer maintenance for safe and accurate pesticide applications.
- Fruit growers learned proper tree pruning techniques and pest management practices at the Tree Fruit Twilight meeting.
- Over 50 people attending a Risk Management Association workshop increased their understanding of managing soil fertility and soil organic matter and maintaining crop records on organic farms.
- A new farm in the county saved approximately \$2,000 when he took advantage of mid-season nitrogen testing for corn. Instead of applying approximately two tons of fertilizer to a large corn field prior to planting, they waited to see if it was necessary. Testing indicated that no fertilizer was necessary, and the land didn't receive excess nitrogen fertilizer that would otherwise leach out to contaminate surface and ground waters. Seven farms, representing approximately 950 acres, have now used mid-season nitrogen testing in the past six years.
- A dairy farm has begun soil testing on pastures and hayfields for the first time in over 20 years as part of organic certification. They also implemented a rotation for testing their land every three years, using the results to guide lime and manure applications.
- A livestock operation asked Cooperative Extension for help to expand the farm to include a small organic dairy operation. As a result of several farm visits with Extension Dairy Specialists Mike Lunak, Pete Erickson and John Porter, and Extension Educator Seth Wilner, the farm was able to project cash flow and income with a dairy herd included on the farm, develop a business plan, and figure out how to convert part of their existing pole barn to accommodate the milking herd and facilities. The farm is building their herd, proceeding with barn renovations and have built a growing customer base for raw milk.
- Another dairy farm that wanted to diversify into other markets has begun selling raw milk in a farm stand. They are presently selling 30-40 gallons of milk directly to customers, generating additional income.
- The last three years of the state-wide apple IPM program resulted in a savings of \$190-200,000 per year in reduced spraying, plus a five percent increase in the incidence of unblemished fruit, compared to pre-IPM levels. For Cheshire County, that represents a \$10,000/year in reduced spraying.
- The Farmer and Community Feasibility Study, a SARE-funded (Sustainable Agriculture Research and Education) collaborative effort between the Cheshire County Conservation District, Hannah Grimes and UNH Cooperative Extension increased public awareness of local agriculture, provided a forum for the public and agricultural producers to discuss issues that affect the public's access to local agricultural products, and served as a starting point for the public to get more involved in finding ways to improve the connections with area farms.
- Over 100 people, and several area farms, participated in two forums for the Community Feasibility Study. In a survey of participants, 94 percent expected to learn more about local food initiatives and 85 percent expected to share ideas about supporting local agriculture and 79 percent responded the event either enabled or motivated them to buy or sell more local food.

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