Food Storage Curriculum for Farmers and Processors

go.uvm.edu/cropstorage

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Storing Food Better

The goal of this project was provide education on food storage for farmers and processors to increase postharvest competency and capacity in the region and ultimately improved product quality and farm viability.

Outcomes:

- Development and delivery of a food storage curriculum for farmers and processors focused on produce. Topics: crop physiology, optimal storage conditions (temperature and humidity), storage infrastructure (cold rooms, equipment, structure and materials), and controls and monitoring.
- 337 participants attended in-person workshops totaling 1600 contact hours of educational programming.
- 1122 participants and 2200 contact hours including meeting and conference presentations combined with webinars.
- A web-based clearinghouse of related resources was also developed (go.uvm.edu/cropstorage). The site hosts workshop materials, developed under the project, but also collects other existing resources with relevance to the topic. This site has had 18,000 page views over 3 years.

Impact:

- Evaluation indicated strong, relevant knowledge development with improved understanding of topic and related resources noted among 97% of workshop participants.
- The project has also increased awareness of the need for additional work in the postharvest arena leading to several other funded initiatives that will have lasting benefit to the region.
- This project coincided with and supported improved direct consultations with 660 producers over 3 years.

Educational Topics | Learning Principles | Activities | Activities | Learning Objectives | Activities

to an identified need for produce storage educational programs in the Northeast. The website above serves as a clearinghouse for additional educational resources include workshop and webinar, videos

- Importance of Food Storage Why is food storage important to the region and specific farms and businesses? What competitive advantage can be achieved through improved storage
- harvest and postharvest conditions impact storage life and quality? What crops can be stored together and which ones need to be separate? Why do my carrots become bitter and my
- Energy, Heat and Moisture How do basic scientific principles factor into storage practices? system work (and not work?) What are effective means for precooling different crops prior to
- Equipment What are my options for refrigeration equipment and how do they compare in

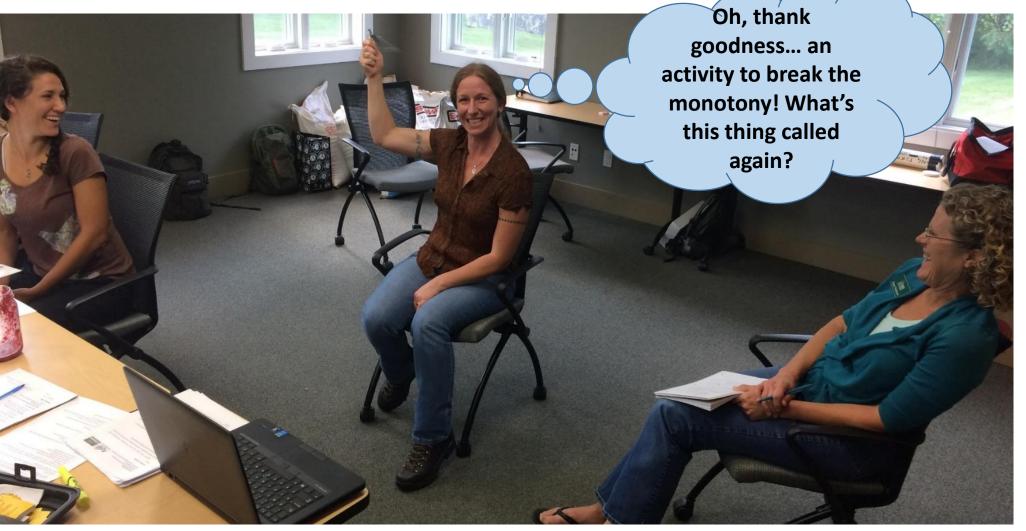
Topics included

- postharvest physiology (hotel not a hospital),
- basics of metabolic respiration,
- optimal crop storage conditions (temperature and relative humidity) and zones,
- ethylene production and sensitivity,
- basics of refrigeration and heating,
- cooler construction basics.
- controls / thermostats,
- record keeping and monitoring, and
- produce safety factors.

The photo at left shows a cooler built by a small, diversified, organic vegetable grower after participating in a workshop. It features a stud-framed, insulated and sealed wall construction, CoolBot[™] refrigeration, adjustable wire shelving, and TrussCore™ plastic inside finish surface materials. This is a picture that makes me proud... it's just waiting for produce!







Theresa Snow, Salvation Farms (Burlington, VT), tries out a sling psychrometer for measuring humidity in a workshop tailored to gleaning organizations in Berlin, VT. The project involved curriculum development and workshop delivery. Both benefited from the incorporation of adult learner theory (another SARE project!)



This project leveraged a community of learners in the Northeast. Workshop participants shared their own experiences, experiments, successes, failures. All of this helped refine the curriculum, workshop materials, and even follow-on work and projects. Above, one of the many workshop venues was a renovated carriage barn in Shelburne, VT.

The educational content, workshop events, webinars and direct technical assistance helped to develop a methodology for informed decision making related to storage. At right, one New York farm really embraces a workshop activity related to wash/pack/store shed layout using a rough floor plan and scaled cutouts of equipment. It helped to think about how equipment is setup, how product is staged, and how people and product flow through the facility.

