



UVM Extension's agronomy outreach programs reach farmers and agriculture industry professionals statewide with education and technical assistance on nutrient management planning, precision manure management and water quality conservation practices to meet the goals set by Vermont's Clean Water Act (Act 64) in 2015.

## **NUTRIENT MANAGEMENT PLANNING (NMP)**

The NMP course is taught over five weeks by a multi-agency team. Participants spend approximately 15 total hours (three hours per week) on classroom instruction and activities. Topics covered include learning to estimate annual animal manure quantities, documenting and planning crop rotations, identifying fields with manure spreading restrictions, analyzing soil test reports, and calculating on-farm nutrient credits for animal manure and legumes. Approximately 20 hours is spent at home writing nutrient management plans and when finished, approved plans meet Vermont Natu-

ral Resources Conservation Service (NRCS) 590 Nutrient Management Standard.

This curriculum follows the training manual *Digging In: A Nutrient Management Course for Farmers*, developed by University of Vermont Extension which includes information delivered during the course and instructions on how to use the UVM Extension Nutrient Management web application, goCrop, and the accompanying app for record keeping. *Digging In* may be downloaded at: [go.uvm.edu/digging-in-manual](http://go.uvm.edu/digging-in-manual).

Over a three-year period (2015-2017), **18 classes** were taught statewide, reaching **211 farms** and resulting in **200 approved plans**.

## PRECISION MANURE MANAGEMENT

In early 2017, UVM Extension Agronomists Jeff Carter and Heather Darby and their teams, delivered **nine manure application workshops**, attended by more than **100 custom manure applicator owners and employees from 56 businesses** in New Hampshire, New York and Vermont. Three additional Custom Applicator Certification programs were offered in December 2017 and January 2018, attended by 83 participants.

## AGRONOMY AND CONSERVATION ASSISTANCE PROGRAM (ACAP)

In the Lake Champlain Basin, UVM Extension Agronomists Jeff Carter and Heather Darby have directed ACAP\* since 2011. This program provides outreach education and technical assistance to agricultural industry professionals and

to animal agriculture operations in three distinct regions of the Lake Champlain watershed. Participants learn to implement farm practices that will improve water quality in the lake and tributaries by minimizing the adverse effects of agricultural operations. Nutrient management planning and cover cropping techniques are among the conservation practices UVM Extension agronomy experts teach farmers.

Among the benefits of cover cropping are reduced nutrient and soil loss, increased soil organic matter and improved soil health, weed suppression, extra sources of livestock forage and habitat for pollinators and other beneficial insects. UVM Extension experts help farmers understand the value of this practice and learn the steps needed for implementation.

Over the three-year period from 2015 through 2017, ACAP assisted 258 individual farms to develop nutrient management plans for 60,046 acres, start no-till planting on 7,003 acres, and plant winter cover crops on 12,806 acres.

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