



## **USDA-CSREES 2007 National Water Quality Conference**

### [Evaluating Alternative Organic Dairy Forage Production Systems](#)

In much of New England, demand for organic milk exceeds supply. Water quality implications for increasing the number of organic dairies include reduced: 1) pesticide loss to surface and ground waters of the region; 2) nutrient loss to water resources due to nutrients being released more slowly; and 3) soil loss from fields from alternative cropping system strategies. However, producing quality forage with minimal weed pressure remains the greatest challenge for organic dairy producers. Growers need information on effective crop rotations and cultivation methods to maximize forage yield and quality. The University of Maine Cooperative Extension initiated an experiment in 2004 to evaluate alternative cropping system strategies that might better balance crop emergence, growth, and time to canopy closure compared to organic silage corn. Our interest was to: 1) quantify yield, quality, and weed pressure of winter and spring small grains and brown midrib sorghum sudan grass (BMRSS) double crops compared to intensively cultivated organic silage corn; and 2) determine if narrow crop row spacing would more effectively control weeds compared to intensively cultivated organic corn. Small grains evaluated in the study included spring barley, spring wheat, winter barley, winter wheat and winter triticale. Comparing two of three production seasons, silage corn produced 20% more biomass than the spring barley/BMRSS double crop but weed biomass was 18% of total yield compared to 3.9% for the double crop. Winter triticale and winter wheat/BMRSS double crops produced well in 2004/2005, but yields were reduced due to winter kill in 2005/2006. In years with little or no winter kill, both winter wheat and triticale/BMRSS double crops can out-produce organic silage corn with significantly lower weed biomass. Surviving weeds in the double crop system produce fewer weed seeds, improving the potential for long-term cropping system success.

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