

## **Effects of Recent NIFA Budget Reductions on Research, Education, and Extension Funding**

### **Prepared for the Northeastern Association of State Departments of Agriculture (CT, DE, ME, MA, NH, NJ, NY, PA, RI, and VT)**

The National Institute of Food and Agriculture's (NIFA) mission is to lead food and agricultural sciences to create a better future for the nation and the world by supporting research, education, and extension programs in the Land-Grant University System and other partner organizations. NIFA doesn't perform actual research, education, and extension; rather, but rather helps fund it at the state and local level and provides program leadership in these areas. From 2008 through 2012, NIFA made awards totaling \$882.1 million to universities and other partner organizations in Northeastern Association of State Departments of Agriculture (NEASDA) states.<sup>1</sup>

Two things have reduced NIFA's fiscal year (FY) 2013 budget: 1) Budget Sequestration and 2) Expiration of mandatory programs from the Farm Bill.

Budget sequestration reduced NIFA's FY 2013 budget by \$61 million. Approximately \$24 million represents Cooperative Extension funding, which supports 4-H and youth programming, horticulture education for commercial producers and consumers, nutrition education for low income families, and helps landowners comply with state and federal conservation regulations. The loss of an additional \$37 million impacted other NIFA programs, including research, higher education, and integrated programs. These funds employ researchers and students who, in all 50 states, address locally important agricultural and natural resource problems. Due to sequestration, capacity funding for State Agricultural Experiment Stations was reduced in FY 2013 and fewer competitive grants were made.

Additionally, the 2013 extension of the Farm Bill did not provide funding for five programs conducted by NIFA between 2008 and 2012 (FY 2012 funding in parentheses): Organic Agriculture Research & Extension Initiative (\$20M), Beginning Farmers & Ranchers Program (\$19M), Biomass Research & Development Initiative (\$40M), Specialty Crop Research Initiative (\$50M), and Biodiesel Fuel Education Program (\$1M). The loss of these five programs reduced NIFA's funding portfolio by \$130 million from 2012 levels.

The following pages contain examples of recently funded projects conducted in NEASDA states. The federal funding for budget lines associated with these projects has either been eliminated entirely due to lack of inclusion in the Farm Bill extension or reduced by sequestration. This will reduce funding available for future projects like those listed, which range from \$500,000 to over \$4 million each.

1 – This set of states differs from NIFA's northeast region in that it does not include MD, WV, or DC.

### **Beginning Farmer & Rancher Development Program Helps Connecticut Farmers "Scale-up"**

The landscape for beginning farmers in Connecticut is challenging in terms of farmland access, yet ideal in terms of potential markets for direct sales. For the long-term viability of new farm businesses, some will need to get beyond a small-scale direct retail business model by scaling up to do a mix of retail and possibly wholesale business. The **University of Connecticut** is providing education that will enable the state's beginning farmers to evolve from small-scale farm enterprises into viable farm businesses. This program will augment training and technical assistance for Connecticut's new farmers in regards to sustainable agriculture practices, farm management, and farmland access.

### **Innovative technology thins fruit trees but fattens profits**

Deciduous fruit trees produce more fruit than is needed to make a profitable crop, but the only reliable current strategy for removing excess fruit is hand-thinning. This practice can require as much as 100 laborer hours per acre. Depending on the region, this can cost \$750 to \$1,120 per acre. An integrated team led by **Penn State University** has developed an automated system for fruit thinning that can reduce the labor requirement by 50 percent. For peach crops, these tractor-mounted or handheld thinners also resulted in better fruit quality and yield to an average net economic output of \$694 per acre. Nationally, the annual economic benefit to peach growers is \$82.5 million and a labor reduction of 5.9 million hours, which could increase the revenue of rural economies by \$181.5 million per year. The project is expanding into other crops (apple, cherry, and plum) with similar results. Adoption of this program across all potential crops could translate to a positive economic impact on rural economies of almost \$1 billion per year.

### **Enhancing organic apple production through research, education, and eXtension**

Apples are an important component of New England's diversified agriculture, but challenges associated with growing the traditional apple (McIntosh) has limited the number of organic apple orchards in the region. A **University of Vermont** research team used NIFA Organic Agriculture Research and Extension Initiative funding to educate organic growers on how to transition to Honeycrisp, Ginger Gold, Macoun, Liberty, and Zestar! apples. "OrganicA" Project outputs include an organic apple production website, an undergraduate course on organic fruit production, workshops and orchard tours, and presentations at meetings from local to international levels.

### **Cornell-led team bolsters broccoli industry in the Eastern United States**

Broccoli is typically grown along California's coast and foggy valleys where average temperatures are between 55° and 65° Fahrenheit. Broccoli must be refrigerated after harvest for maximum nutrient quality. However, an increase in the cost of cooling and shipping broccoli long distances has led to broccoli production east of the Mississippi River. A team of researchers and extension specialists led by **Cornell University** is working to develop and test broccoli cultivars that are suited to the climate and soils from Maine to Florida. Conservative estimates indicate that Eastern broccoli production will result in a 66-percent reduction in fuel used to

transport the crop to market. This will save close to 2.3 million gallons of fuel per year and reduce carbon dioxide emissions by over 51 million pounds per year. The team expects that growers in the region will see increased profits of \$3,000 per acre per year, which translates to increased profits of \$40 million. The total annual economic impact on rural economies will be almost \$90 million.

### **University of Massachusetts leads U.S. Veterinary Immune Reagent Network**

Just as you cannot effectively repair a car without proper tools, animal diseases cannot be studied well without particular products, known as immune reagents. **University of Massachusetts-Amherst** leads a public-private partnership that links four academic institutions with three federal laboratories and one private company to form the U.S. Veterinary Immune Reagent Network. The network now offers over 20 new, low-cost commercial tools to animal disease researchers to speed the development of new vaccines, diagnostic tests, and the identification of better intervention approaches to improve animal health and animal welfare. The network will serve to enhance the safety of the nation's agriculture and food supply through improved animal disease control.

### **Livingston, NJ Company Working to Develop Enable Local Production of Biofuels from Energy Crops**

Biomass is a diffuse energy resource that can only be economically transported over short distances. High biomass yields, even on marginal lands, and small-scale processing close to the farm are needed to improve the economic viability of biofuels. A Biomass Research Development Initiative Grant to Exelus Inc. is addressing this issue through a combination of new technologies and methods to: 1) Greatly expand viable energy crop acreage; 2) To permit economical, small-scale conversion to fuels close to the farm; and 3) To understand both the local and national impact of adopting these technologies. If successful, this project will vastly increase the viable acreage for biofuel production by both improving plant biomass yields under stress conditions and permitting low-cost biomass conversion units to be constructed near the farm.

### **New Hampshire Organic Agriculture Research and Extension Initiative Grant Helps Growers Capitalize on Emerging Value Added Milk Markets**

The University of New Hampshire is leading an Organic Agriculture Research and Extension Initiative project designed to enhance the year-round capacity of Northeastern dairy producers to produce value-added organic milk. In collaboration with the University of Maine, the University of Vermont, and Penn State, the project is working to enrich the concentrations of health-beneficial omega-3 and linoleic acids in milk from pasture-fed organic cows. The ultimate goal is to assist organic dairy producers to capitalize on new and emerging milk markets. With guidance provided by a Research and Extension Advisory Board, the project will enhance learning opportunities between organic dairy producers, researchers, and educators via workshops, field days, fact-sheets, newsletters, and eOrganic webinars.