

Memo

To: Deputy Secretary LaClair
From: Virginia Nickerson, UVM Extension Produce Safety Outreach Coordinator
CC: Chelsea Bardot Lewis, Abbey Willard, Doug Lantagne, Linda Berlin, Vern Grubinger, Steve Justis, Dave Rogers
Date: 3/2/2012
Re: Need for Food Safety Capital Improvement Funding for Vermont's Produce Industry

Estimate of Costs for Vermont Produce Farms to Make Equipment and Infrastructure Improvements to be in Compliance with Food Safety Standards

- Cost for *all* produce farms in Vermont (vegetable and apple combined): **\$5 to 12 million**
- Cost for members of produce grower associations only (vegetable and apple combined): **\$3 to 7 million**

Vegetable and Berry Industry:

- Cost for *all* vegetable and berry farms: **\$ 4 to 10 million.**
- Cost for members of produce grower associations only: **\$ 2 to 6 million.**

Apple Industry:

- Cost for all apple orchards: **\$576,000 to over 1 million**
- Cost for members of the apple growers association only: **\$384,000 to 892,480**

Note: None of these estimated costs include the cost of purchasing large plastic harvest bins

Significance and Need for Funding

Funding to assist Vermont's produce farmers meet these costs are essential to:

- Protect and keep Vermont's brand competitive by reducing the risk of food borne illness outbreaks
- Meet the Farm-to-Plate goal of doubling the consumption of local food by enabling more farmers to move Vermont product into supermarkets, where most residents purchase food
- Grow Vermont's agricultural economy by helping produce farms become more efficient, expand sales to markets such as schools and hospitals which are particularly concerned with food safety practices, and hire more employees
- Improve the quality and shelf-life of Vermont produce
- Assist 'early adopting' farmers in Vermont who are providing on-the-ground research and development in this new realm of produce safety systems, practices and infrastructure. The funds will leverage their intellectual, physical and economic investments, which are significant.

Explanation of Calculations

The figures above are an estimate for costs for equipment and infrastructure improvements related to food safety for produce growers. They do not include annual costs associated with Audit fees, water tests or labor associated with food safety practices. They also only reflect costs associated with whole, fresh produce and do not include costs related to food processing, egg or maple sugar production, dairy, or meat processing, all of which might occur on the same farm.

These figures are rough for a number of reasons. 1) We do not currently have a precise count of the number of commercial produce farms in the state. 2) Because only 19 farms in Vermont had undergone GAPs audits by 2011, the figures are based on data from a small sample of 10 farms (8 vegetable farms and 2 apple orchards), and from the 14 applicants for capital improvement grants in 2011. 3) The costs for both large and small operations have been averaged - a more accurate representation would segregate costs by size of operation, and attempt to derive a cost per acre.

This data also may not capture the complete range of expenses that should be anticipated for all of our produce farms. In particular, only three farms in Vermont have had their packhouses certified to date. Infrastructure and equipment costs associated with packhouses, storage and transportation will most likely be the largest source of food safety related expenses for Vermont's produce industry. For example, Hans Estrin of Extension determined that infrastructure and equipment costs required for Westminster Organics to be certified in all five of the USDA GAPs sections would cost Paul Harlow between \$6,000 and \$77,450¹, depending on level of compliance and whether he bought new equipment or repaired existing items.

It is also difficult to come up with precise numbers for the farms that will have to make these investments because school and hospital buyers are still deciding whether they will be requiring GAPs audits or not, and because the FDA has yet to release its new preventive controls rules for produce. As a consequence, we do not yet know how many farms will be required by their buyers to undergo a GAPs audit, or will be subject to the FDA's new created through the Food Safety Modernization Act.

However, from the perspective of food safety and protecting the Vermont brand, in an ideal world, *all* produce farms in Vermont would have equipment and infrastructure that would reduce the risks of microbial contamination of their product (handwash facilities, good wells, plastic harvest containers, metal processing equipment, cleanable contact surfaces, etc...). Since it is unlikely that we could achieve that ideal, we have given two sets of figures: the higher figure is the estimated cost for improvements for *all* produce operations in Vermont, and the lower figure is for just the approximately 347 produce farms that belong to the three producer associations in the state (VOF, VVBGA, and VTFGA), based on the assumption that farms that belong to producer associations are most likely to sell to markets that will be looking for food safety certification, selling the largest volume of produce, and seeking to grow in size.

Many of Vermont's produce farms are utilizing aging dairy barns for pack houses. It is challenging for these old barns to meet some of the hygiene and sanitation standards of a GAPs audit. Our anecdotal experience as technical providers indicates that the greatest needs for food safety related infrastructure include: sinks in pack sheds where workers can wash hands while handling produce, washable contact surfaces in packsheds, coolers with walls that can be cleaned, triple wash sinks or dunk tanks, drip irrigation if irrigating from surface water, and components for traceability systems for farms that sell to supermarkets or through wholesale market channels. The current wisdom among food safety scientists is that because wood is impossible to sanitize, it is preferable for vegetable growers to use metal root crop washers and processing lines, and for apple orchards to use plastic apple bins. It should be noted that I have NOT included the cost of plastic large harvest bins in these calculations. If these bins were to become mandatory it would represent significantly larger costs for Vermont growers.

¹ Does not include cost of large plastic harvest bins, which cost approximately \$200 per bin. Apple orchards can use hundreds of these bins.

Most of the 14 applicants for the Capital Improvements grant requested funds for improvements related to pack shed improvements. The total amount for the requested projects ranged from \$9,600 to \$120,071 with the mean being \$35,680 and the median being \$22,312.

Calculations for Costs of Equipment and Infrastructure Improvements for Food Safety

		VEGETABLE AND BERRY	APPLE/TREE FRUIT
Number of commercial farms (estimate)		494 ²	60 ³
Number of members in producer associations		297 ⁴	51
Number of farms already GAPs certified		14	11 ⁵
Equipment and infrastructure costs to be certified for first 4 sections of USDA GAPs Audit (General, Farm Review, Field Harvest and Packhouse)	All farms (minus certified)	480 x \$9,600 = \$4,608,000 480 x \$22,312 = \$10,709,760 \$4,608,000 – 10,709,760	60 x \$9,600 = \$576,000 60 x \$22,312 = \$1,338,720 \$576,000 - \$1,338,720
	Producer Assoc. Members (minus certified)	297 x \$9,600 = \$2,851,200	40 x \$9,600 = \$384,000
		297 x \$22,312 = \$6,626,664	40 x \$22,312 = \$892,480
		\$2,851,200 - 6,626,664	\$384,000 - 892,480
Costs for all vegetable and fruit tree farms	Apple and Veg	\$5,184,000 - 12,048,480	
Costs for members of produce associations only	Apple and Veg	\$3,235,200 - 7,519,144	

² Farm-to-Plate Executive Summary, p. 15, based on United States Department of Agriculture, 2007 Census of Agriculture, Tables 34 and 35.

³ Estimated by Steve Justis, Executive Director, VTFGA, as the number of commercial orchards in the state

⁴ Members in VOF (approx. 137) and VVBGA (approx. 240) minus overlaps (approx. 80)

⁵ According to Steve Justis of the VTFGA, approximately 11 of Vermont's apple growers are certified either through the USDA GAPs program, or another third party audit program. They account for all of the orchards selling through large supermarket chains. These growers are estimated as accounting for approximately 75% of Vermont's apple sales. The state's 264 apple growers annually produce over \$15 million of fruit. About 70 percent of the state's crop is sold through wholesale channels, while the balance is sold through farm stands, farmers' markets and through CSAs.

UVM Extension helps individuals and communities put research-based knowledge to work. Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the United States Department of Agriculture. University of Vermont Extension, Vermont. University of Vermont Extension, and U.S. Department of Agriculture, cooperating, offer education and employment to everyone without regard to race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or familial status.