

## **Nevada Value-Added Marketing Research and Education Program**

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### **Abstract**

Value-added products are an important direct marketing strategy to help Nevada small farms increase profitability. The project (i) educated food entrepreneurs and producers on the legal production and sales of food products in Nevada, markets, and food business; (ii) resulted in 31 new products sold by participants, with future targets of 102 new products and \$304,800 in sales; (iii) increased income by over 3% among specialty-crop producers; and (iv) found fewer local food products in the natural grocery store market from 2015 to 2017. Value-adding of specialty crops in Nevada is now more accessible.

**Keywords:** food markets, food processing, local foods, value-added

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## Background

Direct marketing strategies and the development of value-added products are essential for Nevada small farms to increase profitability for year-round farm sales. Small farms selling local foods struggle to be profitable (Lynch et al., 2018; Lacagnina et al., 2017). Small farms have incurred losses of 10%–40% for products that were of high quality for value-adding but not for selling to chefs or at farmers markets (Bishop, Gatzke, and Curtis, 2010). The combination of sales options can help improve the feasibility for sales and value-adding of local foods in rural areas (Gatzke, Cowee, and Harris, 2015). The path for processing food products for sale in Nevada was often unclear and shifted over time and depending on the health department personnel consulted. We established a project to support producers and aspiring specialty-food entrepreneurs to develop and profitably sell value-added products in Nevada.

## Methods

We built a curriculum to be used in workshops by performing a literature review of strong food-processing value-added education programs, researching Federal and Nevada's food-processing requirements, compiling results from previous studies of local food markets, and researching local food markets in natural grocery stores. The curriculum used proven value-added education materials produced by Penn State Extension (2018) and the University of Maine Cooperative Extension (2018), federal food regulations, and Nevada-specific materials developed in this project. Before being incorporated into the curriculum, components of the curriculum were tested on small groups in three workshops held in 2016 and 2017. Post reflective surveys measured knowledge gain among workshop participants, and 4-to-6-month follow-up surveys were completed by phone. The University of Nevada, Reno, Institutional Review Board approved these tools.

### *Natural Grocer Market Study*

The market research consisted of the types and amounts of local foods and competing products in natural grocery stores. We collected data on local foods in natural grocery markets by tracking required store policies for local foods and producers' experiences and documenting the local food items available in the stores yearly from 2015 to 2017 in the Reno and Las Vegas areas. The market analysis of farmers' market consumers and chefs' purchasing desires used for the project were from previous studies by University of Nevada Cooperative Extension (UNCE) (Curtis et al., 2008, 2010).

## Results

### *Educate Steps for Making a Food Product Legal for Sale in Nevada*

We designed and piloted a value-added curriculum to cover specific business organizing skills to enable Nevadans to increase their knowledge and develop or improve their food business profitability. The workshops taught business skills, an understanding of requirements for value-added foods, and marketing concepts. The curriculum included information on how to interpret federal and state requirements for food processing, inventory needs, and a full series of business

considerations. Peer-reviewed publications on food businesses based on flavored vinegar, candy, pickles, jams, dried fruits and herbs, and cut and frozen products were produced as background on Nevada state law and used as content for presentations and workshops (Gatzke, Allen, and Bishop, 2017; Gatzke, Allen, and West, 2016a,b; Roemer, Gatzke, and Allen, 2017a,b; West, Gatzke, and Allen, 2015a,b). Food-processing specialist Karin Allen taught in some of the workshops and helped extensively in curriculum development.

The three-workshop series involved 46 participants who reported a 90% average gain in knowledge on the target information areas (Table 1). The survey results indicated that 30 participants planned to take action in their business based on this workshop; 9 indicated that they were not sure, 0 would not take action and 4 did not respond to the question in the survey. Written comments indicated that participants felt they had gained knowledge needed to create successful businesses.

**Table 1.** Food Business Workshop Results

<b>Rate effectiveness of the workshop series (scale of low 1 to high 5)</b>	<b>N</b>	<b>Mean</b>	<b>Std. Dev.</b>
Value of workshop	42	4.76	0.47
Usefulness of educational materials/information	44	4.64	0.53
Helpfulness to begin your food business	44	4.57	0.63

<b>Please rate your understanding of the following topics before and after today's workshop (scale of low 1 to high 5)</b>	<b>N</b>	<b>Mean before Workshop</b>	<b>Mean after Workshop</b>	<b>Percentage Increase</b>
How to source locally grown ingredients	20	2.20	4.25	93%
The food regulations and where to acquire help to ensure I comply	20	1.70	4.50	165%
How to label my products and manage inventory	20	2.30	4.53	97%
What to consider to price and determine the cost of my food product	20	2.95	4.76	61%
The characteristics of Nevada's local food markets	20	2.40	4.38	83%
The value of business management and planning	20	2.80	4.55	63%
How to find the best business structure for my business	20	2.60	4.43	70%
The insurance coverage I should consider for a food business	20	2.30	4.43	93%

In addition to the workshops, 199 individuals attended five presentations provided at other events and conferences about starting a cottage food or commercial food business in Nevada, including over 100 Las Vegas Master Gardeners in late 2015, 21 participants at a specialty-food workshop in Carson City, 25 participants at the 2017 Nevada Small Farm Conference, and 53 participants at two presentations at the 2016 Nevada Small Farm Conference. At these last two presentations, participants believed that their knowledge increased by 60% ( $N = 26$ ) and 67% ( $N = 17$ ), respectively.

Beyond the workshops and presentations, discussions on value-adding were held with over 120 people at the 2016 University of Nevada Research Station Field Day.

### *Identify Markets for Value-Added Products in Nevada Natural Grocery Stores*

The requirements set by natural grocery stores for selling local food products have become more rigorous since the study was conducted. Regional natural food chains have changed their policies, adopting more complicated requirements for internal quality-control certifications for local products. During our study, the store contacts for sales moved to regional sales centers located in other states. As a result, personal contact and easy communication became more difficult.

The study results of local foods in natural grocery stores followed well-known market factors: Products made more convenient for eating were priced higher per unit weight; products made by locals and known by consumers bore the highest prices in their category; and unique products not found in regular grocery or big box stores were higher priced. During the study, stores started making more of their own labeled products, creating more competition for cut and prepared produce, salsas, and other locally-made products. Despite increased interest and demand for local foods, the number of local foods available for sale in natural food stores decreased by 20%–75%. Small, privately-owned stores, farmers' markets, and festivals currently provide the most significant opportunity for local food sales. Participants learned how to analyze the desires of target consumers, collect market information, and study potential market trends that aligned with their products.

## **Impacts**

The collaboration and research provided by this project have provided a much clearer path to move value-added local foods to Nevada consumers. Participants in this project made 28 products before the start of the project. At the end of the project, 4–10 months after the workshops, 31 additional new products were being sold by the small number of the participants reached for a post-survey. Participants indicated that they anticipate producing 102 products within the next year. The targeted income from the value-added food sales in the next year was indicated as \$0–\$200 by eight participants, \$2,001–\$10,000 by four participants, \$10,001–\$30,000 by two participants, \$30,001–\$50,000 by one participant, and over \$100,000 by two participants. Project participants estimated they would create \$304,800 in sales in the next year.

Local communities will gain jobs and income from the development of the local food industry. Sales of food locally can provide economic benefits due to the positive 1.3–1.9 multiplier effect (Thilmany McFadden et al., 2016). Using the common 1.3 multiplier effect for rural areas, new

value-added production could generate \$396,240 in the coming year. People will continue to learn from the curriculum, creating ongoing impacts.

If 10% (1/3 of the estimated 30% industry-standard food costs) of value-added business income of \$304,800 used specialty crops as an ingredient, charging a price 30% higher, then specialty-crop sales would result in \$100,000 extra in growers' pockets. Producers who participated in the project indicated that their income easily increased by the targeted 3% for their specialty-crop operations due to a captured value from less than premium crops or surpluses.

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