



Northeast Center for Food Entrepreneurship

Final Evaluation Report
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Executive Summary

The Northeast Center for Food Entrepreneurship (NECFE) was a five year collaborative food entrepreneur assistance and educational Center between Cornell University and the University of Vermont, and partnered with the Vermont Food Venture Center to serve the northeast region and beyond. NECFE utilized a multi-institutional and regional collaboration approach, with specific expertise and necessary facilities and resources, to provide technical assistance and education for businesses in the food industry. The overall goals of the Center were to support and sustain rural businesses and promote sustainable economic development of rural communities.

Evaluation Methodology

The Center for Rural Studies (CRS) at the University of Vermont (UVM) provided evaluation services for the NECFE grant, focusing on project process and outcomes. Process evaluation activities included staff focus groups and interviews. Outcome evaluation was collected through workshop evaluation surveys, client follow up surveys, and in-depth case study interviews. The quantitative and qualitative evaluation instruments were developed based on previous work conducted by the authors in the area of entrepreneurship development and standard evaluation methodology.

The NECFE Model

The evaluation of NECFE demonstrates that the NECFE model has five components that have contributed to the success of the project in assisting business creation, growth, and retention, product development and improvement, business sales, job creation, and skill and knowledge development. The five components include:

1. Multi-institutional and regional collaboration
2. Expertise
3. Facilities and resources
4. Services, and
5. Evaluation

Impact of NECFE Services

Data on the impact of NECFE services is based on two cross sectional surveys of 540 NECFE clients (approximately 15% of all clients). NECFE provides services primarily to business owners, but has also assisted other service providers, researchers, students, and other educators. Clients reported working with NECFE from one to 300 times with an average of six points of contact with staff. More than half (56%) of businesses served operate in a rural setting, with 35% based on a farm. Clients surveyed produced a total of 4,971 products and NECFE assisted clients to create 571 products. The greatest area of product improvement was in product safety, followed by the development of new products. Almost half of clients experienced growth in their business since they started working with NECFE (approximately ½ to 3 years). One third of those surveyed were established while working with NECFE and two-thirds were established prior. Ninety-six percent of businesses were retained from their intake with NECFE to the time of the survey.

Job Creation

More than half (54%) of businesses reported creating between one and sixty part-time jobs, with an average hourly wage of \$8.15/hr for an average of 16 hours a week. A total of 809 part-time businesses were reported. Almost half (49%) of businesses created between one and forty-one full time jobs, with one business expanding to provide 550 full time positions. Full time jobs pay an average rate of \$12.80/hr for an average of 48 hours a week. In total, 1,061 full time jobs were reported by clients. Based on data collected, the evaluators estimate that NECFE supported 1,625 businesses and assisted 812 of these to start while they were working with NECFE. Further, client businesses employed an estimated 1,440 new jobs that were established while the client was working with NECFE. An estimated 11,676 jobs were created by established businesses. In total, NECFE services created and supported businesses that employ over 13,000 people.

Business Sales and Income

Two thirds (69%) of owners reported that their business is generating enough income to cover expenses. Client sales reported during both survey periods ranged from \$82 to 10 million dollars. Overall, total client sales reported were approximately \$51.5 million. Sixty-one percent of respondents reported that their business provides a source of income, with 59% of businesses providing the owner with a primary source of income. Since clients started their businesses, 74% reported that their household income had increased or stayed the same because of their business and 36% saw a decrease. The average dollar amount of increase was \$41,600 and the average decrease was \$25,200. Thirty-seven percent reported an increase in physical assets, with the primary asset being equipment, followed by business property, a vehicle, and investment capital.

Impact on rural economic development in community:

Respondents discussed many different impacts that their businesses had on rural economic development in their local community. Thirty-seven percent of businesses reported supporting their local economy and 23% reported providing food or other products to the local community. Other responses include: an overall positive impact on the area community, community development, the preservation and rejuvenation of agriculture in their area, and the development of the food and agricultural industry.

Skills Gained and Satisfaction with Services

Clients reported major skill gains in product safety and sanitation, labeling and packaging, processing foods, and marketing and conducting market research. Major changes in client attitudes included increased self confidence and more business savvy. Eighty-one percent stated that NECFE provided them with access to information about food processing and 61% reported greater access to food processing technology. Eighty-seven percent agreed or strongly agreed that NECFE services met their expectations and provided information and assistance that they needed. Sixty-four percent agreed or strongly agreed that NECFE services aided in the success of their business.

Workshop Evaluation

Since the start of the NECFE grant, NECFE held 76 workshops reaching over 2,300 attendees. Topic areas covered through NECFE workshops include: cheese making, marketing and selling skills, product development (i.e. cheese, meat, sausage, jams and jellies), food safety and sanitation, and good manufacturing practices. A total of 489 workshop evaluation surveys were completed. Workshop evaluations showed that clients expressed high levels of satisfaction with workshops and materials covered. Between 95% and 97% of respondents felt that materials were helpful and appropriate, presenters were clear, and the workshop was useful for their business. Ninety-two percent thought that interactions and networking with others at the workshops were useful and 90% reported that the amount of allotted time for the workshop was sufficient. Overall, 97% indicated that the workshop met their expectations. Workshops are helpful for participants as they learned skills, gained hands on experience, learned from experts, had networking opportunities, and gained resources and referrals.

Client Case Studies

The NECFE case study interviews exemplify how NECFE services assisted businesses in a variety of ways, tailoring services to meet clients' unique needs. A common theme emerged as all interviewees praised the knowledge, expertise, and helpfulness of NECFE staff. All clients interviewed remarked that staff expertise and support was a major strength of NECFE. The case studies demonstrate how NECFE services assisted clients to start a business, improve the quality and safety of products, develop a marketing strategy, and obtain financing. As a result, most clients remarked that an aspect in their lives have changed, such as an increase in income or improved self-confidence. Further, clients mentioned the impact their businesses have had on their rural communities, including as providing employment, supplying products that fulfill a need or niche, bringing customers to other area businesses, and donating to local charities.

For questions or more information about this study, please contact Michele Cranwell Schmidt, Evaluation Coordinator, at (802) 656-0256 or Michele.Schmidt@uvm.edu.

Introduction

The Northeast Center for Food Entrepreneurship (NECFE) was a collaborative effort between Cornell University and the University of Vermont, which expanded the activities of the New York State Food Venture Center, the Center for Food Science at the University of Vermont, and the Vermont Food Venture Center. NECFE was funded by the Fund for Rural America/CSREES/USDA and the collaborating Universities for five years from January 2000 to December 2005. NECFE provided technical assistance and educational services to beginning and established businesses in the food industry to support and sustain rural businesses and promote sustainable economic development of rural communities in the United States.

The NECFE evaluation included both process and outcome components. Through the process evaluation of NECFE, CRS determined five essential components of the model Center. These components enable NECFE to provide clients with access to state-of-the-art food processing technology, information, and education. Through replication of this model, other facilities may establish a regional food entrepreneurship assistance and education center. Outcome evaluation examined the impact of NECFE services on clients and their businesses, through client surveys, workshop evaluations, and in-depth case study interviews. The following data provides the complete results of the follow up study.

Importance of Entrepreneurship in Rural America

Many researchers recognize that entrepreneurship is an important economic development strategy in rural America (Seymour 2001; Reagan 2002; Dabson and others 2003; Macke 2003). Many rural communities are faced with the challenges of low population size and density and geographic isolation, with communities characterized by a poorly educated and low-skilled workforce, weak entrepreneurial culture, and racial inequality. Further, public policy at the federal and state level tends to focus on large-scale agri-business interests, leaving little organized constituency to assist and advocate for rural entrepreneurs (Seymour 2001; Dabson and others 2003). Macke (2003) states that most rural communities have limited economic development programs and policies and few focus on business retention, expansion and the establishment of new business through entrepreneur education. Macke notes that assisting local entrepreneurs is crucial as they leverage local resources, improve availability and quality of local products, and build local networks. Reagan (2002) furthers this notion by stating that rural entrepreneurs create jobs, raise incomes and generate wealth, improve the quality of life and well being of community citizens and assist their communities to participate in the economy.

Current Strategies and Programs to Assist Food Entrepreneurs in the United States

Dabson and others (2002) conducted a study to map entrepreneurial activity and gather information on institutions, programs and activities that support this area in Rural America. The study concluded that four principles are necessary to enliven the entrepreneurial spirit in rural America. These principles include: community driven, regionally oriented, entrepreneur-focused, and continuously learning. The NECFE project model embodies these four principles. Further, Dabson and others identified two essential elements to

promote an entrepreneurial climate for success. These elements include having “anchor institutions”, such as Universities research and other groups through partnership, and an atmosphere where all entrepreneurs are welcome to receive services, regardless of client characteristics or motivation for their business. The NECFE project model also includes these two critical elements.

Extension specialists throughout the United States assist food industry entrepreneurs to develop their business, marketing and sales plans and assist with legal and regulatory compliances (Holcomb and Muske 2000). In addition, there are collaborative programs similar to NECFE in several areas of the United States that provide a “one stop” service for food businesses. The Food Processing Center at the University of Nebraska-Lincoln provides a two-phase program, where clients participate in a one-day introductory course, followed by a fee-based individual technical assistance services to assist entrepreneurs in launching their businesses (Burney 2001). The Food Innovation Research and Extension Center at Rutgers offers business, market, and product process development, as well as food safety and regulatory compliance assistance through specialists and University partners (Brennan, 2003). The Food Innovation Center at Oregon State University offers one-stop access to business and technical assistance for food producers, processors, marketers, and entrepreneurs. It operates through a partnership between Oregon State University and the Oregon Department of Agriculture (FIC, 2004).

Northeast Center for Food Entrepreneurship Services

NECFE provided technical assistance and education to entrepreneurs in the food industry to support and sustain rural businesses and promote sustainable economic development in these rural communities. Some clients who sought NECFE services were already established in the food industry and looking to improve and refine their product through continuing education. Other clients were in the start-up phase and needed technical assistance and education to determine product feasibility to develop and approve their product for market. NECFE’s mission was to provide comprehensive assistance to beginning and established food entrepreneurs thus promoting sustainable economic development of rural communities. The Center offered services, outreach, and research development opportunities in four critical areas: business and product process development, product safety, process/product technology transfer and product commercialization.

NECFE primarily served the Northeast region, with the majority of clients from New York, Vermont, Massachusetts and Connecticut. Other states served include Maine, New Hampshire, Rhode Island, and Pennsylvania. However, services have also been provided to those throughout the United States and abroad. Workshops have also been conducted in English and Spanish. Services were focused on agriculturally based businesses in rural communities. However, on occasion, food based businesses in suburban and urban areas were supported as well. NECFE provided educational materials, workshops, direct assistance, and referrals to appropriate organizations, in the following areas:

- Business Development and Entrepreneurship Training
- Strategies and Tools for Marketing
- Product Process Development
- Product Safety Evaluation
- Guidance in local, state and Federal Regulatory Compliance

- Linkages to Business Assistance and Potential Financing Sources
 - Referrals to Local Suppliers and Service Providers
- (Cranwell and others 2004b; Padilla-Zakour 2004)

NECFE staff was comprised of professionals with knowledge and expertise in all aspects of food entrepreneurship encourages and supports food business in the rural Northeast. Teaching, research and extension programs are integrated to support food manufacturing, business management and marketing activities of agricultural, value-added, food products. Through NECFE, entrepreneurs gained access to established Cornell and University of Vermont facilities such as:

- Analytical Laboratories for extensive product analysis and methods development.
- Fruit and Vegetable Technology Pilot Plant offers extensive equipment for a wide variety of processing, testing and scale-up operations.
- Vinification and Brewing Technology Laboratory is a pilot plant serving wine makers and brewers for collaborative research and development in winemaking and brewing.
- Food Processing and Development Laboratory includes a 10,000 ft² pilot plant equipped with a wide selection of pilot-scale equipment, available for use by clients on a contract basis.
- USDA Approved Meats Laboratory consists of a federally inspected abattoir for cattle, sheep and swine with chill coolers, freezers, meat processing and vacuum packing equipment.
- Dairy Pilot Plant equipped with cheese, yogurt and ice cream processing capabilities.

Methodology

The Center for Rural Studies (CRS) at the University of Vermont (UVM) provided evaluation services for the NECFE grant, focusing on project process and outcomes. Process evaluation activities included staff focus groups and interviews. Outcome evaluation was collected through workshop evaluation surveys, client follow up surveys, and in-depth case study interviews. The quantitative and qualitative evaluation instruments were developed based on previous work conducted by the authors in the area of entrepreneurship development and standard evaluation methodology (Krueger and Carey 2000; Posavac and Carey 2002; Rossi and others 2003; Cranwell and Kolodinsky 2003b, 2004; Caudle 2004; Goldenkoff 2004).

Process Evaluation

Process evaluation activities included staff focus groups held on an annual basis based on staff availability in October 2001, July 2002, and September 2003 (see Appendix A for questionnaire). Questions asked at the staff focus groups centered on project management, marketing, recruitment and enrollment strategies, client assessment, training, technical assistance and support, and collaboration with project partners. This information was collected to document how the NECFE project was carried out, provide a forum for staff to share stories and lessons learned, and determine ways to improve services. A staff focus group was also held in October 2003 to determine the key characteristics of the NECFE model (see Appendix B for questionnaire). Both sites attended all focus groups, either through in-person meetings or video or telephone conference technology. Process evaluation results and the NECFE model were shared with the NECFE Advisory Council at each annual meeting and through electronic communication.

Client Surveys

Two client follow up surveys were conducted during the grant to complete a cross sectional analysis of clients at two distinct points in time. The first survey was conducted between the months of November 2002 and June 2003 for continuous follow up during the second year of the NECFE grant. A total of 1,285 people were called and 299 surveys were completed for a response rate of 23%. The survey population was drawn from the NECFE database of people who received services from 2000 to 2002. The results based on a group of this size have a margin of error of plus or minus 5 percentage points with a confidence interval of 95 percent.

The second survey was conducted from March to September 2004. A total of 2,352 people were called 241 surveys were completed for a response rate of 10%. The survey population was drawn from the NECFE database of people who received services from 2002 to 2004 and those who were not able to be reached during the 2002 survey. The results based on a group of this size have a margin of error of plus or minus 6 percentage points with a confidence interval of 95 percent. The 299 clients interviewed at the first survey were also followed up with during the second survey to determine if they were still using NECFE services and changes in their business. A total of 57 clients were able to be reached for a response rate of 19%. This report presents the aggregate data of 540 clients collected in the

two points of time, which is about 15% of NECFE's all clients called. Where applicable, comparative data from 57 clients surveyed at two points in time is presented.

The surveys were administered at CRS, UVM using Computer-Aided Telephone Interviewing (CATI) software. Trained interviewers conducted the survey during daytime and evening hours and up to ten attempts were made on each telephone number. Survey participants were interviewed on the services they received and satisfaction, business development, job creation, income changes, skills, knowledge and attitude changes, and program feedback. The survey instrument was developed by CRS in collaboration with NECFE staff based on models of previous surveys conducted by CRS (Cranwell & Kolodinsky, 2003, 2003b, 2003c, 2004) and other researchers (Clark & Kays, 1999; Klein, Alisultanov & Blkair, 2003). This report presents the results from this survey and estimates made from the survey data as indicated. Univariate and bi-variate analyses were carried out using the Statistical Package for the Social Sciences (SPSS) and Microsoft Excel. Throughout the analysis presented in this report, the number of respondents for each question (n value) fluctuates as irrelevant questions were skipped or respondents refused to answer a question. More information or copies of the surveys can be obtained by contacting Michele Cranwell at 802-656-0256 or mcranwel@uvm.edu.

Workshop Evaluation

A standardized workshop evaluation form was developed by CRS, with assistance of project staff (see Appendix C for the Workshop Evaluation Form). This evaluation form was presented at the completion of NECFE workshops. Completion of the evaluation form was highly encouraged; however it was optional for participants. Since the start of the NECFE grant, NECFE held 76 workshops reaching 2,367 attendees. Topic areas covered through NECFE workshops include: cheese making, marketing and selling skills, product development (i.e. cheese, meat, sausage, jams and jellies), food safety and sanitation, and good manufacturing practices. A total of 489 workshop evaluation forms were completed.

In-Depth Interviews

In-depth interviews were conducted with nine NECFE clients to gather qualitative information on how NECFE services assisted their businesses (see Appendix D for survey instrument). NECFE staff provided CRS with 18 client names and contact information, representing all of the geographic areas served. Clients were selected based on their ongoing or significant relationship they had with NECFE to start or improve their business or products. Clients were initially contacted by the primary NECFE staff with whom they worked to invite them to participate in the interview. A total of nine case study interviews were conducted based on the availability and willingness of participants to complete the survey. Interviews were completed at the CRS from January to December 2004. Trained interviewers completed up to ten attempts on each number, calling at a variety of times throughout the day. Clients represented the major states served by NECFE, as two were from Vermont, two from New York, two from Massachusetts, two from Connecticut, and one was from Maine.

NECFE: Project Implementation

Throughout the NECFE grant, CRS conducted focus groups with NECFE staff to document the project process (how NECFE services were implemented), determine how the program and services has changed and grown over the past year, and determine best practices. The following summarizes the outcome of these discussions.

Strategies in Advertising NECFE Services

NECFE staff utilized various marketing and advertising strategies for services. Since the establishment of NECFE, each site became more visible (specifically the UVM Center for Food Science as a newer establishment) and used strategies of networking and collaboration with outside agencies to advertise and diversify services. Major advertising strategies included:

- Word of mouth
- Related agencies including the Vermont Food Venture Center (VFVC), New York regulatory agencies, New York Cooperative Extension
- Personal networking/site visits
- Invited guest seminars.
- Distribution of over 3,000 of the *Small Scale Food Entrepreneurship: A Technical Guide for Food Ventures*
- The NECFE website and continual upgrading with online information, fact sheets, and pictures. Receive approximately 10 requests a week for fax sheets and the Resource Book
- Publication of quarterly newsletter, *Venture*, alternating authorship between each site.
- Local newspapers
- Diversified location of workshops throughout the New England area
- Specialty and Trade shows throughout New England area - e.g. New York Farmers Direct Marketing Conference, Vermont Specialty Food Association, Greenfield Massachusetts Community Development Center, Northeast Organic Food Association of Vermont annual conference, Barre Farm Show, Northeastern Institute of Food Technologists Conference. At these shows, staff display marketing brochure, pictures, services, etc to spread the work on NECFE services.
- Advertise NECFE in local resource guides, such as the Vermont Small Business Resource Guide and www.lthinkvt.com.
- UVM hiring of consultant, Jeff Roberts, to act as a NECFE liaison to other businesses and organizations in the food industry field.
- Out of state federal regulatory agencies refer clients to NECFE

Client Inquiry and Referral

NECFE staff consistently fielded client calls using the database, assessing needs, and making appropriate referrals. Several strategies were utilized so clients were more prepared for additional follow up or to take next steps.

Inquiry:

- Staff send the resource guide, *Small Scale Entrepreneurship: A Technical Guide for Food Ventures*, and marketing brochure to all clients upon contact.
- Clients are also sent specific materials based on their inquiry.
- VFVC sends the NECFE Resource Guide to clients before they come for their initial visit to the Center so they are more prepared.
- Send out the Marketing Resource Questionnaire so clients begin thinking about market research needed for their business or product.
- New specific form used for Schedule Process

Referral:

- Continue to refer clients to UVM or Cornell depending on need.
- If referring clients to other services, continue to search database and provide a list of company names appropriate - i.e. lab analysis, supplies, suppliers of packaging or ingredients, materials for lab, and co-packers.
- If out of state, refer clients to their state Extension Service and instruct to call NECFE back if do not get appropriate response.

Client Follow Up

NECFE staff followed up with clients depending on services received. Specifically, NECFE staff follow up after providing marketing and business services, however staff often do not after technical assistance because it is not always appropriate.

- Marketing staff followed up with clients both immediately and two to three months after contact. These follow ups clarify information and answer additional questions.
- Staff also have frequent email conversations to answer further questions.
- Staff send the schedule process packet to clients as a resource and follows up with them to see if they have questions.
- Workshop sponsors send out a certificate of completion and a "thank you" to participants.

Collaboration

UVM and Cornell had a positive and beneficial collaboration through the NECFE grant. The teams were complimentary and provided resources for one another with differing expertise. The relationship between the centers changed during the course of the grant as each site matured, specifically the growth of the newer UVM site. At the beginning of the grant, staff had frequent contact with each other via telephone and email. They also had regular meetings either in person or through video-teleconferencing technology. However, as the two sites matured, they had less frequent contact and operated more autonomously compared to the first year in operation. Even with this growth, the sites continued to share

resources and expertise and provide a source of referrals. NECFE also held annual Advisory Council meetings, alternating the site locations.

Benefits of Collaboration

UVM and Cornell benefited from the NECFE collaboration because the unique position, strength, experience, and expertise that each site had to offer. They also benefited from the increase in collaborative efforts with external agencies.

Benefits of UVM/Cornell Collaboration

- UVM is a small University and receives a lot of local and political support, which is beneficial to the collaboration.
- Cornell is a beneficial partner for UVM because of their facility, technical expertise, and credibility as a long standing Center. UVM could not justify funding for a Center this size without collaboration with Cornell.
- No political boundaries or "territorial" issues between the two sites.
- Collaboration broadens the networking coverage for each site.
- Positive collaboration example - Denny Shaw's assistance and expertise in working with UVM and the Vermont State Agriculture Department for the Meat and Livestock Industry.

Benefits of External Collaboration

- Benefit from technical expertise from other businesses and other Land Grant Universities. Provide expertise and speakers and workshops and seminars.
- Enhances NECFE services by providing expertise from outside of UVM/Cornell.

Indicators of Growth throughout the NECFE Grant

There are several indicators of NECFE growth throughout the grant, based on interviews with staff and evaluator observations. These include: increased networking and collaboration with external resources, new and enhanced services available, and positive changes in public perception and awareness of NECFE, client inquiries, and collaboration between UVM and Cornell.

Increased networking and collaboration with external resources

- Both sites had a significant increase in the number of workshops and seminars presented in conjunction with another organization.
 - Cornell partnered with New York Institute of Culinary Education and has conducted workshops in NYC and Boston.
 - Cornell co-sponsored a conference with Rutgers University
 - Cathy Donnelly, Olga Padilla-Zakour, and Brian Norder presented at the Kitchen Incubators Conference at Rutgers University
- Both sites had a significant increase in the number of networks and collaboration with others in the field.
 - Both sites worked with others in collaboration to launch future efforts - i.e. Policy Conference with Shelburne Farms, NECFE/Vermont Food Venture

Center, CDAE/CRS, and Champlain College Initiative, other University Departments

- Established link with New Hampshire Food Science Department.
- Both sites established a notion of a continuum of services outside of UVM and Cornell through collaboration with others such as the VFVC, co-sponsoring of workshops with the Vermont State Agriculture Department and Specialty Foods Association, and Cooperative Extension Service. Clients benefit because of the opportunity for expertise outside of their area.

New and Enhances Services

- New content/topics for workshops based on experience and feedback received
- Workshops held in Spanish
- Test kitchen in Vermont through collaborative effort
- Updated NECFE website with a list of small co-packers in each state based on need identified.

Positive Changes in Public Perception and Awareness of NECFE

- NECFE was initially perceived as a threat to others within Vermont. At the end of the grant, NECFE was viewed as a resource for clients with technical issues.
- NECFE fulfilled a niche of scientific and technical assistance
- NECFE provided services and assistance to other organizations and agencies (state and private) in addition to individual clients and businesses. NECFE services fill a gap in technical assistance, i.e. HACCP, Regulatory Agencies and food safety, Meat and Livestock Inspection Division, Technical assistance to Farmstead Cheesemakers,
- NECFE staff observed an increased awareness and presence of their services in New England.

Positive Changes in Serving Inquiries and Making Referrals with Clients

- Clients called with inquiries for a specific person
- Staff had more confidence in responding to client inquiries
- Staff observed an increase in client inquiries for marketing services/resources
- Staff observed an increase in the number of referrals through networking and collaboration between sites as well as other service providing and state organizations.

The NECFE Model: Five Essential Components

Interviews and focus groups with NECFE staff and advisory council members led to the development of five essential components of the NECFE program for a model Center. These include: 1) multi-institutional and regional collaboration, 2) expertise, 3) facilities and resources, 4) services, and 5) evaluation. The fifth component of evaluating the program is designed to ensure program accountability based on specific criteria and indicators of success and continuously feedback back to each component to improve services. Each component of the model builds on the preceding and one another, resulting in a complete Center. Each component of the model is discussed in detail below. The model is depicted in Figure 1.

1) Multi-Institutional and Regional Collaboration

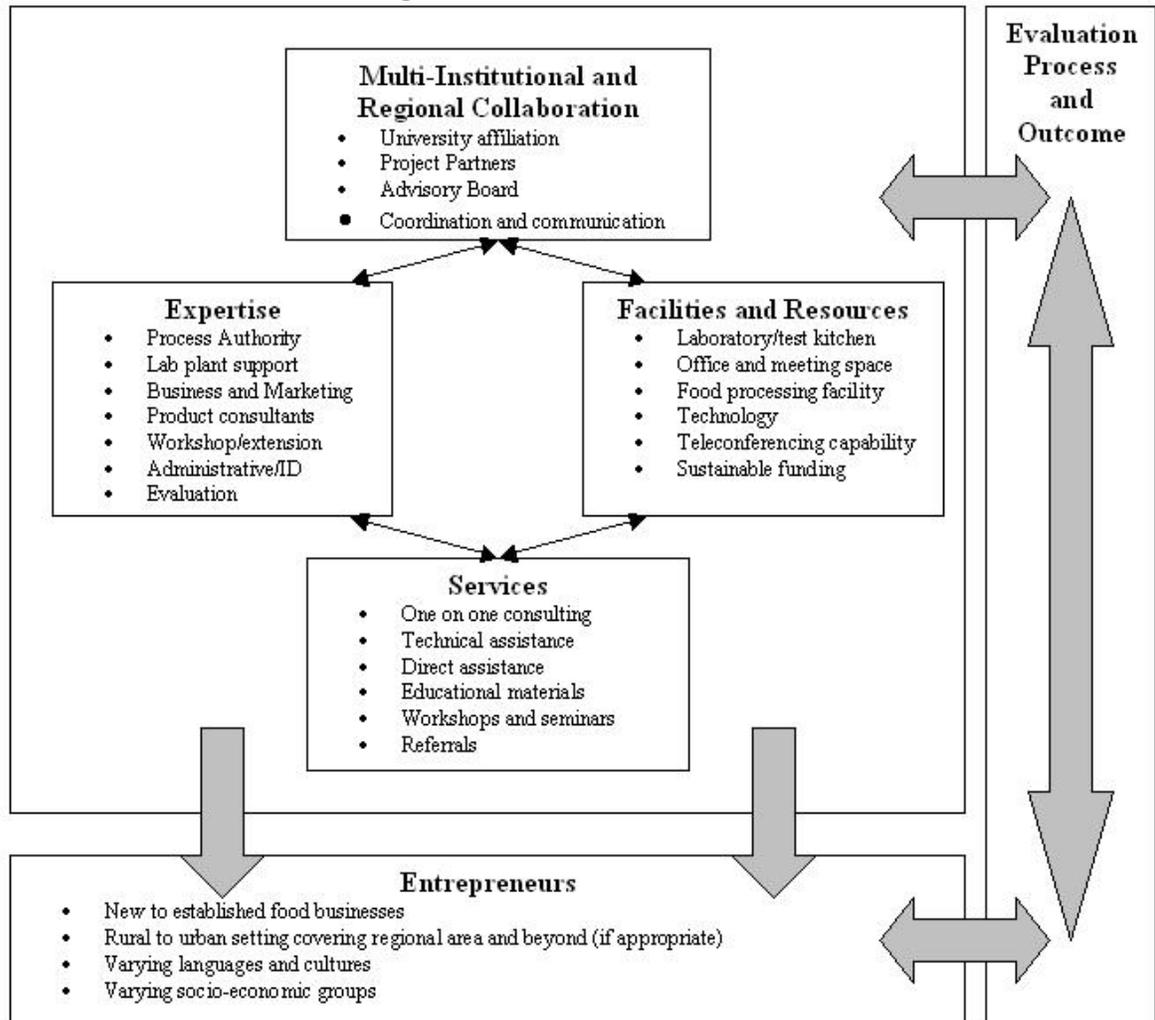
The first essential component of a model Center is to have a multi-institutional collaboration. The NECFE project is based on a multi-institutional model, which combines the resources offered by two Universities as the core educational and service facilities, as well as resources from a successful kitchen incubator service. NECFE staff feel that this multi-institutional model is imperative for long-term success for several reasons. The University affiliations provide the scientific knowledge and credibility to assist food entrepreneurs, particularly related to food safety and compliance with federal regulations. Concomitantly, the kitchen incubator site provides access to state of the art facilities and hands on learning for product research and development. The multi-institutional model should include a regional collaboration to effectively reach the service area, and include project partners and the Advisory Board. Overall, coordination and communication through specific personnel, time, and technology are essential to making the entire collaborative work.

Regional Collaboration

The second major component is to have a regional collaboration. In addition to being a multi-institutional model, the NECFE project is a regional collaboration with two main University-based sites and ancillary project partners that serve the Northeast and connect entrepreneurs to regional and local resources. In order for the regional concept to function properly, the NECFE project recommends that each state within a center's service region should be represented by a group of professionals who are supported by the main centers. Furthermore, at least one of the main partners should have the expertise and experience of an established facility, to assist their start-up partners in establishing their facility and services. Collaboration with partners at a regional level is important for meeting client needs as it serves to:

- Provide a seamless network of services for clients;
- Provide a large resource for different issues and questions;
- Provide multiple points of entry for entrepreneurs to the resources offered;
- Enable the development of various materials and publications for education;
- Connect entrepreneurs, state and federal regulatory agencies, and agencies involved with economic development; and
- Refer clients to local support services and programs in local area.

Figure 1. The NECFE Model



Project Partners and Advisory Board

To effectively serve clients as a multi-institutional and regional model, the core sites should establish project partners that are located in each state that is represented by the region served. Specific project partners include, but are not limited to:

- Outside consultants
- Food Processing Authorities
- Investment groups
- Local service providers
- State officials and agencies

Furthermore, the center should have an appointed Advisory Board made up of individuals with a variety of expertise from the geographic region served. The Advisory Board provides oversight of the center and lends to project improvement and cohesion.

Coordination and Communication

Collaboration across many institutions, including project partners and Advisory Board members, and over a broad geographic region requires personnel to coordinate services and staff to effectively and efficiently serve the geographic region. The Coordinator of the collaboration enables the center to bridge geographical and territorial boundaries and bring services and programs to individuals from all states served. Collaboration also requires communication among all personnel at a regular and frequent basis. Communication among staff occurred at the group and individual level through electronic mail, telephone conversations, face-to-face and videoconference meetings. Furthermore, a center should meet on an annual basis with staff and the Advisory Council to review accomplishments and services, and determine project adjustments based on lessons learned in the center operations. In addition or in place of the annual meeting, center staff should meet at least every two years to review skill sets and expertise and recommend additional training to ensure quality service, and determine if there is a need to shift services in another direction based on client demand.

2) Expertise

The second essential component is to have the appropriate expertise from project partners and other collaborators across the region, to operate the Center. The NECFE team of professionals from New York and Vermont has expertise in all aspects of food entrepreneurship, specifically product process authorities, business & marketing consultants, and a meat products consultant. In addition, teaching, research and extension programs are integrated to support the development and success of agricultural, value-added, food products produced by NECFE clients. Staff identified that it is crucial for a center to have a core group of experienced and knowledgeable professionals in the following specific areas.

- A Process Authority is needed, who has the knowledge of food science issues in the areas of thermal processing for acid and acidified foods, refrigerated foods, fermented products, dairy products, dried products, meat, and seafood.
- A Lab/Pilot Plant Support is needed to conduct necessary lab analysis and food processing for the research and development of clients' products.

- A Business and Marketing Coordinator is needed to assess needs and provide guidance and referrals in this area of business development.
- A Product Specific Consultant, such as meat, cheese, or jams and jellies, is needed to assist clients with specific product needs.
- A Workshop/Extension Coordinator is needed to coordinate and implement workshops and educational sessions, including inviting guest lecturers, securing facilities, registering clients, and preparing educational materials.
- An Administrative and Information Technology Support person is necessary to provide clients with their initial contact, assist in data collection and management, record keeping, and communications. This person should also be proficient with technology to maintain a client database and center website.
- A third-party Evaluator is required develop and implement methodology and instruments to evaluate the Center in reaching stated goals and ensure Center accountability.

Staff Characteristics

Interviews with staff indicate that staff of a model food entrepreneurship assistance and education center should possess specific characteristics. Staff should be highly skilled with the necessary credentials to carry out their specific role within the center. Personnel who will focus on educating clients should possess strong teaching skills and carry out effective, hands-on learning. Staff should also be committed to the project and assisting clients to succeed. Given that the model is based on collaboration between two or more institutions, staff must be able to share resources and expertise, have regular communication with one another at all levels, and work well both as a team and individuals.

3) Facilities and Resources

The third essential component is to have collaborating institutions and project partners with appropriate expertise to provide the necessary facilities and resources to operate the Center. In order for a food entrepreneurship assistance and educational program to function, it requires specific facilities and a variety of resources to best serve entrepreneurs in the food industry. A University based facility using the multi-institutional model is a crucial element to provide needed expertise and resources, such as office and meeting space, technology, laboratories, a test kitchen, a pilot plant, and a food processing facility. Project partners, such as an incubator or shared-use kitchen facility, also provide clients with the equipment needed for product research and development.

Other resources are also required for a model Center. Adequate and sustainable funding over time is needed to fund Center operations and sustain the project for continued services. A center should be work to obtain a sustainable funding source through federal and/or state programs. The ideal situation would be for the host universities to adopt the center and fund the programs. Technology is also needed, such as computers, servers, Internet access, and software. This is needed to develop and maintain databases that collect and track client and referral source information. The databases should be user-friendly and networked so all staff may easily access them and input the necessary information to track client progress. Technology is also needed to host a Center website. This web presence is crucial as it provides clients instantaneous access to services, information, and resources. Further, a regional collaboration requires teleconference capability so that staff may have regular and

frequent communication with partners who are separated geographically. This technology may also be used for workshops and seminars.

4) Services

The fourth essential component is to provide the necessary services, such as technical assistance, education, and referrals, to assist clients in business and product development, once project partners and collaborators located across a broad geographic region, with specific expertise, facilities, and resources are established. Based on the NECFE experience, a successful Center needs to combine technical, business, academic, and "real world" expertise from the main sites and project partners, to build the depth and strength of services and educational programs offered. Technical assistance and education are at the heart of the NECFE center, forming the bulk of staff operation. Technical assistance and education should be provided through various levels of client interaction, to meet a variety of needs. Ultimately, when communicating with clients, staff need to be clear about the Center's capabilities and refer clients out to other resources as appropriate. Main client services, which are discussed in detail below, include:

- One on one consultation and technical assistance;
- Client education
 - General and specific direct assistance to basic inquiries;
 - Distribution of educational materials;
 - Group learning environment through workshops and seminars; and
- Referrals to external and local resources.

One on One Consultation and Technical Assistance

One on one consultation and technical assistance are important services for a model Center to provide for assisting food entrepreneurs in developing and refining their product and business. Services offered should include, but are not limited to, business development and product process development, product safety and evaluation, marketing and commercialization, and support to other service providers.

Business and product process development. This is the primary area of technical assistance that clients in the start-up and developmental planning phase of their business seek from NECFE. At initial contact, NECFE provides start-up clients with educational materials and information needed to assist them in evaluate the feasibility of their business and/or intended product. Business development assistance is also provided at this time, which may include a review of the client's business plan, market viability, and referrals to various workshops and local business resources. Clients with an established business also contact NECFE for this type of assistance if they are interested in refining their product or expanding their product line.

Product safety and evaluation. Product safety and evaluation is a major component of technical assistance and education for a model Center. NECFE assists all clients, regardless of business stage or size, with improving product safety to ensure regulatory compliance. NECFE educates clients in all aspects of food processing through workshops, the resource guide, fact sheets, the website, and newsletter. NECFE also provides clients with individual consultations and technical assistance in food safety and processing with a focus on regulatory compliance. Main areas of assistance include: initial product technical feasibility;

schedule process review; assistance with FDA filing requirements; compliance with state regulations; site visits and facility evaluation for HACCP; and lab analysis, with a minimum of pH and water activity analyses.

Strategies and tools for product marketing and commercialization. Another major component of a model Center services is assistance in developing strategies and tools for product marketing and commercialization. NECFE business specialists provide these services through packaging and labeling recommendations, marketing and selling assistance, and product logistics and distribution. NECFE staff also connect entrepreneurs with possible funding sources to provide capital for product development and marketing.

Services to other service providers. NECFE has also provided technical assistance and training to other service providing and State agencies to increase the depth and effectiveness of their own agency offerings.

Client Education

Client education, an inherent part of technical assistance, is another important service for a model Center to provide entrepreneurs. NECFE provides clients with general and specific direct assistance to assist with inquiries. NECFE staff also developed a variety of educational resources and publications and workshop curricula to serve clients based on their needs and specific inquiries.

General and specific direct assistance. NECFE provides clients with a toll free hotline that directly connects clients to staff at Cornell University, to provide general and specific direct assistance. Based on the assistance needed and expertise required, Cornell staff will either respond directly or refer clients to other staff persons at Cornell or UVM, or other project partners or resources. Both Cornell and UVM also have local contact numbers for clients to call for assistance.

Publications and educational material. The most comprehensive of materials developed by NECFE staff is the resource guide, *Small Scale Food Entrepreneurship: A Technical Guide for Food Ventures* (NECFE, 2002). This is a 108-page guide sent out to all clients upon their first contact with NECFE staff, which was developed in the second year of the NECFE grant. Since the inception of the grant, over 3,000 copies of the *Guide* have been printed and distributed (Padilla-Zakour, 2004). Of those who participated in the follow-up survey, 84% (151) reported that this guide was useful to very useful (Cranwell and Kolodinsky 2003b). This guide was developed with the expertise of NECFE staff, with the idea that individuals and businesses in the food industry could easily use and apply technical information to start their business or improving their business and/or product. Other widely distributed publications that are developed by staff expertise include:

- Nineteen Fact Sheets - One-page informational sheets on a variety of Specialty Food Business issues.
- *Food Processing: A Guide to Creating a New Business*- The Food Processing Manual covers all aspects of the Specialty Food Business in detail.
- *Venture Newsletters* – A quarterly newsletter that discusses new technology and current issues in the food business industry, NECFE evaluation, and profiles of NECFE clients.

Group learning environment through workshops and seminars. Hands-on training and skill development in a group-learning environment through workshops and seminars are other important parts of client education and critical services to be provided by a model Center. For workshops to be the most effective, funding is needed to support workshop location, outside expertise, and materials. Since the start of the NECFE grant, NECFE has held 65 workshops reaching 2,087 attendees (Padilla-Zakour, 2004). Topic areas covered through NECFE workshops include: cheese making, marketing and selling skills, product development (i.e. cheese, meat, sausage, jams and jellies), food safety and sanitation, and good manufacturing practices. Ninety-seven percent (447) of clients who completed the NECFE workshop evaluation survey reported high satisfaction levels with the workshop and information presented. Clients reported that the most helpful aspects of the workshops were: gaining a specific skill or knowledge (such as state regulations, recipe development, and safety and sanitation information), hands-on learning, networking and resources, learning from experts, and referrals (Cranwell and Kolodinsky 2003c).

Referral Services

Referral service is the final major component to the service aspect of a model Center. A center needs to coordinate referrals and joint work with other service providers and project partners. Of those surveyed in the follow-up NECFE evaluation, 86% (109) reported being satisfied to very satisfied with referrals made. The top referral sources include: other service providers, other consultants, ingredient or material suppliers, and co-packer and production (Cranwell and Kolodinsky 2003). Referrals should be made in the following areas if expertise is not available within the center:

- Ingredient, packaging, nutritional and other labeling, equipment, graphic designers and other suppliers;
- Product development/food chemistry services, sensory evaluation;
- Shelf-life testing and microbiological analysis;
- Commercial laboratories;
- Shared use kitchen facilities;
- Co-packers; and
- Suppliers/distributors.

5) Evaluation and Accountability

The fifth essential component is to evaluate the center for accountability purposes and continuous improvement of services, based on specific criteria. CRS at the University of Vermont conducted a process and outcome based evaluation, through the use of staff and Advisory Council interviews and focus groups, workshop evaluations, follow-up interviews with clients, and in-depth interviews for client case studies. Outcome variables measured include: business establishment, growth, and retention; job creation and employee benefits; business financing; employment income and owner benefits; sales and assets; skills, knowledge and attitude changes; services received and satisfaction; and client and business characteristics. Process evaluation focused on how services are carried out, client referral process, partner collaboration and communication, project impact, and the essential components of a successful model Center, based on the strengths and weaknesses of NECFE (Cranwell and Kolodinsky 2003).

NECFE Client Survey Results

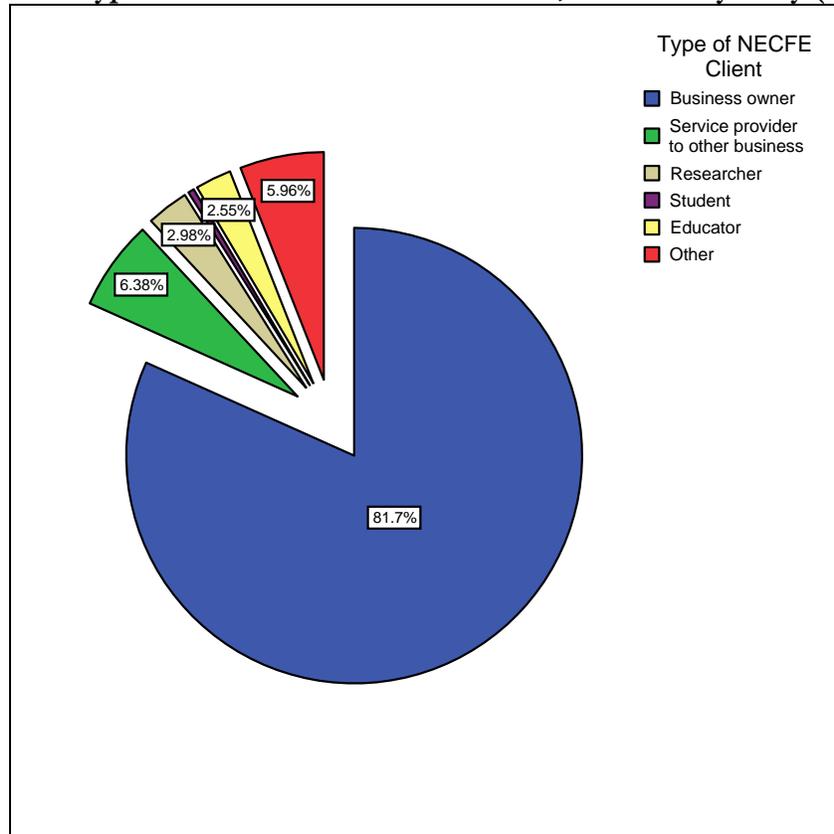
Business Characteristics

The following data summarizes the characteristics of NECFE client businesses. This includes type of client and business, business setting, business sales location, products, product and business improvements, type of production, major reasons why the client started a business and a food based business, if this was a career change for them, and reasons for their initial contact with NECFE.

Type of Client who Contacted NECFE:

Of those surveyed in 2004, the majority of clients (82%; 192) served were business owners (Figure 2). However, there were other types of clients who sought out NECFE services. Six percent (15) of clients were service providers to other businesses, 3% each were researchers (7) or educators (6) and 1 person was a student. Other clients include: potential entrepreneurs, personal interests, state agency, commercial kitchen owner, Extension Specialist, and journalist.

Figure 2. Type of Clients that NECFE Served, 2004 Survey Only (n=235)



Type of client business:

- 53% (224) of respondent businesses are owned by women (n=424)

- 35% (148) are a farm based business (n=419)

Business setting:

- 56% (194) operate in a rural area
- 26% (89) suburban
- 25% (86) urban

n = 347

Business sales location:

The four major locations where respondents reported selling their products are: specialty food stores (48%), farmer's markets (46%), farm stand (39%), and mail order (35%).

- Specialty food store (42%; 139)
- Farmer's market (38%; 127)
- Farm stand (34%; 114)
- Mail order (33%; 109)
- Grocery store or supermarket (31%; 103)
- Website/online (29%; 97)
- Natural food store (28%; 95)
- Cooperative (26%; 88)
- Food service (23%; 77)
- Broker distributor (19%; 64)
- Other (31%; 104)

n = 335

Client products:

- Clients produce from 1 to 3500 products, average of 18 products, median of 4 and mode of 1 product (n=280)

- ***NECFE clients surveyed produce a total of 4,971 products.***

- Of the clients who were surveyed in 2004, 37% reported that NECFE assisted them in the development of products. Clients reported receiving assistance with between 1 and 28 products with an average of 4 products and median and mode of 1 product.

- ***NECFE services assisted clients to create 571 products for clients surveyed in both 2002 and 2004.***

- Seven of the clients surveyed in both 2002 and 2004 who reported producing products were asked the number of products they produced in 2004 compared to 2002. Two clients increase the number of products produced, four decreased the number and one client's production stayed the same.

Product and business improvements:

In 2004, additional questions were asked of clients who produced products. Clients were asked if their business had improvements in various areas since they started working with NECFE. They were then asked to rate how helpful NECFE was in the achievement from 0

to 10 with 0 being not at all helpful and 10 being extremely helpful. Table 1 presents the percentage of clients who reported the improvement and the average, median, and modal rating of the degree NECFE assisted in the improvement. Overall, almost half of clients (45%) with products indicated having improvement in their product safety with most reporting that NECFE was extremely helpful in improving product safety (average of 8). NECFE was also most helpful in assisting clients add product lines (ave 6) and develop new products (ave 5).

Table 1. Areas of improvement since client started working with NECFE and degree NECFE helped from 0-10 (n=116)

Area	% Reported Improvement	Average Rating 0-10	Median Rating	Mode Rating
Product safety	45% (52)	8	10	10
Development of new products	28% (33)	5	6	0
Addition of product line	22% (25)	6	8	10
Expanded product distribution	35% (41)	3	0	0
Expanded market base	28% (33)	3	0	0
Expanded client base	28% (32)	3	0	0

Type of production:

- Produce own product (70%; 223)
- Hire a co-packer (19%; 62)
- Both (6%; 18)
- Neither (6%; 18)

n = 321

Major reasons why the respondent started the business:

The four most commonly given reasons for why respondents started their business are: hobby or pleasure (34%), voluntary career change (23%), provide a source of additional income (19%), and to develop a niche market (12%).

- Hobby or pleasure (34%; 117)
- Voluntary career change (23%; 80)
- Source of additional income (19%; 65)
- Develop a niche market (12%; 41)
- Source of primary income (11%; 39)
- Develop value added products (10%; 34)
- Diversify product line (6%; 21)
- Self-employment, work independently, make own hours (4%; 15)
- Retired (4%; 14)
- Involuntary career change (4%; 12)
- Food security in community (3%; 10)
- Generations of farmers in family/family business (2%; 7)
- Preserve farmland (2%; 7)

n = 347

Major reasons why the respondent started a food based business:

The four main reasons why respondents started a food-based business include: hobby or pleasure (42%), they are interested in food processing (29%), already had a career in the food industry (20%), and they live on a farm (16%),.

- Hobby or pleasure 42% (146)
- Interested in food processing 29% (99)
- Already have career in food industry 20% (69)
- Live on farm 16% (56)
- Additional income 12% (44)
- Food security/healthy food for community 8% (28)
- Educational background in food business industry 7% (23)
- Farming is a family business 4% (14)
- Grow more produce than family can consume 4% (13)
- Niche market 2% (7)
- Opportunity arose 1% (5)

n = 347

Career change:

- 61% (183) of those in business indicated that this food business is their second career.

Reason for initial contact with NECFE:

Respondents were asked to indicate their main reasons for their initial contact with NECFE. Responses were recoded into the major categories presented in Table 2. Clients reported that their main reasons for seeking services were to get specific information relating to their business or product, to attend a workshop or seminar, to get help with their business start-up or expansion, to develop a product or recipe, and to test their product and use shared kitchen facilities made available by NECFE and partner agencies

Table 2. Reason for Initial Contact with NECFE (n = 460)

Reason	(%) n
Develop product	22% (100)
Information	18% (84)
Start business	16% (72)
Attend workshop	9% (42)
Access equipment	6% (29)
Learn about regulations	6% (28)
Develop marketing skills	5% (23)
Schedule process	4% (17)
Technical assistance	4% (17)
Referred by source	3% (15)
Get expert advice	3% (13)
Looking for resources	3% (12)
Product testing	2% (8)
Expand product line	2% (8)

Research	1% (6)
NECFE Website	4
Nutritional analysis	3
Product packaging	3
Obtain Resource Guide	2
HACCP	2
Recipe development	2

Continued use of NECFE services

The 57 clients who were surveyed at both points in time were asked if they continued to use NECFE services since the first survey. Twenty-one percent (12) of the 57 clients had continued to use NECFE services since their initial interview and 79% (45) no longer needed NECFE services. Table 3 presents the reasons given why the clients continued to work with NECFE. Clients who continued to use services did so because they were a reliable source of information and resources or were working on developing or refining a product. Most of the clients who did not continue to use NECFE do so because they no longer needed the services for their business or their business became inactive or closed (Table 4).

Table 3. Reasons for continued use of NECFE services (n=12)

Reasons	n
Reliable source of information/resources	4
New product development	2
Artisan cheese	1
Consultation	1
Product refinement	1
Recipe adjustment	1
Technical assistance	1
Use of shared kitchen	1

Table 4. Reasons for no longer using NECFE services (n=45)

Reasons	n
No longer needed services	22
Business not active	18
Too busy	3
Did not pursue	2
Not in service area	1

Business Growth

This section summarizes clients' business status when they first contacted NECFE compared to their status at the time of the survey. It also reviews the levels of growth experienced by clients businesses.

Business status at initial contact with NECFE (Figure 3a):

Of all the businesses surveyed in 2002 and 2004, 45% (215) of survey respondents had a business in a stage from start-up to expanded and 47% (223) were in the exploration phase. In addition, 7% did not have a business and were not planning on starting one and one person had closed their business. The breakdown of responses is presented below.

- 7% (37) did not have a business and did not plan to start one
- 47% (223) were in the planning phase
- 19% (89) were in the start-up stage
- 7% (32) had a stable business that was not yet growing
- 18% (85) were in the process of expansion
- 2% (9) had an expanded business
- .2% (1) had a business that was closed

n = 476

Business status at time of survey (Figure 3a):

At the time of the survey, 63% (294) reported having a business, 27% (125) were still in the planning phase, and 1.6% (9) had decided to sell or close their business. The breakdown is as follows.

- 9% (42) did not have a business and did not plan to start one
- 27% (125) were in the planning phase
- 16% (75) were in the start-up stage
- 14% (66) had a stable business that was not yet growing
- 27% (125) were in the process of expansion
- 6% (28) had expanded their business
- .6% (3) sold their business
- 1% (6) closed their business

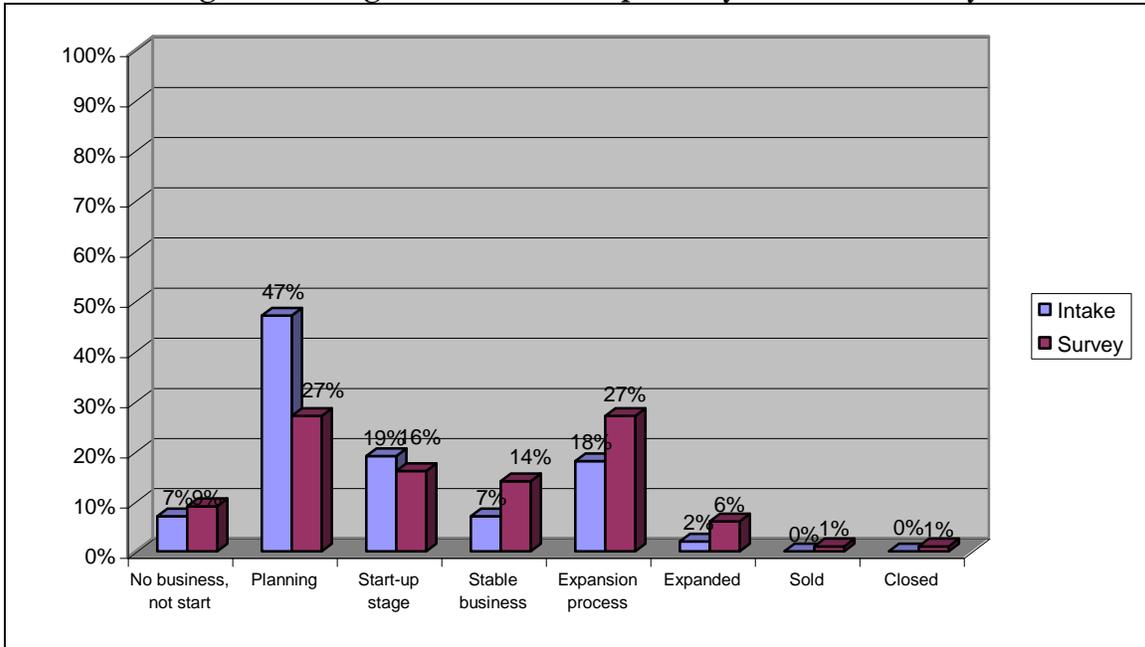
n = 470

Business start-up status:

- 33% (96) started their business while working with NECFE
- 67% (198) started their business prior to working with NECFE

n=294

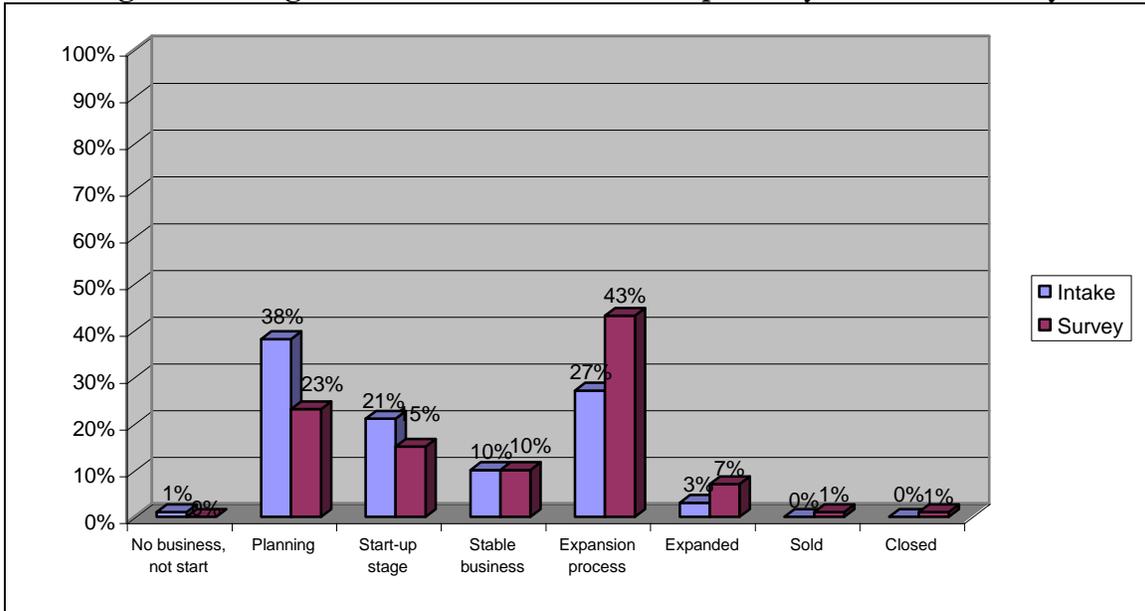
Figure 3a. Stage of business compared by intake and survey



Change in farm based businesses (Figure 3b):

Examining farm-based businesses as a sub-section of the survey respondents (n=148), 38% were in the planning process when they first contacted NECFE compared to 23% in the planning process at the time of the survey. Further, 27% were expanding at intake compared to 43% who were expanding at the time of the survey.

Figure 3b. Stage of farm-based business compared by intake and survey



Growth in clients business (Figure 4):

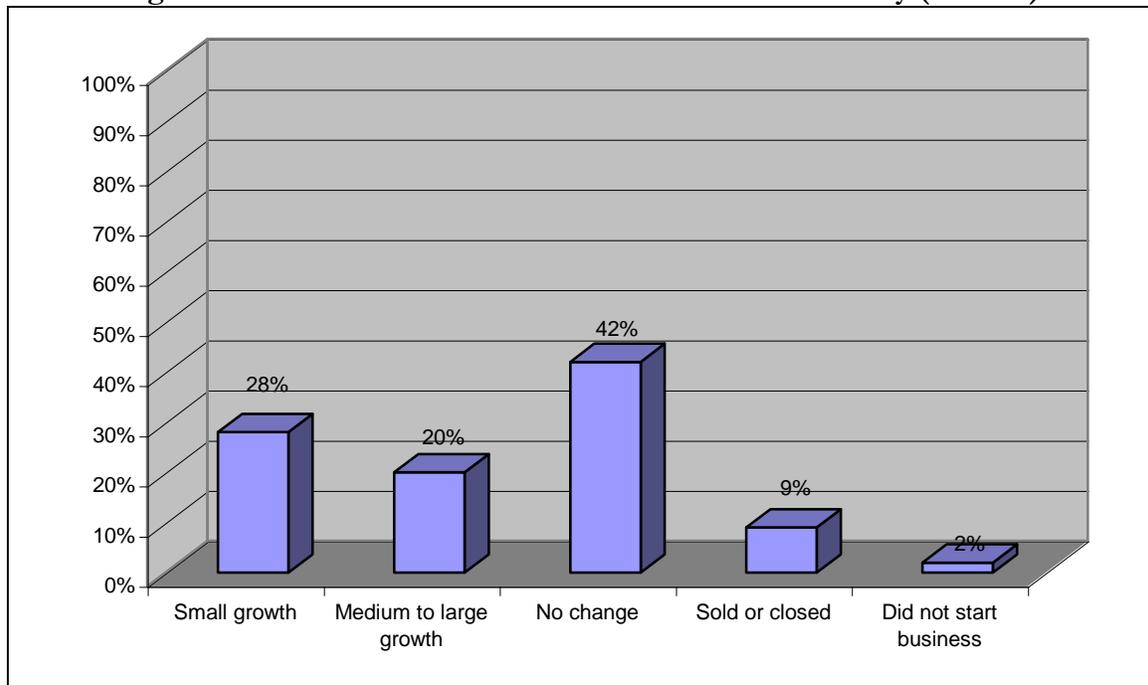
Looking at all survey respondents who reported owning a business, 48% (136) experienced growth in their business since they started working with NECFE (from 1/2-3 years). Of the 285, 36% (61) established their business while working with NECFE. The breakdown of size of growth is as follows.

- 28% (131) experienced small growth, such as from planning to start up or a stable business that is now in the process of expansion.
- 13% (59) experienced medium growth in their business, such as from start up to a stable business.
- 7% (33) to large growth in their business, such as from start up to expanded.
- 42% (196) did not experience any change in their business
- 9% (42) did not start a business
- 2% (9) sold or closed their business

n = 470

- All respondents who started their business while working with NECFE experienced some level of business growth. Almost half (46%, 44) experienced small growth, 26% (25) experienced medium growth, and 28% (27) experiencing large growth.
- All 12 clients who responded to both the first and second surveys and continued to work with NECFE experienced small growth in their business since the first survey.

Figure 4. Growth in business from intake to time of survey (n = 470)



Clients in 2004 were asked to rate the degree that NECFE helped them to start their business on a scale from 0 to 10 with 0 being not at all helpful and 10 being extremely helpful. Overall, clients rated NECFE's assistance from 0 to 10 with an average of 6 and median of 7. Sixty three percent (17) of clients surveyed in 2004 who started their business while they were working with NECFE rated NECFE as providing a high level of help with a rating from 7 to 10. Clients who started their business while they were working with NECFE rated NECFE's degree of helpfulness to their start-up an average of 7.

Time frame to start their business (if in planning stage):

- 70% (62) of those in the planning phase at the time of the survey indicated that they plan on starting their business in 6-12 months. A little over one quarter (30%, 27) plan on starting their business in 12 months or more ($n = 89$).

Business Retention, Job Creation and Benefits

This section reviews the business retention rate of NECFE clients as well as part and full time job creation and benefits. This section also provides estimates on the number of jobs that NECFE assisted in creating for the entire population served based on the survey data.

Business retention:

- 96% (198) of all businesses surveyed that were in business at the time of their intake with NECFE (n=207) remained in business at the time of the survey.
 - 97% (86) of all farm-based businesses surveyed open at intake (n=89) were retained.
 - 100% (96) of businesses that were started while working with NECFE were retained.

Job creation:

- 54% (294) of clients surveyed reported having an established business at the time of the survey
 - 33% (96) of the 294 businesses surveyed were *established while working with NECFE*.
 - 67% (198) of businesses were established prior to working with NECFE
- 54% (160) of businesses surveyed (n=294) created employment in addition to their own job.
 - 27% (43) of businesses with employees were started while working with NECFE
 - 73% (117) of businesses with employees were started prior to working with NECFE

n= 160

Part-time jobs supported/retained by NECFE services:

- **Number of part time jobs created by established businesses = 809**
 - 64% (133) of respondents created between 1 and 60 part time jobs
- For businesses with **between 1 and 4 part time jobs**, the average hourly wage is \$8.15/hr (median and mode of \$8.00/hr) for between 1 and 35 hours a week (average 16 hrs/wk).
 - For businesses surveyed in 2004 with between 1 and 4 part time jobs, 23 jobs were started after the business started working with NECFE.
- For businesses with **more than 4 part time jobs**, the average value of their annual payroll is \$71,000, range is \$1,500-\$600,000, median is \$30,000 and mode is \$50,000.
 - Seven clients with between 5 and 30 part time jobs started those jobs after having worked with NECFE.
- **Number of part-time jobs created by businesses established while working with NECFE = 157** (19% of all part time jobs) at an average of \$8.00/hr for an average of 16 hours a week.

- Four clients surveyed in 2002 and 2004 reported having created other jobs. Since the first survey, there was a **net gain of 6 part time jobs** with 6 reported in 2002 and 12 reported in 2004.

Full-time jobs supported/retained by NECFE:

- **Number of full time jobs created by established businesses = 1,061**
 - 49% (102) of respondents created between 1-41 full time jobs (one client's business had started 550 jobs)
- For businesses with between **1 and 4 full time jobs**, the average hourly wage is \$12.80/hr for between 10 to 80 hours a week (average 43 hrs/wk).
 - For businesses surveyed in 2004 with between 1 and 4 part time jobs, 10 jobs were started after the business started working with NECFE.
- For businesses with **more than 4 full time jobs**, the average value of their annual payroll is \$242,000, range is \$35,000-750,000, and median value is \$200,000
 - Three clients with between 5 and 20 part time jobs started those jobs after having worked with NECFE.
- **Number of full-time jobs created by businesses established while working with NECFE = 117** (11% of all full time jobs) at an average of \$14.00/hr for an average of 40 hours a week.
- One client surveyed in 2002 and 2004 reported having created other jobs. Since the first survey, there was a **net gain of 2 part time jobs** with 2 reported in 2002 and 4 reported in 2004.
- **Total FT and PT jobs created or supported by NECFE services = 1,870**
 - Out of the 1,870 jobs, **274 (14%) new additional jobs** were created by businesses started while working with NECFE.

Type of employment:

NECFE clients employ a total of 1,061 full time workers and 809 part time workers. The types of positions for these jobs are presented in Table 5.

Table 5. Types of full and part time jobs

Types of full time jobs	Types of part time jobs
Manager	Production/ food processor
All duties	All duties
Labor	Labor
Raising livestock	Sales and marketing
Assistant manager	Farmhand
Cheese maker	Baker
Food processor	Manager
Administrative assistant	Packager
Chef/baker	Retailer
Cooking/preserving	Bookkeeper
Product development	Assembler
Product manufacturing	Cook
Production	Janitor
Assistant to processor	Manufacturer
Butcher	Student intern
Carpenter	Yogurt maker
Delivery/production	Research and development
Kitchen assistant/bookkeeper	Administrative assistant
Sales and marketing	Cheese maker
Warehouse assistant	Construction
	Delivery
	Feeding livestock
	Herd manager
	Planting/harvesting
	Truck driver
	Waitress
	Warehouse assistant

- 32% (32) of respondents who created jobs provide their employees with medical and health benefits.

Estimate of new and existing businesses created and supported by NECFE services:

To estimate the number of new and existing businesses (owner jobs) created and supported by NECFE, the evaluators applied the confidence interval of 95% for a finite population (3,637 persons called) to the percentage of businesses created and retained from the survey to determine the number of businesses created and retained from population of 2,462 NECFE clients who made a product inquiry between January 2000 and December 2004 (this figure is used as opposed to all inquiries as they have had more substantial contact with NECFE than those who made a general inquiry). Upper and lower limits of each estimate are presented because of the use of the 95% confidence interval.

- Estimate of new and established businesses supported by NECFE services = 1,625
 - Upper limit = 1,758
 - Lower limit = 1,485

- Estimate of new businesses created while using NECFE services = 812
 - Upper limit = 943
 - Lower limit = 672

Estimate of other employment created and supported by NECFE services:

Using the assumption of the percentage of businesses created and retained from the current population (2,462), the evaluators applied the confidence interval of 95% to estimate the number of businesses that would have created jobs out of 2,462. The number of full time equivalent (FTE) jobs created and supported by NECFE services was estimated using the following two assumptions based on the survey results:

- ✓ The percentage of new (27%, 43) and existing (73%, 117) businesses that have created other employment
- ✓ The average number of FTE jobs created by new (4 FTE/ new business) and existing (12 FTE/ established business) businesses

- Estimate of new employment created by businesses started through NECFE services = 1,440
 - Upper limit = 1,556
 - Lower limit = 1,316

- Estimate of employment created by existing businesses, supported by NECFE services = 11,676
 - Upper limit = 12,636
 - Lower limit = 10,656

Total estimated number of jobs created and supported by NECFE services = 13,116

Business Financing, Employment Income, and Benefits

This section summarizes the sources of capital investment for NECFE client businesses, employment income generated from their business, change in annual household income since they started their business, and medical and health benefits for business owners.

Sources of initial capital investment for business:

More than two thirds (69%) of NECFE clients used their personal savings as their initial source of business capital. The next two most commonly used sources were a bank loan (12%) and a loan from a friend or family member (9%).

- Savings 69% (292)
- Bank loan 12% (49)
- Friend or family loan 9% (36)
- Grant funding 8% (32)
- Credit card 4% (15)
- Micro-loan 2% (8)
- Outside investor 2% (9)
- Individual Development Account 1% (6)
- Revenue from existing business (3)

n = 424

Employment income from business:

- 61% (180) of respondents with an established business (n=294) reported that it provides a source of income for them.
 - 59% (96) reported that their business provides their primary source of income.
 - 44% (74) reported that this business provides a secondary source of income.

n=170

Changes in household income:

Respondents were asked to indicate if their household income changed because of their business. Three quarters (74%, 160) reported that their household income had increased or stayed the same because of their business, while one quarter (26%, 56) saw a decrease. The average dollar amount of increase was \$41,600 (n=32) and the average dollar amount of decrease was \$25,200 (n=32).

Change in annual household income because of business:

Increased = 38% (83)

Decreased = 26% (56)

Stayed the same = 36% (77)

n = 216

Dollar amount of *increase* in income because of business:

Range = \$100 - \$600,000

Mean = \$41,600

Median = \$10,000

Mode = \$10,000

$n = 32$

Dollar amount of *decrease* in income because of business:

Range = \$800 - \$55,000

Mean = \$25,200

Median = \$20,000

Mode = \$50,000

$n = 32$

Medical and health benefits:

- 19% (58) of respondents businesses provide themselves with medical and health benefits.

Business Sales and Assets

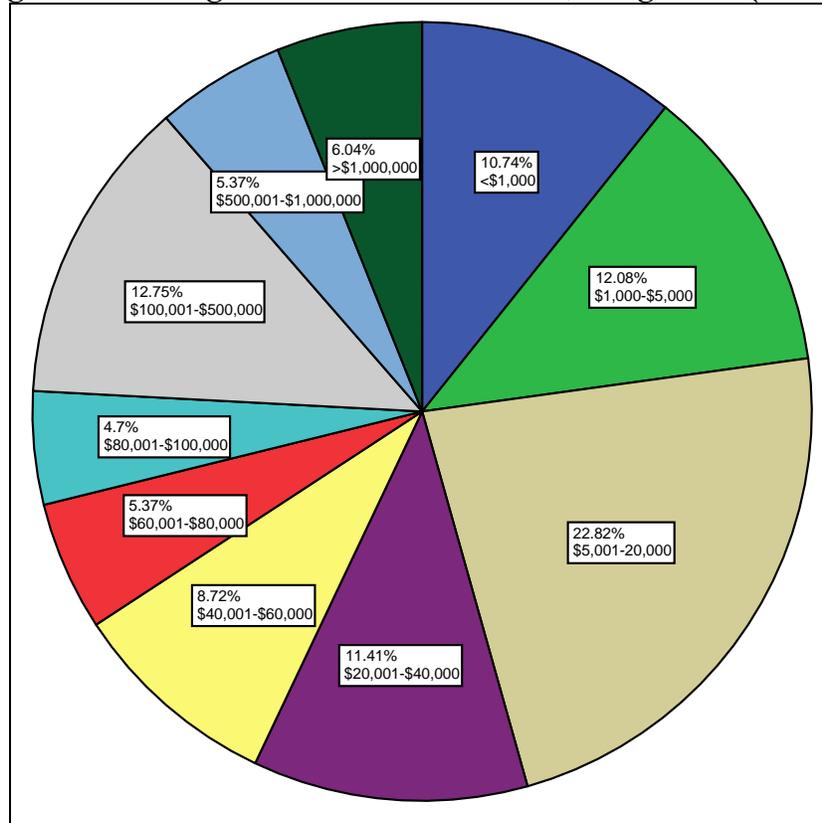
This section reviews the sales generated from client businesses and business assets gained over time.

Sales generated in 2001 and 2003 (Figure 5a):

Client sales reported during both survey periods ranged from \$82 to 10 million dollars.

Overall, total client sales reported were \$51,551,285 (n=149). Figure 3a shows client sales broken down into ten categories. Below the figure are the measures of central tendency for sales data. Seventy-nine people indicated that they did not have any sales in 2003, 63 people reported that they did not know their sales and 20 people refused to provide a response. Looking at the categorized sales, 21% (18) reported their sales to be in the range of \$5,001 to \$20,000. The next highest category was the range of \$100,001-\$500,000 (16%; 13). 6% (5) of clients reported sales earnings in the +1 million-dollar category, with sales ranging from 2.5 to 10 million dollars.

Figure 5a. Sales generated in 2001 and 2003, categorized (n = 149)



Sales generated in 2003:

Range = \$115-\$10,000,000

Mean = \$346,000

Median = \$28,000

Mode = \$10,000

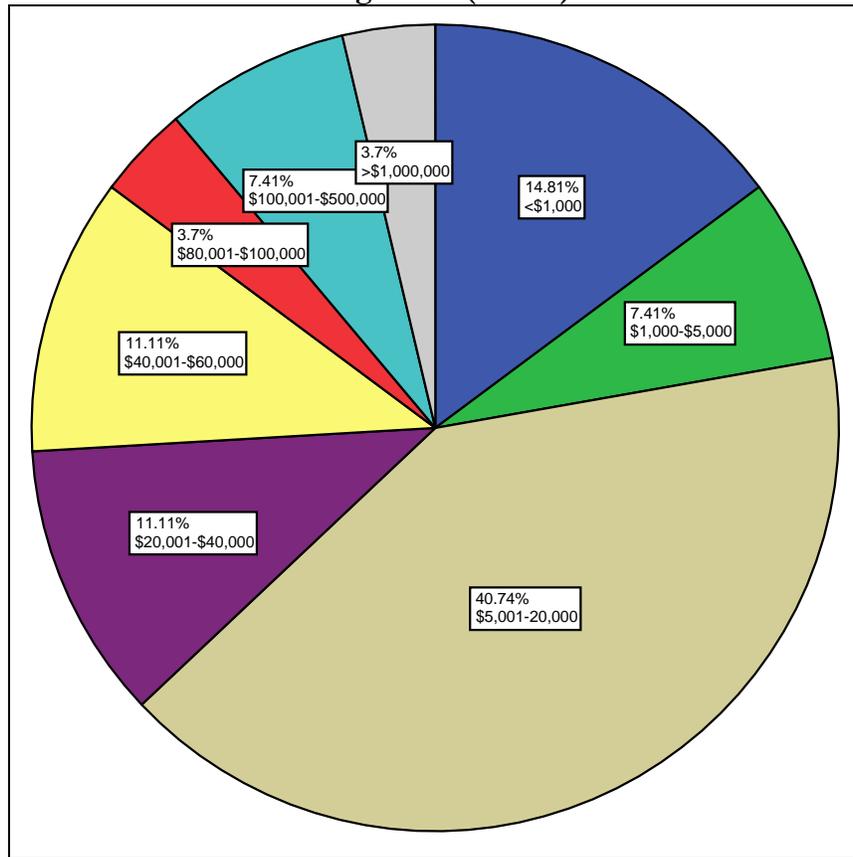
Total client sales = \$55,551,285

n = 149

Sales generated by clients who started a business while working with NECFE (Figure 5b):

Range = \$500-\$4,000,000
 Mean = \$180,200
 Median = \$10,000
 Mode = \$10,000
 Total sales = \$4,865,785
 n = 27

Figure 5b. Sales generated in 2001 and 2003 by businesses started by NECFE, categorized (n = 27)



- 69% (192) reported that their business is generating enough income to cover expenses.
- Four of the clients surveyed in 2002 and 2004 who disclosed their business sales reported an increase in business sales since the first survey.

Business assets:

Thirty-seven percent (104) of respondents reported an increase in their personal assets, as shown in Table 6. The top five assets reported include equipment for the business (61%; 43), the business property (21%; 15), a vehicle (16%; 11), investment and capital (11%; 8), and livestock (10%; 7).

Table 6. Personal assets gained because of business (n = 129)

Asset	% (n)
Equipment	45% (58)
Business property	21% (27)
Vehicle	16% (14)
Investment/capital	11% (11)
Livestock	6% (8)
Kitchen supplies	4% (5)
Farm	4% (5)
Kitchen	2% (3)
Inventory	2% (3)
Raw Materials	1% (2)
Computer	1% (2)
Brand	.5% (1)

Skills, Knowledge and Attitude Changes

This section summarizes the reported skills and knowledge gained and changes in attitudes experienced by NECFE clients because of services and the businesses impact on their local community and community economic development.

New and improved skills and knowledge gained because of NECFE services received:

NECFE clients surveyed reported gaining a variety of new and improved skills and knowledge because of the services they received. The top four skills gained include: product safety and sanitation, labeling and packaging, processed foods, and marketing and market research. A complete list of skills gained is presented below.

- Product safety/sanitation (28%; 104)
- Labeling/packaging (21%; 77)
- Processed foods (19%; 70)
- Marketing/market research (19%; 71)
- Networking/contacts (15%; 55)
- Regulatory/licensing information (20%; 74)
- Recipe development (12%; 44)
- Learned about resources (17%; 63)
- Writing a business plan (10%; 38)
- Financial management (7%; 26)
- Meat processing (5%; 20)
- Use of lab instruments (5%; 20)
- Production and technical assistance (2%; 4)
- Product development (2%; 4)
- Other: starting a business, producing at the commercial level, public relations, computer skills, and organizational skills.
- None (16%; 60)

n = 375

Changes in attitude because of NECFE services:

Respondents also reported various changes in their attitude because of NECFE services. The top four responses given include: more self-confidence, more business savvy, excited and enthusiastic, and broadened scope of possibilities.

- More self-confidence (22%; 83)
- More business savvy (13%; 47)
- Excited/enthusiastic (11%; 42)
- Broadened scope of possibilities (10%; 39)
- More willing to take risks (9%; 32)
- More motivated/encouraged (9%; 32)
- Improved personal outlook (7%; 27)
- Improved overall quality of life (3%; 12)
- Recognized it is difficult to start a food business (3%; 5)

- More confident in handling food and preparation (2%; 3)
- Other: cautiously optimistic, more detailed oriented, more focused on long term goals, prepared to start a business, happy to provide a service to the community.
- None (34%; 129)

n = 375

Improvement in community relations:

Clients interviewed were asked to rank on a scale from 0 to 10, with 0 being no improvement and 10 being a lot of improvement, the level to which NECFE services improved their relationship to their local community. Community relations could refer to working with other community members, selling to local stores, being involved in farmer's markets, or other civic activities through their business.

Range: 0-10

Mean: 3.4

Median: 2

Mode: 0

Impact on rural economic development in community:

Respondents were asked to indicate what impact, if any, their business has had on rural economic development in their local community. Six major themes emerged from this data, as presented in Figure 6. Categorized responses within each of the six themes are presented in Table 7. Thirty-seven percent (41) of respondents reported that their business supported their local economy and 23% (25) reported that their business provides food or other products to the local community. Other responses include: an overall positive impact on the area community, community development, the preservation and rejuvenation of agriculture in their area, and the development of the food and agricultural industry.

Figure 6. Business impact on rural economic development in community (n = 109)

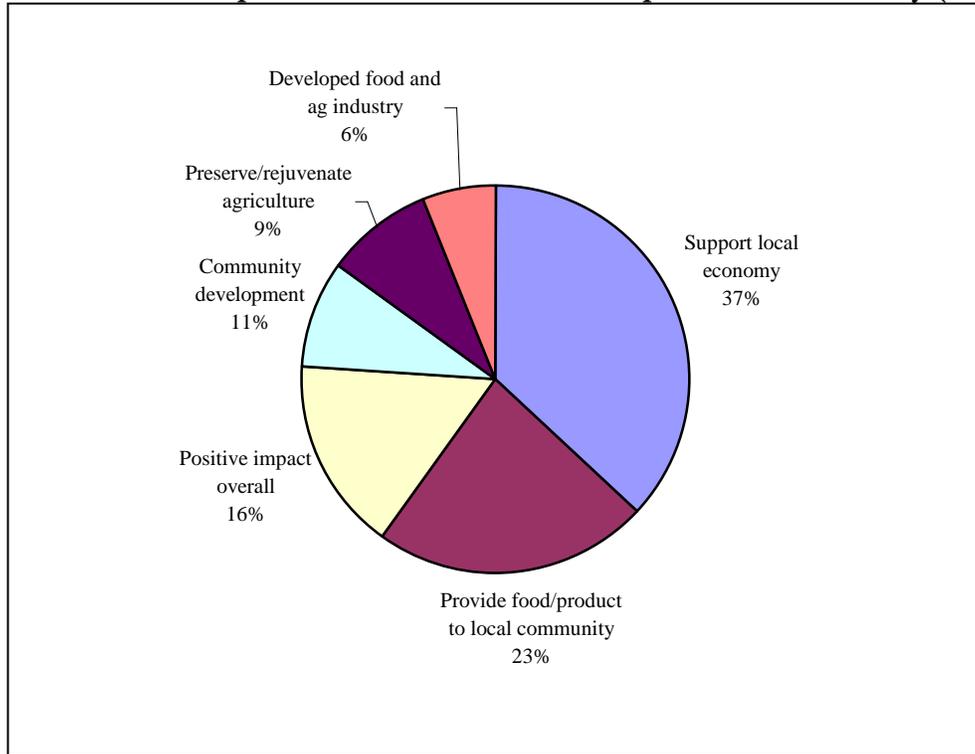


Table 7. Breakdown of business impact on rural economic community development by major areas % (n) (n = 109)

Support local economy	37% (41)
Supported/buys from other local businesses/producers	
Created/sustained jobs in community	
Supported local economy	
Expanded local tourism	
Provide food/products to local community	23% (25)
Increased availability of local food products	
Supplied produce to 130 families	
Positive impact on area	16% (18)
Community development	9% (10)
Community gatherings	
Collaborate with other farmers	
Increased networking with community members	
Influenced development of community	
Instrumental in starting VT Cheese Council	
First farm in community for 30 years	
One of few full time functioning farms in county	
Improved neighborhood	
Raised tax assessment	
Preserve/rejuvenate agriculture	9% (10)
Preserved agriculture and farming life/skills	
Rejuvenated farms in area	
Developed food and agricultural industry	6% (7)
Created a new local product	
Only such business in the area	
Created a new farmer's market	
Created an industry new to area	
Catalyst for other start up businesses	

Impact of business on life or community in other ways:

Respondents were also asked what, if any, impact their business has had on their life or community in other ways. The top answers given include:

- More busy
- Developed new relationships through business
- More involved in community
- Learned new skills
- Life and work more enjoyable

- Provides community with healthy food
- Educates public through business
- Increased financial self reliance
- Community recognition
- Make donations to community
- Preserve family business
- Life change
- More realistic
- Give back to community
- Community resource
- Assist other businesses in area
- Create local jobs
- Flexible hours

n = 120

Services Received and Satisfaction

This section reviews the number of contacts that clients had with NECFE and the services they received and their satisfaction with them. This section also examines the NECFE resources that clients used, including the NECFE resource guide, website, and Venture newsletter, and their level of usefulness. Clients overall satisfaction with services and areas to make improvements is also addressed.

Number of contacts with NECFE:

Clients were asked to indicate the number of times that they contacted NECFE. The responses ranged from 1 to 300 times, with an average of 6 services, median value of 3, and mode value of 1. ($n = 508$)

Services received and satisfaction:

Table 8 depicts the service areas that clients received and their level of satisfaction with the area. Satisfaction was presented to the respondent on a scale from 1 to 5 with 1 being very dissatisfied and 5 being very satisfied. Clients may have reported receiving more than one service. The majority of clients (83%) received educational materials, 77% made a general inquiry, and 52% received direct assistance. About half were referred to other services and a 37% attended between one and ten workshops (average of 2 workshops). Overall, clients reported high levels of satisfaction, as 83 percent or higher reported being “satisfied” or “very satisfied” to all areas.

Table 8. Utilization rate services and satisfaction levels with NECFE services, %(n)

Service	Utilized	Very Dissatisfied	Dissatisfied	Neither	Satisfied	Very Satisfied	N
Received educational materials	83% (434)	1% (4)	2% (10)	8% (33)	25% (106)	64% (272)	521
Made a general inquiry	77% (402)	3% (9)	3% (10)	7% (27)	17% (68)	71% (284)	520
Received direct assistance	52% (270)	1.5% (4)	2% (6)	3% (9)	14% (37)	79% (212)	520
Referred to other services through NECFE	44% (224)	1.5% (3)	2% (4)	8% (17)	27% (55)	61% (124)	508
Attended workshop(s)	37% (194)	1.6% (3)	4% (8)	8% (15)	31% (59)	56% (107)	531

Services referred to:

Forty-four percent of clients reported being referred to other service providers through NECFE. The breakdown of responses is provided below. As most clients were referred to more than one source, the combined percentages are greater than 100%.

- Other service providers 46% (102)
- Other consultants 37% (83)
- Co-packer and production 37% (83)
- Ingredient or material suppliers 34% (77)
- Financial resources 19% (42)
- Local resources 35% (28)*
- Regulations (6)
- Laboratory facilities (3)

n = 224

* *Asked in 2004 only*

NECFE Resources:

73% (192) of clients reported that they received the NECFE resource guide, *Small Scale Food Entrepreneurship: A Technical Guide for Food Ventures*. 84% (151) of respondents reported that it was useful to very useful (Table 9). The top areas within the guide that were the most helpful to businesses include food safety and sanitation, acidified and low acid products, and labeling. One respondent reported that the information on state laws and regulations was helpful and another found the table of conversions helpful.

Table 9. Percent of respondents that received the Resource Guide and usefulness

	Used/ Received	Not at all useful	Somewhat not useful	Neither	Useful	Very useful	<i>n</i>
Received the NECFE resource guide	74% (350)	2% (7)	2% (6)	15% (49)	26% (86)	55% (184)	475
Visited NECFE Website*	40% (91)	5% (4)	2% (2)	12% (10)	25% (21)	55% (46)	230
Received <i>Venture</i> Newsletter*	37% (75)	3% (2)	6% (4)	24% (17)	27% (19)	40% (28)	204

**Asked in 2004 only*

Areas within guide most helpful to businesses:

- Acidified and low acid products 19% (68)
- Food safety and sanitation 18% (64)
- Labeling 17% (61)
- Business and marketing issues 14% (48)
- Processing facilities and equipment 13% (45)
- Resources 11% (37)
- Introduction 10% (34)
- Other product types 8% (27)

- Dairy products 7% (23)
- Meat and poultry products 6% (22)
- Fish products 5% (18)
- All chapters 3% (5)

n = 350

Overall satisfaction with NECFE Services:

Overall, clients showed high levels of satisfaction with NECFE services (Table 10). Eighty-seven percent agreed or strongly agreed that NECFE services provide the information and assistance needed and that NECFE services met their expectations. Sixty-five percent reported that NECFE services aided in the success of their business.

Table 10. Overall client satisfaction with NECFE services

Satisfaction area	Strongly disagree	Disagree	Neither	Agree	Strongly Agree	<i>n</i>
NECFE services provided the information and assistance needed	1% (6)	5% (23)	8% (41)	46% (230)	41% (204)	504
NECFE services met their expectations	2% (10)	5% (25)	7% (32)	48% (233)	39% (191)	491
NECFE services aided in the success of their business	4% (16)	11% (41)	22% (86)	40% (156)	24% (92)	391

- Of the clients surveyed in both 2002 and 2004, all clients showed an increase in satisfaction with NECFE services in all three areas listed in Table 10.
- 76% (67) of respondents who started their business while working with NECFE agreed or strongly agreed that NECFE services aided in the success of their business.
- 77% (367) of clients surveyed plan to continue using NECFE services in the future.

NECFE Assistance in Expanding Client Access to Services:

In 2004, clients were asked several questions about how NECFE services assisted them to improve access to information about food processing and food processing technology and expand their business network. Table 11 shows that 81% reported that while they were working with NECFE services they had greater access to information about food process and 61% said food processing technology. When asked to rank the degree that NECFE helped to accomplish this from 0 to 10 with 0 being not at all helpful and 10 being extremely helpful, clients rated both areas an average and median of 8 and mode of 10. Forty-three percent noted that they expanded their business support network while working with NECFE and that NECFE assisted an average of 6 on that same scale.

Table 11. Percentage Achieved and Degree NECFE Assisted with Achievement, 2004 respondents only

Area achieved while working with NECFE	% Yes	Rank 0-10		
		Average	Median	Mode
Greater access to information about food processing	81% (89)	8	8	10
Greater access to food processing technology	61% (59)	8	8	10
Expanded business support network	43% (44)	6	6	8

Use of Services other than NECFE for Assistance:

Clients surveyed in 2004 were asked if they used other technical assistant services for their business in addition to NECFE, what these services where, if NECFE referred them and their value compared to NECFE.

- 40% (41) reported using other technical assistant services in addition to NECFE
 - 54% (22) food service related
 - 56% (23) business development related
 - 32% (13) other examples: Small Business Administration, Community Action, U.S. Department of Agriculture, restaurant association, packaging and bottling resources.
- 22% reported that NECFE referred them to these resources
- In comparing services, 42% (16) reported that it was not an applicable comparison, 32% (12) said it was the same level of helpfulness, 24% (9) said it was more helpful, and one person said it was less helpful.

Suggestions for improving NECFE services and offerings:

Table 12 shows the categorized list of suggestions clients provided for ways NECFE may improve their services. More than two-thirds of respondents indicated that they did not have any suggestions to improve NECFE services. Thirty-five percent cited suggestions relating to improving services, 12% regarding service offerings, 9% regarding improvement of the NECFFE resource Guide and referrals, and 2% facilities.

Table 12. Suggestion to Improve Services (n=285)

Suggested Area	% (n)
None	68% (194)
Services Improvement	35% (99)
Local access to classes	43
Advertise services	16
More follow-through/follow-up	13
Increase frequency of seminars	7
Improve response time	4
Ensure person will answer phone calls/staff available for help	4
Improve communication with clients	3
Use easier to understand language	3
Continue services	2
Become a nonprofit organization	1
Promote website	1

Evening hours	1
Table 12. Suggestion to Improve Services (cont.) (n=285)	
Service Offering Improvement	12% (35)
Improve marketing and sales information	5
Improve website	4
Be more specific about course content/level	4
Create a newsletter	2
Assist small businesses	2
Have more entrepreneurs instruct workshops	2
More workshops on cash flow and pricing	2
Financial assistance to start business	1
Health benefits for small business	1
International focus	1
Local growers	1
Make written materials available through website	1
More basic information	1
More hands on workshops	1
More organization in testing samples	1
Notify clients of workshops	1
Offer more services	1
Offer series of classes instead of daylong seminars	1
Pair entrepreneurs with mentors in similar products	1
Workshops for agriculture and processing food	1
Use case study of product from farm to retail	1
New funding sources	1
Guide/Resource Improvement	9% (25)
Directory of distributors, marketing, and other resources	10
More networking opportunities	4
Continue revision of Guide	2
Local service referral	2
Recommend places to purchase produce	2
Beginner version of Guide	2
Check list of needs for specific industry	1
Information on improving product shelf life	1
Information on State regulations	1
Facilities Improvement	2% (6)
Develop more community processing kitchens	4
Baking Facilities	1
More modern equipment to decrease processing time	1

Client Characteristics

Client demographic data was gathered through this survey, including household composition, residence, education, income, age, gender, and ethnicity.

Household composition:

Relationship status

- 72% (352) of respondents are married
- 18% (88) are single
- 8% (39) are divorced, and
- 2% (7) are widowed

n = 488

Household members

- Respondents reported having between one and 10 members living in their household, with an average of 3 household members. *n* = 488

Number of children

- 40% (198) of respondents reported having children under the age of 18. The range of number of children is from 1 to 9, with an average of 2 children. *n* = 489

Client residence:

Clients surveyed live throughout the Northeast as well as other locations in the United States and abroad (Table 13). About half of the population (49%) surveyed lives in New York State; 20% live in Vermont; 9% live in Massachusetts; and 9% live in Pennsylvania. A little over half of the population surveyed (57%) reported living in a rural location as presented below the table.

Table 13. Location of NECFE client residence (n = 505)

<i>Location</i>	<i>Percent (n)</i>
New York	49% (249)
Vermont	20% (100)
Massachusetts	9% (46)
Pennsylvania	9% (44)
Connecticut	4% (21)
Maine	4% (13)
New Hampshire	4% (13)
Other West coast	1% (5)
Outside of US	.6% (3)
Other East coast	.6% (3)
North Carolina	.4% (2)
Florida	.4% (2)
Rhode Island	.4% (2)
Other Central US	.4% (2)

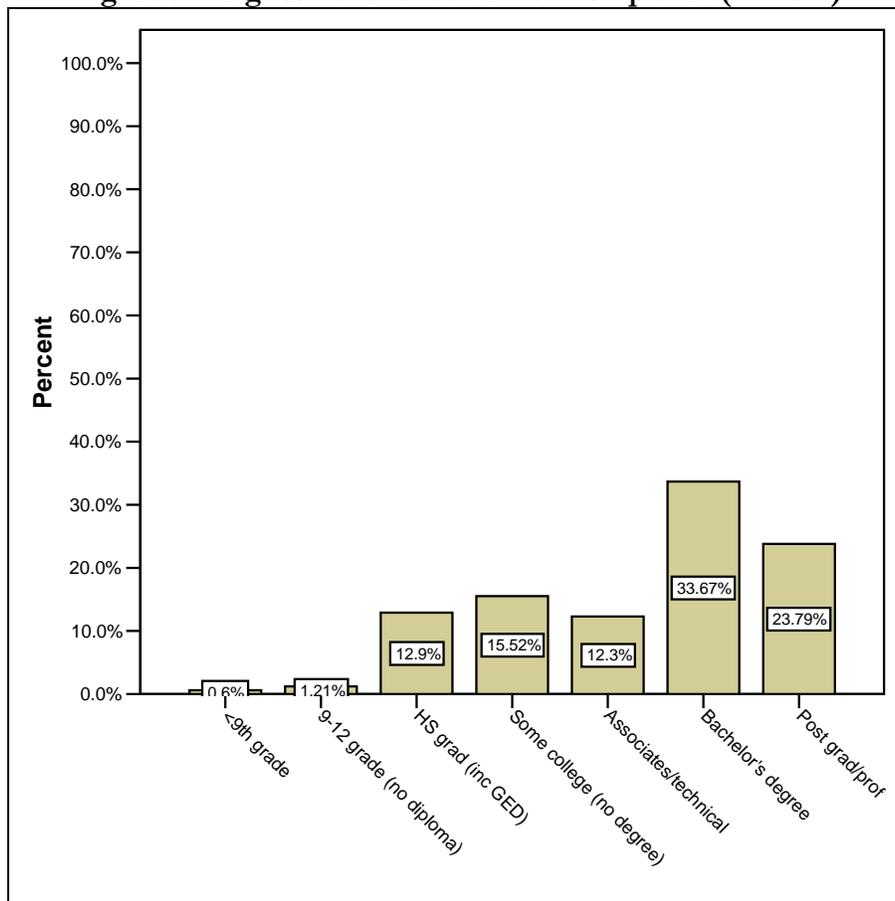
Type of location where NECFE clients live (n = 508)

- 57% (287) reported living in a rural location
- 28% (142) suburban
- 16% (79) urban

Education status:

Figure 7 shows that survey respondents are a well-educated population. Seventy percent (346) of clients surveyed reported having an associate's degree or higher and 85% (423) have some college education or more. Only 14% (73) have a high school degree or less education.

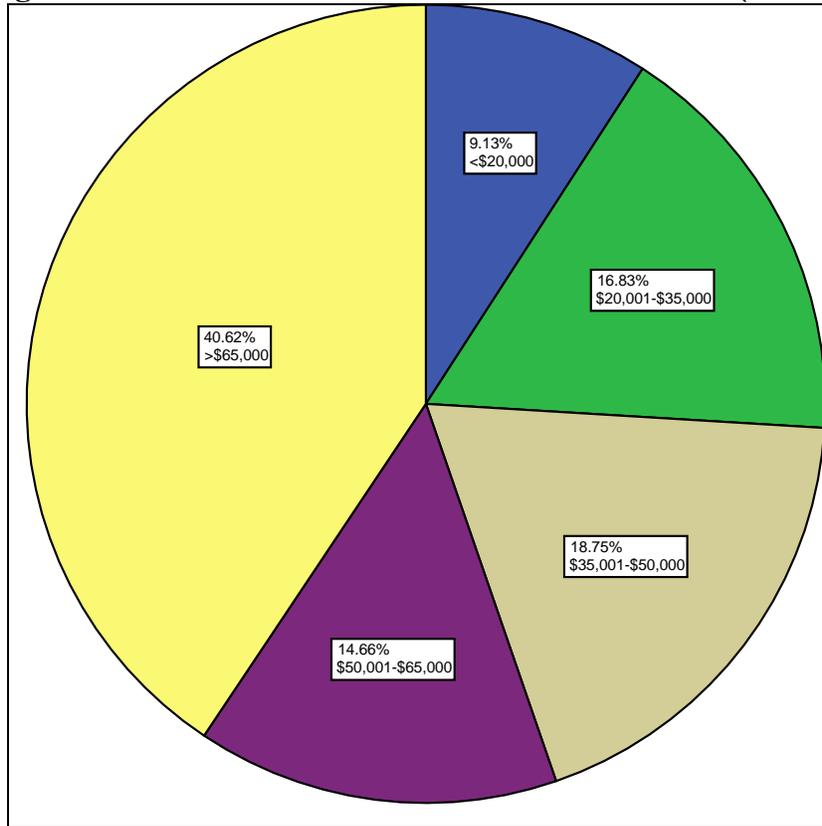
Figure 7. Highest level of education completed (n = 496)



Income:

Figure 8 shows that a little less than one half (41%; 169) of NECFE clients surveyed reported an annual household income of greater than \$65,000. Nineteen percent (78) reported earning an income between \$35,001-\$50,000, 17% (70) reported between \$20,001-\$35,000, 15% (61) reported between \$50,001-\$65,000, and 9% (38) reported an annual household income of less than \$20,000.

Figure 8. Annual household income of NECFE clients (n = 416)



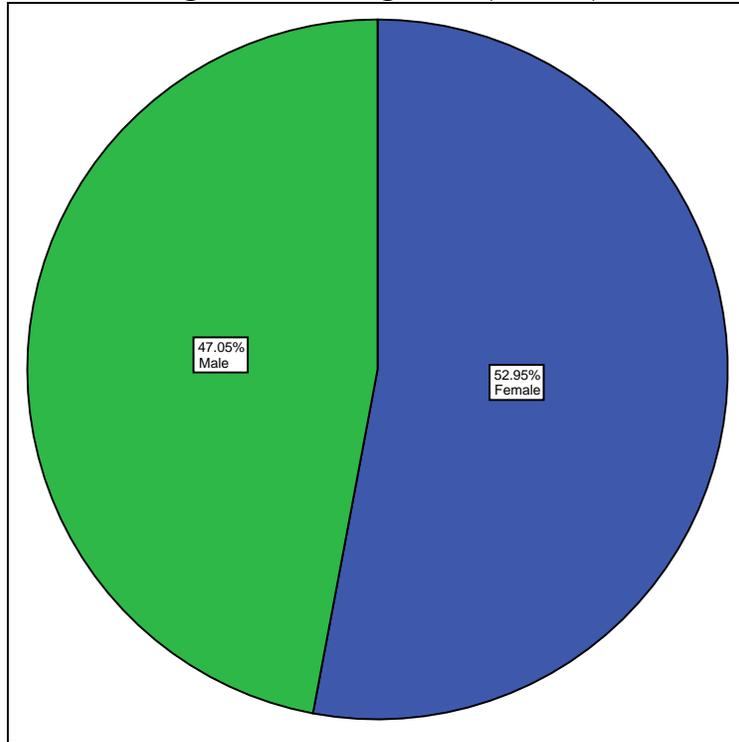
Age:

Respondents age range from 21 to 77 years old, with an average of 47 years and median and modal value of 48. n = 477

Gender:

Figure 9 shows that 53% (278) of NECFE clients surveyed are female and 47% (247) are male.

Figure 9. Client gender (n = 525)



Ethnicity:

The breakdown of all ethnic groups represented by NECFE clients surveyed is presented in Table 14. Table 13 shows that almost three quarters (72%) of NECFE clients are of Caucasian decent, 10% are Mediterranean, 4% are Indian and 3% are of mixed decent.

Table 14. NECFE client reported ethnicity (n = 524)

Ethnicity	Percent (n)
Caucasian	72% (388)
Mediterranean	10% (52)
Indian	4% (23)
Mixed decent	3% (18)
African American	3% (15)
Asian/Pacific Islander	2% (11)
Hispanic	2% (10)
American Indian/Native American	.5% (3)
Other	1% (4)

Workshop Evaluation Results

Since the start of the NECFE grant, the project has held 76 workshops reaching 2,367 attendees (Padilla-Zakour, 2004). Topic areas covered through NECFE workshops include: cheese making, marketing and selling skills, product development (i.e. cheese, meat, sausage, jams and jellies), food safety and sanitation, and good manufacturing practices. A total of 489 workshop evaluation surveys were completed by participants. The workshop topics covered for which evaluations were completed are indicated in Table 15.

Table 15. Number and Percentage of Clients who completed Workshop Evaluations for Various Topics

Workshop Topic	% (n)
Recipe to Market	25 (120)
Jams and Jellies	12 (57)
Meats processing	11 (53)
Specialty foods	9 (44)
Selling skills	8 (39)
Basic Cheesemaking	6 (28)
Acidified foods GMP	5 (25)
Food safety	5 (22)
Sanitation	4 (21)
Sausage Making	4 (21)
Advanced Marketing	4 (18)
Food Processing	2 (11)
Tilling the soil of Opportunity	2 (9)
NxLevel training	2 (8)
Commercial cheesemaking for beginners	1 (6)
Advanced Cheesemaking	1 (5)
Insight Group	.4 (2)
Total	100.0 (489)

Workshop Evaluation Results

A little more than half (56%, 261) of clients who completed the evaluation form reported that they are currently operating a food business. Twenty-eight percent (122) indicated that this business is their primary source of income, while 55% reported that it is a secondary source of income. Overall, clients expressed high levels of satisfaction with workshops as demonstrated in Table 16 and 17. Between 95 and 97% of all respondents reported that workshops met their expectations, materials were helpful and appropriate, presenters were clear, and the workshop was useful for their business. Ninety-two percent reported that interactions and networking with others at the workshops were useful and 90% reported that the amount of allotted time for the workshop was sufficient. Overall, 97% (442) indicated that the workshop met their expectations.

Table 16. Client Satisfaction with Workshop

	Very to somewhat Dissatisfied	Neither	Satisfied to very Satisfied	n
The workshop met your expectations	3% (14)	1% (5)	96% (466)	485
Materials provided were appropriate	2% (10)	3% (12)	96% (465)	487
Materials provided were helpful for you or your business	2% (9)	3% (16)	95% (461)	486
Presenters were clear	2% (9)	2% (9)	96% (465)	483
The amount of allotted time for the workshop was sufficient	6% (30)	4% (18)	90% (433)	481
What is your overall satisfaction level for the workshop	3% (12)	1% (4)	97% (468)	484

Table 17. Usefulness of Workshop

	Not useful to somewhat not useful	Neither	Somewhat to Very useful	n
The overall usefulness of this workshop to your or your business	1% (6)	2% (10)	97% (466)	482
The usefulness of interactions and networking with others at the workshop	1% (4)	7% (33)	92% (447)	484

Main reasons why people take workshops:

- Learn and explore for diversification
- Potentially make product in future
- Make product at the commercial level
- Enhance home production of food for family
- Have an introduction to the workshop topic area (i.e. cheesemaking, marketing)
- Gain a better understanding of the food making process for a given workshop area
- Improve food product
- Learn how to fit product into the market
- Identify steps to develop a successful business
- Develop marketing strategies
- Network with peers and professionals
- Learn rules and regulations

Areas most helpful for workshop participants:

Skill building

- Food safety/sanitation
- Licensing information
- Marketing tools
- Labeling and packaging
- Developing recipes
- Product production
- Procedural advice
- TA/pH
- Pork cutting
- Value-mapping

Hands-on experience

- Hands-on experience
- Visual demonstration of cheesemaking
- Taste testing and sensory evaluation of cheesemaking
- Hands on opportunity to see and use jam making equipment

Networking and resources

- Learning about resources available
- Use of workshop materials as references
- Interactions and networking, establishing future contacts and resources
- Excellent speakers/presenters
- Group interaction

Learning from experts

- Expert advice
- Time for questions at the end of the workshop
- Hints and troubleshooting, technical tips from experts
- Explanation of rules and regulations governing industry

Referrals

- 83% (326) indicated that they were referred to other services that they needed through the workshop

Participant plans for their business after having taken the workshop:

- Begin planning stage to start a business
- Develop a business and marketing plan
- Business expansion - farm stand and value-added
- Invest in and use more equipment for business expansion
- Product development and improvement

- Re-evaluate business idea
- Follow up with professionals for further assistance in the areas of HACCP and food safety
- Find a local shared use kitchen
- Determine genetic selection for better breeds
- Educate others on information
- Pursue meat production
- Use value-mapping techniques
- Personal improvement

Table 18. How participants found out about workshops

Method	% (n)
Brochure	41% (186)
Agency representative	10% (44)
NECFE Website	9% (42)
Listserv	4% (17)
Other	41% (185)

Main other: Word of mouth through family and friends

Workshop Participant Demographic Information

The following data describes the population of respondents who completed the NECFE workshop evaluation surveys. Data collected includes state of residence, age, gender, education, and income.

Table 19. State of residence of Workshop Evaluation Respondents

State	% (n)
New York	41% (183)
Vermont	32% (144)
Massachusetts	9% (42)
Maine	8% (36)
Connecticut	4% (16)
New Jersey	2% (9)
New Hampshire	1% (6)
Rhode Island	.7% (3)
Ontario, Canada	.7% (3)
Texas	.2% (1)
Maryland	.2% (1)
West Virginia	.2% (1)
Oregon	.2% (1)
Iowa	.2% (1)
Michigan	.2% (1)
North Carolina	.2% (1)

n=449 (Includes attendees from the Food Business Incubation Summit 2003)

Table 20. Age of Workshop Evaluation Respondents n=431

Age range	21-80 years
Mean	48
Median	48
Mode	44

Table 21. Gender of Workshop Evaluation Respondents n=419

Gender	% (n)
Male	54% (228)
Female	46% (191)

Table 22. Highest level of education completed of Workshop Evaluation Respondents n=446

Education Level	% (n)
Graduate/Professional	28% (125)
Bachelor's Degree	33% (127)
Associate's Degree	14% (63)
Some College	15% (66)
High School Graduate or GED	8% (34)
11 th grade or less	1% (5)
Other Training	1% (6)

Table 23. Annual Income of Workshop Evaluation Respondents n=398

Income Level	% (n)
Less than \$20,000	15% (58)
\$20,001-\$35,000	24% (94)
\$35,001-\$50,000	28% (112)
\$50,001-\$65,000	12% (49)
More than \$65,000	21% (85)

Examples of Success: Client Case Studies

The following case studies were conducted during the months of January to December 2004. The case studies exemplify how NECFE services assisted businesses in a variety of ways that tailored services to meet clients' unique needs. A common theme that emerged throughout all interviews was the high level of knowledge, expertise, and helpfulness of NECFE staff. All clients interviewed remarked that staff expertise and support was a major strength of NECFE. The case studies demonstrate how NECFE services assisted clients to start a business, improve the quality and safety of products, develop a marketing strategy, and obtain financing. As a result, most clients remarked that an aspect in their lives have changed, such as an increase in income or improved self-confidence. Further, clients mentioned the impact their businesses have had on their rural communities, including as providing employment, supplying products that fulfill a need or niche, bringing customers to other area businesses, and donating to local charities.

Claudia Clark: Infused Maple Syrup

Claudia Clark owns a two year old LLC, which makes infused maple syrups. While she has worked with NECFE, her business has moved past the start-up stage and is in the process of becoming stable. Her infused syrups, as well as her oat biscotti cookies, are sold in many gourmet food stores. Her business is located in a rural area and she uses UPS to distribute her products. Claudia started the business because she was interested in trying to position maple syrup as more than just a pancake topping. She purchases Vermont maple syrup to use in her infusions. To promote her products she sends letters and samples to food editors of newspapers and magazines. As of yet the businesses' sales volume does not provide a source of income and the household relies on her spouse's income, though her monthly sales have increased each month. Sales were \$50,000 last year and a subcontractor produces her product.

NECFE services assisted Claudio with safety testing-running water activity microbial tests-and a marketing plan. She says she feels reassured of the quality and safety of her product and that after working with NECFE she has a better support network for diversifying her operation. Her work with NECFE definitely impacted her personal life. She found running the business by herself to be lonely and appreciated networking through NECFE for its social and stress reducing benefits. She has become more involved in her community, is now active on the advisory board of a women's networking organization, and meets with an SBA SCORE counselor. Her business has impacted her community in a variety of economic ways as she makes donations of gift packs to charities, high schools, and the local humane society. She also purchases local maple syrup, labels, hang tags, bottles, shipping cases and storage units throughout Vermont for her production. Claudia has been very satisfied with the NECFE services she has received and feels that the Centers strength lies in the staff's technical, marketing and business skills. She feels that Vermont is very fortunate to have such wonderful services available for the business community.

Annette Consol: Co-Packing Services

This small business owner bottles sauces and provides co-packing services. She has been in business since 1997 and describes her business as “growing.” The majority of her sauces are sold in New York and her incorporated business is located in a suburban/rural area. To advertise her sauces she attends food demonstrations and provides in store scan-downs (\$.50 off per bottle). She says that the demand for her co-packing services is growing because of NECFE referrals. She also advertises these services on the internet. Annette began her business because she wanted to start bottling the sauces she made and was concerned about the quality of co-packing. The business provides a secondary source of income, about 15% of her annual income, which has changed since she started working with NECFE. Annette’s business has grossed over \$100,000 in sales since she started working with NECFE. Occasionally she utilizes a labor service, but thus far has not created another permanent job. In the next year she hopes to hire a full-time production manager for \$8-10 per hour. She attributes this job creation to NECFE services, which helped her business grow.

Annette was referred by the state because she needed to complete a scheduled process for her products. She has utilized NECFE’s scheduled process, packaging, good manufacturing practices, business development, and marketing classes and services. Annette reports that NECFE services provided her with greater access to low cost, state-of-the-art food processing information and technology, that she has had a better support network for diversifying her operation, and that her market share has increased since she started working with NECFE. Also, she now has new opportunities to market and sell her product regionally because of NECFE services and her market and client bases have expanded because of working with NECFE.

Annette reported that all of her businesses successes were because of NECFE services. She specifically attributed her business survival in the first few years, current growth, and more refined bottling process to her involvement with NECFE. Annette also reported having improved her skills, obtaining a business license, and receiving assistance with production and packaging problems. NECFE staff, she expressed, “were invaluable in helping with problems” she was having at the beginning. She also said “I couldn’t have gotten started without them. I could easily have gone under without their help with co-packing. NECFE opened up a whole new door for me.” NECFE also helped alleviate some stress of being a business owner by providing social as well as technical support. Annette does not have healthcare or childcare, but owning the business has allowed her to take her child to work with her. Owning the business has also allowed her more flexibility and NECFE has helped her by providing her with contacts and networking opportunities. Annette reported that she has always been very satisfied with the services she received. NECFE’s main strengths are the staff, who are always accessible to provide the “right” answer and provide excellent follow-up. In the future, Annette would like NECFE to offer more in-depth classes in marketing.

Judy Delaney-Shirley: Improving Stonewall Kitchens

Judy is the Quality Control Manager for the specialty food company Stonewall Kitchens, which makes jams, chutneys, mustards, dressings and sauces. Stonewall kitchens is based in a rural Maine community, owns 3 stores in Maine, one in New Hampshire, and in Massachusetts. Its products are available in 5000 other retail stores nationwide. The business was started in 1991 at a farmers market with blueberry jam made from the owner’s

grandmother's recipe. Now it is an LLC partnership and has sales of \$20 million. It employs 175 full-time and 50-85 part-time or seasonal employees.

NECFE has provided many services to Judy and Stonewall Kitchens, specifically providing process reviews on acidified food. Judy also became certified through NECFE's acidified food class, receives the newsletter, and uses NECFE as a general resource. She also states that NECFE staff have always been available to answer questions, such as how to scale up recipes to make mass quantities. She feels that NECFE is an important resource for small processors who could easily go in the wrong direction with their food. NECFE, she says, "is instrumental in helping people move forward in the right direction." She feels that it is less intimidating for processors to approach a University for help. She is also more confident in the information a University would disseminate, as they are a neutral source and do not have their own agenda.

Judy reports that NECFE has provided guidance and resources to help Stonewall Kitchens improve product quality and safety, resolve labeling issues, understand manufacturing regulations, and document samples. With NECFE's help, Stonewall Kitchens has broken into new markets and could potentially go organic in the future. Judy notes that the business has contributed to the community through employment and that within the business there are opportunities for employees to improve their skills. Stonewall Kitchens has also become a tourist stop, which has brought income to the area. The business also impacts the community by buying locally when possible. Judy's goals for the future include helping the business grow while continuing to make sure that the products are safe and of high quality, to open up a new produce line, and to expand the retail stores through more name recognition of their high quality gift products. She feels very satisfied with the services she has received and plans to continue working with NECFE. She feels that NECFE's main strength is the staff with their variety of technical backgrounds and their experience in dealing with many other small businesses. She would like for NECFE to hold classes in more diverse locations so she can more easily attend.

Eli Martin: Pickles and Salsa

Eli Martin is a small business owner who processes pickles and salsa and other low acid foods. Three years ago, after participating in a NxLevel business course, he also began co-packing and processing for others. Eli hires one broker and uses the sales skills he learned from a NECFE course to do the remainder of the distributing himself. On advice from NECFE, he is also beginning to revise his advertising brochure to include photos. His business operates in western New York in a very rural area close to the Finger Lakes Produce Auction and farmers market. In 1995 he started learning about food safety and started to process jams and jellies. He attended some business classes and his wife had experience with a food packer, so they started up the business. He describes getting into pickles as an "accident"; a man at the market told him they would sell well. Now he has been processing for about ten years and the business is expanding. The business is now his primary source of income. He used to run a co-op and is glad NECFE helped him transition out of it and into co-packing, because, as he says, two other bulk food stores opened up in the area and he would therefore be out of business. Most of Eli's sales are through the mail and his income has increased slightly over the last year. The business has not created any jobs other than for his family, but he does sometimes hire locals to do work for the business.

NECFE has assisted Eli in a variety of ways, including legal processes, licensing, advice on recipes, inspections, and problem solving (when his jellies weren't thickening and his pickles turned soft.) NECFE also helped him make contacts for co-packing. "The NxLevel course was the biggie," he said. He found the course to be thorough and said, "it opened my vision to a lot of business opportunities." He learned how businesses run, about chain marketing, and where he wants to position his business. With NECFE's assistance and referrals, Eli has come to understand the language of conglomerates, has since been able to successfully distribute to them, and has made a contact who will be helping him to distribute nationally. "Before it would have been impossible," he says, "but now I have the potential for dealing with chain stores." He recently shipped 14 cases of salsa to a chain that he had been unable to get into before. Eli has found the staff to be very knowledgeable, feels very comfortable calling for advice, and appreciates the low cost of services. If NECFE services were not available to him, he says, traveling costs to receive the information from elsewhere would have been prohibitive.

Originally, Eli's goal was to run the business solely on family labor. NECFE helped him understand that family may not have all the talents that the business needs and that he should let his children find their own jobs. He now feels it is better to hire someone who really enjoys working there as opposed to making his children do something they do not want to do. Also from working with NECFE, Eli has more contact with local farmers and is purchasing more from them. His business also hires local welders and electricians on a project basis, and purchases jars, containers and labels locally. Eli says he has been very satisfied with NECFE services. "I know whatever questions come up," he said, "they will have the answer." He plans to continue to work with NECFE on record keeping and getting his product "out there." Eli's would like to see NECFE combined with inventory and/or cost analysis. He also suggests that NECFE collaborate with "Pride of NY" and the "Fingerlakes Culinary Bounty" because of their strong marketing skills.

Michael J. O'Sullivan: Cheese Making Workshop Participant

This sole proprietor makes cheese and his business is in the start up phase. Michael primarily worked with NECFE through the Cheese Making Workshop. Cheese making was a hobby of his and now provides a secondary source of income. NECFE provided him with greater access to low cost, state-of-the art food processing information and technology. He also feels he has a better support network for diversifying his operation and increasing his market share compared to before he was working with NECFE. He expresses that NECFE services helped to improve his product competitiveness and that now he has new opportunities to market and sell his product. Business and product process development were the immediate outcomes of his work with NECFE and now has more knowledge about product development. He plans to continue working with NECFE and reports that more cheese making workshops would be useful to him.

Sudhir Roc-Sennett: Indian Foods

This small business owner of a sole proprietorship produces a line of Indian food packaged as prepared frozen meals. Nearly two years old, the business is still in the start up phase. Based out of Richfields, Connecticut, Sudhir promotes his products through in store demonstrations, radio and newspaper ads. Sudhir chose to go into business because he saw a market opportunity. It is now his primary source of income. He reports that NECFE provided him with information and technical help when he was starting up and his business

has now created jobs in addition to his own. The two immediate outcomes of NECFE's services were a great ability to produce quickly and assistance with co-packer planning. By working out various problems with NECFE, his products were able to get to the market faster and at lower cost. Sudhir has been very satisfied with the services he received from NECFE and says that the staff provided good technical help. He would find it helpful to have a greater support network for small businesses and feels that more services for the production end of development would be useful.

Aisha Sobeih: Aisha's Termis

This small business owner of *Aisha's Termis*TM said that, "NECFE really helped to start my business." Aisha started distributing lupine beans (or termis beans) imported from Australia in 1996 after working with NECFE. The beans can be blanched, left to air dry, and then made in a variety of ways to be eaten. Her friends and family loved what she was making for them and she decided to go into business. She knew she needed help to develop a marketing and advertising campaign, as well as a label, and to ascertain her product's nutritional value. Through networking she found NECFE, which helped research the nutritional value of the lupine bean and sent her product to the lab for nutritional value and safety testing. They helped her develop a label, provided advertising contacts, and helped develop flyers to attract customers and make them aware of the product. *Aisha's Termis*TM started out in two locations and now sells in 13 stores in New York and Massachusetts. The business provides Aisha with an important second source of income, although it is not yet showing a profit because of overhead costs. She employs one part-time employee for 8-16 hours a week at minimum wage. Her sales have increased and she hopes to be making more money in the future.

Aisha says she found the NECFE's Food Processing Guide very helpful and that NECFE services provided her with greater access to low cost, state-of-the art food processing information and technology. Overall, she says that she would not have succeeded in her business without their assistance. Personally, she says that her work with NECFE has helped to increase her self esteem and her business keeps her busy in a good way. She also enjoys helping people to eat more healthy food through her product. Aisha has received positive feedback about her product, from as far away as Germany, and feels that her business, as any small business in a rural area would, supports economic development. She reports that she is very satisfied with the NECFE services she has received, that the staff is well trained, "they know exactly what they are doing", and that the low lab fee was very helpful. *Aisha's Termis*TM has recently won an award from the Massachusetts Marketplace.

Joanna Welland: Gluten Free Pizza

Joanna Welland's LLC produces a line of frozen gluten free pizza. The business, which is nearing the end of the start up phase, is home based and operates in a semi rural area. The business, which was started in 2002, is marketed to targeted groups through magazine advertisements. Joanna chose to go into the business because she felt there was a real need for her product. She has seen her sales activity increase significantly over the past year, although the business has not yet provided her with any income. She employs a part-time employee for 5 hours every other week. Joanna first contacted NECFE through the University of Vermont as she was looking for help with marketing and networking for her business. She acknowledges that NECFE services have provided her with greater access to low-cost, state-of-the art food processing information and technology.

NECFE services provided Joanna with answers to production questions and assisted her to refine her production and improve product marketing. With limited resources available she was able to market “well and wisely” with help from NECFE. Joanna disclosed that the services have increased her awareness and enabled her to live and work with less stress. Her business has impacted the larger community by fulfilling a need for gluten free products and employing a part-time worker. Joanna was very satisfied with the services she received. She appreciated the marketing assistance and other information she received and the experience and skills of the NECFE staff person. Joanna would like NECFE to offer services in more diverse locations and would like an allergy free/nut free lab or kitchen.

Stephen Zamansky: Frozen Organic Foods

This entrepreneur was referred to NECFE by the University of Vermont when he was looking to start a business. He needed information on finding resources, marketing, and sourcing productions for his future frozen food company. Currently in the late stages of production, Stephen is getting ready to produce his frozen organic meals in a factory line. Set up as a corporation, the business will distribute the product line to stores and to the general market. Stephen started the business in 1991 for ethical reasons and a strong desire to produce organic foods. Once the business is stable, it will be a secondary source of income for him and will help diversify his sources of income. He reports that NECFE services provided him with greater access to low cost, state-of-the art food processing information. He also feels that he has a better support network for diversifying his operation and increasing his market share because he has been working with NECFE from the beginning.

The immediate outcomes of Stephen’s work with NECFE were a business plan and a team of key persons who helped him to start the business. Stephen says that he has been able to get to the late process of production because of NECFE services and he attributes important positive changes and developments in the early stages to his work with NECFE staff. NECFE helped Stephen to expand his networks and raise funds. Stephen says that the progress he has made through his participation with NECFE has impacted his personal life and financial situation in that NECFE helped make it easier for him to start the business from the beginning and helped him find the financial resources to get started. His business goal for the future is to get the product in stores. Stephen expresses that he has been very satisfied with the services he received and that everyone he worked with was very helpful. He would recommend NECFE to others. He found NECFE’s strengths to be the staff’s knowledge and assistance and would find it useful if NECFE offered financing to developing and expanding food companies.

NECFE CRIS Report

In five years of operation, the Northeast Center for Food Entrepreneurship (NECFE) successfully provided comprehensive assistance to entrepreneurs in the Northeast and the US. We responded to 4,231 inquiries for assistance on marketing food products. We worked with 600 entrepreneurs on safety evaluations of 2,200 specialty products and processes for commercial production. The laboratory analyzed 2,363 samples of food prototypes to address their safety and technical feasibility. Research projects focused on food safety and value-added processing. Other areas of assistance included product process development, labeling compliance, technical support to shared-use kitchens and co-packers, access to pilot plants for market trial production and to demonstrate small-scale equipment.

We provided direct assistance to 542 entrepreneurs on business planning advice, marketing, resource referrals, and business strategies. We conducted and sponsored 76 workshops and conferences in the northeast covering topics relevant to specialty foods' production with 2,367 attendees. We cosponsored and hosted with several institutions 3 Food Business Incubation Summits-National Conferences and Education Symposia, held in NJ, MA and NY. We assisted over 30 agencies in the Northeast with specific programs as requested.

The 108-page manual developed by NECFE "Small-Scale Food Entrepreneurship: a Technical Guide for Food Ventures" is used as a valuable resource by small processors and state agents. More than 4,500 copies were distributed. We published 15 Venture newsletters distributed to over 1,800 interested parties. Complete electronic archives are maintained in the website, which is being accessed by over 20,000 visitors per year. We facilitated numerous tours, meetings, conferences and trade shows as speakers, to promote NECFE, create partnerships and linkages with agencies, institutions, organized groups, individuals and regulatory concerns in the Northeast, reaching over 5,000 people.

Impact

The center provided direct assistance or training to 6,500 people in food safety, food processing, and business development and marketing, complemented by appropriate referrals to existing local service providers. NECFE services helped to create and support an estimated 8,500+ jobs in primarily rural communities.

The successful components of the NECFE model build on one another and enable the center to provide clients with access to state-of-the art food processing technology, information, and education that are directly applicable to a real business. Through replication of this model, other facilities may establish additional regional food entrepreneurship assistance and education centers.

Seamless integration of assistance by the two partner institutions, Cornell University and University of Vermont, was possible with the implementation of shared databases that allowed effective tracking and assessment of entrepreneurs' needs and services provided.

Comprehensive assistance to food entrepreneurs through university centers is a successful model that increases the safety of specialty foods, increases entrepreneurs' knowledge and competency, and creates local economic development. Outcome evaluation of NECFE demonstrates that the NECFE model, with the five essential components, is successful in assisting business creation, growth, and retention, product development and improvement, business sales, job creation, and skill and knowledge development.

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Conclusions

The Northeast Center for Food Entrepreneurship (NECFE) was a five year collaborative food entrepreneur assistance and educational Center between Cornell University and the University of Vermont, and partnered with the Vermont Food Venture Center to serve the northeast region and beyond. NECFE utilized a multi-institutional and regional collaboration approach, with specific expertise and necessary facilities and resources, to provide technical assistance and education for businesses in the food industry. The overall goals of NECFE were to support and sustain rural businesses and promote sustainable economic development of rural communities.

The NECFE Model

Process evaluation of NECFE demonstrates that five essential components make up the NECFE model. These components include: 1) multi-institutional and regional collaboration, 2) expertise, 3) facilities and resources, 4) services, and 5) evaluation. These components are the core of NECFE services and enable staff to provide clients with access to state-of-the art food processing technology, information, and education.

Impact of NECFE Services

Data on the impact of NECFE services was based on two cross sectional surveys of 540 NECFE clients (approximately 15% of all NECFE clients). NECFE provided services primarily business owners, but also assisted other service providers, researchers, students, and other educators. Clients reported working with NECFE from one to 300 times with an average of six points of contact with staff. More than half (56%) of businesses served operate in a rural setting and 35% are farm based. Clients surveyed produced almost 5,000 products and NECFE assisted clients to create over 500 products. The greatest area of product improvement was in safety, followed by the development of new products. Almost half of clients experienced growth in their business since they started working with NECFE (approximately ½ to 3 years). Of all businesses surveyed, 33% were established while working with NECFE and 67% were established prior. Ninety-six percent of businesses were retained from their intake with NECFE to the time of the survey.

Job Creation

More than half (54%) of businesses have created between one and sixty part-time jobs, with an average hourly wage of \$8.15/hr for an average of 16 hours a week. A total of 809 part-time businesses were reported by clients. Almost half (49%) of businesses created between one and forty-one full-time jobs, with one business expanding to provide 550 full time positions. Full-time jobs pay an average rate of \$12.80/hr for an average of 48 hours a week. In total, 1,061 full time jobs were reported by those surveyed. Based on data collected, the evaluators estimate that NECFE supported 1,625 businesses and assisted 812 to start while they were working with NECFE. Businesses that were started while working with NECFE created an estimated 1,440 new jobs. Established businesses employ an estimated 11,676 workers. In total, businesses that NECFE created and/or supported employ over 13,000 people.

Business Sales and Income

Two thirds (69%) of owners reported that their business generates enough income to cover expenses. Client sales reported during both survey periods ranged from \$82 to 10 million dollars. Overall, total client sales reported were over \$51.5 million. Sixty-one percent of respondents reported that their business provides a source of income, with 59% of these people reporting that it is their primary source of income. Since clients started their businesses, 74% reported that their household income had increased or stayed the same because of their business and 36% saw a decrease. The average dollar amount of increase was \$41,600 and the average decrease was \$25,200. Thirty-seven percent reported an increase in physical assets, with the primary asset being equipment followed by business property, a vehicle, and investment capital.

Impact on rural economic development in community:

Respondents discussed many different impacts that their businesses have on rural economic development in their local community. Thirty-seven percent of businesses reported supporting their local economy and 23% reported providing food or other products to the local community. Other responses include: an overall positive impact on the area community, community development, the preservation and rejuvenation of agriculture in their area, and the development of the food and agricultural industry.

Skills Gained and Satisfaction with Services

Clients reported major skill gains in product safety and sanitation, labeling and packaging, processed foods, and marketing and market research. Major changes in client attitudes included increased self confidence and more business savvy. Eighty-one percent state that NECFE provided them with access to information about food processing and 61% to food processing technology. Eighty-seven percent agreed or strongly agreed that NECFE services met their expectations and provided information and assistance that they needed. Sixty-four percent agreed or strongly agreed that NECFE services aided in the success of their business.

Workshop Evaluation

Since the start of the NECFE grant, NECFE held 76 workshops reaching 2,367 attendees. Topic areas covered through NECFE workshops include: cheese making, marketing and selling skills, product development (i.e. cheese, meat, sausage, jams and jellies), food safety and sanitation, and good manufacturing practices. A total of 489 workshop evaluation surveys were completed by participants. Workshop evaluations showed that clients expressed high levels of satisfaction with workshops and materials covered. Between 95 and 97% of all respondents reported that materials were helpful and appropriate, presenters were clear, and the workshop was useful for their business. Ninety-two percent reported that interactions and networking with others at the workshops were useful and 90% reported that the amount of allotted time for the workshop was sufficient. Overall, 97% indicated that the workshop met their expectations. Workshops are helpful for participants as they learn skills, gain hands on experience, learn from experts, have networking opportunities, and gain resources and referrals.

Client Case Studies

The NECFE case study interviews exemplify how NECFE services assist businesses in a variety of ways, tailoring services to meet clients' unique needs. However, a common theme that emerged throughout all of the interviews was the knowledge, expertise, and helpfulness of NECFE staff. All of the clients interviewed remarked that staff expertise and support was a major strength of NECFE. The case studies demonstrate how NECFE services assisted clients to start a business, improve the quality and safety of products, develop a marketing strategy, and obtain financing. As a result, most clients remarked that an aspect in their lives have changed, such as an increase in income or improved self-confidence. Further, clients mentioned the impact their businesses have had on their rural communities, including as providing employment, supplying products that fulfill a need or niche, bringing customers to other area businesses, and donating to local charities.

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Appendix A: Staff Annual Focus Group Guide

Recruitment

- What **strategies** are used to **recruit** participants to utilize services? (i.e 1-800 #, website)
- What strategies have been **effective** in recruiting participants?
- What **problems** have you encountered in the recruitment phase?
- What is being done to **overcome** these problems?

Assessment

- How are participants **assessed** for eligibility of receiving services?
- What are major **barriers** clients face upon enrollment?
- How are clients **referred** to address these barriers?

Referral

- How are clients **referred** to services, both internal and external?
- Where are clients most **commonly referred** services?
- How do you **follow up** with clients regarding the resources to which you referred them?
- Do you receive any **feedback** from clients on how referrals benefited them? How do clients perceive referrals to **benefit** them?
- Are they receptive to referrals?

Support Services (Workshops)

- What are the main **support services** offered for clients?
- How do you perceive these support services to **benefit** or **impact** clients?
- Please provide examples of how services have benefited or impacted clients.

Collaboration

- What **strategies** are used to **share** information, technology and resources between UVM and Cornell for the NECFE project?
- Are these strategies **effective** or **not effective** in sharing information, resources and technology?
- What are your **suggestions** for improving this communication?
- How does **communication** between UVM and Cornell work to **address problems** that arise in the project?
- What has been **successful** or **effective** in collaborating with partners and other collaborators?
- What **problems or limitations** have you encountered in working with partners and other collaborators?
- How have these problems been **overcome** or how do you plan to overcome them?
- How does **Cornell/UVM benefit** from this collaboration (specific examples i.e. **research**)?
- How do you think you help UVM/Cornell?
- How do you perceive that other partners **benefit** from this collaboration?
- Please discuss any **success stories** in collaborating with UVM or other partners (i.e. examples of successful collaboration or ways the institutions have benefited for the collaboration)

Seamless integration of services

- What **strategies** (i.e. communication or technology) are used to ensure **a seamless integration** of assessment, referral, research, technology, and support services to value-added food producers.
- Is the project **providing** a seamless integration of services to clients?
- Are these strategies **effective** or **not effective** in serving the needs of food producers?
- What are your **suggestions** for making this more effective?

Project Impact

- Overall, how do you perceive the services of NECFE to **benefit** clients?
- **Rural communities?**
- Please discuss any success stories with clients.
- What evidence is there of **economic, social, and environmental** impact of the project on clients and their communities? (i.e. JOBS, economic development, sustainability (environmental aspects), wage rates, income levels)
- If too early to tell, what do you **anticipate** will be the economic, social, and environmental impact of the project on clients and their communities?
- What **tangible** things will come out of their participation?

Appendix B: NECFE Model Focus Group Guide

1. Given your experience with NECFE, what is a model that works and may be transferable to other institutions for offering assistance to food entrepreneur?
2. What are the key components of a successful center model? Please list the components/services that are absolutely required. Please list component/services that could be referred out to existing organizations.
3. What were the most successful aspects of the NECFE model? (Including collaboration, the larger picture)
4. What were the most successful aspects of technical assistance or services provided? (more focused on services)
5. What is missing from the NECFE food entrepreneur assistance center model? If you were providing recommendations to another organization that was starting an assistance service, what are lessons you learned based on something that NECFE did not provide?



Appendix C: Workshop Evaluation Form

Northeast Center for Food Entrepreneurship Workshop Evaluation Form

Please answer the following questions about this NECFE workshop. Your feedback is very important so that NECFE may better serve you and others in the future. *Thank you!!*

Workshop attended _____ Date _____

1. Are you currently operating a food business? Yes No
2. Is your food business your primary source of income? Yes No
 - 2a. If no, is your food business your secondary source of income? Yes No
3. What were your goals for taking this workshop?
4. Did the workshop meet your expectations? Yes No If yes, how so?

5. What is your level of satisfaction that...	Very Dissatisfied	Somewhat dissatisfied	No opinion	Somewhat satisfied	Very satisfied
The workshop met your expectations	1	2	3	4	5
Materials provided were appropriate	1	2	3	4	5
Materials provided were helpful for you or your business	1	2	3	4	5
Presenters were clear	1	2	3	4	5
The amount of allotted time for the workshop was sufficient	1	2	3	4	5
What is your overall satisfaction level for the workshop	1	2	3	4	5
6. Please rate:	Not useful	Somewhat not useful	No opinion	Somewhat useful	Very useful
The overall usefulness of this workshop to your or your business	1	2	3	4	5
The usefulness of interactions and networking with others at the workshop	1	2	3	4	5

7. What was *most helpful* for you in this workshop?
8. What *did not work well* for you in this workshop?
9. Were you referred to other services that you needed through this workshop? Yes No
10. What suggestions do you have for improving this workshop?

Appendix D: Case Study Interview Guide

NECFE Services and Impact

1. How did you **learn** of NECFE? (i.e. NECFE or other website, brochure, agency representative, hotline, etc.)
2. For what reason did you **first approach** NECFE?
3. What NECFE **services** have you used?
Ex. Educational materials, workshops, direct assistance, and referrals to appropriate organizations, in the following areas:
 - Business Development and Entrepreneurship Training
 - Strategies and Tools for Marketing
 - Product Process Development
 - Product Safety Evaluation
 - Guidance in local, state and Federal Regulatory Compliance
 - Linkages to Business Assistance and Potential Financing Sources
 - Referrals to Local Suppliers and Service Providers

Business Questions

4. Please describe your **current business**? What stage are you in?
Planning stage, start-up, stabilizing, stable but not growing, growing?
5. Please describe your **product/product line/service**? Are any of these products the result of NECFE services?
6. Where does most of your **business take place**? How do you **distribute** your product? Describe the **type of community** in which your business operates. (rural, urban, suburban)
7. How do you **advertise** or **promote** your business? How have NECFE services facilitated this?
8. How would you describe this type of **business ownership**?
Sole proprietorship, partnership, corporation, or others?
9. Approximately when did you **start** this business? How long have you been in business?
10. Why did you **choose to go into your particular business**? (i.e. did it start out of a hobby, previous employment, etc.)
11. Is this business your *primary* or *secondary* **source of income**? What percentage of your yearly income comes from your business? Has this changed since you started working with NECFE?
12. Has your business helped you to **diversify** your sources of income?
13. Please describe your **sales activity**. (Actual dollars or increased over past year, etc.)
14. Has your business created any jobs in addition to your own? Type of job, hours worked, and payrate (PT and FT). Were these jobs created as the result of NECFE services?
15. Have NECFE services provided you with greater access to low cost, state-of-the art food processing information and technology?
16. Do you feel you have a better support network for diversifying your operation now compared to before working with NECFE? Increasing your market share?

17. Do you now have new opportunities to market and sell your product because of NECFE services? Have NECFE services helped you to improve your product competitiveness in regional, national, or international markets?
18. Has your market-base expanded because of working with NECFE?
19. Has your client base expanded because of working with NECFE?
20. What was/were the **immediate outcome(s)** of NECFE services (i.e. improved product label, business plan, license, new or improved skills or knowledge)?
 - a. Business and product process development,
 - b. Product safety,
 - c. Process/product technology transfer and
 - d. Product commercialization
21. With regards to **product development**, what outcomes have you experienced because of working with NECFE?
 - Meet regulatory standards
 - Scheduled process
 - Increased knowledge of food safety
 - Safer product
 - Improved product quality
 - Improved product packaging
 - New value-added product
22. What **business successes** or **business goals** have you reached because of NECFE services? How has **NECFE facilitated** reaching these business goals?
23. What **positive changes** in your business have taken place (business improvements) that you would attribute to your involvement with NECFE services? (i.e. better marketing, better product, regulatory, improved sales, etc.) Please describe how **NECFE facilitated** this?
24. What **problems** have you encountered in starting/running your business? (i.e. license/registration, funds, skills/training, support, etc.) Please describe how NECFE services have **helped to work through or solve** these problems?

Impact of Business on Personal Life

25. What **effect** has your participation in NECFE services and the progress you have made had on areas in your **personal life**?
 - a. **Personal life** (such as your health, skill development, self-awareness, attitudes, etc.)
 - b. **Financial situation** (income, child care, health care)
 - c. **Family situation** (such as your parenting skills or communication skills with family members)
 - d. **Community life** (involvement in community, neighborhood, friends, etc.)

Impact of Business on Community

26. What **impact** has your business had on your **larger community**? How has your business **contributed** to the community? Jobs, food security, goods and services, etc.?
27. How is your business contributing to rural economic development?

28. What are your **business goals** for the **future**? Do you plan to continue working with NECFE?

Feedback on NECFE Services

29. How **satisfied** have you been with NECFE services?

30. What are the **strengths** and **weaknesses** of NECFE services? How could they be **improved**?

31. What **other services** could NECFE offer that would be useful to you?

Demographic information

Now I have a few questions to ask you about your self. Please answer what you feel comfortable with.

State of residence?

In what year were you born?

What is the highest level of education you have completed?

Less than 9th grade

Associates degree

9th -12th grade (no diploma)

Bachelors degree

High school graduate (Includes Equivalency)

Graduate/Professional degree

Some college (no degree)

Other training (please specify):

Total yearly income:

Less than \$20,000 \$35,000-\$50,000 More than \$65,000

\$20,000-\$35,000 \$50,000-\$64,000

Family structure? # of children and adults in household?

That was my final question. Thank you so much for taking the time to complete this survey.

For additional copies of this report, please contact:

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