

Establishing an Aggregation & Marketing Center for California's North Coast



A USDA RURAL DEVELOPMENT FEASIBILITY STUDY
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EXECUTIVE SUMMARY

This report presents a market analysis of the food system in California's four North Coast counties (Sonoma, Napa, Mendocino, and Lake), with the core aim of identifying opportunities to expand local markets for food producers.

After a robust series of interviews, surveys, and meetings with both producers and buyers, it was determined that there is both the supply and demand necessary to expand local food production and distribution in the North Coast region. It was further determined that an Aggregation and Marketing Center (AMC) could provide an effective mechanism to increase the availability of local product efficiently and sustainably.

It is clear that there is a real desire from distributors and other large purchasers to make more local product available. Consumer demand for local food is high, driving demand from restaurant, retail, and institutional customers. Regional producers have likewise indicated that they are willing to make more of their product available to the local market, predicated on profit margins sufficient to justify any necessary investment, and there appears to be North Coast farmland available for additional production. Many growers also indicated a need for services in addition to straightforward aggregation, including cold storage, packing, and various forms of training.

Locally produced fruits and vegetables are in particularly high demand, and would be well served by the establishment of an AMC. While there is a demand for and local supply of cheese, meat, and grains, these products have unique challenges, which put them beyond the focus of an AMC, at least in its early stages.

An early-phase AMC could be managed by a non- or for-profit organization, with concurrent business or programmatic activities complementary to produce aggregation, appropriate entrepreneurial and produce handling expertise, and adequate capital and infrastructural resources. While multiple organizational candidates exist, there is currently no appropriate turnkey facility.

There is sufficient business justification to establish a North Coast AMC, however. This service is much needed by both growers and buyers, and its social, environmental, and economic impacts could extend throughout the region.

INTRODUCTION

“As I talk to farmers across the country, regardless of what they produce or where, they all share one common challenge: how to best move product from the farm to the marketplace. This is especially crucial for small and midsize farmers who may not have enough capital to own their own trucks, their own refrigeration units, or their own warehouse space. They might not have the resources to develop sophisticated distribution routes, build effective marketing campaigns or network with regional buyers and customers.”

- Kathleen Merrigan, USDA Deputy Secretary, April 2011

The popularity of locally grown food continues to rise. Between 1997 and 2007, national direct

to consumer sales increased 105%, and “local” is now one of the top criteria that consumers look for when making produce buying decisions.¹ Yet as “local food” has entered the mainstream, the idea has to some extent outgrown what is feasible on the ground. Marketing messages around local food do not always denote an actual commitment to sourcing from small, sustainable, regional producers, and the existing food system is still largely structured to reward centralized production and long distribution chains. Actually bringing significant quantities of product from small and mid-size family farms to larger local markets remains a structural challenge.

It is generally accepted that small and mid-sized family farmers are at a distinct disadvantage when selling to larger markets. They are often excluded from mainstream market channels because conventional distributors and retailers look to achieve lower, more competitively priced products through high volume purchases and to avoid the transaction costs associated with purchasing from many different small suppliers. Smaller farmers may also be financially unable to maintain infrastructure like packing sheds and cold storage facilities, which are necessary for larger volume sales. In these cases, many farmers end up renting space, often at some distance from their growing operation and at exorbitant rates.

Small and mid-sized farmers have employed a combination of tactics in order to stay in business: differentiating their products, typically by adding value, developing direct-market outlets such as farmers markets and CSAs, and in many cases by accepting a lower return on their investments and labor than larger competitors. The often higher gross revenues yielded by direct vs. wholesale marketing channels do not necessarily translate into higher profits for the farmer, as much of that difference is eaten up by the higher cost of bringing products directly to market.² Although agriculture on the North Coast is dominated by wine grapes, the area’s existing produce growers are eager to find new markets that will provide them the returns they need to stay competitive in a region with crippling high land costs. There is a distinct need in the region to develop larger markets for local produce and to find new and better ways for farmers to differentiate and verify their products as locally grown.

As Jane Jacobs famously observed, all regions are city regions and no rural area is independent of a city. The North Coast is economically tied to the San Francisco Bay Area, and there is today no better market for “local” food. However, the infrastructure that once assembled and delivered food to San Francisco from the surrounding region was severely damaged or eliminated after World War II by price competition from lower cost areas. Meanwhile, the North Coast region is itself crowded with potential customers. In total, there are 1,491 food and drink establishments throughout the four-county region, with most of these concentrated in Sonoma County.³ According to the US Food Market Estimators, over a quarter of a million pounds of fresh fruits and vegetables are received annually by North Coast retailers. The technical and logistical question of how to connect these businesses with small local farmers is the main barrier to establishing a more robust market for local food.

¹ “Understanding Local from a Consumer Perspective,” 2008, The Hartman Group

² “Determining Market Costs and Returns in Alternative Marketing Channels,” Hardesty, Sharmain D. UC Davis.

³ USDA Agricultural Census, 2002

Since 1978, the Community Alliance with Family Farmers (CAFF) has advocated for California family farmers and sustainable agriculture. Working with farmers on one end of the food chain, and educating hundreds of thousands of consumers on the other end to “Buy Fresh Buy Local,” CAFF’s programs have played a crucial role in growing the local food movement throughout the state. CAFF also has a wealth of experience developing wholesale markets for local food through the Growers Collaborative (GC) initiative, which was an early, innovative effort to aggregate and distribute the products of small farmers to meet the burgeoning demand by large purchasers.

METHODOLOGY

The study’s central goal was to determine the feasibility of creating a single point of sale for locally grown products on California’s North Coast. This entity is called the Aggregation and Marketing Center (AMC) for the purposes of this report. Also for the purposes of this report, the “North Coast” includes Sonoma, Napa, Lake, and Mendocino counties.

The inquiry focused on three main questions:

- Is the North Coast’s demand for local produce strong enough to sustain an AMC?
- Would the growers in the North Coast counties be able and willing to supply enough produce to sustain an AMC?
- Would there be either a for- or non-profit entity willing and able to manage an AMC sustainably?

The feasibility study was conducted over the course of a year, from June 2010 to June 2011. To begin the process, a four-county community stakeholder meeting was held. This was followed by a series of farmer meetings held locally in each of the four counties. Subsequently, the research drew on the connections and information gleaned from these stakeholder meetings and employed multiple forms of inquiry, including:

- Publicly available data from county Agricultural Commissioner, etc.;
- A survey of community stakeholders to learn what was already being done within local communities and how they perceive a prospective AMC;
- A survey of growers to assess the need for various prospective AMC functions and to determine the availability of product;
- A survey of local institutions about the demand for locally grown food;
- A survey of local and regional distributors to assess their potential use of a regional AMC;
- One-on-one interviews with local growers and other stakeholders, conducted by the county Outreach Coordinators.

Outreach Coordinators local to each county were employed to engage key growers and other stakeholders in more in-depth interviews and consultations. Conclusions and recommendations regarding the feasibility of a North Coast AMC were based on qualitative data from these one-on-one interviews, as well as quantitative data provided by the surveys.

The research team recognizes that each product category (fruits, vegetables, meats, cheese & grains) present a unique set of challenges. For this study we primarily focused on the fruit and

vegetable sector in the four-county area. See Appendices C & D for general observations on other sectors, as well as for spotlight discussions on food and farming in each of the four counties.

This feasibility study will be followed by an AMC business and marketing plan, which will incorporate the findings and recommendations from this report.

ANALYSIS OF SUPPLY

In order to assess the availability of product for an AMC, we began by reviewing the data available from the agricultural commissioners in each of the four counties. According to these records, the total number of farms in the four counties is 7,048. The total cropland is 283,437 acres, and pasture and rangeland totals 413,671 acres. Total crop sales for the four counties equaled \$1.2 billion.

The agricultural commissioners reported that there were annual sales of about \$20 million for field crops (includes pasture), \$38 million for nursery products, \$22 million for cattle, \$2 million for sheep, \$36 million for poultry (and miscellaneous livestock), \$21 million for eggs (and miscellaneous livestock products), and \$86 million for milk. Dairy and poultry production is heavily concentrated in Sonoma County. The Ag Commissioners' estimates for fruits (excluding wine grapes), nuts, and vegetables sales were about \$55 million on average from 2006 to 2009, whereas the Agricultural Census of 2007 calculated sales for these products at about \$60 million (because prices fluctuate from year to year and the product mix changes, these are in the same degree of magnitude).

Due to a lack of resources, however, not all farmers register with the county commissioners, and the data appears to underestimate the number of farmers, quantity of farm acreage, and production of fruits and vegetables. To find more precise and detailed numbers, we relied on the 2007 Agricultural Census. Table 1 provides an overview of the four counties. There are about 7,000 farms (with annual sales greater than \$1,000) constituting almost 1.5 million acres. Reported cropland totals 283,000 acres, but harvested cropland is only 193,000 acres – that is, significantly less than the total. The census data indicates that 32 percent of cropland is idle or was not harvested, suggesting that there is space in these counties for production to expand.

Table 1: 2007 Agricultural Census Overview

	Sonoma	Lake	Napa	Mendocino	Region Total
Number of farms ¹	3,429	845	1,638	1,136	7,048
Land in farms (acres)	530,895	124,199	223,246	606,674	1,485,014
Total cropland (acres)	134,418	28,997	66,184	53,838	283,437
Harvested cropland (acres)	91,197	18,800	51,860	31,609	193,466
Land in orchards/vineyards	68,425	15,089	50,533	20,188	154,235
Land in vegetables, melons, potatoes (acres)	919	31	29	255	1234
Total value of ag sales (\$)	647,579,000	61,102,000	376,868,000	122,408,000	1,207,957,000
Crop sales (\$)	422,538,000	59,713,000	371,961,000	106,614,000	960,826,000
Animals and prods sales (\$)	225,041,000	1,389,000	4,906,000	15,795,000	247,131,000
Direct sales to individuals \$	4,803,000	575,000	1,148,000	1,210,000	7,736,000

Direct sales to individuals by farmers located in the four-county area were estimated at less than \$8 million. Sales at the region's farmers' markets are significantly greater than that, so this figure would appear to be an underestimate. Many of the farmers selling at those markets are from other regions, however, so it is possible that \$8 million is approximately accurate. This figure would not include direct sales to restaurants or stores, nor would it include direct sales of processed products such as wine.

Focusing specifically on fruits and vegetables, Table 2 (Appendix A) shows the census data for number of farms and acreages in the four counties for broad categories. There were 273 farms growing 1,234 acres of vegetables, melons, potatoes, or an average of only 4.5 acres per farm. There were 108 farms growing 195 acres of berries, or less than 2 acres per farm. With few exceptions, the farms in the region engaged in fruit and vegetable cultivation (excluding wine grapes) are small. Apple and pear orchards are larger, as the more detailed data shows.

Table 3 (Appendix B) breaks down the 273 farms producing 1,234 acres of vegetables, melons, potatoes, and herbs into particular crops. Although the numbers of farms are accurate and complete, the acreage numbers are often incomplete due to confidentiality requirements. There are only about 30 acres of these crops in each of Lake and Napa Counties, about 250 acres in Mendocino County, and almost 1,000 acres in Sonoma County. The largest numbers for farms and acreages were reported in cantaloupe, lettuce, pumpkin, squash, and tomato production.

Table 4 (Appendix C) presents similar data for fruits, nuts, and berries. Because the overall data are so heavily influenced by wine grapes — where 3,726 farms produced 139,294 acres of grapes, or an average of 37.4 acres per vineyard — it is best to look directly at individual crops, although confidentiality is again a problem. The largest historic fruit crops that remain in the region are apples and pears. There are 353 farms with 4,203 acres of apples (at an average of 12 acres/farm) in the region, and there are 146 farms with almost 4,100 acres of pears (at an average of almost 29 acres/farm). The apples are concentrated in Sonoma County (90 percent), and the pears were split between Mendocino (50 percent) and Lake (48 percent) Counties.

There has been a reduction in pear acreage since 2007, demonstrated most clearly by the closure of the Thomas facility in Ukiah. The California Pear Board reports in 2011 that the number of pear grower-shippers in California has fallen from 300 to 60.

According to Paul Vossen of UC Cooperative Extension, fruits that have disappeared from Sonoma since the 1940s include 20,000 acres of prunes, 3,000 acres of pears, 1,000 acres of cherries, 670 acres of berries, and 200 acres of peaches. In 1940, there were almost 14,000 acres of apples in the county. There were also once 2,800 acres of hops. Most of these were displaced by wine grapes, as lower-cost competition arose from the Sacramento and San Joaquin Valleys, the Central Coast, and the Northwest. A similar process occurred around Watsonville, where apples were progressively displaced by berries. Of these crops, a local-oriented marketing strategy would seem mostly likely to favor a mix of berries and hops for local beer.

A fruit of growing importance in the region is olives, which were grown by 176 farms on 836 acres in 2007; they were spread evenly across Mendocino, Sonoma, and Napa. The nuts are

mostly walnuts (93 percent), with over 5,000 acres, concentrated mainly in Lake County. Finally, berries are grown on over 100 farms in the region and have the potential to play an important role in a local food system.

Grower Survey

We administered a survey of local growers to assess the degree of interest in an aggregation center in the region, and to determine the range of supply. A letter of solicitation was first mailed to all of the non-grape fruit and vegetable growers in the region, using lists provided by the Agricultural Commissioners. We held four grower workshops in the different counties, where we distributed questionnaires. Finally, we directly interviewed a number of key farmers known to our county Outreach Coordinators and collaborators.

We received 52 completed questionnaires. This does not represent a random sample of growers, but rather a group of producers interested enough in the idea of a local AMC to provide us with information about their businesses. Both the questionnaire and a detailed report on most of the information can be found in Appendices F & G. The following discussion summarizes the most important results.

Of the 52 farmers who responded, 43, or 83 percent, offered to sell products to the AMC. Table 5 shows the fruits offered by these growers. (Since most respondents did not specify quantities, we have just listed the number of farms offering to sell the product.)

Table 5: Fruits offered to AMC by farms surveyed

Product	Number of farms
Apples	21
Asian Pears	2
Berries	1
Cherries	1
Figs	1
Jujubes	1
Peaches	2
Pears	4
Persimmons	3
Plums/Pluots	2
Strawberries	1
Other fruits produced by these farms	
Blackberries	
Feijoas	
Marionberries	
Olallieberries	
Prunes	
Raspberries	
Table Grapes	

Source: Grower Survey

The crop with the greatest number of respondents was apples, with 21 growers offering 483 tons of an array of apple varieties. Apples are the principal historic fruit crop in Sonoma County, while pears dominated in Lake and Mendocino Counties. There is clearly sufficient apple and pear production in the region to create a core business for an AMC. As discussed above in the review of census data, there were 353 farms with 4,203 acres of apples in the four counties, or 19 percent of all apple acreage in California, and there were 146 farms with 4,079 acres of pears in the four counties, or 26 percent all pear acreage in California (2007 Census of Agriculture). Although most of this production currently has a market, much of it is sold at low prices for processing or into general commodity markets. Fresh market sales as “local” product in the region and the Bay Area would provide more attractive prices.

In addition, there is growing production of more specialty fruits, especially a variety of berries. We queried the farmers about whether they had planted more fruits, and 25% said they had, including more apples, raspberries, strawberries, pears, peaches, and plums.

Table 6 shows the vegetables, melons, potatoes and herbs offered to the AMC by the surveyed growers. In this table we have listed quantities where we had two or more growers, although the data were still very incomplete. Quantities ranged from very small amounts—100 pounds—from one farm to 83 tons of tomatoes from 10 farms.

Table 6: *Vegetables, melons, potatoes, and herbs offered to AMC by farms surveyed*

Product	Number of farms	Approximate quantity
Arugula	1	*
Beans, dry	1	*
Broccoli	2	40-50+ cases/week
Cabbage	2	10+ cases/week
Carrots	2	
Cauliflower	1	*
Chard	2	40-50+ cases/week
Cucumbers	5	11,900+ pounds
Eggplant	2	1,800+ pounds
Fennel	1	*
French beans	1	*
Garlic	3	
Green beans	2	100+ cases/week
Kale (Collards/Chard)	3	40-50+ cases/week
Leeks	1	*
Lettuce	4	8,000+ heads
Melons	3	1,200+ pounds
Okra	1	*
Onions	3	2,500+ pounds
Peas, snap and snow	2	
Peppers	6	4,900+ pounds
Potatoes	3	500 tons

Pumpkins	2	12,000 pounds
Squash	4	4.5+ tons
Squash, Summer	3	1+ tons
Squash, Winter	4	5+ tons
Sweet corn	1	*
Tomatoes	10	83 tons
Tomatoes, cherry	1	100 cases
Turnips	1	*
Vegetables, mixed	4	10+ tons
Other Vegetables and Herbs produced by these farms		
Basil		
Beets		
Carrots		

+ = an additional missing quantity

* = data suppressed where only one farm

Source: *Grower Survey*

Our purpose in looking at what the surveyed growers offered was to show that there is significant interest in selling to an AMC, and that there is a wide variety of fruits and vegetables produced in the region.

We asked the surveyed growers how they marketed their products. Table 7 shows the results for those crops with sufficient data by market channel. Farmers reported selling large percentages of most crops directly to consumers or stores. Relatively small percentages are sold to restaurants and even smaller percentages to wholesalers. Large percentages of the principal fruit crops — apples and pears — are sold to processors at low prices, suggesting that there is an opportunity to sell more of these as “local” in fresh markets. Institutional sales are small and are mainly confined to fruits, exhibiting both the lack of fresh-cut operations for vegetables as well as the lack of access to institutional markets for local produce.

Table 7: *Distribution by Market Channel of Selected Crops*

	Direct to consumers	Restaurants	Stores	Wholesale	Processors	Cider, own process	Institutions	Other (e.g. food bank)
	%	%	%	%	%	%	%	%
Apples, all	11.4	0.5	12.1	12.8	45.4	14.6	3.2	
Basil	33.3	8.9	46.7					11.1
Blackberries	75.0				25.0			
Cucumbers	32.3	3.7	50.3	8.8	2.1			2.7
Eggplant	20.8	9.2	30.8	8.3	1.7			29.2
Figs	10.4	5.7	75.2		8.7			
Lettuce	68.2	16.5	9.4					5.9
Melon	59.1	1.8	1.8				37.2	
Okra	83.3	13.3	3.3					

Onions	10.1		8.2		81.6			
Peaches	80.1		0.3				18.9	
Pears	16.7	2.8	2.7	5.2	68.3		4.3	
Peppers	19.5	0.6	60.6	16.0	0.2			3.1
Persimmons	16.3	5.1	10.6	68.0				
Plums	82.3	0.7	14.2	2.8				
Pumpkins	83.9	3.2	3.2					9.7
Squash	58.5	5.7	28.1		1.1		3.5	3.1
Tomatoes	29.3	8.3	46.1	4.6	2.6	5.4	0.4	3.2
Mixed veg	44.5	23.6	29.2		.04		.04	2.6

As we discussed the idea of a North Coast AMC, it became apparent that people had different ideas about the meaning of “local” and the precise nature of the local distribution problem. In Napa County there is so little production of produce that people sought a staging point with a cooler to facilitate participation in farmers’ markets. There are not enough producers to supply local farmers’ markets, let alone supply institutions or send product to an aggregation center. In Lake County, the Farm Bureau’s “Eat Local” campaign — and one man’s efforts to distribute local produce around the lake — are similarly hampered by the lack of a staging point with cold storage. In Mendocino County, production is spread out over a very large area with a small population. Nevertheless, the residents are very dedicated to the idea of self-sufficiency and supplying local schools, stores, restaurants, and institutions with locally grown produce. In Sonoma County, a similar desire for local was expressed, as well as dissatisfaction with a distribution system that – when it did buy from local farmers – often took the produce to San Francisco and then brought it back.

We consistently found that across the region and within each agricultural sector, there are individual farm and/or ranch operators who could (or already do) provide storage and/or packing services for other nearby producers. There was also general agreement that active collaboration between these farmers and ranchers would be highly beneficial to the growth of agriculture in the four-county area.

Possibilities for Expansion

We asked the farmers we surveyed if they had planted any additional acreage recently. A quarter of them responded that they had, including six new plantings of apples, two of grains, as well as stone fruit, pears, raspberries, and strawberries. That farmers in the region are planting apples and pears suggests that there is real potential for these crops if they can be shifted more toward the fresh market.

We asked if the farmers expected to increase production in the following two years, and 44 percent responded that they were planning to expand vegetables, melons, sustainable meats, and processed foods. Furthermore, if an AMC were to be created, some 60 percent of surveyed growers would expand production and an additional 26 percent might expand. Growers speculated that they might expand all sorts of vegetables, melons, herbs, potatoes, grains, dry beans, meats, and fruits.

Although land in many parts of the region is expensive due to the influence of the wine industry, many growers we spoke to said they knew people who would lease them additional land. Very

expensive land can often be leased relatively cheaply, because someone with a house in the country does not necessarily want to farm. As we observed in the census data, there is a considerable acreage of underutilized cropland in the region. This is particularly true in Lake and Mendocino counties, farther away from the population centers of the Bay Area. Improving the logistics for Lake and Mendocino to sell products in the region as well as in the Bay Area through an AMC could well put additional acreage into production and constitute part of an economic development strategy for those counties.

Many growers indicated that they could accommodate specific requests for crops and crop varieties, as long as they had solid commitments to purchase prior to planting.

Siting and Delivery

We asked farmers in our survey if they could deliver to an aggregation center, and 80 percent said yes, while 8 percent answered “maybe.”

While an AMC in Sonoma County could help to alter the Bay Area-centric distribution system, it would not have an equivalent effect on the other three North Coast counties. The average distance growers were willing to deliver was 28 miles, and this was true across all four counties. They uniformly preferred local aggregation points, suggesting two in Mendocino (coast and inland), one in Lake, with Napa close enough to deliver to a central Sonoma AMC. These distributed aggregation points could serve as staging points where products could both be assembled for very local distribution within the county, as well as aggregated for pick-up and delivery to the Sonoma AMC.

A successful example of this type of system is Red Tomato on the East coast, which typically utilizes participating farmers’ own facilities (i.e. farmers who are themselves engaged in packing and shipping and so have cold storage, truck docking, etc. capabilities) as staging points. A potential example in Mendocino would be the Gowan apple packing facility in Philo. Several similar facilities were also suggested in Lake County, including old pear sheds, the Mariani drying plant, and Mt. Konocti Growers.

ANALYSIS OF DEMAND

To evaluate the demand for local produce, we surveyed and interviewed over 35 food service operators and 16 retail operators in Sonoma and Napa counties. Over 80 percent of those interviewed expressed the desire to be able to access source-verified local produce. Chefs and retail produce managers expressed a desire to meet with local growers to collaboratively identify needs and capabilities.

Institutional & Food-Service Operators

The desire to serve local food by institutional and food service operators is extremely high, and the potential volume is substantial.

Sonoma State University has a student and faculty population of 9,500, with 10 food facilities on campus serving 1,450 meals daily. Just two of these facilities – The Commons and Zinfandel Hall – purchased a total of 7,641 boxes of produce in the 2010 school year. In addition to Sonoma State University, there are four community and junior colleges in the North Coast

region, as well as hospitals that produce approximately 14,000 daily meals.

The colleges and hospital facilities that were surveyed and/or interviewed expressed a strong desire to include local, seasonal products on their menus. The barriers to direct sale identified by institutional and food service buyers included price, limited supply, inconvenience associated with multiple ordering & delivery systems, and food safety concerns. Moreover, many institutions and large food service operators are bound by contract with a single distributor, and they are often strictly limited in the amount they can procure from secondary sources by contractual requirements. If these barriers can be reduced or eliminated, considerable potential for local produce purchasing exists in this sector.

Less demand was found among catering companies that operate food service concessions at hospitals, colleges, and corporate campuses. These companies are typically not locally based and are often less interested in supporting local farmers than independent food service operations. Correctional facilities also exhibited less demand, due to limited budgets (each facility has a discretionary budget that could theoretically be spent to secure local produce, however). Due to safety and security concerns, the number of vendors to correctional facilities is also relatively limited.

Public school enrollment in the four-county area is over 50,000. School districts could potentially purchase approximately 10 tons of fresh local produce over the course of the school year, and there have recently been strong community efforts to influence school food buyers in this direction. These efforts have been largely frustrated by the purchasing and supply systems, however. When school districts use the bid system to procure produce, the award will always go to the lowest bidder. This can be changed if schools modify their contracts to mandate that a certain percentage of the total produce bid be purchased either directly from North Coast growers or through an AMC.

K-12 schools play an important role not only in growing the demand for local produce, but in educating future generations of eaters. Schools have the ability to educate their students about agriculture, sustainability, and how local food and farmers are an important part of their communities. An AMC could provide support to educational initiatives around local food.

When provided with regular sourcing updates and complementary marketing materials, food service operators in schools, hospitals, institutional concessions, and other venues can plan meals around what is regionally available and in season, communicate this information to their customers, and leverage their local procurement into positive publicity.

Restaurant Operators

Independently owned high-end restaurants and resorts in the four counties are all currently purchasing a relatively high percentage of seasonal produce directly from local farmers. Farmers that sell direct should be advised, however, that many restaurants are slow payers, and that the business with the highest bankruptcy rate in the country are independent restaurants operators.

Corporate owned operations, both free-standing and those operating in hotels or other serving facilities, are for the most part supplied by contracted buying groups or full-line distributors. This

type of buying arrangement has not been supportive of local produce. But over the past three years there has been a growing interest to purchase more local produce across a wide range of restaurant types. Over 85% of the owners and the chefs interviewed expressed an interest in increasing the amount of local produce they would use.

Restaurant operator concerns regarding direct sales were about overall quality, consistency, and dependability. Restaurant operators generally trust in their distributors to procure produce for them, and may view alternative sources with uncertainty. Larger operators were also concerned about liability risk that they would incur if the local farmers did not have the necessary insurance coverage. An AMC could mitigate buyers' risk by securing an appropriate umbrella insurance policy.

Retail Operators

Locally based retail operations have always been involved in purchasing and selling local produce. Traditionally and for the most part, consumer cooperatives and small independent operations have established direct sale relationships with farmer vendors, while conventional supermarket operators do not. As major chain retailers have begun to recognize consumer demand for local produce, however, many have begun to institute local procurement and marketing programs to meet this demand. Nearly half of grocery and produce managers report that they currently purchase locally grown products.

According to the USDA 2007 census, retailers in the four-county area receive approximately 227 million pounds of fresh fruits and vegetables annually to fill their produce departments. If a small portion (e.g. 2%) of this received volume was sold by local farmers through an AMC, it would insure the business sustainability of the aggregation center.

Local Distribution

There are numerous distributors operating in the North Coast region, with over 25 companies serving retail and/or food service operators. Fourteen (14) of these companies have the facilities located within the four counties, six (6) are in the Bay area, four (4) are in the Sacramento area and one (1) travels in from Watsonville. In addition there are between 15 and 25 farmers and ranchers that market and deliver directly.

Most of these distributors handle both local and non-local produce, however none source-identify their local produce offerings as such. For restaurant, retail, and food service operations, buying from a local distributor does not guarantee locally grown produce, even during the height of the growing season. Since distributors must carry a full line of products, from apples to watermelons (and including bananas, pineapples, etc.), they must buy from the San Francisco terminal market. Depending on the time of year, the terminal market often carries produce from large North Coast growers, and it has been reported that prices are lower there than when purchased directly from the local grower. In addition, distributors have been hesitant to purchase from small local farmers based on quality, consistency and dependability. As a result, distributors serving the North Coast region are mainly bringing products in rather than taking them out.

A few distributors in the Bay Area have long-standing relationships with growers in the four-

county area. These distributors pick product up at the farm or the larger farmers may deliver produce into the terminal market. Local food advocates in the North Coast region are concerned that a substantial amount of local produce currently available via distributors must first leave the area, returning up to 3 days and 120 miles later. While an AMC would not eliminate this activity, an aggregation aggregation center could reduce those figures significantly. An AMC could also serve as an excellent point of purchase for Bay Area-based distributors to buy North Coast grown produce for sale into the Bay Area market. An increased share of the large Bay Area market could have a substantial positive impact on small and mid-size North Coast growers.

Table 8: *Distributors currently servicing food service and/or retail operations in the North Coast counties*

Distributor Name	Whse Location	Distributor Name	Whse Location
A1 Produce Wholesale	Petaluma	Mendocino Coast Produce	Fort Bragg
Aliterra Produce	Hopland	Mendocino Sea Vegetable Co.	Philo
Andy's Produce	Sebastopol	Moitozo Brothers	Upper Lake
Carcione Fresh Produce	San Francisco	NorCal Produce	Sacramento
Coastline Distributors	Santa Rosa	Northbay Produce	San Francisco
Earls Organics	San Francisco	Pro Pacific	Sacramento
Fresh Point	San Francisco	Rincon Valley	Santa Rosa
Paul's Produce	Sonoma	Romanini Jo Ann Distributing	Sonoma
General Produce	Sacramento	Scully Packing	Finley
Green Leaf	San Francisco	Sonoma Growers Exchange	Santa Rosa
Inwalle Produce	Santa Rosa	Sysco Foodservice	Hayward
Jacks Produce	Santa Rosa	U.S. Foodservice	Livermore
Lake County Guy	Upper Lake	Veritable Vegetable	San Francisco
Marin Produce	San Rafael	Watsonville Coast Produce	Watsonville
	Fort Bragg	Western Pacific Produce	Fall River Mills

THE AGGREGATION & MARKETING CENTER

An Aggregation and Marketing Center (AMC) is a centrally located facility with a business management structure facilitating the aggregation, storage, and marketing of locally/regionally farmer/rancher produced food products. Creation of a consolidated point of purchase and sale removes the onus of wholesale marketing from growers, enabling them to concentrate on production. Ideally, the aggregation center also increases the total amount of source-verified local food on the market by facilitating sale to larger buyers and leveraging existing distribution networks.

By configuring the AMC to serve solely as an aggregator and not as a distributor, we significantly reduce the fixed costs of the venture, heightening its probability of profitability and subsequently the returns to the farmer. This configuration as an aggregator rather than a distributor also negates the barrier of exclusive pre-existing contracts between large buyers and

distributors. An AMC could provide both institutional buyers and mainline distributors with a way to satisfy customer demands for locally grown food.

Although some consumer and community advocates perceive gaps in the supply chain for local food, the study findings and analysis show that there are many area distributors and farmers selling produce – both local and non-local – to retailers and food service operators. It must therefore be assumed that perceived gaps have less to do with the actual ability to deliver locally grown products than with distributors' ability to procure source-identified local products conveniently and consistently.

An AMC could play an important role in insuring that the perceived and real gaps in the supply chain are filled. By offering large buyers a single point of purchase, an assurance of consistent quality, and a comparatively large volume of product, an aggregation point would encourage them to purchase more local produce overall. By identifying local produce visibly, verifiably, and consistently (including marking each case with the farmer's name and lot number) the AMC ensures that local produce is promoted as such. Promotional and branding campaigns like Buy Fresh Buy Local and Know Your Farmer Know Your Food could be tied to the AMC's marketing activities, thus maximizing the value of the local produce being sold.

Functions of the AMC

Although an AMC's core function would be aggregation of local foods for efficient distribution, there are a number of other roles that the facility could play. The research team asked growers if they would use cold storage services and 41 percent said yes, while 45 percent answered "maybe." Some vegetable growers need temporary storage to simply improve delivery logistics, while apple and pear growers need longer-term storage to extend the period during which they can sell to the fresh market. Although some apple and pear growers have their own coolers, most agreed that more efficient group storage would lower costs. Meat producers also indicated a need for freezer space. It appears that there is significant demand for cold storage services, which could constitute one aspect of an AMC's business.

We also asked farmers if they were interested in the cooperative purchasing of inputs. 56 percent said yes and 31 percent answered "maybe." The leading items that growers were interested in were soil amendments, boxes, irrigation supplies, row cover, and seeds/starts. Whether or not cooperative purchasing would constitute part of the AMC's business would depend on the availability of relatively inexpensive warehouse space where these inputs could be temporarily stored.

An important consideration in encouraging mainly direct-market farmers to expand and sell to wholesalers and institutions is the issue of food safety. The Food Safety Modernization Act of 2010 strengthened the FDA's oversight, and food safety rules for the produce industry are currently being drafted. Once those rules are finalized, it will become obligatory for every produce grower to observe basic food safety practices. Many large buyers already require food safety plans and/or audits for farmers. We asked the farmers if they had a farm food safety plan and 25 percent said yes, though only 14 percent had a written plan and 16 percent had been audited for food safety. The farmers said they needed more information and assistance, but believed that collaboration could help them meet buyers' demands.

One interesting survey finding was the enthusiasm of the farmers for more value-added production. 63 percent said they were interested in value-added processing and 10 percent indicated that they might be interested. Table 7 shows the processed products that farmers are currently willing to sell to the AMC, including fruit juices, jams, sauces, honey, and olive oil. One area not yet thoroughly explored is the cut-up of produce, which is essential for institutional vegetable sales. The research team is aware of an effort to create such an enterprise in the region, and we assume that it could be coordinated with an AMC.

Table 9: *Processed products offered to AMC by farms surveyed*

Product	Number of farms
Apple juice	3
Asian pear juice	1
Hot pepper sauce	1
Infused honey	1
Asian Pear-Blackberry-Ginger Jam	1
Olive oil	2
Seaweed	1
Other processed products produced by these farms	
Apple sauce	
Apple vinegar	
Mustard	
Quince jam	

Source: Grower Survey

Some of the proposed value-added products included apple products, pickled vegetables, tomato sauce, jam, chutney, salsa, sorbet, kale chips, pies, dried chilies, processed garlic, potato salad, and sauerkraut. Though there was willingness to market some of these products through an aggregation center, most producers wanted them for direct marketing through existing channels such as farmers' markets and CSA boxes. A significant number of farmers (12) said they needed access to a commercial kitchen, however, four farmers said they had commercial kitchens that they would be willing to rent out. Simple coordination between growers could potentially satisfy this demand.

Start-Up Requirements for a North Coast AMC

To successfully launch an AMC, the following resources are needed:

- Start-up capital to prepare facilities for aggregation and storage. Additional services can be incorporated, such as farm pick up, custom vegetable packing and distribution;
- Working capital for business management systems and operations manager to coordinate supply chain logistics (e.g., grower-buyer transactions, aggregation, distribution, and marketing)
- Enterprise development training and technical assistance to increase grower capacity to meet wholesale buyer requirements (volume, quality, packaging, food safety, etc.)

The minimum start-up physical requirements for a building that would house the AMC would be as follows:

- 6,000 to 10,000 total sq feet open area
 - 240 to 280 volt electric power lines in place
 - ½” water lines
 - Men and women toilet facilities
 - Floor drains
 - Truck height loading docks
 - 360 to 420 sq ft cooler & 100 to 120 sq ft freezer
- Shipping containers can be leased or purchased to satisfy this requirement

In the four-county region, we found that there are many empty buildings, but only one that would satisfy all of the above requirements. Most of the facilities on the market are well in excess of 10,000 sq ft. Even at the attractive current triple net lease rate of \$0.55 to \$0.65 per sq ft., a facility of over 10,000 sq. ft would need to generate sales of at least \$7,000 dollars in sales per month just to pay the rent. One promising facility exists in Sebastopol at the Barlow Center. The building managers have indicated that they would be willing to subdivide a 21,000 sq ft building with the features required for the start-up AMC.

The following pro-forma illustrates the anticipated average monthly sales and operating cost of a stand-alone AMC. The margin has been set a at a very low percentage in recognition of the need to purchase products from local farmers at a fair price and insuring that the customer base, retailers and distributors, would find the AMC pricing competitive. Based on this buying/selling strategy, the AMC must quickly establish sales of 2 million dollars in order to turn a small profit.

Using this strategy it is extremely important that local farmers be able and willing to provide 1.7 million dollars of product per year. Equally important is that enthusiasm and stated demand by retailers and food service operators for local family farm produce be conveyed to their distributors and encourage them to support the AMC.

Table 10: *AMC Pro-Forma Operating Statement*

Pro Forma Month	\$/hr.	Units	Sub Total	Totals	% of Total
Sales				166,666.00	100.00%
Cost of Good				141666.00	85.00%
Gross Profit				25,000.00	15.00%
Direct Costs					
rec/ship Labor	14.00	172	2,408.00		
Assembling Labor	12.00	172	2,064.00		
Warehouse	1.00	250	250.00		
Supplies					
Fringe Benefits	0.25	4,472.0	1,118.00		

		0					
Total			5,840.00	5,840.00	3.5%	5,840.00	5,840.00
Indirect Cost							
Accounting	14.00	172	2,408.00				
Mgr/Sales	25.00	172	4,300.00				
Fringe Benefits	0.25	6,708.0	1,677.00				
		0					
Phone/internet	1.00	120	120.00				
Rent	0.65	6000	3,900.00				
Utilities		600	600.00				
Equipment (pallet jack)		300	300				
Postage		86	86.00				
Office Supplies		55	55.00				
Insurance		200	200.00				
Losses/shrink	0.01	166,666	1,667.00				
				15,313.00	9.2%	14,480.00	14,062.00
Total Costs				21,153.00	12.7%	20320.00	19,902.00
Profit/Loss				3,847.00	2.3%	-(7,820.00)	-(13,652.00)

Possible Models for a North Coast AMC

Survey and interview participants offered a range of ideas as to how an AMC could be structured. These ideas are summarized below in the form of five possible models, and each model is evaluated for pros and cons, keeping in mind that the purpose of the AMC is to connect as many local producers as possible with local food retailers and food service businesses.

Model #1: Local farmers form a sales and marketing cooperative

A group of three farmers propose to join forces and form a marketing cooperative.

Pros	Cons
Eliminates Middleman	Could limit farmer participation
Offers diverse product line	Small customer base vs. market potential
Quick field fresh to customer	Competes with existing distribution system

Model #2: Large local grower builds packing shed on his property and acts as AMC

In discussions with a family who are large producers, it was proposed that they build a facility on their property.

Pros	Cons
Satisfy high demand	Currently lacks adequate financing

Open to multiple growers	No current infra-structure
Existing distributor customer base	Would tend to sell his own product first. Possible price differential.

Model #3: Local processor and distributor collaborate to build and operate an AMC

Pros	Cons
Open to all growers	Needs to build customized facility
Expert operational knowledge	Long timeline before operational
Strong buyer/seller experience	High capital requirement

Model #4: Local food bank uses excess capacity to provide space for AMC

The Redwood Empire Food Bank (REFB) is expecting to move into a new facility. At least initially, they will have excess capacity and could house the AMC in one part of the building. They could also provide some of the labor required to run the AMC. They currently have trucks circulating in the region that could back-haul (pick up products on their trip back to their warehouse) product from farmers throughout the north coast.

Pro's	Con's
Infra-structure in place	No experience in this business
Lower operating overheads	Uncertain on long term space availability
Provide farmer needed services	Can not afford to take any risk
Back hauls	

Model #5: Non-profit folds the AMC operation into its fresh cut, vegetable operation

The non-profit organization Buckelew Programs, backed by the Roberts Enterprise Development Fund (REDF), has been seeking to set up a fresh-cut produce facility in the Santa Rosa area. Since many institutional buyers require certain vegetables and fruits to be pre-cut, this operation and the AMC could operate as one efficient company.

Pro's	Con's
Provide value added products	Lacks knowledge of this local market
Well financed	No facility at this time
Perfect synergism	
Provides employment and training to disadvantaged	

In the case of the first three options, the operators of these facilities would engage in selective purchasing practices and direct distribution. This would, in effect, limit the number of growers who participate, and would be in direct competition with the existing distribution system. The customer base of a co-op or other direct distribution operation would be relatively small in comparison to the number of retailers and food service operators that are served by the distribution system already in existence in the four county areas.

Models #4 & #5 offer the benefit of not limiting the number of participating growers and not competing with the 29 conventional distributors currently servicing the retail and food service operations in the four-county and surrounding area. REFB has taken steps to purchase a new 60,000 sq ft facility. At this time there are indications that the new facility would be underutilized for at least two years. Early-phase incubation within the REFB would give the AMC an opportunity to establish relationships with growers and distributors at a minimum capital investment. It is assumed that by operating within the REFB the AMC would benefit from a low operational overhead, as costs would be based on square-foot usage and shared labor. The revenue generated by the AMC's activities would cover all its costs and potentially reduce the operational overhead of the REFB. It must be noted that the AMC cannot at any time have a negative cash flow imbalance that would impact the operational requirements of the REFB.

In Model #5, with BP acting as the AMC operator, blending BP and AMC activities into a single business entity would similarly reduce overhead costs for both parties. More importantly, the synergy between BP's business as a cut and wrap processor and the aggregation function of the AMC would help to accelerate the business' revenue growth. As a single business, the BP-operated AMC would be drawing from an overlapping base of both farmer suppliers and customers, making the overall operation extremely efficient. BP has also received grant funding for the start-up of its business operation and is prepared to handle a short-term negative cash flow.

CONCLUSION

In order to determine the feasibility of a North Coast Aggregation and Marketing Center (AMC), this study set out to answer a set of overlapping questions: Is the demand for local produce on the North Coast strong enough to sustain an AMC? If so, would North Coast growers be able and willing to supply enough produce to keep an AMC operating? If demand and supply requirements could be met, would there be a for- or non-profit entity realistically willing and able to manage an AMC?

Study findings indicate that there is a very strong demand for local produce at all points along the value chain. Institutional food service operators, restaurant buyers, and grocery retailers all indicate a strong interest in increasing the amount of local food moving through their businesses. Meanwhile, there is a vibrant distribution system currently in place, and distributors operating in the area are likewise interested in meeting the demand from produce end users.

The study's research team was originally concerned about the ability of North Coast farmers to supply sufficient produce for an AMC, and there was uncertainty that farmers would even be interested in marketing their product through an aggregation point. As shown in the analysis of supply, however, there is currently ample production of fruits and vegetables in the area to support a financially viable AMC. Farmers are interested in providing product to an aggregation center – provided an attractive price point – and we have identified farmers who would greatly benefit from the establishment of an AMC. Many North Coast fruit and vegetable growers need to find new marketing opportunities that will generate bigger sales and better returns than their existing channels.

Growers that indicated an interest in selling to the AMC – primarily small and beginning family farmers growing a diverse mix of vegetable crops -- also indicated that in addition to aggregation and marketing, they would like the AMC to offer additional services like packing, sizing, grading, storage, and training. These services would add values to farmers' products and increase both their overall marketing capacity and their return on investment. The AMC could provide some or all of these services for a fee, as well as umbrella insurance coverage and food safety assurances. For meat, cheese, grain, and on-farm value-added products, the AMC could simply function as a type of wholesale market.

In addition, the study found that many North Coast farmers have access to additional cropland, which could allow for increased production if demand continued to grow. A successful AMC would encourage the cultivation of underutilized cropland in North Coast rural communities, particularly in Lake and Mendocino counties.

Over the past several months, the study attracted the interest of a number of young, mostly beginning farmers, who recognized both the growing demand for their products and the economies of scale available through collaborative or cooperative marketing. A group of these farmers is currently in the process of forming a new cooperative. The research team supports this type of action by small farmers in the area and does not see it as a replacement or alternative to an AMC.

The AMC could be managed by a non-profit or for-profit organization. A suitable AMC operator would have entrepreneurial experience, financial resources, an adequate facility in a desirable location, and the appropriate infrastructure. While multiple organizational candidates exist, there is currently no appropriate, turnkey facility that could accommodate the basic needs of an AMC. Consequently, if an organization were to undertake management of the AMC, their start-up would take at least eight to ten months. AMC operators must additionally have a broad understanding of the produce business, with specific knowledge in buying, selling, marketing, and warehousing. CAFF has the tools and experience to support the marketing activities of the AMC and its customers.

In order to maintain momentum for the AMC project, it is important that CAFF continue to interface with farmers and organizations in the North Coast region between July 1, 2011 and June 30, 2012. Without CAFF's continued oversight, it is likely that the progress made to-date will become fractured, and interest could severely dissipate, resulting in lost marketing opportunity for North Coast farmers.

Supply and demand for local fruits and vegetables in the North Coast region are sufficient to support the operation of an aggregation center. Although barriers remain to bringing significant amounts of locally grown produce to the North Coast market, an AMC would begin to break these barriers down. An AMC would facilitate the increased purchase of source-identified local produce by larger institutional and distributor buyers, offering local farmers both alternative and additional market opportunities. The economic development stimulated by an AMC would benefit the surrounding urban and rural North Coast communities, while maintaining the region's rich agricultural lands.

Appendix A.

Table 2: Fruits, nuts, berries, vegetables, melons, potatoes

	Sonoma County		Lake County		Napa County		Mendocino County		4-County Region	
	# Farms	Acres ¹	# Farms	Acres ¹	# Farms	Acres ¹	# Farms	Acres ¹	# Farms	Acres
Vegetables, melons, potatoes	172	919	20	31	22	29	59	255	273	1,234
Land in orchards & vineyards	2,061	68,425	549	15,089	1,464	50,533	502	20,188	4,576	154,235
Grapes	1,758	63,949	164	8,183	1,410	49,907	394	17,255	3,726	139,294
Fruit orchards		4,293		2,002		250		2,810		9,355
All nuts		183		4,904		376		123		5,586
Land in Berries	58	125	11	18	8	15	31	37	108	195

Source: 2007 Census of Agriculture

Appendix B.

Table 3: Vegetables, melons, potatoes, herbs

	Sonoma County		Lake County		Napa County		Mendocino County		4-County Region		California
	# Farms	Acres ¹	# Farms	Acres ¹	# Farms	Acres ¹	# Farms	Acres ¹	# Farms	Acres ¹	Acres ¹
Vegetables, melons, potatoes	172	919	20	31	22	29	59	255	273	1,234	1,169,786
Artichokes	2	nd	0	0	0	0	0	0	2	Nd	9,612
Asparagus	2	nd	0	0	0	0	1	nd	3	Nd	20,211
Beans, snap	19	36	3	nd	4	1	16	4	42	41+	5,474
Beets	19	18	0	0	0	0	11	4	30	22	979
Broccoli	14	5	0	0	0	0	9	7	23	12	106,271
Brussels sprouts	1	nd	0	0	0	0	0	0	1	nd	3,617
Cabbage, Chinese	0	0	0	0	0	0	2	nd	2	nd	5,593
Cabbage, head	4	1	0	0	1	nd	8	1	13	2+	14,099
Cantaloupe	35	74	6	6	2	nd	28	8	71	88+	38,489
Carrots	22	8	0	0	0	0	9	5	31	13	56,263
Cauliflower	2	nd	0	0	0	0	5	2	7	2+	32,277
Chicory	1	nd	0	0	0	0	0	0	1	nd	2,085
Collards	1	nd	0	0	0	0	4	3	5	3+	183
Cucumbers/pickles	25	27	6	1	2	nd	9	1	42	29+	6,999
Eggplant	15	8	1	nd	2	nd	14	4	32	12+	1,191
Garlic	18	9	2	nd	0	0	16	7	36	16+	22,177
Herbs, fresh	15	7	0	0	7	4	2	nd	29	11+	4,908
Honeydew melons	2	nd	0	0	0	0	2	nd	4	nd	13,303
Kale	4	2	0	0	1	nd	7	3	12	5+	1,077
Lettuce, all	34	66	8	2	1	nd	17	17	60	85+	227,515
Mustard greens	2	nd	0	0	0	0	3	nd	5	nd	1,902
Okra	0	0	3	nd	0	0	2	nd	5	nd	254
Onions, dry	14	9	8	3	1	nd	13	5	36	17+	43,255
Onions, green	8	16	0	0	0	0	3	nd	11	16+	2,061
Parsley	3	1	0	0	0	0	0	0	3	1	2,265
	Sonoma County		Lake County		Napa County		Mendocino County		4-County Region		California

	# Farms	Acres ¹	# Farms	Acres ¹	# Farms	Acres ¹	# Farms	Acres ¹	# Farms	Acres ¹	Acres ¹
Peas, sugar & snow											
Peas, green	3	1	0	0	1	nd	3	nd	7	1+	826
Peppers, bell	12	9	2	nd	1	nd	6	1	21	10+	21,098
Peppers, other	18	26	1	nd	1	nd	13	3	33	29+	5,617
Potatoes	17	50	2	nd	3	1	7	3	29	54+	37,858
Pumpkins	34	155	3	5	4	3	9	12	50	175	5,106
Radishes	2	nd	0	0	0	0	4	nd	6	nd	1,705
Rhubarb	2	nd	0	0	0	0	2	nd	4	nd	4
Spinach	2	nd	0	0	1	nd	5	1	8	1+	25,843
Squash, summer	41	nd	7	nd	5	nd	20	3	73	3+	3,523
Squash, winter	26	nd	2	nd	2	nd	14	10	44	10+	2,012
Sweet corn	28	23	0	0	2	nd	7	nd	37	23+	24,866
Tomatoes, outdoors	103	162	13	6	13	10	42	19	171	197	355,133
Turnips	5	2	0	0	0	0	2	nd	7	2+	246
Watercress	3	nd	0	0	1	nd	0	0	4	nd	151
Watermelon	8	5	1	nd	1	nd	7	1	17	6+	10,977
Other vegetables	29	59	1	nd	6	2	7	nd	43	61+	21,031

nd = data suppressed for confidentiality

+ = some additional quantity suppressed for confidentiality

¹ = harvested acres

Source: 2007 Census of Agriculture

Appendix C.

Table 4: Orchards, vineyards, berries

	Sonoma County		Lake County		Napa County		Mendocino County		4-County region		California
	# Farms	Acres ²	# Farms	Acres ²	# Farms	Acres ²	# Farms	Acres ²	# Farms	Acres ²	Acres ²
Land in orchards & vineyards	2,061	68,425	549	15,089	1,464	50,533	502	20,188	4,576	154,235	2,826,291
Apples	250	3,769	10	8	14	7	79	419	353	4,203	22,184
Apricots	5	1	1	nd	0	0	1	nd	7	1+	11,290
Avocado	6	17	0	0	1	nd	0	0	7	17+	74,767
Cherries, sweet	10	nd	0	0	1	nd	16	6	27	6+	30,433
Cherries, sour	2	nd	0	0	1	nd	0	0	3	nd	19
Figs	9	4	2	nd	4	1	9	9	24	14+	9,384
Grapes	1,758	63,949	164	8,183	1,410	49,907	394	17,255	3,726	139,294	868,330
Guava	0	0	0	0	0	0	2	nd	2	nd	270
Kiwi	3	nd	2	nd	1	nd	1	nd	7	nd	4,375
Nectarines	3	1	3	nd	2	nd	6	nd	14	1+	28,431
Olives	62	294	28	39	58	212	28	291	176	836	38,142
Peaches	36	23	11	8	12	5	19	22	78	58	66,408
Pears	53	104	35	1,938	4	nd	54	2,037	146	4,079+	15,859
Persimmons	6	2	2	nd	4	1	1	nd	13	3+	3,236
Pluots	7	2	0	0	2	nd	0	0	9	2+	4,137
Plums & prunes	28	18	2	nd	10	8	11	7	51	33+	102,860
Pomegranates	0	0	0	0	1	nd	5	1	6	1+	24,458
Other non-citrus fruit	35	45	4	3	6	5	12	8	57	61	nd
Lemons	28	5	0	0	12	5	0	0	40	10	53,232
Oranges	22	5	0	0	5	nd	0	0	27	5+	212,313
Tangerines	5	3	0	0	0	0	0	0	5	3+	21,528
Other citrus fruit	0	0	0	0	2	nd	0	0	2	nd	127

	Sonoma County		Lake County		Napa County		Mendocino County		4-County region		California
	# Farms	Acres ²	# Farms	Acres ²	# Farms	Acres ²	# Farms	Acres ²	# Farms	Acres ²	Acres ²
All nuts	48	183	391	4,904	38	376	29	123	506	5,586	1,210,203
Walnuts	40	165	389	4,882	35	nd	17	92	481	5,139+	264,517
Chestnuts	6	14	0	0	0	0	4	nd	10	14+	334
Land in Berries	58	125	11	18	8	15	31	37	108	195	42,081
Blackberries	17	38	5	2	0	0	11	10	33	50	1,132
Blueberries	2	nd	2	nd	0	0	6	14	10	14+	3,081
Boysenberries	3	nd	0	0	0	0	2	nd	5	nd	114
Currants	1	nd	0	0	1	nd	1	nd	3	nd	(4 farms)
Loganberries	0	0	0	0	0	0	1	nd	1	nd	2
Raspberries	27	42	4	nd	2	nd	9	7	42	49+	3,247
Strawberries	17	23	4	14	5	13	12	3	38	53	37,442

nd = suppressed for confidentiality

+ = some additional quantity suppressed for confidentiality

² = total acres, bearing and non-bearing

Source: 2007 Census of Agriculture

Appendix D.

Counties of the North Coast

Lake County

Less than 65,000 people live in Lake County, and the demand for local produce is relatively small. It is a distinctly and historically agricultural community, however, and offers perhaps the best opportunity for new small farm development in the North Coast region.

Once a strong wine grape growing region in its own right, Lake County was largely transitioned to walnut and pear orchards in the 1920s following Prohibition. Today, many of these orchards are still in operation, however wine grape production is again on the rise. For diverse fruit and vegetable growers, Lake County offers the prospect of rich, relatively inexpensive agricultural land, especially compared to the surrounding counties. Although weather is a barrier for some crops due to hot summers and early fall frosts, vegetables are grown year round.

There is a very limited demand for product within the county and prices are depressed compared to the surrounding areas. Issues faced by fruit and vegetable growers include finding new markets and better prices, and a lack of knowledge around standard packing practices and food safety. The AMC would help Lake County growers by offering packing and grading services, as well as core distribution and marketing functions. Due to the distance between Lake County and the prospective Sonoma County AMC, growers would be most benefited by the additional establishment of an in-county mini aggregation point.

Mendocino County

Mendocino is the largest county covered by the study area. While community support for local food is strong, population centers are small and local demand is limited. Mendocino offers an abundance of agricultural land, much of it underutilized, but land prices are higher than in Lake and start up costs remain prohibitive.

Wine grapes and marijuana are the most profitable and therefore widely cultivated crops in Mendocino, with comparatively few fruit and vegetable growers. There are several vineyards working to integrate other crops into their operations, however. Most local vegetable growers sell exclusively at local farmers markets, with a limited amount of direct to restaurants and direct to retail sales. There are a few larger row crop growers who are successfully marketing CSAs to primarily Bay Area consumers. Some of these growers have expressed interest in reducing the amount of travel associated with operating a CSA at some point in the future.

Pears and apples were once mainstay crops of Mendocino County, but they have been hard hit over the past several decades. The AMC would be of particular help to these fruit growers, who currently sell their products to canning and juice operations at basement prices. The AMC could provide a sorting and packing facility, which would separate culinary grade fruit for sale to large buyers, while also offering custom processing services. The AMC's utility for Mendocino growers could be magnified with a mini-aggregation point, possibly located in Ukiah.

Napa County

Currently the number of farmers growing vegetables and other fruits in Napa County compared to those growing wine grapes is very small. Historically, Napa had a more diverse agricultural footprint on the valley floor, and lately efforts have been made to restore some of this agricultural diversity. There has been a local community push to supplement the dominant wine grape industry with other fruit, vegetable and nut crops in order to create a more sustainable local food system.

In 2010 the Agricultural Commissioner's Office partnered with the Napa Valley Expo and other industry groups and community members from throughout Napa County to host the Napa Local Food Forum, which attracted over 300 participants. Subsequently, the Napa County Local Food Advisory Council was established, which is composed of fifteen members appointed by the Board of Supervisors and will serve to advise the Ag Commissioner and Board regarding the development and promotion of a local food system. The Council represents a variety of community interests, including teachers, community organizers, farmers, chefs, restaurant owners, wineries, government officials, and concerned citizens.

There has been an effort to encourage wine grape growers to consider planting different crops in areas not conducive to growing grapes (due to pest presence, disease, etc.). Several wineries now maintain gardens that provide produce for employees, while many vineyards have small garden plots where vineyard managers and field workers grow produce for their own consumption.

There are a few Napa County farmers who are making a living selling produce at farmers markets and other local retail outlets, but the majority of farmers growing crops other than wine grapes are doing so on a very small scale. Approximately 20% of the farmers/producers at Napa's four certified farmers markets are local to the county, and the markets are supplemented with approximately 80% out-of-county growers.

Issues faced by local diversified produce growers include the cost of land, knowledge of food safety laws and practices, and distribution. An AMC could prove essential for Napa County growers by providing a reliable distribution system, facilitating connections with landowners and other organizations involved in land acquisition and education around standardization requirements for size, packaging, quality and maturity, and food safety. Although the volume of produce currently produced in the county is relatively small, there is a strong community and commercial interest in both increasing that volume and supporting an AMC.

Sonoma County

Sonoma County offers a range and abundance of crops due to its varied microclimates, soils, and topography. Wine grapes are currently dominant in those areas where they are best cultivated, while dairy cows, goats, beef cattle and sheep are pastured on poorer, steeper soils. Lower grape prices over the past two years along with a strong interest in growing food locally, are causing some grape growers to incorporate more diverse food crops into their operations, and other growers are moving into the county to establish produce growing operations.

Although the Sonoma County apple industry has been steadily declining for many years, apples are still grown on approximately 1,000 acres by over 50 farmers, and the industry has recently been showing signs of stabilization. Historically, apples in Sonoma County have been sold mostly for processing, but some farmers have begun selling their fresh fruit direct to consumers through farm stands, CSAs, or at Bay Area farmers markets. Direct-market channels for fresh fruit often fetch prices up to forty times that paid for processing apples.

There is also an increasing interest in vegetable cultivation in the county. In 2009, there were 701 acres of vegetables grown in Sonoma, an increase of 44% over 2007. Interestingly, the gross crop value of vegetables per acre exceeds that of wine grapes by 42%. There are a few medium or large size growers marketing wholesale and many smaller ones who market directly to consumers or to restaurants. The total volume is still very small compared North Coast regional consumption. Barriers to farming in Sonoma County include the high cost of land due to urban sprawl and the presence of the wine industry, high labor costs, and in some areas lack of water.

Interest in and demand for local food is very high, and agritourism has become increasingly important to the local economy. These days, tourists come to Sonoma not only to taste wine, but also to visit u-picks and farmstands, dine at farm-to-table restaurants, try out one of the many farmers markets, and follow the Sonoma County Farm Trail or the Sonoma/Marin Cheese Trail. The County Board of Supervisors recently committed to making vacant public land available to farmers, and the Sonoma County Agricultural Preservation and Open Space District protects three thousand acres, much of it suitable for a range of crops. In 2009, the Sonoma County Food Systems Alliance was established to assess the current food system and the needs of the community. A countywide food forum held in February 2011, showed strong interest in increased access to locally produced food, with one of the priorities being a regional aggregation and marketing center. Sonoma County is uniquely positioned among the North Coast counties, due to the conjunction of both intense consumer demand and an increasingly vibrant community of small and mid-size produce growers.

Appendix E.

Spotlight on North Coast Crop Sectors

Spotlight on: Fruits

The dominant North Coast fruit crops are overwhelmingly apples and pears. North Coast's apple and pear growers have been hit hard in recent years, due primarily to global market pressures that are driving down prices.

In order to extend the sales period, growers need access to cold storage facilities. Without cold storage facilities, growers are forced to sell their harvest to processors rather than to the fresh market, and the price difference can be dramatic. Processors pay on average \$125.00 per ton, while a 38 lb. box of fresh apples sells for \$22.00 on average – that is, fresh boxed apples bring the grower \$1,157.89 per ton by comparison.

Many apple and pear growers cannot afford to maintain the infrastructure necessary to run their own storage and packing operations, however. These growers rent space from larger farming operations, often outside their community, at rates considered relatively high. In the past, some farmers complained facilities were poorly managed or ill maintained, which had a negative effect on their products. In a survey conducted by CAFF's North Coast chapter, 40 percent of growers surveyed indicated that they lacked adequate cold storage space. Rather than carry inventory of their crops for future sale, many farmers would prefer that storage facility operators purchase products on arrival and sell on future demand, however this sort of arrangement entails a level of risk for operators that would drive prices unacceptably low.

Don Gowan – a North Coast apple grower who maintains excess storage capacity, as well as a packing facility – proposes that fruit growers put their bin product in storage and establish a fair market price, which Gowan would pay when product is pulled from storage for sale to regional distributors or an AMC. With regard to the AMC, a single standard pack would be established, which should insure product consistency and fair market value. Gowan would continue to do custom packing for growers who want to maintain control over the marketing and sale of their brand.

Another farmer able to service local apple producers is Lee Walker & Lee Walker Jr, who currently run a sorting and cleaning line for wholesale pack apples. These apples are primarily sold for processing to Manzana in Sebastopol and Martinelli in the Salinas area. Sales to the juice and sauce processor give a very low return on investment. The Walkers would consider selling the AMC a small percentage of their harvest at the start of the center's operation, but could expand that percentage if demand were demonstrated.

Spotlight on: Meat

Meat production in the four-county area, especially in Sonoma County, is quite significant, while processing facilities are almost extinct.

Rancho Veal Co. in Petaluma processes dairy culls and veal. Panizzera Meat Co. in Occidental processes sheep and goats. Beef cows, pigs, poultry must be trucked to

facilities in neighboring counties, incurring extra costs for North County ranchers. Meanwhile, Rancho Veal and Panizzera are both family operations without a next generation to take over the business, and it is conceivable that either or both of these facilities could close their plants within the next several years. Given the urban and tourism development throughout much of the four-county area, siting for any new slaughtering plants is likely to prove challenging.

The majority of small farmers slaughter between one and four times a month in order to maintain a steady supply of fresh meat for sale.¹ If a ranch is raising multiple species, the process can be additionally complex since the majority of slaughterhouses are single-species operations. The further ranchers have to travel to bring their animals to slaughter, the lower their return on investment and the less likely they are to market direct.

An AMC with quick freezing and frozen storage capabilities would provide an excellent opportunity for ranchers to maintain ownership of their product after slaughter and engage in high-margin direct marketing. The AMC could act as a logistical partner, offering storage and transportation to ranchers, and connecting them with the wholesale distribution customer base as desired. There should be no expectation that the AMC would do any butchering or packing.

The current meat processing situation on the North Coast may change quickly. A business plan is reportedly being developed to build a modern multi-species processing plant in Mendocino County.

Spotlight on: Cheese

The interest in American-made artisan cheese has grown exponentially over the past decade, and California-made artisan cheese has seen particularly robust growth. California is poised to overtake Wisconsin as the top cheese state and is home to the most artisan cheesemakers nationwide. In the context of all this exciting growth, the north coast counties – Marin, Sonoma, Mendocino are uniquely suited for artisan cheese production thanks to the abundance of good pastureland.

At an average of \$15/lb, artisan cheese is a \$119 million dollar industry in the North Bay. As in the great cheese producing regions of Europe, this region's artisan cheesemakers draw heavily on tradition, terroir, and high-quality ingredients. The area's rolling green hills and cool, foggy climate make it ideal for pastured cows, goats, sheep, and now water buffalo. Local milk is key to artisan cheesemakers' success.

Of the 92 family dairies in the North Bay, 22 are commercial cheese operations producing 95 types of artisan cheese. Half of these are "farmstead" operations, meaning the cheese is made on site using milk from the operator's own dairy herd. Two thirds of the area's artisan cheesemakers are located in Sonoma County. Sixty-nine Sonoma dairies produce 520,731,219 lbs of milk per year. Most of these are small family

¹ *Edible Marin & Wine Country*, "A Good Death: The State of Slaughter in Our Community," 2010, Marissa Guggiana.

operations, with an average size of 420 acres and 385 cows per operation. Most Sonoma farmstead cheesemakers report that 1-4 family members are involved in the cheese part of the business, and approximately one third of the area's cheesemakers are relatively new, with many in business for 3 years or less.

All of the region's artisan cheesemakers report that they rely on the Bay Area retail market to sell their products. The Bay Area consumer base is sophisticated, and demand for artisan cheese is high, however many cheesemakers report that distribution remains "challenging." Approximately 30% of the region's cheesemakers have on-farm retail and/or agritourism components to their businesses, while the smallest cheesemakers rely primarily on local farmers markets. Value-added labels (e.g. "Certified Humane Raised & Handled," "Organic," and "Buy Fresh Buy Local") have been key to cheesemakers' marketing success. Recently the Marin Economic Forum produced the "Sonoma, Marin Cheese Trail," a descriptive map of 27 cheesemaking facilities in the two counties.

As both the supply and demand for Sonoma area artisan cheese continues to grow steadily – the majority of these cheesemakers report that they hope to expand their operations over the next five years, and several new commercial plants are planned – how to get products into the hands of customers most efficiently will become an increasingly important question. Some area cheesemakers have expressed an interest in "cross-docking," where products can be dropped off and picked up with little or no storage time in between. A recent report on the status of North Bay artisan cheesemaking highlighted the need for distribution solutions, as well as a need for coordinated marketing campaigns. Due to space, capital, and permitting barriers, it would not be practical to establish a shared cheese processing area as part of the AMC. The AMC could act as a logistical partner however, providing much-needed storage and transportation services.

Spotlight on: Grains

There are two large mills in California that currently get their grains from out of state -- Giusto's and Certified Foods. Grain production is on the verge of rapid expansion in Lake, Mendocino, and Sonoma counties, but growers face a steep learning curve.

According to John Fendley, of the Sustainable Seed Company in Sonoma County, demand for local grains rose 300 percent last year. Fendley grows over 200 varieties of grains, but he needs additional land and capital. Doug Mosel, of Mendocino Grains CSA, has been steadily increasing his grain acreage, while partnering with other growers to share storage and equipment. Mosel organized a meeting in March 2011 with 25 North Coast growers to talk about what they're growing and how they can help each other. The group is collectively growing about 70 acres of grain, with more coming on line this year. Vineyards are also inter-cropping grains, as well as taking out vines to plant grains and other crops.

Monica Spiller is a long time researcher of whole wheat, and founder of the nonprofit Whole Grain Connection. She is working with a Yolo County grower to produce Sonora Wheat on a large acreage, which they hope to sell to Bon Appétit Management Co. Spiller is working to determine the "real price" of whole grains, including production,

processing, labeling, and marketing. She feels that there is a big need for a food hub in the area, which could offer grain producers services and equipment, such as a gravity table cleaner, 32" stone mill, packaging ability (bags, filling, labeling), and storage (ambient, cold, very cold, distribution, and coordination). Spiller says we need to replace grain infrastructure that has been lost due to commoditization, and the North Coast grain growers are working hard to do just that.

According to Mosel, the challenge is to both dramatically increase grain production and improve storage and handling capabilities. In terms of increasing production, there are thousands of acres of grains grown for feed and hay in southern Sonoma County, and there may be a potential for some of these farmers to grow grains for food if the current efforts of the small, specialty, grain growers are successful. There are also indications that demand is growing for specialty hops for microbreweries. The National Organic Program will soon require organic hops for organic beers, and hops grow quite well in Sonoma and Mendocino counties.

**Appendix F.
Farmer Survey**

November 14, 2010

CAFF Grower Survey for North Coast Aggregation Hub

Note: The information requested is for the purpose of assessing the feasibility of a local food hub in the north coast region, under a contract with USDA. It will be kept confidential and no information about any individual operation will be disclosed

Name _____

Farm Name _____

Farm Office Location _____

Best Phone Number _____

E-mail address _____

Counties where production is located _____

Nearest town(s) to fields _____

Please mail the completed questionnaire to:

Dave Runsten
CAFF
PO Box 363
Davis, CA 95617

Or give it to the county coordinator:

Terry Harrison—Sonoma County, 707-433-6802, <fresh@hughes.net>
Jim Leonardis—Lake County, 707-483-4004, <jimleonardis@hotmail.com>
Sommer Wooley—Napa County, 707-253-4357, <sommer.woolley@countyofnapa.org>
Tim Bates—Mendocino County, 707-895-2333, <Applefarm@pacific.net>

For questions:

Dave Runsten
Director of Policy and Programs
Community Alliance with Family Farmers (CAFF)
dave@caff.org
530-756-8518 ext. 25
530-756-7857 fax
310-925-0857 cell

**Appendix G.
Results of the Farmer Survey**

**CAFF
North Coast Food Hub Study
May 2011**

Responses to questions on grower survey

Do you expect 2011 or 2012 production to be significantly different for any product?

Yes..... 43.5%
No..... 54.3%
Maybe..... 2.2%

Increasing overall production
More lettuce
More of each
Changes according to what can be sold
Will be larger
More pork, chicken, turkey
2010 was cold
Developing apple sauce, chutney, fresh bread
Commercial kitchen means more processed foods
More vegetables and lamb
Larger greenhouse and longer season means more production
More hot sauce for new accounts
10% more olives
New varieties, melons, tomatoes, potatoes
More tomatoes
More broccoli, fennel, kale, chard
More cheeses

Less, looking for off-farm job
Less of everything except peppers
Trees are old, production is uncertain

Have you planted additional acreage of varieties that will come into production in the future?

Yes..... 25.5%
No..... 74.5%

If yes, what?

Gravensteins—7 acres
Granny Smiths
Raspberries
Apples
Grains
Replant 3% of orchard each year
Strawberries
Winter Wheat
Apples and pears
Vegetables
An acre of peaches and plums to be grafted soon, will be available in 2 years
Fujis

Would you be willing to do contract growing for a food hub?

Yes..... 44.7%
No..... 14.9%
Maybe..... 40.4%

For pressing apples
Depends on price, quantity
Many people are willing to let me produce on their land
Food hub would have to finance production
Need more information
Depends on logistics—we are not truckers
Probably too small, need retail price of farmers market
Depends on price, quantity minimums
Depends on price
Depends on price
Depends on price/sustainability
Have limited growing space
Have apples on drip that could be contract grown with 2nd simultaneous crop
At good prices with good logistics

If obstacles to storage/processing/marketing/transport were dealt with, would you be interested in expanding your production?

Yes..... 59.6%
No..... 14.9%
Maybe..... 25.5%

If yes or maybe, what crops or products would you expand and what are the obstacles at present?

Apples
Apple juice
Expand all, but grains most difficult
Row crops/vegetables
Expanding grapes, not fruit, because short of water
Tomatoes, vegetables, melons
Pumpkins—obstacles are marketing and transport
Grains and dry beans—obstacles are harvesting and processing
Winter vegetables
Meat goats—need fencing
Fruits—obstacles are lack of infrastructure supporting marketing and storage
Tomatoes, squash, cucumbers, green beans
Sees apples as an opportunity
Lamb—need capital to expand production and purchase livestock trailer
Apples, potatoes, vegetables
Tomatoes, apples, peppers
Expand all—but need sustainable pricing
Strawberries, eggs, rhubarb, shoots and sprouts, lettuce, processed foods—lack water and labor
Lack of slaughter facilities
Apples—storage a problem
Squash, tomatoes, cherry tomatoes, melons, cucumbers, peaches, apples, pears—want to deliver in bulk
Peppers—price, labor, overhead are problems
Dry beans—need more acreage
Apples—problem is storage
Garlic—need proper soil
Grains—need processing equipment and combine
Hand-picked apples
Vegetables and herbs—obstacles are cheap rinsing and cold storage; also marketing and logistics
Garlic, leeks, onions, root vegetables—flood problems make winter difficult
Kale, chard, fennel, broccoli, romanesco, collards, snap peas, dry farmed potatoes
If grow, need labor
More fresh market apples

Could you deliver to a food hub?

Yes..... 80%

No..... 12%

Maybe..... 8%

How far would you be willing to go to deliver to a hub?

Average of:

Total—28 miles (n=35)

Sonoma—28 miles

Mendocino—34 miles

Lake—30 miles

Napa—15 miles

Most comments said they preferred a local aggregation point and would deliver any distance only if the order were large enough.

Should we consider multiple aggregation points in the region?

Yes..... 60.0%

No..... 32.5%

Maybe..... 2.5%

Don't know... 5.0%

Where in your County?

Sonoma

Windsor/Healdsburg/Santa Rosa

Santa Rosa/Windsor

By Sonoma State, Petaluma Hill Road

Sebastopol farmers market, Veteran's Building

Close to my farm

Santa Rosa

Healdsburg

Between Windsor and Petaluma

Santa Rosa area

Healdsburg ideal, Windsor/Fulton good, Santa Rosa/Sebastopol OK

Healdsburg, Santa Rosa, Petaluma

Between Cloverdale and Petaluma

Sebastopol and Windsor

Santa Rosa makes most sense

Occidental

Central Sonoma County
South end of County, Petaluma

Mendocino

Gowan
Ukiah, Willits, Coast
Need something on Coast
Boonville
Ukiah, Ft Bragg

Lake

Somewhere in Lake County
Lakeport/Kelseyville or Ukiah
Kelseyville/Lakeport; old pear sheds or old Mariani drying plant
Big Valley
Kelseyville
Mt. Konocti Growers

Napa

Could go to Sonoma

Would you be willing to pay to transport your crop to a hub?

Yes	56.1%
No	31.7%
Maybe	12.2%

Comments:

Depends on price and quantity
Would have to be comparable to cost of doing it themselves
Many would prefer to do it themselves
Timing of pickups a concern
One suggested Coastline

Are you interested in cooperative purchasing of inputs?

Yes	55.6%
No	11.1%
Maybe	31.1%
Don't know	2.2%

If yes, what inputs in particular?

Compost, fertilizers, mulch, manure—15
Boxes—10
Irrigation supplies—9
Row cover—7
Seed, starts—6
Animal feed—3
Greenhouse plastic—3
Labels
Trays
Bags
Fuel
Advertising

If the hub provided cold storage services, would you use them?

Yes	40.8%
No	14.3%
Maybe	44.9%

Comments:

Yes—extend Gravenstein season by a month (Sonoma)
Maybe—just for temporary storage, a few days (Napa)
Yes—organic certified, better to share (Lake)
Yes—need temporary storage (Lake)
Maybe—Silva Star Farms and Felton Acres really need this for their meat (Sonoma)
Maybe—used cold storage in Sebastopol but it closed (Sonoma)
Yes—three month storage or more if controlled atmosphere (Sonoma)
Yes—has two buildings where stores bins of apples now (Mendocino)
Maybe—have own cold storage, would use hub if cheaper (Lake)
Yes—apples and potatoes (Sonoma)
Yes—Store apples in bulk bins and packed boxes-palletized. Vacu-Dry Co. in 1980s and 1990s charged growers \$15/ton/month for excellent cold storage. Need capacity for 1,000-2,000 bins for Sonoma County (Sonoma)
Maybe—depends on distance and cost (Napa)
Yes—Mostly to drop produce for pickup (Sonoma)
Yes—depends on costs (Sonoma)
Yes—it would be better to pick and store more boxes toward the end of the harvest (Sonoma)

Are you interested in some type of value-added processing of your products?

Yes	62.5%
No	27.1%
Maybe	10.4%

Which products? What kind of facilities would be needed? Would you market value-added products at least in part through the hub?

Apple juice, apple sauce

Sliced or other apple products

Pickled vegetables, tomatoes

Tomato sauce, jams

Tomatoes, peppers

Apple sauce, juice, hard cider

Growers could bulk ship vegetables and herbs to food hub, hub could rinse, sort, and package for wholesale trade. Culls could go to food service or food bank and contribute to revenue.

Want to make a frozen fruit puree

Apples, maybe other things. Could sell through hub

And all those mentioning a commercial kitchen:

Garlic—need commercial kitchen (Healdsburg)

Would love commercial kitchen, cut up produce, CSA bundling (Rohnert Park)

Apples, tomatoes

Need easy access to commercial kitchen to make jam and chutney (Sebastopol)

We have a county-certified kitchen on the farm; might market products through hub (Mendocino)

Pickles, salsa, tomato sauce, sorbet, sundried tomatoes, dried fruit, kale chips, jam, jellies.

Imagines a commercial kitchen, drying racks, solar dehydrator, sell products at hub retail space. (Lake)

Dried and canned—need certified kitchen. (Sebastopol) We need more direct sales such as through a hub

We will have our own commercial kitchen and will do own processing; we would market some through hub (Mendocino)

Jams, jellies, frozen pies; need commercial kitchen; could market through hub (Lake)

Salsas, roast tomatoes, dried chiles, dried tomatoes; need large scale dryer, roaster, kettles, jar fillers; would consider mktg through hub (Sebastopol)

Already have a commercial kitchen and make value added products. Will rent it out if people want to use it. (Santa Rosa)

Some processed garlic product; need access to commercial kitchen; would market through hub (Healdsburg)

Need a certified kitchen for canning with oven, stove. would market through hub if more \$ stayed with farmer (Healdsburg)

I will make an heirloom tomato salsa this year and perhaps a ketchup as well. I have applied for a CCOF handler's certification. I need a certified kitchen. (Napa)

We have a CSA and would love to offer a wide range of canned veggies to members. And with our dry farmed potatoes we could do great potato salad. (Sebastopol)
Organic apples can be used for many things. We also have a production facility that could be used to manufacture other farms' products if there is a market. (Sebastopol)
Want to make a naturally fermented sauerkraut (cabbage, salt, spices). Need a kitchen to cut the cabbage, cold storage to age the kraut. Could market through hub, also some cheese through hub (Petaluma)

Though there is currently no legal requirement, some institutional buyers require assurances about food safety. This will probably get worse in the future and growers will have to provide some evidence of food safety efforts. A hub would set up a program to work with growers to meet whatever requirements there were. We are wondering if you have already been affected.

Do you have a farm food safety plan?

Yes	25.5%
No	74.5%

Is it written?

Yes	13.7%
No	86.3%

Have you had any experience with being audited for food safety?

Yes	15.7%
No	84.3%

Comments:

Follows juice regulations
Can trace boxes
We should band together to get protection
Could put something together quickly
Cannery audited us. This is an inevitable area of importance that would necessitate a reasonable approach and collaboration would be key for a good result.
We will write one now!
I am safe and legal
Health Department visits kitchen
Just common sense
Certified organic
USDA, FDA, CDFR
It's coming
Just need to know what to do
Just starting, would need help with this

Fruits offered to food hub by farms surveyed

Product	Number of farms	Approximate quantity
Apples	21	483 Tons
Asian Pears	2	
Berries	1	
Cherries	1	4 Tons
Figs	1	50 pounds
Jujubes	1	150 pounds
Peaches	2	50+ pounds
Pears	4	275+ pounds
Persimmons	3	75+ pounds
Plums/Pluots	2	50+ pounds
Strawberries	1	

Note: “+” indicates some questionnaire(s) did not state the amount

Other fruits produced by these farms

Product
Blackberries
Feijoas
Marionberries
Olallieberries
Prunes
Raspberries
Table Grapes

Vegetables, melons, and herbs offered to food hub by farms surveyed

Product	Number of farms	Approximate quantity
Arugula	1	100 pounds
Beans, dry	1	400 pounds
Broccoli	2	40-50+ cases/week
Cabbage	2	10+ cases/week
Carrots	2	
Cauliflower	1	
Chard	2	40-50+ cases/week
Cucumbers	5	11,900+ pounds
Eggplant	2	1,800+ pounds
Fennel	1	20 cases/week
French beans	1	100 cases/week
Garlic	3	
Green beans	2	100+ cases/week
Kale (Collards/Chard)	3	40-50+ cases/week
Leeks	1	
Lettuce	4	8,000+ heads
Melons	3	1,200+ pounds
Okra	1	
Onions	3	2,500+ pounds
Peas, snap and snow	2	
Peppers	6	4,900+ pounds
Potatoes	3	500 tons
Pumpkins	2	12,000 pounds
Squash	4	4.5+ tons
Squash, Summer	3	1+ tons
Squash, Winter	4	5+ tons
Sweet corn	1	
Tomatoes	10	83 tons
Tomatoes, cherry	1	100 cases
Turnips	1	
Vegetables, mixed	4	10+ tons

Note: “+” indicates some questionnaire(s) did not state the amount

Other Vegetables, Melons, Herbs produced by these farms

Product
Basil
Beets
Carrots

Processed products offered to food hub by farms surveyed

Product	Number of farms	Approximate quantity
Apple juice	3	
Asian pear juice	1	
Hot pepper sauce	1	2,000 jars
Infused honey	1	500 jars
Asian Pear-Blackberry-Ginger Jam	1	
Olive oil	2	200+ bottles/month
Seaweed	1	500 packs

Note: “+” indicates some questionnaire(s) did not state the amount

Other processed products produced by these farms

Product
Apple sauce
Apple vinegar
Mustard
Quince jam

Miscellaneous products offered to food hub by farms surveyed

Product	Number of farms
Cheese, cow milk	1
Cheese, goat milk	1
Chicken	1
Cut flowers	2
Ducks	1
Eggs	1
Grains	1
Lamb	2
Lavender	1
Pork	1
Rabbit	1
Turkey	1
Walnuts	1

Final Comments

Hub is GREAT IDEA!
Build this system and farmers will use it. Do it!

**Appendix H.
Commercial Survey**

Regional Business Enterprise Grant #3
North Coast Regional Hub Feasibility Study

Commercial Business Survey

Business Name

Date

Address

City

State

Zip

Contact Name

Tel #

Type of Business (please check one or list other)

Distributor Restaurant School K to 12 College/Univ

Caterer Retail Market Other _____

Do you Purchase direct from farmers in the following counties (check one or more)

Lake Marin Mendocino Napa Sonoma

The follow questions apply only to products purchased direct from farmers in the
5 counties mentioned above

Approximate Annual Fresh Box Produce Purchased \$ _____

Approximate Annual cut / processed Produce Purchased \$ _____

Approximate Annual Dairy products Purchased \$ _____

Approximate Annual Eggs Purchased \$ _____

Approximate Annual processed meats Purchased \$ _____

Of the following categories what percentages of your annual fresh box produce
purchases are?

Vegetables _____%

Fruits _____%

Please check items purchased direct from farmers in the counties mentioned above;

Apples Beans Berries Corn Mellon Mushrooms
 Peaches Pears Potatoes Pumpkin Squash
 Strawberries Tomatoes.

Do you think an aggregation hub would be a benefit to small & mid-tier farmers I the 5 counties (Lake, Mendocino, Marin, Napa, Sonoma) YES NO

Check the services that you think would be beneficial to small and mid-tier farmers

grading & packing aggregation storage further processing

Add an X next to the service above that would be most beneficial to your operation.

Check the benefits that an aggregation hub would provide you operation

Single pick up point Diverse products available One Invoice

Liability Insurance Quality control Program Marketing program

Where would you think a hub should be located (please list 3 location in order of your preference.

1. _____

2. _____

3. _____

General Comments

**Appendix I.
Commercial Survey**

Regional Business Enterprise Grant #3
North Coast Regional Hub Feasibility Study

Commercial Business Survey Results

Businesses Surveyed

7 Distributors 45 Restaurants 3 Schools K to 12 3 Colleges/Univ
2 Caterers 5 Retailers 3 Hospitals 5 Hotels

Purchase from Local Farmers in following counties;

Lake, did not know Marin all no's Mendocino 3yes Napa 12yes Sonoma 11yes

Purchase Direct from farmers in the 5 counties (combined totals)

Approx Annual Fresh Box Purchases \$ 500,000

Approx Annual Cut Produce \$ 150,000

Question regarding Dairy , meats and egg purchases were not asked

Percentage of Fresh box produce purchased

Vegetables 45% Fruits 55%

Direct Farm Purchases in order of Dollar volume

Leafy Greens

Strawberries

Tomatoes

Beans

Mellon

Do you think an aggregation hub would be a benefit to small and mid-size farmers

Yes 57 No 6 Not Sure 10

Beneficial services

Grading & Packing 43 aggregation 36 Storage 5 further processing 28

Benefits of the aggregation center

Single pick up point 12 Diverse products available 12 One Invoice 12

Liability Insurance 42 Quality Control program 12 Marketing Program 51

Best Location

73 % Santa Rosa Area

25% Sebastopol

2% Peteluma