

GROWING LOCAL FOOD

**A SURVEY OF COMMERCIAL PRODUCERS
ON THE SOUTHERN KENAI PENINSULA
2018**



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Homer Soil and Water Conservation District



Homer Soil & Water
CONSERVATION DISTRICT

Acknowledgements

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Committed to the future of rural communities.

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Statement from the Board

The agricultural potential of the Kachemak country was first recognized very early in the Age of Exploration. Captain Cook's entry in the log, when his ship broke out of the rain and fog of the Northwest Coastal Rainforest, was a description of arable land. These people manning the ships of exploration came from an agrarian tradition, they could recognize productive soils from a thousand yards away. The flush and cover of natural vegetation is evident even to the untrained eye.

These early agrarian sailors were known to abandon their ships, just for a chance to test their spades in these soils. [Frank Chase, personal communication]. When Homesteading finally came to the territory of Alaska, the Kachemak lower bench was largely littered with "sooners" and opportunists, hoping for recognition by the Federal Government for their early entry onto the land. They were largely rewarded by a "color of title" act of congress, allowing for a priority claim for patent under the Homestead Act [Highlights, 1911].

The success of these early homesteaders provided a private property base for the growing city of Homer. Today most of the large blocks of land have been split up and now are hosting the urban and suburban sprawl of 21st century Homer.

Springing up in the backyards and under-utilized areas of modern Homer, a new generation of farmers are thriving. Based on small acreage and enhanced growing environments, these new age farmers are producing a stream of high-quality products. They are using new marketing tools to distribute these products to our community. The following paper is an attempt to describe and quantify some of these methods of production and distribution.

Our thanks go out to authors Kyra Wagner and Nicole Arevalo for doing the hard work of compiling what might take years for regular supply and demand economics to discover.

A handwritten signature in black ink, appearing to read "Chris Rainwater". The signature is fluid and cursive, with the first name "Chris" written in a larger, more prominent script than the last name "Rainwater".

Chris Rainwater,
Homer Soil and Water Conservation District, Chair of Board of Supervisors

Executive Summary

It is clear that agriculture is a growing here on the Kenai Peninsula. We can see this through the data collected from the thirty-nine local farms in this survey as well as the nationwide data from the 2017 USDA Census of Agriculture. The increase in farm numbers on the Peninsula is more rapid than anywhere else in the U.S. or Alaska--while the number of farms in the Lower 48 declined by 3 percent in the last 5 years, the number of farms in Alaska grew by 30 percent and the number of farms on the Kenai Peninsula grew by 60 percent.

This is good news for a state that imports 95 percent of its food. The Alaska Division of Agriculture highlighted the benefits of locally produced food with its "\$5/Week Alaska Grown Challenge." If every Alaskan spent \$5 each week on Alaska Grown products year-round, those purchases would contribute \$188 million dollars/year to the state's economy.

Farmers like those surveyed in this study would receive those dollars. Their farms are small, averaging 0.75 acres in crop production. They tend to take care of their soils, with more than 90 percent of growers in this survey classifying their growing practices as non-certified organic in terms of fertilizers used, pest control methods, and livestock feed. Using these practices, local farmers are growing dozens of varieties of vegetables, fruits, meats and other farm products, and selling them through many kinds of market venues.

There have been farmers on the Kenai Peninsula for generations. Nonetheless, a theme throughout this study is the relative newness of this economic engine. The last decade has seen a huge jump in the number of peninsula farms, leading to more new farms on new soils with new farmers using new methods. This leads to new markets and the marketing of new products. It also means that peninsula farmers, rather than being part of a long-established culture or tradition of ag production, are creating their own.

The peninsula's expanding ag culture is experiencing some growing pains. There are steep learning curves when it comes to pest control, soil improvements, crop management, labor, and sales and marketing. Some producers are ready to slow down, but a majority have expanded production over the last five years, and roughly as many plan on expanding in the next five.

Supporting local ag means identifying the best ways to support producers. Obstacles to local ag growth are varied--needs for cold storage, labor, farm loans, ag land, an FSIS-inspected slaughter facility--but they can be addressed. Whether solutions come as financial programs, education, infrastructure, or other mechanisms, none are unattainable. And the benefits of supporting local ag--benefits like improved food security, new jobs, healthier and fresher foods, more lifestyle choices, increased connections to the lands and waters that sustain us--are priceless.

95% OF ALASKA'S
FOOD IS IMPORTED.

Only 5% of food consumed in Alaska is grown in Alaska. The remainder is flown or barged into the state, leaving the **majority of Alaskans without a secure food supply.**



(Alaska Farmland Trust/Census of Ag 2017)

Introduction

In 2017 Homer Soil and Water Conservation District received a Rural Business Development Grant (RBDG) to conduct a survey of local food producers on the southern Kenai Peninsula. Homer Soil and Water soon learned that the national Census of Agriculture was underway and that most farmers were tired of taking surveys. Delaying completion of the RBDG study meant that farmers would be more willing to respond to yet another survey. This report could then also include Census of Ag statistics from the rest of the borough, state, and nation and compare these data to local survey results. This study began in earnest in late summer 2018; Census of Agriculture results became available spring 2019.

The better we understand our local food system, the better we can build on its strengths and address its weaknesses. Statistics from earlier iterations of the Census of Agriculture indicated that the number of producers selling direct to consumers more than doubled between 2007 and 2012. What will 2017 statistics show? Of the hundreds of growers who have expanded production in recent years, why are more not selling commercially? What are the challenges faced by the dozens of vegetable producers selling on the southern Kenai Peninsula? What challenges could be addressed? What can be done to increase local food production even more?

These were the questions we had in mind as we started this survey. We hope the answers presented in this report will:

1. provide needed information to new farmers curious about local agriculture and how they might fit into this growing industry,
2. inform consumers--including restaurants, schools, hospitals, and local “foodies” seeking taste and nutrition--about local produce and how to reliably meet their needs, and
3. guide local, state, and national entities who want to support farming and farmers on the southern Kenai Peninsula.

Methodology

This market production survey was conducted through face-to-face interviews with 60 producers from 39 farms; interviews were supported by a survey of over 50 questions (see complete survey in the [Appendix](#)). The geographic scope of the study included producers living in the Anchor Point and Nikolaevsk areas, south to Homer, and out East End Road. Those willing to be interviewed are a subset of all producers in the area, and study results reflect input from this subset. Similarly, the USDA Census of Ag had a response rate of 70.1 percent from Kenai Peninsula farmers and, therefore, also reflects only a subset of peninsula producers. Nonetheless, statistics from the Census of Agriculture, as well as from the Alaska Food Hub, are invaluable for a better understanding how the food system on the southern Kenai Peninsula compares to other regions.

Producers interviewed were selected because they actively sell at least a portion of what they produce; many additional producers in our local food system grow food only for themselves and their families. This study focuses on production intended for market. Producers interviewed actively sell vegetables, fruits, eggs, meat, honey, birch syrup, and other products. Their production methods vary widely--leading to a wide variety of answers to survey questions. For example, a goat or cattle rancher will answer questions about acreage differently than will a farmer growing vegetables in a greenhouse. As a result, in some sections of this report, answers are broken down by production type. Providing information about the whole range of local ag production is a key objective of this study.

A companion to this study, "Buying Local Food: A Survey of Southern Kenai Peninsula Restaurants and Institutions," focuses on consumption, or the demand side of the local food system. The production, or the supply side, is the complete focus of the following pages. This snapshot of local ag production is broken down into the following topics:

1. About the farmer,
2. About the farm,
3. About farming methods,
4. About labor on the farm,
5. About production,
6. About marketing and sales,
7. About growth potential, and
8. Moving forward

History of Local Agriculture

The southern Kenai Peninsula has a rich history with agriculture, even though it is short compared to other parts of the country. A trip to Homer's Pratt Museum will highlight some of these details.

Hunting and gathering was the cultural norm among the Denaina and Sugpiaq-Alutiiq people of this region rather than agriculture. About 150 years ago, as the Russian fur trade entered the area, Russians brought with them a tradition of subsistence gardening. Since the road system as we now know it didn't exist, growth on the Peninsula was slow and patchy, but homesteaders persisted. For example, in 1905 a group of Finlanders settled at the head of Kachemak Bay. In the 40's the military started putting in more robust infrastructure like roads and an airport and farmers started growing staple food crops to supply the Kodiak military base. (*A Larger History*, 1983)

The road to Homer was completed in 1951, making it even easier for people to settle in the Homer area and enjoy this protected, rich, coastal climate. There are not many wide tracts of flat land to grow on like is found in the Matanuska-Susitna Valley, but the mild maritime climate gives the area the nickname "The Banana Belt of Alaska." As time went on, the population grew and stores with larger varieties of food

popped up. By the 70's, farmers with the desire to grow larger scale crops were still known to sell their vegetables to larger population centers such as Kodiak. Small privately-owned stores eventually gave way to larger and larger grocery store chains. The first large-scale grocery store chain (now Safeway) came to Homer in the early 1990s. Home gardening and small ranches continued to be part of the local food culture, though not as significantly as before.

Organizations that support farmers such as the USDA Natural Resource Conservation Service (NRCS), Farm Service Agency (FSA) and Cooperative Extension Service have all had offices in Homer, though NRCS is the only agency still present. There were attempts to start a local farmers market over the decades, but none persisted until 1999 when the Homer Farmers Market was started. Starting with a few tables, the Market now has up to 60 spaces dedicated to producers, local crafters and food vendors as well as music, kids' activities and chef demonstrations. This Market has served as an incubator for various businesses over the years and helped to develop an appreciation for the culture of local food production.

The High Tunnel Revolution

A surprising shift took place in 2010 that will be noted throughout this study. To understand this shift, it is important to understand how NRCS programs work. NRCS staff sit down with landowners and help develop a conservation plan for their farm. Certain practices are encouraged for the sake of the land, such as cover crops, efficient irrigation, and nutrient management with fertilizers. Certain practices are so highly encouraged that NRCS will reimburse, or cost-share, a portion of the expenses for doing that practice. To participate in this EQIP cost-share program (Environmental Quality Incentives Program), the landowner enters into a contract with NRCS for a certain number of years, committing to uphold the environmental standards laid out in the conservation plan. In 2010, NRCS started offering a cost-share program that included high tunnels.

High tunnel greenhouses not only extend the growing season, but also extend the climate. Previous to the widespread use of large greenhouses and high tunnels, Alaskan growers commonly focused on potatoes and cole crops that can thrive in climates with cool temperatures like cabbages, kale and broccoli. However, the semi-controlled environments inside high tunnels and other greenhouses can drastically affect capacity for farmers to grow a greater diversity. This can be seen with the success of heat-loving crops like tomatoes, cucumbers, zucchini and even corn or stone fruit trees. Seeing the opportunity to significantly alter possibilities for food production in northern latitudes, area producers have spent the past decade experimenting in high tunnels with what can now be grown in Alaska and expanding seasonal harvests to both earlier and later weeks. Heaters are being tried in tunnels to stave off cold weather damage during shoulder seasons, soil health and nutrients are often being carefully managed, new crops are being experimented with, and knowledge is being shared through social media groups, trainings, Garden Club meetings and personal networks.

These pursuits have provided Kenai Peninsula residents and other Alaskans the opportunity to eat a much wider variety of naturally grown, nutritious food shortly after harvest rather than the weeks-old vegetables that show up from the Lower 48. A changing climate outside has allowed producers in the area

to grow a greater variety outside of these covered spaces as well. Many more people are jumping into farming as a career, retirement pastime, and/or supplemental income. Add to this a more robust economic infrastructure with the successful Homer Farmers Market and the new Alaska Food Hub, and farmers have more opportunity than ever. All of this recent change in our local food system is what prompted this producer survey.



To find better adapted forages, the Alaska Agricultural Experiment Station has conducted many field tests in the Kenai Peninsula. Here the Territorial Conservationist and two members of the Soil Conservation District Board in company with a University Extension agent examine experimental plots on the Newman Farm near Miller's Landing east of Homer. This site is on the low bench land along Katchemak Bay. In the background rises the rolling hill country.

Changes are needed to protect the unwary prospective settler and also the public interests, since tax-supported funds are used for servicing rural areas. There is a strong public argument for guiding settlement into certain selected areas where soil and climatic conditions conducive to profitable agriculture are known to exist and where markets for products exist or can be developed.

Surveying in advance of settlement and guiding homesteaders to areas of good soils and good markets are both essential to a sound program. Both will serve the best interests of the nation and the individual prospective settler. Prospective settlers should first be guided to areas already being developed, as long as these areas contain unclaimed undeveloped tracts suitable for farming.

29

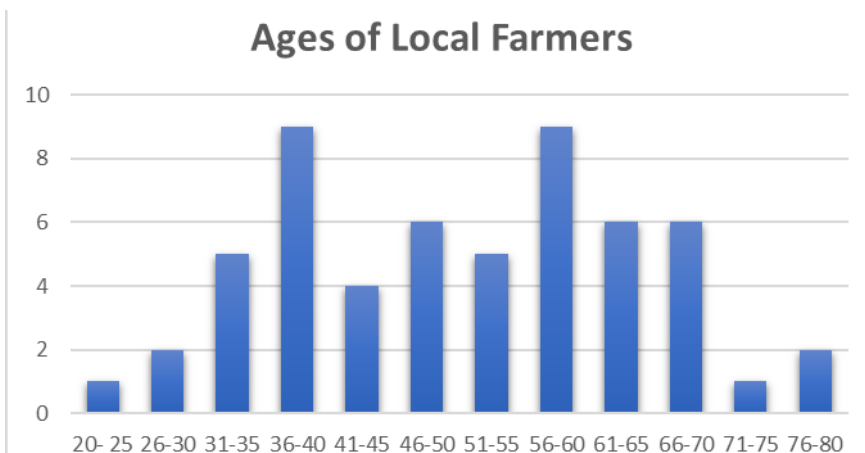
The source of this article is unknown, but the reference to “the Territorial Conservationist” dates it back to before Alaska statehood of 1959. This snapshot in time shows that the discussion about where to farm and which place has the best access to markets is one that has been going on for decades.

About the Farmer

The first section of the survey focused on demographics and provides a picture of how local farmers compare to state and national demographics. These are the simplest and most straightforward questions to ask in a survey, and it is easy to compare local results with those of the Census of Agriculture.

Age

Nationwide farmers are aging. The national average age for farmers is 57.5 years. The average age in Alaska is slightly lower at 55.2 years (Ag Census, 2017). The average age of the farmers interviewed here on the southern peninsula is lowered even more by a large number of young farmers, those in the 31-40-year-old range. In fact, 14 farmers interviewed (25 percent) are in this range. As a result, the average age of farmers interviewed for this study is 50.9 years.



(Figure 1)

Gender

Sixty individuals are represented in the 39 farms included in this survey--31 men and 29 women. Some farms are run by men, others by women, and some by partners. Commonly, farms identified as being run by one person include partners at home who work other jobs and help out with farm work as needed. Of the 39 farms represented, 12 are identified as being run by men, 9 by women, and 18 as partners. Nationally, only 27 percent of farmers are women; the local percentage is much higher--48.3 percent. This closely mirrors the trend in the state as a whole, where the percentage of women farmers is 47 percent, and on the Kenai Peninsula, where the number is 48 percent (Ag Census, 2017)



47%

OF ALASKAN
FARMERS ARE
WOMEN

National average: 27%

(Alaska Farmland Trust/Census of Ag 2017)

Experience

Farming is a learned skill. As more of the U.S. population moves to urban areas, much of the knowledge formerly passed from one generation to the next is lost. New and beginning farmers have to learn skills from scratch, but they are also often open to trying new technologies and innovations. Of the 60 individuals interviewed, 12 percent were from homesteading families or grew up on an Alaskan farm. Another 20 percent said they had grown up on farms outside of Alaska for at least part of their childhood. The other 68 percent were not raised on farms. While 43 percent had no farming experience at all until adulthood, the other 25 percent who were not raised on farms did have some exposure with agriculture growing up. Those with some exposure said they either helped out on a farm, had a family garden or a farm in the immediate family, or simply grew up in a community where farming was important. Those who grew up on or around farms outside Alaska worked around the country and, in some cases, other

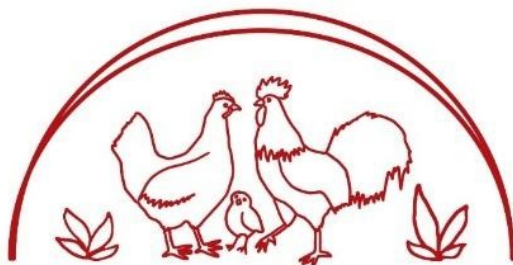
countries; locations include Arkansas, California, Colorado, Idaho, Indiana, Kansas, Michigan, Minnesota, Missouri, New York, North Dakota, Nova Scotia, Oregon, Utah, and New Zealand.

The farms themselves were as diverse as the backgrounds of the farmers. Some raised dairy cows and goats, beef cattle, pigs, chickens and/or honeybees. Some produced a wide variety of fruits such as melons, apples, or Oregon berries) as well as and vegetables or commodity crops like corn, barley, and alfalfa. By and large, these were not the kind of highly diversified small market farms the majority of local producers now operate.

By USDA definition, a farmer with less than 10 years of farming experience is considered a “new and beginning farmer.” Nationwide, the percentage of new and beginning farmers is 27 percent of total farmers, while in Alaska and on the Kenai Peninsula, new farmers represent 46 percent (Ag Census, 2017). Although over two-thirds of interviewees did not grow up on farms, many of those who began raising farm products as adults have been doing so for at least a decade: 82 percent of participants said they had 10 or more years farming or ranching experience, 5 percent had 5-10 years experience, 8 percent had 3-5 years, and 5 percent were just getting started and had 0-3 years in agriculture. Though many respondents had experience farming, the farms themselves were often fairly new. Of local ag operations surveyed, 56 percent are under 10 years old. In fact, over 35 percent of respondents have been in commercial production in Alaska for no more than 5 years, six of these operations, or 15 percent, for no more than 3 years.

56%

of the farms in this survey on the southern Kenai Peninsula had been in operation for less than 10 years. 15% for had been in operation for under 3 years.



ALASKA IS
#1 IN THE NATION
FOR NEW FARMERS.

46% of Alaskan farmers have **less than 10 years** of farming experience. We are **#1 in the Nation** for beginning farmers.

(Alaska Farmland Trust/Census of Ag 2017)

About the Farm

While nationally the number of farms has declined 3 percent in the last 5 years, the number of farms in Alaska has gone up 30 percent. The Kenai Peninsula saw the largest growth in the state from 2012 to 2017: total number of farms increased 60 percent, from 162 to 260 (up from 124 in 2007) (Ag Census).

The size of those farms, however, has not been increasing. Between 2012 and 2017 the average farm size on the Kenai Peninsula actually decreased 33 percent. Almost half the farms on the peninsula (49 percent) are 9 acres or less. Pastureland, which represents the largest acreage of ag land, is 75 percent of the total. (Ag Census).

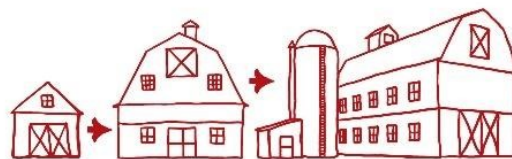
Southern Kenai Peninsula farms selling for market are small even as small farms go. Most are diversified little parcels where farmers grow a variety of plants and animals to nourish their families and sell to the community. Some are geared toward producing almost entirely for market, others are large family gardens or homesteads with extra to sell, and many are somewhere in between. Determining exact acreage used to produce vegetables, fruits, and livestock is challenging, as acreage for different uses may be intermixed throughout the property; a chicken coop here, a raspberry patch there, a large pasture extending to or beyond the property line. We have endeavored to create an accurate picture with the data available, though local production acreage is complex.

Acreage in vegetables and fruits

Most producers interviewed grow vegetables and fruits (92 percent), so we begin there. In 2018, 36 farms producing fruits and vegetables grew these crops on a total of 26.8 acres. Because this survey focused on farmers who sell their produce, this total acreage does not reflect all lands producing fruits and vegetables on the southern Kenai Peninsula. Many others in the survey area contribute to the local food system by growing in kitchen gardens, larger plots, greenhouses or high tunnels but don't sell their produce.

The average vegetable or fruit farmer has 0.75 acres (3/4 acre) in production, with 28 of those surveyed (77 percent) using 1 acre or less. The largest acreage reported as producing food crops was 6 acres.

THE NUMBER OF ALASKA
FARMS GREW
30%
OVER THE PAST 5 YEARS.



This goes against the national trend of a 3% decrease in the number of farms - but we're growing!

(Alaska Farmland Trust/Census of Ag)

SMALL, BUT **MIGHTY.**



The number of small farms (1-9 acres) is **up 73%**. It doesn't take a lot of space to grow food in AK!

(Alaska Farmland Trust/Census of Ag 2017)

Though these are small farms, the variety of produce grown and the yields achieved have given this area a reputation as a rising agricultural center in the state. Area producers generally choose to grow a wide variety of crops on small parcels rather than specializing in only one or a few crops, though exceptions exist. Exceptions include farmers who dedicate their high tunnels to asparagus, heirloom varieties of tomatoes or fresh beans; lettuce and microgreens specialists; a producer growing gourmet mushrooms in a controlled indoor environment; and farmers focused on apple and cherry orchards. Details on types of crops grown can be found in the section [About Production](#).

Area under cover: high tunnels and greenhouses

As mentioned earlier, one defining factor in the agricultural scene on the Kenai Peninsula over the last decade has been the introduction of season-extending high tunnels. These are typically used for crop production, though some area residents have found other creative uses for them, including separating breeding pigs, producing poultry, or storing boats seasonally. Of those interviewed, 30 respondents (83 percent of produce growers) had hoop houses, greenhouses, or high tunnels. A variety of sizes have been installed by these 30 respondents, ranging in size from 14 ft by 18 ft (252 square feet) to 30 ft by 100 ft (3,000 square feet); some growers having 6 or more. One producer had more than 30 grow houses (high tunnels and greenhouses) when interviewed, covering nearly 1½ acres in semi-controlled environments dedicated to vegetable production. The total combined area under plastic was 191,614 sq ft, or 4.4 acres. This represents nearly 20 percent of the entire area in vegetable and fruit production.

Square Footage in Greenhouses or High Tunnels	Producers
0-1,000	3
1,000-5,000	17
5,000-10,000	6
10,000-15,000	3
15,000-20,000	0
20,000-25,000	0
25,000 & up	1

(Figure 3)

Acreage for poultry and livestock

Of the 39 producers in the Homer area, at least 15 had livestock or poultry, though not all sell the meat or eggs. Only four operations focus on raising semi-free-range animals for market and this requires significantly more land to keep the animals healthy and well fed than does growing fruits or vegetables. Two of these animal producers also grow hay, either for sale or to feed their livestock, thus adding to the acreage they use for ranching. The top three livestock producers use more land than all vegetable and fruit producers combined, not including leased land. That said, locally produced meats and poultry account for much less of the total production for sale than do fruits and vegetables.

Determining how much acreage is used for raising animals on small, integrated farms is tricky. Often animals are raised for home use while vegetables are grown for market. Because this survey asked specifically about production intended for sale, not about what is grown or raised for personal use, acreage used for animal production on small, integrated family farms was not precisely determined. For example, data from vegetable-focused farms does not always reflect the size of areas used for egg hens or other animals, which are typically integrated into the operation's footprint. Some producers keep chickens, turkeys, ducks, or goats in moveable chicken tractors, pens or corrals intermixed with crop rows, compost piles, or tool sheds.

Acres for other agricultural production

Other forms of agricultural production on the southern Kenai Peninsula are also gaining momentum. Acres for these is considered separated separately from fruit and vegetable crops or livestock.

Honey and Birch Syrup

Acres used in producing these sweet treats can be difficult to determine. The local birch syrup producer taps trees on 18 acres but doesn't own that acres, rather, willing landowners allow them to tap the trees when the sap begins to run during the spring. Beekeepers are numerous on the southern Kenai Peninsula but it would be nearly impossible to guess the acres their bees cover. Honeybees generally can fly up to 2 miles from their hive, so honey production reaches far beyond fences and boundaries of property ownership. Some beekeepers in the area keep their hives in one spot all season, but some house their hives on various properties, many of which are not their own.

Hay, pasture, and rangeland

Hay is not a human food crop, so those producing only hay were not included in this survey. Nonetheless, in terms of local ag practices, it is worth mentioning that many peninsula farmers with haying equipment (mowers, tilters, balers, etc.) cut hay on several properties, including parcels they do not own. As a result, much of the local acres in hay production is not owned by the farmer or rancher that harvests, uses, or sells the hay.

Land for grazing also contributes to acres used for animal production, which as noted above, is much larger than acres used for growing fruits and vegetables. According to the Census of Agriculture, on the Kenai Peninsula pastureland makes up 75 percent of the land in farms. Some tracts used for grazing are quite large. For example, the four members of the Fox River Cattlemen's Association each have their own ranch, but they also share a 15,670-acre state grazing lease on the Fox River Flats (Coordinated Resources Management Plan, 2010). Other ranchers lease land from neighbors, family, or large landowners such as Cook Inlet Region, Inc. According to the 2017 Census of Agriculture, there were 66 farms on the Kenai Peninsula with permanent pasture/rangeland totaling 23,609 acres.

Peonies and *Rhodiola*

Six of the farmers interviewed integrate peony production into their operations, but those acres were not considered as part of food production acres. Growing peonies for the cut flower market is a recent phenomenon contributing to the growth in Alaskan agriculture. Peonies grown in Alaska bloom later than those grown elsewhere and can therefore fill a unique seasonal market niche. This market niche has led to entire farms dedicated to peony cultivation. Thanks to the development of cooperative marketing, owners of small flower plots can also sell to national and international markets. Peony production has become another way for small scale farmers to diversify their operations.

Another specialty crop worth mentioning but not addressed in this study is *Rhodiola rosea*, or native rose root. This is grown for the medicinal qualities of the root and, like peonies, is sold to an international market. One farmer in the study has dedicated significant acres to this crop to diversify his farm income.



(Figure 4: Census of Ag 2017)

About Farming Practices

The USDA “Know Your Farmer, Know Your Food” campaign emphasizes the importance to consumers of knowing the practices used by farmers who produce the food they buy. Are products grown organically or using chemicals? Are crops planted by hand or using tractors equipped with GPS tracking? There are many ways to farm, and understanding the differences among them can help consumers support methods they value.

Planning for good management

Production methods can vary widely from farm to farm. Different producers learn different practices--e.g., soil and water management, ways to plant, pest control, etc.--from YouTube, neighborly advice, institutions, family stories, books, and first-hand experience. Agricultural agencies like the USDA Natural Resources Conservation Service (NRCS) can help producers decide which practices best suit their goals, resources, and farm conditions.

At the time of their interviews, 54 percent of producers had a conservation plan developed with NRCS. Producers can include in these plans a variety of practices that are eligible for the NRCS Environmental Quality Incentives Program (EQIP). This program can provide federal cost-share funds to farmers and ranchers who install and follow conservation practices addressing environmental concerns. For example, EQIP can assist farmers to use “nutrient management” by paying them to have their soils tested and then to add recommended soil amendments (e.g., fertilizers, lime) based on soil test results and plants to be grown. No-till or low-till practices can also be cost-shared and are gaining interest from farmers for improving soil health. Interest has also grown in NRCS irrigation practices that can help improve water delivery to crops while increasing irrigation efficiency. Crop rotation and succession planting are practices local growers have used to increase production and reduce pests and plant diseases.

“Soil health/fertility is the key to this whole thing that we do. On tillage, minimum till is the way to go. Use a broad fork. Soil microbes are WAY too important to beat up.”

Many of those who have completed EQIP contracts with NRCS continue to manage soils carefully and rotate crops. Though not all local farmers use these types of methods, the ag community continues gathering and sharing information about best practices through local grower networks (e.g., the [Homer High Tunnel Growers Facebook page](#)), grower-focused workshops, peer support, and local publications (e.g., *Kachemak Cultivating from Seaside to Summit: A Guide to Successful Gardening on Alaska's Southern Kenai Peninsula* by The Homer Garden Club, and UAF Cooperative Extension Service publications, see <http://cespubs.uaf.edu/>). In recent years, several local farmers have taken part in an NRCS-sponsored soil health study comparing different low-till methods and cover crops.

Soil Amendments and Fertilizers

Listed by Most Commonly
Used to Least

Compost
Manure
Bone meal
Blood meal
Lime
Seaweed
Greensand
Fish meal
Fish bone meal
Langbeinite
Compost tea
Fish fertilizer or emulsion
8-32-16
Worm castings
Epsom salt
Alfalfa pellets
Gypsum
Ash
Rock phosphate
K-Mag
Bat guano
Feather meal
Soybean meal
Borax
Raw fish
Sulphur
Super triple phosphate
Diatomaceous earth
10-20-10
16-16-16

(Figure 5)

Soil amendments and fertilizers

Crop production in Alaska differs from production in the Lower 48 states not only because of the climate, but also because soils here haven't been intensely farmed for generations. Understanding soil chemistry is crucial in achieving sustained high yields and healthy produce. When asked what kinds of fertilizers they use to provide soil nutrients, the overwhelming majority of produce growers--34 out of 36--said they primarily use organic sources. The two growers who did not use organic sources reported that they used no fertilizers or amendments. That is not to say that conventional, petroleum-based, fertilizers are not used in this area, but they are used less commonly than more natural options. Only five growers reported using commercial fertilizers: two add these fertilizers into the mix for only 0-10 percent of their fertilizer usage, two others estimated their use of commercial fertilizer at 25-50 percent of total fertilizer use, and one respondent added commercial fertilizers only to hay land.

Of organic sources of fertilizer and other soil amendments mentioned by growers, compost was named most commonly, with 20 or more using it. Many local growers make their own compost and/or compost tea, some adding manure obtained from their own animals or animals owned by others. Manure was the second most common fertilizer mentioned, followed by a variety of fish-based inputs (fish meal, emulsion, etc.), blood meal, bone meal, green sand, and kelp (seaweed) products. Agricultural lime, which is used to raise the pH of acidic local soils, was also commonly mentioned among the long list of inputs that local growers use to improve soils and crop production.

When asked which fertilizers they would like better access to, kelp (seaweed), fish bone meal, ground fish scraps for compost, manure, and locally produced compost were mentioned as difficult to get locally. Legal restrictions prohibit farmers from collecting kelp off the beaches without a special permit. Though Homer is a fishing port, fish waste from the local docks is difficult to gather, requiring individual farmers to shovel fish waste into 5-gallon buckets during specific times before the waste is pumped out to sea. Since there is no large-scale method for collecting fish waste, it is seldom utilized. Farmers can access store-bought dried kelp products and certain fish products, but many producers consider them to be cost prohibitive. When it comes to store-bought products, what is valued depends on the producer. A couple of farmers pointed out that Alaska imports nearly all supplies and equipment used for farming, which raises costs. Farmers also mentioned other imported products as prohibitively expensive, including imported lime and bone meal. Several farmers felt that no fertilizers are in short supply but are expensive to use.

Comments On Accessing Fish for Fertilizer:

"If somebody wants to get fresh fish for fertilizer, it's difficult to get because the city of Homer grinds it and pumps it out into the bay. They don't have a good way to get it onto trucks, so it makes that difficult to get to. And, you can't use sport-caught fish carcasses for commercial use."

"Tanner Processing out here on the North Fork shut down, so my supplier of fish for my compost is gone."

"Fish bone meal is decent stuff, reasonable, but it's expensive up here. Agriculture outfits in Chile are buying fish waste from our boats, but in Alaska we're not doing enough with our fish waste for Alaskan users. It's a shame, it's a travesty."

"It's hard to get blood meal. Can get fish bone meal from Kodiak by friends who bring it on their boat for \$20 a bag less than at stores (gets shipped up to Palmer and then down to here)."

(Figure 6)

"Composting is everything! Soil health/fertility - Land is the only thing that matters. It is the only thing that counts."

Pest Control

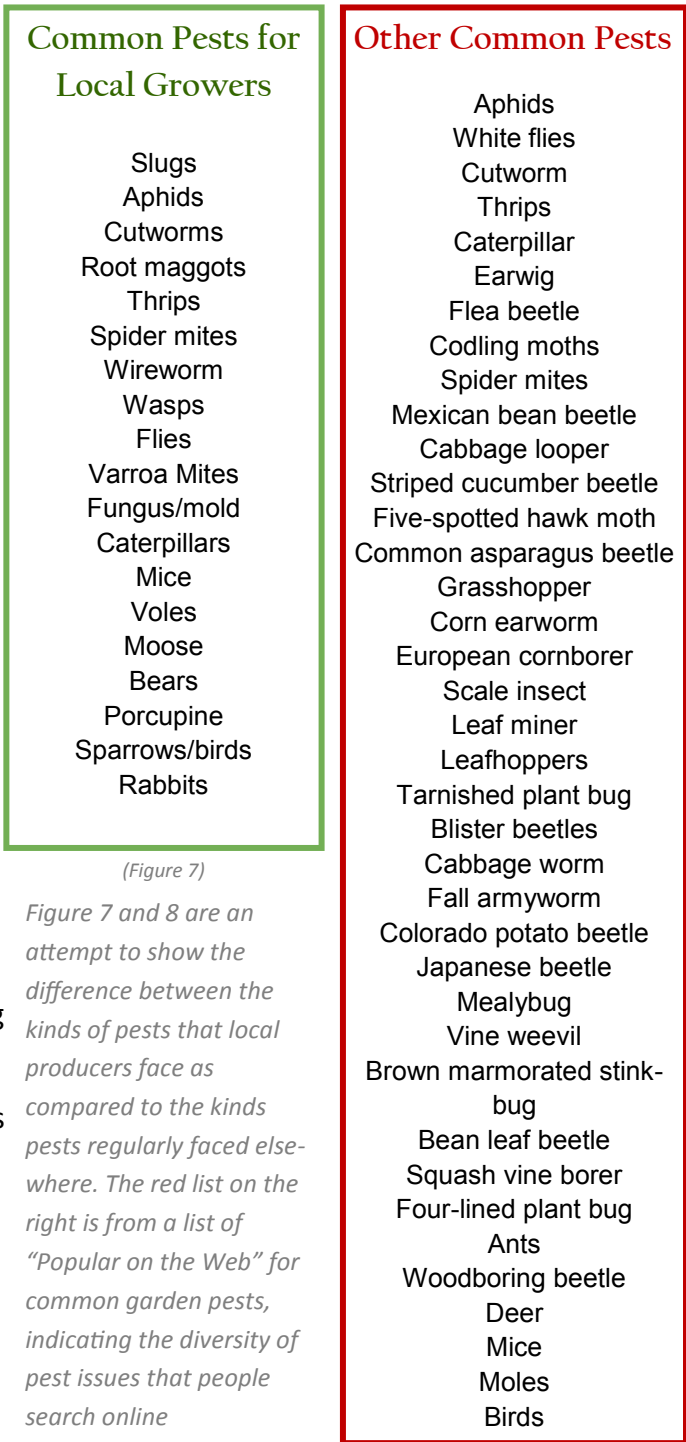
Local farmers have fewer pest problems than their counterparts do in warmer climates. Many pests common in the Lower 48 simply don't do well in Alaska, so local farmers rarely need to rely heavily on pesticides.

Different pests are drawn to different types of crops, so problems often depend on what is grown and how gardens and greenhouses are managed. Slugs and aphids topped the list of local pests. Some producers said they were able to figure out how to manage pests effectively and were now relatively pest-free, while others continue to battle pests using a variety of techniques. All respondents (100 percent) use organic methods to combat garden pests.

Slug control methods include: building garden perimeters with copper, tilling the soil, turning ducks loose in garden areas, hand picking (the most common method), or using Sluggo™ (an organic pesticide), diatomaceous earth, and/or beer traps. Growers will try nearly anything to help control slugs. Many attribute their success in managing slugs to keeping a clean, weed-free growing area and/or using Sluggo.

For aphids, a strong spray of water to knock them off is common, sometimes with soap or neem oil added. Other strategies include using ladybugs and other predatory insects or planting companion crops like thyme, lavender, garlic or onions. Some producers simply stopped growing specific crops that seemed consistently to attract aphids. Producers commonly stated that keeping aphid populations under control was the most important factor in reducing aphid infestations.

Floating row covers were mentioned as important in controlling maggots or other larvae of flying insects, e.g., cutworms. Netting or fences are used to keep out animals like birds and moose. Other common garden pests mentioned were spider mites, varroa mites in honeybees, voles, and porcupines, all of which require different control measures. Some controls mentioned were simply good management practices, such as crop rotation or trap crops. Two producers also stated that soil management helps; saying the richer the soil, the fewer the pests.



(Figure 7)
 Figure 7 and 8 are an attempt to show the difference between the kinds of pests that local producers face as compared to the kinds pests regularly faced elsewhere. The red list on the right is from a list of "Popular on the Web" for common garden pests, indicating the diversity of pest issues that people search online (Google, 2019).

(Figure 8)

"Didn't have slugs for many years, but the last 8 years they've gotten worse and worse."

To Be or Not to Be... Certified Organic

More than 90 percent of growers in this survey classify their growing practices as non-certified organic in terms of fertilizers used, pest control practices, and livestock feed. Only 4 of the 39 farms use practices that are not organic. While natural methods are the norm, only 22 percent of respondents were interested in getting USDA organic certification, and another 22 percent were undecided. Commenting on why, many producers felt that organic certification is unrealistic for small-scale operations because of the paperwork and reporting required and the cost. On top of that, reliably and consistently accessing certified organic feeds and fertilizers can be both challenging and expensive. A couple of producers mentioned the desire to become Certified Naturally Grown, which uses local peer review of farming practices, requires less paperwork, and costs much less. Producers who export crops, like *Rhodiola* or peonies, mentioned being interested in certification specifically for those crops, since they are competing on national and international markets.

Given management practices commonly used by local producers, existing pests and how they're controlled, and the kinds of soil amendments local producers choose, the case can be made that local growing standards are as good as or better than USDA organic standards. Most producers share a value system that supports soil health and prefer to use readily available Alaska-specific inputs such as compost, manure, seaweed and fish bone meal from Kodiak (which is not OMRI-certified for USDA organic use). For them, it is easier to grow organically than it is to get certified organic. Farmers (and consumers) in this area are very lucky.

List of Major Substances used by local growers:

- Beer
- Water
- Salts
- Lime
- Neem oil
- Safer Soap™ (uses potassium salts & fatty acids)
- Dish soap
- Diatomaceous earth
- Sluggo™ (an iron phosphate bait)
- Vinegar
- Monterrey BT™ (a biological pesticide)

(Figure 9)

Figure 9 and 10 above are an attempt to demonstrate the difference between the kinds of pesticides that local producers use as compared to the kinds pesticides allowed to be used on certified organic farms. The red list on the right is a partial list from AgDaily.com from April 24, 2018. The full list of synthetic and non-synthetic substances can be found on the [USDA website](#)

List of Major Substances allowed by USDA Organic standards

- *Bacillus subtilis*
- *Bacillus thuringiensis*
- *Beauveria bassiana*
- Boric acid
- *Coniothyrium minitans*
- Copper: Copper hydroxide, copper oxide, copper oxychloride, copper sulfate
- Corn gluten
- *Cydia pomonella granulosis*
- Diatomaceous earth
- Gibberellic acid
- Horticultural vinegar
- Hydrogen peroxide
- Lime sulfur: Including calcium polysulfide
- Minerals such as elemental sulfur, bicarbonate, or kaolin clay
- *Myrothecium verrucaria*
- Non-detergent insecticidal soaps
- Oils, including petroleum, vegetable, and fish oils:
- Peracetic acid
- Pheromones and pheromone traps
- Plant-derived substances such as neem, caraway oil, seed fennel, or Quassia
- Ryania/Ryanodine
- *Sabadilla*
- Spinosad
- Streptomycin sulfate and tetracycline
- Sticky traps
- Vitamin D3

(Figure 10)

“No desire. It's expensive and not worth the time and effort. What fertilizers and pesticides are allowed on certified organic I would not want put on my food.”

About Labor on the Farm

According to the Census of Agriculture, labor was the largest expense for farmers statewide, ranking three times higher than any other farm expense. Statewide, producers reported spending \$25,291,000 on labor, while all other expenses combined totaled \$28,855,000 (including feed, livestock purchases, fertilizer, rent, seeds, supplies, repairs, chemicals, fuels, interest, and other). On the Kenai Peninsula, only 25 percent of farms hire farm labor (Ag Census, 2017). Farms in this study are specifically market farms, growing significantly more than for personal consumption. This explains why 30 out of 39 farms interviewed (77 percent) use labor other than just their own at some point during the season. Labor costs were identified as one of the top factors inhibiting farm expansion.

Number of workers

The majority of producers surveyed operate small-scale diversified vegetable farms, which are labor intensive and require a broad set of specialized skills. Many are family operations, often with one primary farmer and a spouse who helps. Some farmers rely on paid or work-trade labor (sometimes both) with minimal skills or experience, while others have only one or two experienced workers who help for the entire growing season.



(The work crew at Twitter Creek Gardens. Photo courtesy of Emily Garrity, 2018)

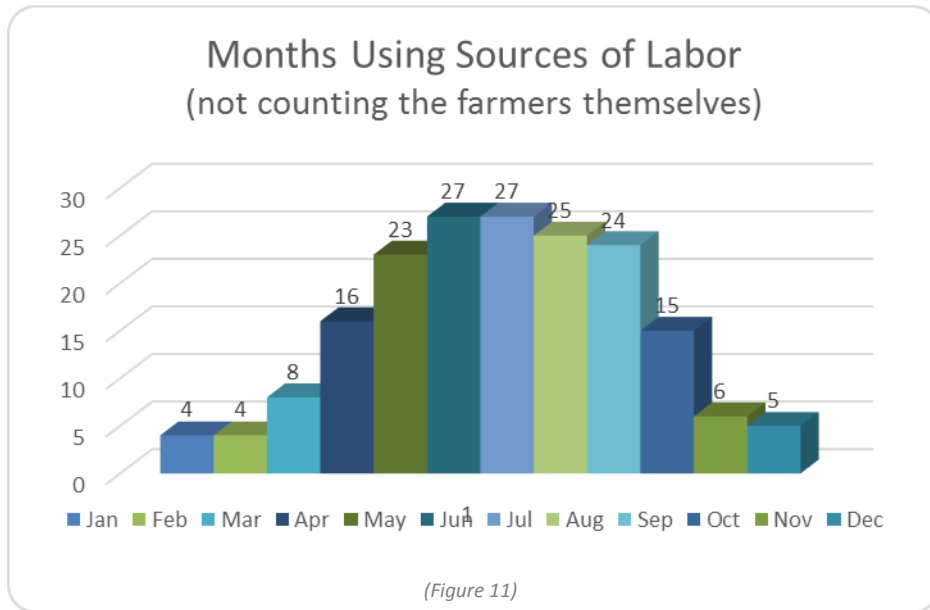
Producers were asked how many workers they typically use each year to operate the farm or ranch compared to what would be ideal. Current farm staff ranged from 1 up to 15 workers. The majority of producers (71.8 percent) have fewer than 5 workers. The rest use between 5 and 10, with only one farm requiring between 10-20 seasonal workers. Descriptions of the ideal labor situation varied greatly among producers. Some thought fewer workers with more skills would help improve efficiency, while others saw additional laborers as the means to increase productivity. On average, producers' ideal number of laborers was slightly higher than their current number. One operation talked about streamlining their process with equipment and infrastructure instead to reduce labor needed.

"If I could afford workers, I wouldn't want them to cost more headache for me than they're worth, so I try to do as much for myself as I can."

Length of employment and wages

For most farmers on the southern Kenai Peninsula, additional labor is only required for part of the year. Labor needs for many crop growing operations tend to be low throughout winter and into spring- when prepping occurs- and are met by the producers themselves. Those who specialize in products like birch syrup or berries need help only during short harvest and processing windows each season. In contrast, producers raising animals have relatively consistent daily tasks and labor requirements. The greatest need

“Labor and staff are different.”



for additional labor occurs April through October, closely following the curve of the growing season throughout summer and peaking in June, July and August. However, there were four farmers who reported using labor (besides themselves) throughout the year, some as full-time year-round positions and others part-time. During the summer growing season, eleven producers (28 percent) offered full-time seasonal positions, and 14 (36 percent) used part-time seasonal workers; some use both.

Producers reported a wide range of arrangements for their seasonal help, including work-trade, harvest-based wages, stipends, and fixed hourly wages. Many use a mix of approaches depending on task or needs during different parts of the season. Of the producers interviewed, 25 do work-trade (64 percent), 21 pay workers (54 percent), and 18 do not hire paid workers (12 use only family help on the farm and the other six do work-trade only). Intermittent helpers may be hired for short periods of time and for specific chores, like spring weeding or installing infrastructure. Fourteen of the farms have room & board relationships with their work-trade helpers, though producers will also trade food, local travel, farming education, or some combination, which may include stipends or wages. Paid positions are usually in the \$10-\$15 per hour range, but several farms are willing to pay more, even up to \$20 per hour. Many producers include access to food, transportation, and other benefits to wage-based workers.

Labor used most frequently	Number of Farms	Percent of Farms
Family	26	70.3 %
Paid workers with experience	7	18.9 %
Paid workers without experience	16	43.2 %
Trade for work: labor traded for food, housing, etc.	21	56.8 %
Volunteers	16	43.2 %
Interns	7	18.9 %

(Figure 12)

Finding labor

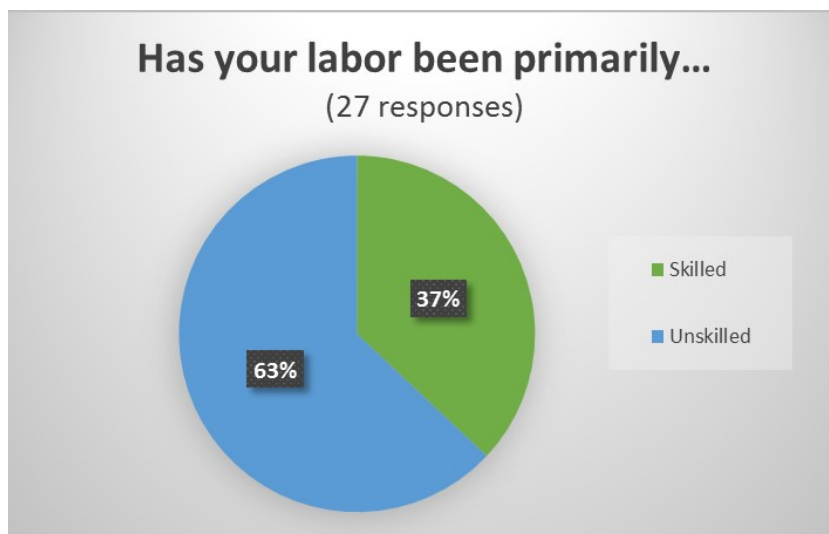
The Southern Kenai Peninsula is home to approximately 16,000 people. Folks that live here have varying levels of experience in agriculture, mostly bringing skills from elsewhere. Though there are many ways to connect to labor sources, the majority of those interviewed simply connected with friends and/or family (89.2 percent). Connecting with local workers through word of mouth was next most common method (51.4 percent) while the use of WWOOFers is the third most common (37.8 percent).

A “WWOOFer” is someone a local producers connected to through Worldwide Opportunities on Organic Farms (<https://wwroof.net/>). WWOOF is an exchange program where farmers provide food and housing in exchange for part-time or full-time farm labor. Farmers can post information on the website and potential “WWOOFers” can contact them directly to negotiate terms of a labor trade. WWOOFers have become so common in the Homer area that the term is often used generically to describe someone who works for trade. Of those interviewed, approximately 38 percent have used WWOOF to find labor, though some report using other programs that also facilitate bringing seasonal workers in specifically to work on local farms. This program and others like it are particularly popular in the area for the small farms that do not have a budget for employees. Some producers use volunteers as their primary labor source for specific projects, like building new infrastructure, but don’t depend on them for daily operations.

“People have come here from abroad via Work Away or other volunteer programs have been given trouble or even turned away after getting off the plane because they told customs about their volunteer work here. They're considered "working," even though their pay is room and board. The Work Away program sends up red flags the most because the word "work" is in there.”

Skill Level

Considering that most of the work offered by local farms is informal, part-time, and often trade based, it may be unsurprising that 63 percent of producers report their laborers have been primarily unskilled. Often those brought in as volunteers or new hires arrive without experience. Farmers who successfully integrate volunteers and other unskilled labor into their daily activities have learned how to make



(Figure 13)

on-the-job training efficient and effective, such as by having laminated cards for workers to take out into the field with descriptions of crop specifics and weed characteristics. Others make sure to assign only the most basic tasks to new unskilled hires.

Consistency

One difficulty mentioned by producers was keeping workers consistently when needed. This is an issue whether producers seek workers that are full- or part-time, work-trade or paid, local or from outside Alaska. Though volunteers found through online work-trade programs don't require wages, they also are not obligated to stay throughout the season. Several farmers over the years have found this to be a difficult dynamic to fit into a business plan. Some have used different online hiring platforms, like [ATTRA](#) or [GoodFoodJobs](#), to connect them to interns who are more specifically dedicated to farming as a future career and will commit to a larger portion of the season.

Finding the right laborers and structuring farm operations to function with the seasonal flux in labor requirements can be tricky, but farmers are developing ways to adjust. Some pay higher wages, some provide better housing, and some focus on building relationships through activities such as shared meals. Regardless of how labor is handled, farmers we interviewed described 130-170 positions in agriculture.

“Our volunteer workers are just people from all over the place. That can be a little scary for both parties.”

Various Labor Sources

1. Friends and/or family
2. Local workers found through word of mouth
3. WWOOFers (<https://wwofusa.org>)
 - Homer High School students
 - Local college students (Kachemak Bay Campus)
 - Workers Facebook page
 - Alaska State Job Center in Homer or ALEXsys (websites on form)
 - ATTRA (<https://attra.ncat.org>)
 - Good Food Jobs (<https://www.goodfoodjobs.com>)
 - Alaska Department of Corrections (parolee workers)
 - Workaway.com
 - Permies.com
 - A veteran
 - Other Facebook pages
 - Volunteers and others
 - J1 Visa students from other countries, specifically China, Colombia and Thailand
 - HelpX.net
 - A French agriculture university's animal husbandry program
 - FFA kids from the high school
 - Craigslist.com
 - Local hostel

(Figure 14)

About Production

The products coming out of our agricultural sector here on the southern Kenai Peninsula vary widely. Some of them sell better than others. In this section of the survey, participants were asked what they grow and what their top sellers were. For an idea of what is possible, a list of all farm and ranch products sold at the Homer Farmers Market is in the [Appendix](#)

Vegetables

The vast majority of those interviewed grow a variety of vegetable and herb crops on small market farms. Vegetable production is the main focus for 34 of the 39 survey participants, though 21 of the 34 also grow herbs, and 9 grow fruit. Of the 39 interviewed, 26 produce other types of agricultural products, from meat and eggs to specialty items like honey, birch syrup, mushrooms, or value-added products like jams, fruit wines, or fermented products.

Unlike many larger farms, the small market farmers on the southern Kenai Peninsula tend to branch out and put their efforts into a variety of different types of products. The following data indicate the variety of agricultural products these producers sell and the number who sell each item. Items not included on our questionnaire were listed as “other” by producers and have been incorporated.

Data provided by producers on which items did or did not sell out are included in [Appendix A](#). Also in the appendices are tables showing which months each agricultural product is available for sale and the number of producers selling each product throughout the year ([Appendix B](#)).

Vegetables	Number who sell	Percent who sell (of 34)
beans	12	35%
beets	21	62%
broccoli	19	56%
Brussels sprouts	7	21%
cabbage	17	50%
carrots	21	62%
cauliflower	18	53%
celery	9	27%
chard	15	45%
corn	2	6%
cucumbers	17	50%
garlic	6	18%
greens	17	50%
green onions	12	35%
kale	22	68%
kohlrabi	11	33%
leeks	8	24%
peas	15	45%
peppers	5	15%
potato	16	47%
radishes	17	50%
rhubarb	11	33%
rutabagas	2	6%
squash-summer	15	45%
squash- winter	6	18%
tomatoes	16	47%
turnips	13	39%

(Figure 15)

Other types of produce grown for sale

- onions (white or purple)
- microgreens (many types)
- shallots
- romanesco
- bok choy
- artichokes
- asparagus
- watercress
- New Zealand spinach
- spinach
- parsnips
- pea shoots
- Asian greens: (pak choi, tsa tsi, komatsuna, Tokyo bekana)
- mustard greens
- arugula
- collards
- napa cabbage
- tomatillos
- garlic scapes
- radicchio

(Figure 16)

“Grew many more types than I sold.”

Fruits, Herbs and Miscellaneous Ag Products

It is worth noting that some growers in the survey area do cultivate peaches, plums, pears, nectarines, grapes and other fruits, but at the time of this survey, these fruits were grown for home consumption only. Additionally, while only one producer interviewed reported growing raspberries for sale, they are commonly grown for home use, and several u-pick berry orchards are found in the area.

Local harvests are not limited to crop and livestock production, they also include wild harvests. Producers making value-added jams and wine grow some of the fruit they need, but they also use wild harvested fruits, flowers, and spruce tips that they either gather themselves or source from other local harvesters or growers. Totals shown below include combined quantities from both cultivated and wild harvests used for wines and jams, along with prices offered to those who have fruit to sell to jam and wine makers.

Fruits	Number who sell
apples	5
blueberries	1
cherries	1
currants	1
gooseberries	1
grapes	0
ground cherries	0
peaches	0
pears	0
plums	0
LISTED AS "OTHER"	
strawberries	2
crabapples	1
raspberries	1
black currants	1
hardy kiwi	1

(Figure 17)

Harvested/Cultivated for Jams/Jellies:
spruce juice- 10 gallons
rhubarb- 600 lbs
fireweed juice- 36 gallons
raspberries- 32 gallons
highbush cranberries- 5 gallons
lowbush cranberries- 18 gallons
rosehips- 6 gallons
apples- 10 gallons
Wild berries sourced for jams: \$3.00-\$4.00 per pound paid to the harvester

(Figure 18)

Harvested/Cultivated for Wine 2018			
Type	Quantity	Price Paid	Total Value
blueberries	5,000 lbs	\$4	\$20,000
red raspberries	700-2,500 lbs (1,500 on avg.)	\$3	\$4,500 (\$2,100-\$7,500)
golden raspberries	400 lbs (would like to get 2,000+)	\$3	\$1,200
gooseberries	77-260 lbs	\$3	\$505 (\$231-\$780)
black currants	1,300 lbs	\$2.75,	\$3,575
strawberries	50 lbs (previously 130-180)	\$2.50	\$125
rhubarb	11,000-22,000 lbs	\$0.35	\$5,525 (\$3,350-\$7,700)
lowbush cranberries	250 lbs	\$2	\$500
apples	3,500 lbs	\$1	\$3,500

(Figure 19)

Herbs	Number who sell
basil	13
chives	8
cilantro	9
dill	11
mint	9
oregano	8
parsley	10
rosemary	6
sage	7
thyme	8
hops	1
LISTED AS "OTHER"	
marjoram (2)	2
anise hyssop	1
lavender	1
epazote	1
fennel fronds	1
French tarragon	1

(Figure 20)

Other Farm Products	Number who sell
beef	1
chicken	4
duck	2
eggs	11
flowers (not peonies)	2
goat	1
hay	2
honey	2
lamb	0
manure	3
milk products	1
mushrooms	1
peonies	5
pork	3
rabbit	2
<i>Rhodiola rosea</i>	1
turkey	3
wool or other fiber	2

(Figure 21)

Value-added and "Other"	Number who sell
edible blossoms	1
birch syrup	1
kimchi	1
duck eggs	3
composted	1
composted manure	1
homemade wool products	1
goose	1
fireweed jelly	1
dandelion "honey" syrup	1
pickled vegetables	1
dried herbs/chilis	1
berry jams	1
fruit trees	1

(Figure 22)

"I grow mostly for my household, so I grow a LOT more than I sell."

Producers' top-selling products

Because producers interviewed typically operate diversified farms, it would have been cumbersome for them to give specific details on all products grown. As farm operations advance, producers alter which crops or products they focus on. In order to get specific data about their most successful crops, producers were asked to share data on the five products they considered most important to their operations in 2018. The variety of responses shows the diverse ways in which producers operate and fill different niches. Keep in mind that quantities and values shown do not indicate overall local production for each product or any farmer's total production (37 of 39 producers answered this question). These numbers simply provide insight into the items that producers consider key components of their sales.

Some products listed in the top five by a producer were reported with incomplete data (e.g., no price given). For several products, data on pricing and/or total value were not given and these were not included in the table on the top five ag products below (Figure 23). Some of these the products were beet and turnip greens (50 lbs), kombucha (80 gallons), goats (424 lbs), vegetable medley bags (400 lbs), and yarn or yarn products. Keep in mind, all of these numbers are a snapshot in time from sales in 2018.

Top Ag Product (collected from producers' top 5 products)

Ag Product	Total Quantity	Avg. Price	Total Value
Apples	645 lbs	\$2.80 lb	\$1,362
Arugula	*404 lbs	\$10.00 lb	*\$5,280
Basil	*202 lbs	\$16.00 lb	*4,832
Beans (yellow, purple, green)	450 lbs	\$5.38 lb	\$2,333
Beef	10,000 lbs	\$3.00 lb	\$30,000
Beets	1,642 lbs	\$2.65 lb	\$13,377
Birch syrup	75 gallons	***	***
Black currants	10 gallons	\$2.00 lb	\$90
Bok choy	774 lbs	\$5.00 lb	\$3,780
Broccoli	3,499 lbs	\$3.59	\$11,453
Cabbage	19,400 lbs	\$1.50 lb	\$29,850
Carrots	3,850 lbs	\$3.00 lb	\$20,400
Cauliflower	3,308 lbs	\$2.91 lb	\$9,179
Celery	1,560 lbs	\$3.38 lb	\$4,725
Cherries	20 gallons	\$3.00 lb	\$270
Chicken	6,000 lbs	\$6.00 lb	\$36,200
Compost	50 yards/year	\$75.00 yard	\$3,750
Cucumbers	20,113 lbs	\$2.29 lb	\$42,800
Cucumbers (English)	1,000 lbs	\$2.75 lb	\$2,750
Eggs (duck and/or chicken)	2,082 dozen	\$5.50 dozen	\$12,040
Garlic	549 lbs	\$18.25 lb	\$10,760
Green onions	1,200 lbs	\$6.00 lb	\$7,200
Hay	15 tons	\$240.00 ton	\$3,600
Herbs (variety)	**1,440 bunches	\$3.66 bunch	**\$5,812
Honey	248 gallons	\$205 gallon	\$53,740
Jams and jellies	(see Figure 18)	\$14.00 pint	***
Kale (some specified as baby)	810 lbs	\$4.33 lb (mature) \$12.00 lb (baby)	\$4,814
Lettuces/salad greens	11,494 lbs	\$6.27 lb	\$66,947
Long/pole beans	30 lbs	\$4.50	\$135
Microgreens/pea shoots	328 lbs	\$2.06 oz (\$32.90 lb)	\$15,520
Milk and milk products (goat)	1,200 gallons	***	\$19,600
Mushrooms (variety of types)	450 lbs	\$16.00 lb	\$7,200
Onions	950 lbs	\$4.00 lb	\$3,800
Pigs (live fertile breeders & piglets)	47 live piglets, 20 breeders	\$300 piglet, \$600 mature	\$23,000
Pork	4,775 lbs	\$4.80 lb	\$22,875
Potatoes	14,855 lbs	\$2.07 lb	\$29,895
Potting soil	1,000 cubic ft	\$100 cubic ft	***
Radishes	320 lbs	\$3.00 lb	\$1,240
Snap peas	676 lbs	\$7.25 lb	\$5,501
Squashes (summer and winter)	*1,000 lbs	\$2.00 lb	*\$2,000
Swiss chard	305	\$4.00 lb	\$1,220
Tomatoes	21,335 lbs	\$4.91 lb	\$75,985
Turkey	520 lbs	\$5.00 lb	\$2,600
Turnips	867 lbs	\$3.00 lb	\$2,061
Zucchini	436 lbs	\$3.00 lb	\$1,274

(Figure 23)

Notes for the table on the preceding page:

* Indicates that at least one producer did not specify quantity sold or monetary value, therefore the actual quantity and total value is higher for this product.

** Indicates that the term “bunches” was reported by producers without indication for what weight or number of stems constitutes a bunch, therefore actual quantities are undetermined. Also, indicates that at least one producer did not indicate quantity or total amount sold, therefore total value is higher for this product.

*** Indicates undetermined, insufficient data or removed for the sake of anonymity.

Estimated totals from available data show that from their top five products, farmers interviewed generated more than \$620,031. The actual total is likely significantly more when the number of products not fully quantified or valued here are factored in. Two producers did not provide data on their top five products.

The table below shows the approximate percentage of income represented by each of the top five selling products listed by producers as contributing to their 2018 overall sales. Several of those who produce other non-food ag products, such as peonies, reported that those products provide the majority of their farming income (up to 80 percent in some cases).

Percentage of Ag Income Producers' Top 5 provided

Percent of Income	# of producers: Product #1	# of producers: Product #2	# of producers: Product #3	# of producers: Product #4	# of producers: Product #5
0-5%		5	4	8	4
5-10%	4	10	7	6	5
10-25%	12	13	15	9	13
25-50%	9	6	2	3	1
50-100%	11				

(Figure 24)

Totals: Quantities of Production	
Total Veg/Fruit	113,343 lbs (incl. rhubarb for jam) + 147 gal (fruit by the gallon)
Total Meats	21,719 lbs + 67 live pigs
Honey, Birch Syrup	323 gal
Herbs	2,248 bundles (perhaps 562 lbs, if 4oz bundles)
Eggs	2,082 doz
Compost	50 yards/yr
Potting soil	1,000 cu ft
Hay	15 tons (30,000 lbs)
Milk/milk products	1,200 gal

(Figure 25)

Top 10 Sellers on the Alaska Food Hub

Another way to gain insights on local production is to look at data provided by the Alaska Food Hub. Since it has been running now for 3 years and all sales are online, the data is easy to collect, inclusive of all sales, and accurate. Despite data accuracy, it is important to remember that the Food Hub is a subset of all market options available to producers and consumers. The information provided is, however, invaluable to producers who want to see trends. Figure 26 below shows the top 10 selling products according to revenue from sales. Figure 27, on the other hand, shows the top 10 sellers by units sold.

The Alaska Food Hub		
2016-2018 Top 10 Selling Products BY REVENUE		
Product	Units Sold	Total Sales
Greens	3518	\$16,481.52
Chicken	442	\$8,861.81
Shellfish	403	\$7,289.50
Mixed Vegetables	303	\$6,781.25
Potatoes	1164	\$5,266.21
Tomatoes	786	\$4,672.02
Carrots	888	\$4,600.46
Herbs	1098	\$4,235.42
Cabbages	658	\$4,060.86
Eggs	523	\$3,862.80

(Figure 26)

The Alaska Food Hub		
2016-2018 Top 10 Selling Products BY UNITS		
Product	Units Sold	Total Sales
Greens	3518	\$16,481.52
Potatoes	1164	\$5,266.21
Herbs	1098	\$4,235.42
Onions and Leeks	947	\$3,250.67
Carrots	888	\$4,600.46
Veg & Fruit Starts	846	\$3,470.96
Tomatoes	786	\$4,672.02
Cucumbers	770	\$2,939.34
Cabbages	658	\$4,060.86
Eggs	523	\$3,862.80

(Figure 27)

"I try to grow specialty, high-end, gourmet varieties that are more difficult to grow as my focus. It's a way to separate myself from other people."

About Marketing

The vast majority of farmed or wildcrafted food made available on the southern Kenai Peninsula is bought and sold locally. Many of those interviewed indicated that not only the types of products they offer, but also the sales outlets they use or percentages of products sold through each shift from year to year. These shifts may mean a growth in output for some, but sometimes they reflect a contraction in production and sales. Several producers reported circumstances such as personal or family health issues, poor crop yields due to weather, or changes in life plans as influencing factors in how or where they sell.

Shifts in market outlets used and quantities sold can be expected since many of these small farms and businesses are relatively new and producers are still honing their operations or expanding their offerings. It is important to remember that most producers interviewed hadn't been running their farms as businesses here on the southern Kenai Peninsula very long. Twenty-two of the 39 respondents had been in commercial production in Alaska 10 years or less, with a majority of those (64 percent) having just 5 years or less experience selling commercially.

This means that availability of local food for local markets is relatively new and relationships with buyers are relatively new, as are buyer demands and expectations. The Census of Agriculture found that the value of food sold directly to consumers statewide increased from \$2.2 million in 2012 to \$4.5 million in 2017. The number of Kenai Peninsula farms selling food directly to consumers in the last 5 years increased from 56 to 74 (up from 27 in 2007) and the value of direct sales more than tripled: from \$312K to \$981K (up from \$155K in 2007)(Ag Census, 2017). As supply and demand both increase, there are times when one outpaces the other. It is a balancing act that both producers and consumers on the southern Kenai Peninsula are learning. As one market gets saturated (i.e., retail sales at a farmers market), other markets become more appealing to producers (i.e., wholesale sales to restaurants or the Food Hub). As producers refine their growing methods and identify their own production limits and interests, they also identify markets that suit their operations best.

As supply and demand both increase, there are times when one outpaces the other. It is a balancing act that both producers and consumers on the southern Kenai Peninsula are learning. As one market gets saturated (i.e., retail sales at a farmers market), other markets become more appealing to producers (i.e., wholesale sales to restaurants or the Food Hub). As producers refine their growing methods and identify their own production limits and interests, they also identify markets that suit their operations best.

Market Options

Producers were asked where they sold in the most recent year, along with the percentage of products sold through each venue. These data do not reflect the overall amount of food

THE VALUE OF FOOD SOLD DIRECTLY TO CONSUMERS INCREASED FROM **\$2.2 MILLION** IN 2012 TO **\$4.5 MILLION** IN 2017



(Alaska Farmland Trust/Census of Ag, 2017)

Location	Percent Who Sell There
Farmers Markets	67%
Restaurants	54%
Direct Sales from Farm/Business	46%
Alaska Food Hub	26%
Small Retailers/ Local Markets	23%
Large Retailers/ Supermarkets	21%
CSA Subscriptions	13%
Other	15%
Roadside Stand	8%

(Figure 28)

sold through each venue, as products and quantities sold vary widely among this set of producers. Rather, this indicates how producers market what they have.

#1 Farmers Markets

Most producers interviewed sell at least some of their products through farmers markets (67 percent of participants). Not surprisingly, the Homer Farmers Market, which has been in operation since 1999, was the most popular venue of this type. There were, however, several alternatives to this common outlet. One producer transports their product, along with produce they buy wholesale from one to two other local farmers, up the road to sell in central Kenai Peninsula and at an Anchorage farmers market. Others have utilized the Alaska Wild Emporium (now closed) as an indoor market option after the Homer Farmers Market closed for the season.



(Logo courtesy of the Homer Farmers Market)

Producers at farmers markets may have their own booth or share space with another. Vendors at the Homer Farmers Market can sign up for a full-season or weekly booth depending on space available. The season lasts for 19 weeks, 5 hours on Saturdays and 3 hours on Wednesdays. Though the Homer Farmers Market has both produce vendors and craft vendors, produce vendors are given priority for space. Some booths remain available each week, and a wait list exists for these openings (Homer Farmers Market, 2019).

#2 Restaurants

The next most popular way for producers to sell is to restaurants: 54 percent use this option. Restaurants are buying vegetables primarily, though some interest has been shown in local meats, honey, or other products not yet available, such as cheeses made locally. There is considerable variety in how many restaurants individual farmers sell to or how much they focus on selling to restaurants. Ways of communicating with restaurant buyers also vary and include online or text-based ordering systems, phone calls, or door to door spot selling. Currently the norm is for restaurants and farmers to interface directly, though the Food Hub is also used.

Some producers find their restaurant sales to be regular and efficient, while others have found selling to restaurants challenging or have been disappointed when crops grown specifically for a restaurant buyer were turned away. In some instances, plants were grown too large for the chef's preference; in others, the buyer simply no longer wanted the product or had bought it from another source. Restaurants tend to need predictability in their purchasing and consistency in size and quality of produce on their menus from week to week. This presents challenges for producers who deal with unpredictable weather or other variables. One hurdle expressed during interviews was price, since restaurant buyers often require lower than retail prices. On the other hand, these buyers have the capacity and often the desire to buy large quantities from local farmers and prefer to buy in bulk packaging, which can save labor and time for busy producers.



#3 Direct sales

Direct sales are simply sales to consumers without an intermediary market, straight from the farm or production house. Producers may use websites or Facebook pages or flyers to get the word out about what they offer. They also may have established relationships and a reputation with people in the

community who support them. Just under half of the producers interviewed (18) sell this way, though for many (72 percent) this is only for a small portion of their sales. Five sell 1-5 percent through direct sales and eight sell 5-25 percent this way; on the other hand, four producers use direct sales as their main method of getting product to customers.

Direct selling is an important mechanism for livestock producers who don't have many other options. Due to U.S. Department of Agriculture's Food Safety Inspection Service (USDA-FSIS) regulations on sales of processed meat, it is easiest for livestock producers to sell a live animal direct to consumer before slaughter. To be slaughtered or have any further processing, beef, pork, lamb and goat producers need to use a FSIS-certified slaughter facility. Similarly, if the customer buying the meat plans to sell the meat, it needs to be processed in a FSIS-certified processing facility. Since the nearest FSIS-certified slaughter facility is 250 miles away in Palmer, it is much more cost effective for livestock producers to sell directly to consumers. One producer stated that 75-100 percent of his meat was sold direct to consumers. The DEC has an informative publication called *The Farm to Restaurant Factsheet* that details many of these regulations (<http://dnr.alaska.gov/ag/FactSheets/FarmtoRest2014.pdf>).

Dairy in the state meets with similar problems. Pasteurization requirements are too costly for small-scale producers to implement, and many prefer raw milk products anyway. State law requires raw milk to be dyed pink and labeled as pet food if sold to the public. Dairy products from small farms can also get to customers through sales of shares. Customers can buy a "goat share" or a "cow share" and own a portion of the animal. Then they aren't considered to be buying milk from the producer, but only receiving a portion of production from the animal they co-own. More information can be found on the Alaska Department of Environmental Conservation (DEC) website (<https://dec.alaska.gov/eh/vet/dairy-meat-production/>).

Fewer regulations apply to selling direct to consumers, since most regulations are designed to protect the public in general. When you buy direct from the producer, you can know more about their approach to food safety (and you know who to blame if you get sick). It was this philosophy that led the state to create the Cottage Food Law. This allows producers to sell value-added products with low health risks directly to consumers without the use (or the expense) of a DEC-certified kitchen. Cottage food products range from breads and pastries to jams and jellies to pickles and sauerkraut. These sales are appropriate for producers who want to fill their market stalls early in the season with a greater variety of items or when a producer has a surplus of produce that could be turned into a value-added product. In 2018 and 2019, the state also granted the Alaska Food Hub a variance that allows vendors using this online platform to sell value-added products under Cottage Food regulations. More information about the Cottage Food laws in Alaska can be found on the DEC website (<https://dec.alaska.gov/eh/fss/food/cottage-food/>).



(Logo courtesy of the Alaska Food Hub)

#4 Alaska Food Hub

The Alaska Food Hub (originally called the Kenai Peninsula Food Hub) is a new online farmers market for the Kenai Peninsula. In 2019 the Food Hub was used by 32 producers, selling local produce, seafood, meats, eggs, cottage foods, and other home-produced goods. All producers interviewed had heard of the Food Hub, but some were unfamiliar with or curious about how it works. Started in 2016, it has expanded from Homer to include pick-up locations in Soldotna, Seldovia, and Ninilchik. Producers can post to the webpage what they have available each week. Consumers can then browse offerings from participating producers, select what they'd like, and pick up their combined purchases at one of the four

locations around the Peninsula. The Food Hub customer base has grown steadily over the first three seasons; 498 the first year, 975 the second, and 1207 the third (Alaska Food Hub, 2019).

Between 2016 and 2018, 40 percent of producers interviewed had tried the online platform, and 26 percent (10 producers) were actively using it in 2018, though mostly as a supplement to the markets they already used. Several interviewees described using the Food Hub between 2016 and 2018 at varying levels and at least five expressed intention to begin selling through this outlet in the future. Two producers reported using the Hub almost exclusively, selling 75-100 percent of their product there, whereas half of 2018 users (5) reported selling only 1-5 percent there.

Purchases from the Food Hub by individual customers tend to be for small quantities and vary in number from week to week, which has led to mixed opinions about the Food Hub among producers. When asked if they considered the Food Hub an important part of their business plan, 28 percent of respondents answered yes, 64 percent answered no, and 8 percent gave no answer. During interview conversations, several producers stated that they hadn't really looked into it yet, several others, 8 percent, said they thought the concept good and good for the community but that it wasn't right for their needs at this time. How this new sales outlet will fit in among other market options is still being established for both producers and shoppers on the Peninsula.

This online venue is a perfect example of how supply and demand need to grow at the same pace together, but seldom do. Customers who go online to see options to buy may not come back if they see few choices or a lack of what they want. This is clear from the fact that in its 3rd year of operation, the Food Hub still has a large number of consumers who have signed up but never made a purchase (Alaska Food Hub, 2019). Producers, on the other hand, have a hard time committing to a growth in farm

Advantages and Challenges of the Food Hub

Producers were asked to share their thoughts on the Alaska Food Hub. Many of the producers felt the Food Hub was a great opportunity and shared these advantages:

- + Ease/convenience/less time spent selling products/they take care of marketing and taxes- 19 mentions
- + Expands access for people who aren't going to the farmers market/get to ship your food to Seldovia, Ninilchik, Soldotna/good place for selling extra product-16 mentions
- + Only harvest what's sold/don't have to guess what people will buy- 6 mentions
- + Haven't used it but think it's a good idea, has potential and a good marketing technique- 4 mentions

Challenges were also mentioned:

- Small orders/another hoop to jump through/not worth the extra time or special trip to town- 6 mentions
- Don't like the 25% markup- 6 mentions; already pay the Farmer's Market booth fee-2 mentions
- The harvest/drop off schedule in an issue or would need cold storage to make it work- 6 mentions
- Lack of good advertising/not enough buyers- 5 mentions

The 60% of producers who hadn't yet used the Food Hub were asked what held them back. Here's the rundown:

- 38% don't have enough information about it, another 8% haven't taken the time to learn about it
- 38% don't need more options for selling their products
- 33% don't see how it fits into their farm's or ranch's business plan
- 25% don't like using computers or prefer face to face, and 8% more either don't have internet at home or aren't comfortable with computers but would like to learn.
- 8% don't have the extra volume on top of what they already sell
- 8% don't want to pay the fee
- 4% either don't like the schedule, don't want to spend the time, have tried it and it wasn't for them, or would like to give it a go in the near future

(Figure 29)

production or taking the time to supply more choice and quantity to the Food Hub when sales are inconsistent and small. Since the shift from small- to large-scale sales is possible with this outlet, despite growing pains, having the infrastructure in place for these kinds of sales is an asset to the local food economy.

#5 Small shops

Over the years, different small venues have shown enthusiasm for buying local food. Nine producers (23 percent) reported marketing through such venues. Not unlike restaurants, these venues tend to depend on a relationship with the farmer, and many are philosophically inclined to support local food production. Examples of such venues include the Classic Cook in Homer, Natural Pantry in Anchorage, and Anchor Point Natural Foods (before it closed its doors).

#6 Large retailers

There are two large grocery stores with full produce sections on the southern Kenai Peninsula, both in Homer, and several others located in the central Peninsula. The vast majority of food available is trucked in by distribution companies from the Lower 48 states or beyond. Alaskan Grown vegetables are available at each, most of which are sourced from the Matanuska-Susitna Valley north of Anchorage, along with a small amount of Alaska-raised meats, wild seafood, or other products. Eight of those interviewed (21 percent) reported selling to large retailers. Save-U-More in Homer is the most common venue in this category, with six producers (15 percent) reporting sales to this retailer. The store has expressed to farmers an interest in expanding local produce offerings and is willing to buy smaller quantities than some grocery stores require. Gaining entry to large grocery stores can be difficult for small farms, as these businesses often have large quantity mandates or other restrictions for purchasing from farmers outside their usual suppliers. Still, several producers expressed interest during interviews in selling to grocery stores, with one producer wishing to get their products into every grocery in the state.

News of Note

In the time since these interviews were conducted, South Peninsula Hospital began a pilot program for buying local produce to use in their cafeteria, patient meals and salads prepared for the vending machines. They are interested in being flexible to work with farmers and the quantities they can provide. This cafeteria provides the largest quantity of year-round meals of any establishment in Homer

#7 CSAs and #8 roadside stands

Community Supported Agriculture, or CSA, subscriptions typically are sold in advance, and buyers receive regularly scheduled allotments of harvested product. Five producers sold through CSAs in 2018 and three reported using roadside stands, though only one has a regularly stocked stand. While these types of sales venues are less popular, one producer sold 75 – 100 percent of their production via CSA subscriptions and two others sold between 25 and 50 percent in this way. Some producers participate in a program where South Peninsula Hospital Health (SPH) subsidizes the cost of a CSA boxes for their employees. SPH and its Wellness program found the CSA model easy to support since food was paid for up front.

And other markets

One marketing method that was not on the survey list but came up in the “other” category was selling wholesale to brokers. Though not common, two vegetable growers have found a niche in selling the majority of their crops, 50-75 percent and 90 percent respectively, to other local farmers who act as brokers, reselling the crops at farmers markets and to other buyers. One producer sells to Country Foods, a grocery and food distribution company based in Kenai, for sales in grocery stores or restaurants.

The scoop on market options:

Each has its own benefits and challenges

Farmers Markets: Open seasonally. Requires a farmer or representative be there in-person during operating hours and that products are well-cleaned and oftentimes bunched as individual units. Benefits include receiving retail prices and making personal connections and loyalty with buyers. Selling in other farmers markets requires travel but will provide a larger customer base. Can sell other value-added foods and/or crafts.

Restaurants: Over 40 in Homer, many year-round, several in Anchor Point as well. Many will buy locally produced food, though typically require some sort of wholesale pricing. Farmers must reach out to them on an individual basis each week they are interested in selling. Benefits include capacity to sell large quantities in bulk, so no need to take time on individual bundles, personal connections and loyalty with buyers.

Direct Sales: Can charge retail prices and make their own hours. Packaging requirements may be lessened. Does require dealing with purchases individually. Can sell other value-added foods and/or crafts. Easiest option for meat, dairy and low-risk cottage foods.

Alaska Food Hub: Online sales May to November (longer season than farmers markets). Sell at wholesale or retail prices; specifically, there is a 25% service fee for the Food Hub, so producers need to calculate that into the final pricing for the customer. Producers must post what they wish to sell through the website interface each week. Each order must be packaged or bundled and labeled for placement in individual customers' order boxes. Benefits include harvesting only exactly what has sold that week, market expansion to other communities on the Peninsula, and Food Hub staff handles most of the logistics- all orders, invoices, payments, group marketing, compiling customers' boxes and managing the transport and pickup locations. Can sell other value-added foods and/or crafts.

Small Retailers: Year-round sales. Sell at wholesale prices to retailer, they take care of the selling. Packaging and portioning by farmer may be required.

Large Retailers: Year-round sales. Sell at wholesale prices to the retailer. Some form of packaging and labeling required, though many products will be able to be sold in bulk, thus reduced handling and bundling by the farmer. May be able to sell large quantities.

CSAs: (Community Supported Agriculture) Seasonal sales. Crops are pre-sold and harvest boxes or meat/dairy are packaged by farmer for their weekly or monthly subscriptions. May require delivering to one drop spot or to individual subscribers. Benefits include ability to charge retail prices, choose produce for the customer so the farmer can sell crops that are seasonally abundant. Can sell other value-added foods and/or crafts.

Roadside stands: Seasonal sales. Can be manned or unmanned and on the honor system (people leave money in the stand for what they take). Can charge retail prices and make own hours. May be difficult to gauge daily business for harvesting purposes. Requires some packaging/bundling of individual units. Can sell other value-added foods and/or crafts.

(Figure 30)

Other market venues mentioned included seasonal craft fairs like the Homer Nutcracker Faire or the Salmon Fest Music Festival (to keep the bands well fed). Agricultural conferences are a good place to advertise about selling locally raised seeds like garlic or certified seed potatoes.

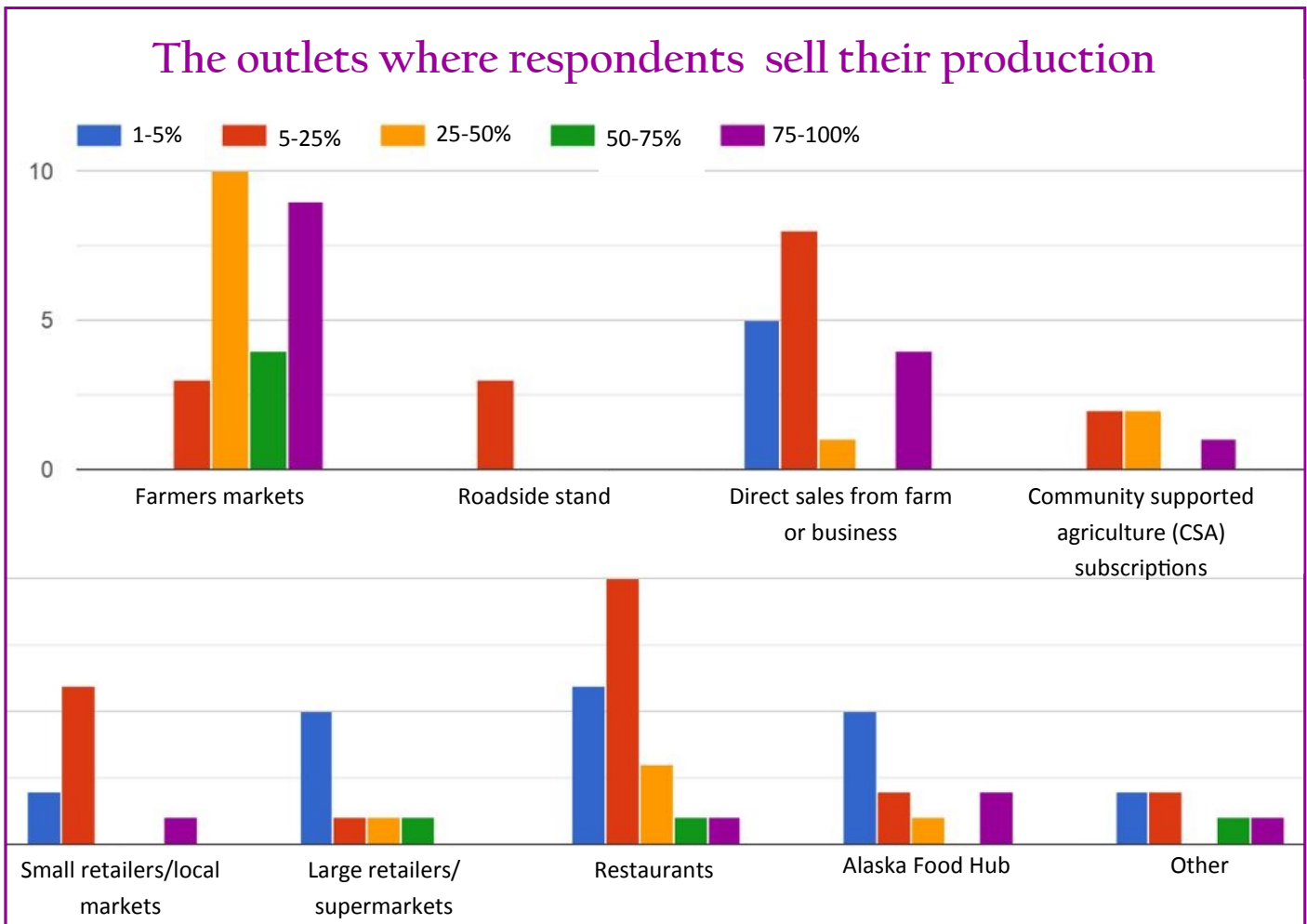
Distribution issues are a common factor affecting sales and marketing. Nearly every sales scenario currently requires the farmer to personally transport their product from the farm or facility to the consumers. This adds time and workload, which will vary considerably depending on the distance each farmer must drive, how many days of the week and number of drop-offs. In fact, one farmer mentioned the possibility of charging restaurants a delivery fee due to the added fuel costs.

How many types of sales outlets do they use?	
Number of outlets	Number of producers
1	4
2	16
3	7
4	3
5	7
6	1

(Figure 31)

Percentage of sales

Producers were asked to indicate what percentage of their product is sold in each type of sales venue. Figure 32 below demonstrates the diversity of market options and how many of the local farms use each one for a portion of their sales. Actual quantities sold through each venue and percentage of farm revenue represented varies from producer to producer. What can be seen is how important each venue is



(Figure 32)

to overall sales from the perspective of the individual producer. The data shows that farmers markets take the lead in all three categories for 25 percent of sales and up. Nearly every producer has a place where they sell 5-25 percent of their product, and every type of sales outlet is utilized to market these somewhat small percentages. Also revealing are the categories through which no producers sell either very large or very small percentages of their products. No producers sell 75-100 percent of their product through large supermarkets/retailers and no producers sell only 1-5 percent of their products through farmers markets or CSAs. Roadside stands were only listed in the 5-25 percent range.

Getting the time to have things marketed is one of the chief frustrations in this, because you can grow it but then selling it is a lot of work.

Promotion and advertising

Producers get creative with ways to advertise, and there is no single strategy community-wide. When producers were asked how they publicize their products, word-of-mouth and collaborative marketing were at the top. Word-of-mouth includes producers' personal interactions with their direct sales and restaurant customers, along with others in the community who can help spread the word. Collaborative markets such as farmers markets and the Alaska Food Hub are common because these outlets enable producers to both sell and advertise. Posting to a business or personal Facebook page was also a popular way to communicate what's available. Other responses included donating boxes to fundraisers and events, which can expose products to new customers, signage at a roadside stand, emails to previous customers, advertising through a friend's e-newsletter, and the Alaska List or Craigslist online classifieds. Branding was a strategy that came up repeatedly, whether by hanging cards on public posting boards, putting stickers on products, or having a banner with a logo in locations like the high school gym.



(Figure 33)

"When something's ripe they want it every week, and I don't have that kind of yield."



Events at the farm or ranch

When asked what, if any, events were offered at their farm or ranch, the number and variety of responses shed light on the fact that the community and local farmers interact in creative and expanding ways. Many, but not all, of these events and connections between farms and the public are fairly new, building on the momentum of the high tunnel revolution in this area. Farm tours are increasingly popular and are put on by several different community organizations, as well as a couple of different tour guiding businesses. These tours bring in participants from schools, churches, cruise ships, and the general public. Farmer-led educational opportunities also exist for interns, other farmers, or those in the community interested in learning a variety of farm skills. Several producers expressed the desire to hold such events in the future, while others chose not to pursue these approaches. Figure 34 below shows ways that local farmers have interacted with the community.



(Figure 34)

The fun ways that our local farmers and ranchers are interacting with the community

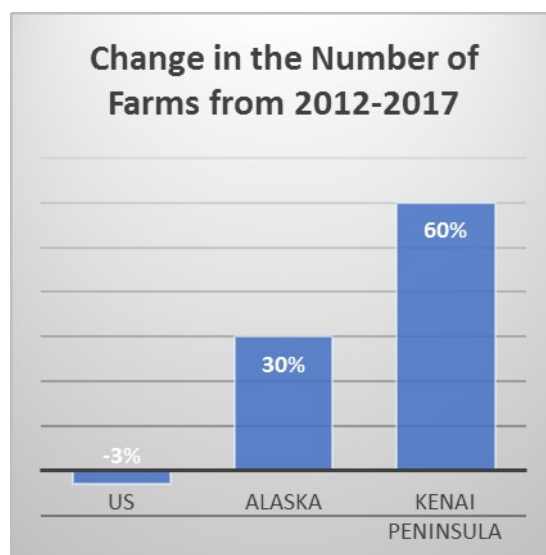
About Growth Potential

It is clear that the number of farms on the Kenai Peninsula is growing. This is good for our local economy as well as our food security. So the question becomes: How can we support this growth in meaningful ways? Are there factors limiting growth? Can a farmer make a decent living on the southern Kenai Peninsula? What are the state and federal programs from which producers can get the support and education they need? What programs would farmers like to see in our area?

Income from agriculture

We need to assess how farmers are doing in the present before considering the future. According to the Census of Agriculture, half the farms on the Kenai Peninsula sold less than \$5,000 worth of products in 2017, over a third (34 percent) earned between \$5,000 and \$25,000, and the remaining 15 percent sold \$25,000 or more (Ag Census, 2017). As can be seen in Figure 36, there are more aspects than just sales to look at when calculating farm income.

The topic of income is sensitive for many people, and producers were not required to provide this information if they were uncomfortable doing so. Thirty-two producers (82 percent of respondents) reported on income; 63 percent of those who provided income data expected to earn \$20,000 or less from food sales in 2018. Another 31 percent expected to earn between \$20,000 and \$50,000, and two expected sales of over \$50,000. As



(Figure 2: Census of Ag 2017)

Value Range	Number	% of Total*
Less than \$2,500	93	36
\$2,500 to \$4,999	36	14
\$5,000 to \$9,999	42	16
\$10,000 to \$24,999	47	18
\$25,000 to \$49,999	22	8
\$50,000 to \$99,999	11	4
\$100,000 or more	9	3

* Does not add up to 100% due to rounding

(Figure 35: Census of Ag Area Profile, 2017)

Total	Total \$	% Change between 2012 and 2017	Per Farm Average \$	% Change between 2012 and 2017
Market value of products sold	\$5,423,000	*	\$20,856	*
Government payments	\$502,000	+42%	\$6,871	+5%
Farm-related income	\$439,000	*	\$9,751	*
Total farm production expenses	\$6,392,000	+23%	\$24,585	-23%
Net cash farm income	-\$29,000	+97%	-\$112	+98%

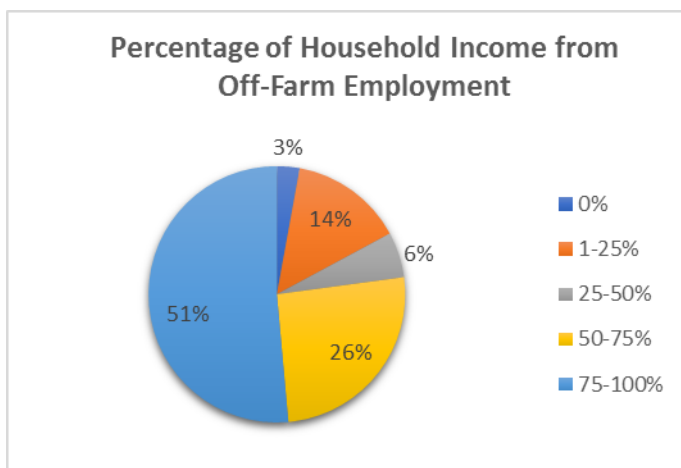
* Withheld by the Census of Agriculture to avoid disclosing data for individual operations.

(Figure 36: Census of Ag Area Profile, 2017):

mentioned previously, several farmers interviewed earn a large portion of their agricultural income from non-food items such as peonies. Even though farms and production houses on the southern Kenai Peninsula have small footprints, these producers are showing that gains can be achieved even on small acreage.

Off-Farm Employment

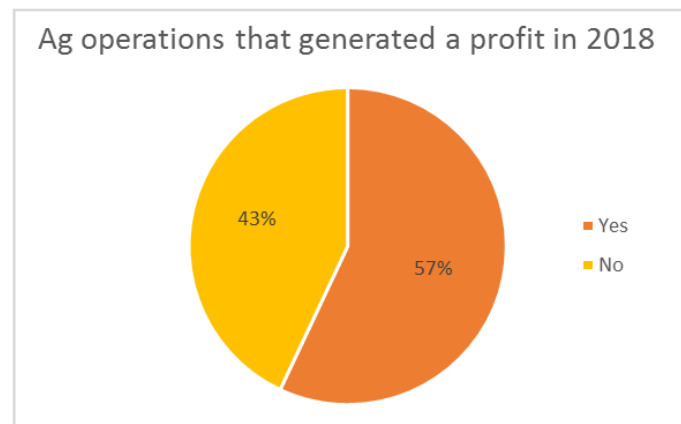
Can local farmers make a living just farming? When asked what percentage of their household income comes from off-farm employment (35 of 39 responding), 77 percent reported that off-farm income is expected to account for at least half of household earnings in 2018. In fact, 51 percent reported that the majority, 75-100 percent of their income, comes from off-farm employment or other sources. That leaves less than one quarter of respondents (23 percent) identifying farming as a major component of their family's income. Interviewees ranged from those who sell extra vegetables from their gardens to full-time farmers, with many falling in between. As a result, dependence on income from their ag products varies significantly.



(Figure 37: 35 respondents)

Income and profit

Producers were also asked whether their agricultural operation generated a profit in 2018, to which 43 percent answered no and 57 percent answered yes. In some cases, purchasing new equipment or improving farm infrastructure contributed to profitability this year. Since the majority made a profit but also had other income, we can see that making a profit does not necessarily equate to making a living.



(Figure 38: 35 respondents)

The total estimated 2018 gross income from farm food sales provided by 32 of the 39 producers (82 percent) was \$588,950. These totals do not include sales of peonies or other non-food agricultural products and also do not reflect any sales income data from the 18 percent of participants who did not answer the question.

These data provide a sense of what local production and sales look like. Bearing in mind that many producers interviewed expressed interest in expanding their production capacity, it's reasonable to expect continued growth in overall revenue generated from agriculture on the southern Kenai Peninsula in the years ahead.



(Figure 39: 32 respondents)

Financial assistance

Producers were asked if they had received any financial assistance from federal or state agencies. Twenty-nine out of 39 producers, over 74 percent, had received assistance from various programs.

Alaska Division of Agriculture

Five producers reported receiving help from the Alaska Division of Agriculture. One respondent had received an Alaska Agriculture Innovation Grant, which helped pay for a cistern, solar panels, and other items for the farm. Producers also reported that the Division provided free Alaska Grown merchandising products like twist ties (one respondent mentioned this service specifically, though others also received promotional materials), and one respondent noted that the Division has been very helpful to the Homer Farmers Market and its vendors.



Farm Service Agency (FSA)

Nine respondents received assistance from the USDA Farm Service Agency (FSA) in the form of loans or reimbursements. Four specified they used FSA's Reimbursement Transportation Cost Payment (RTCP) program, which helps geographically disadvantaged farmers pay the shipping on items needed for the farm. One reported receiving an Emerging Farmer Loan, and another claimed to have been the first Alaskan to get an FSA loan for llamas.



Natural Resources Conservation Service

By far the most common source of financial assistance for local farmers and ranchers is the USDA Natural Resources Conservation Service (NRCS). Having an NRCS office in Homer has made it possible for southern Peninsula producers to have ready access to NRCS programs, most notably the Environmental Quality Incentives Program (EQIP). Ag producers who get help from NRCS to develop farm conservation plans can include in these plans conservation practices eligible for EQIP cost-share incentives, which are provided to producers through EQIP contracts; 46 percent of those interviewed had an active EQIP contract in 2018. (These contracts vary in length depending on which conservation practices are funded; practices common in the study area include high tunnel system, irrigation system, nutrient management, structures for wildlife, pollinator habitat, critical area planting, etc.). Twenty-eight producers (69 percent) reported having worked with NRCS in the past, and all but one of these reported having had an EQIP contract for the high tunnel system. Many had received assistance to install multiple high tunnels and other conservation practices over several years.



In recent years, the Homer NRCS office has also seen increased interest in irrigation systems and irrigation water management. One respondent had received assistance to install an irrigation system (and a bat house), and another reported interest in irrigation practices. Homer NRCS staff report that irrigation programs have been gaining momentum within the last year. One producer reported having received financial assistance as a result of participating in NRCS's cover crop pilot study.

Rural Development, ARRC, and others

Three respondents reported receiving assistance from USDA Rural Development or other USDA programs. One received farm loans from the Alaska Rural Rehabilitation Corporation (ARRC), which specializes in agricultural loans and scholarships. Another earned a small stipend for participating in a program facilitated by Kodiak Rural Leadership Forum, which brought new or would-be rural farmers from Kodiak to Homer to visit farms using high tunnels.



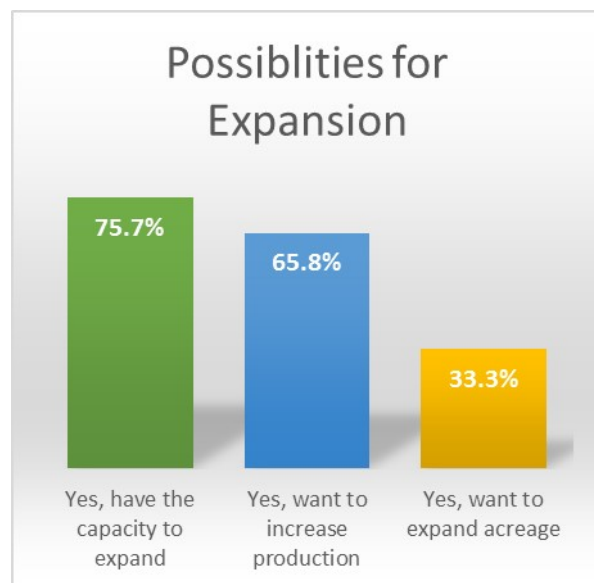
Expanding production

When producers were asked if they had the capacity to expand production, over three-quarters (75.7 percent) said they did. When asked if they wanted to increase production, almost two-thirds of respondents (65.8 percent) said yes. By comparison, only one-third (33.3 percent) said they expected to increase acreage. One producer stated that increasing production was a goal, but not expanding the farm's footprint, since they were currently underutilizing existing infrastructure. Another producer, who works an off-farm job, noted that expansion would not be possible until retirement. Others identified specific crops, value-added products, or markets they would like to focus on. Of those who didn't want to expand, one of the reasons was that they had other responsibilities or plans, some of which involved moving out of state. Others reported being maxed out or were simply choosing to slow down instead.

“Definitely a whole lot more capacity to increase production.”

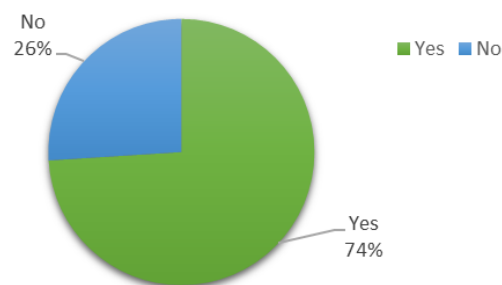
These farmers know what expansion means. Over the past 5 years, almost three-quarters of those interviewed had expanded the acreage of their operation. And some of those who hadn't expanded acreage had expanded production by using new techniques, like biointensive farming or high tunnels. For some, expansion meant a lot of work, such as stump removal, while for others increasing production meant just rototilling a bit more ground for outside garden space.

“Economies of scale here increase our efficiency. It's not much harder to put up 2 more high tunnels and plant more. But then you have to keep balance in that with labor costs, because if you get too big a work force that gets expensive too.”



(Figure 40)

Percent who have expanded the acreage used for farming or ranching over the past 5 years



(Figure 41)

“For me, the demand for greens has increased pretty substantially over the last year, selling twice as much this year over last. Brussels sprouts have to wait 113 days until mature and it's a huge plant with a small, one-time harvest. You can maybe get \$10 for that plant's worth of space. With greens you can get 1 lb/ft if properly planted, can cut after 21 days and can get several harvests on each plant. Over the course of the season you can make hundreds of dollars off that square foot.”

Major obstacles to growth

Producers were given a list of obstacles to growth and asked to rank them from minor to major. There are several ways to look at feedback from this question. One way is to count total votes given a selection, and the choice with the most votes is the “major obstacle.” Alternatively, by combining rankings for the top two (or bottom two) choices, you can get a better idea of whether or not producers see an issue as minor or major. Sometimes rankings indicate whether an obstacle is widely perceived or farm specific. Producers tended to rank labor costs as either a major obstacle or a minor obstacle, but rarely in between. This makes sense considering that some farmers rely on volunteers and family members, whereas others try to incentivize good workers to stay on their farm. Rankings for labor availability as an obstacle to growth were more evenly distributed than were rankings for labor costs, indicating that producers reflect a wider range of responses to availability of labor.

Major Obstacle #1 Availability of Crop Storage

No matter how you look at it, availability of crop storage was ranked as the greatest obstacle to growth. A majority of those interviewed sell at a farmers market where a producer has to speculate as to what quantity of produce will sell. If the producer has no cold storage, he or she has four main choices in terms of what to do with leftover produce: find other buyers (like a willing restaurant), donate it (e.g., to the [Homer Community Food Pantry](#)), pickle or preserve it, or compost it. Cold storage is vital for reducing the risk of wasting excess produce if a producer expands production beyond the demands of existing customers. Cold storage is also vital for producers wanting to serve wholesale markets more efficiently, since it enables them to offer larger quantities for delivery without increasing labor or acreage. For example, a producer lacking access to cold storage can offer a restaurant only the quantity of greens that can be harvested within a day or so to ensure high quality. With appropriate storage, the producer can offer the amount of greens that can be harvested over an entire week. Cold storage also gives producers more flexibility to spread sales out over time, enabling them to adjust more efficiently to market demand as it rises and falls. Some producers who already have cold storage on their farms still ranked it as a high priority issue, recognizing that it plays a significant role for producers looking to expand into more or larger markets.

“Crop storage availability and management (especially) is a giant problem... It's the most important, most pertinent and most solvable concern for farmers in Alaska, for sustainable farming here.”

Major Obstacle #2 Labor Costs

Even though 21 percent of producers said this was a minor obstacle, over half ranked it as 4 or 5 on the scale. Some producers commented on how expensive it was for them to pay for labor, others commented on how expensive it would be if hypothetically they grew to the point that they required paid labor. So even though some producers did not see it as an obstacle, others could see that it would become an obstacle if they chose to expand production. Insurance costs were also identified as an obstacle, but this was in regard to the high cost of insuring workers.

“Labor costs- I haven't taken the step of scaling the farm up to a scale to have paid labor yet. Paying somebody a decent wage to grow vegetables isn't easy.”

Major Obstacles #3

Now we start to see how difficult it can be to prioritize among obstacles. There were three different topics that could be scored as the third level of obstacle: transportation, access to capital, and on-farm infrastructure. Many producers scored “Transportation/shipping costs” and “Access to capital and/or financing terms” as a 5, but more producers overall scored “On-farm infrastructure availability” as a 4 or 5. In comments from producers, we can see that these topics are intertwined. Equipment needed for expansion requires both money for purchase and shipping to get it here or to get the materials to build it. Almost every producer who commented on infrastructure combined the issue with lack of financing. A couple of producers mentioned that farm businesses don’t fit well into traditional financing structures, one noting that it is difficult to get financing without fixed assets.

“On-farm infrastructure availability goes hand in hand with financing. We would like to get a high tunnel, so we need money.”

I would love to have a root cellar, and had planned to this year until I saw the cost.

Other Major Obstacles

Other issues that ranked high for producers were:

- equipment sales and/or service availability,
- labor availability (pool of qualified workers),
- limited volume of product to sell,
- price that buyers are willing to pay is less than needed, and
- electricity costs.

“There's nobody to work on tractors or anything, tillers, etc. Whatever breaks you've got to fix it yourself. “

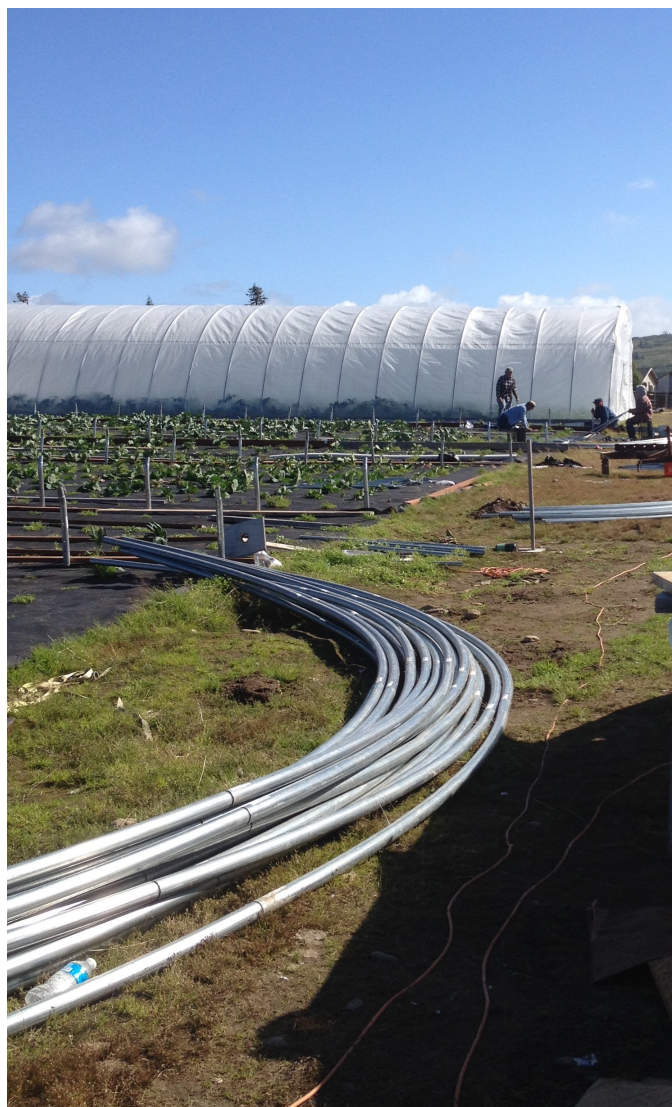


Figure 42 on the following page shows how respondents ranked all obstacles. The number of producers who voted for each obstacle is listed, along with the percent-of-total represented by that number. Obstacles that ranked highest are colored orange, while those that ranked lowest are blue.

If you want to increase production (and with 1 lowest and 5 highest) what are the biggest obstacles?							
Obstacle	1 + 2	1	2	3	4	5	4 + 5
Access to capital and/or financing terms	26%	7- 18%	3- 8%	9- 23%	4- 10%	12- 31%	41%
Labor availability (pool of qualified workers)	34%	8- 21%	5- 13%	7- 18%	5- 13%	10- 26%	39%
Labor costs	29%	8- 21%	3- 8%	3- 8%	6- 16%	14- 36%	52%
Land availability	52%	19- 49%	1- 3%	5- 13%	6- 16%	4- 10%	26%
Water availability	41%	15- 38%	1- 3%	7- 18%	4- 10%	8- 21%	31%
Crop storage availability	21%	8- 21%	0- 0%	4- 10%	9- 23%	15- 38%	61%
Equipment sales and/or service availability	33%	9- 23%	4- 10%	5- 13%	8- 21%	8- 21%	42%
Farm supplies availability	38%	11- 28%	4- 10%	6- 16%	9- 23%	5- 13%	36%
On-farm infrastructure availability	33%	9- 23%	4- 10%	5- 13%	9- 23%	8- 21%	44%
Off-farm infrastructure availability	54%	20- 51%	1- 3%	4- 10%	5- 13%	4- 10%	23%
Fuel costs	39%	8- 21%	7- 18%	9- 23%	5- 13%	7- 18%	31%
Insurance costs	47%	12- 31%	6- 16%	5- 13%	4- 10%	7- 18%	28%
Electricity costs	36%	10- 26%	4- 10%	5- 13%	4- 10%	11- 28%	38%
Transportation/shipping costs	36%	9- 23%	5- 13%	5- 13%	4- 10%	13- 33%	43%
Available market outlets	37%	8- 21%	6- 16%	8- 21%	7- 18%	7- 18%	36%
Limited volume of product to sell	26%	5- 13%	5- 13%	7- 18%	11- 28%	8- 21%	39%
Price that buyers are willing to pay is less than I need	31%	8- 21%	4- 10%	8- 21%	11- 28%	4- 10%	38%
Ability to maintain consistent quality	52%	12- 31%	8- 21%	8- 21%	7- 18%	0- 0%	18%
Inconsistent demand for existing product line	41%	9- 23%	7- 18%	13- 33%	6- 16%	0- 0%	16%
Lack of knowledge to produce new products or expand existing line	54%	13- 33%	8- 21%	6- 16%	7- 18%	1- 3%	18%
Inadequate info/outreach from UA and Cooperative Extension Service	64%	20- 51%	5- 13%	6- 16%	2- 5%	1- 3%	8%
Government policies and regulations	54%	17- 44%	4- 10%	4- 10%	4- 10%	6- 18%	28%
Other	5%	2- 5%	0- 0%	0- 0%	0- 0%	5- 13%	13%

(Figure 42)

Lesser Obstacles

When asking a ranking question in a survey, it is good to give an option that allows the survey taker to choose something that does not land on the spectrum of the ranking. For example, an option for “not applicable” or “I don’t know” should be provided. In the question to producers about what issues were creating obstacles for them, we failed to give the option “not an obstacle.” Because of this, we are now left to guess if the producer chose the lowest ranking, “minor obstacle,” because it was the most minor obstacle or because that was the lowest ranking they could choose and it really is not an obstacle at all.

Minor Obstacle #1

Voted the least hindering of the options on the list, a majority of producers found “inadequate outreach and information from the UAF Cooperative Extension Service” to be a minor obstacle. To clarify if this choice ranked low because producers felt they easily received the information from the University, or if they didn’t consider the University as an information source in the first place, it is important to note that 56 percent of producers did indeed say that they used Extension information.

Minor Obstacle #2

These three all scored equally with 54 percent of respondents ranking them as a minor obstacle: “Off-Farm Infrastructure Availability,” “Lack of Knowledge to Produce New Products or Expand Existing Line,” and “Government Regulations.” Again, there was no way to determine whether off-farm infrastructure was seen as already adequate or if producers ranked it low because they had a farm business plan that didn’t require off-farm infrastructure in the first place. Those who found off-farm infrastructure a challenge noted a lack of production facilities, delivery services for farms in this area, and also of poultry and livestock slaughter facilities. Comments on government regulations regarded land tax policy (specifically tax reductions for land in agriculture), lack of supports or incentives for farmers, neighborhood covenants, inconsistent regulations and NRCS high tunnel requirements, and rules regarding processing and sales of meat and dairy.

Minor obstacle #3

The choice that numerically ranked as the #3 minor obstacle was land availability. Though just over half ranked land availability as relatively minor, over a quarter ranked it as relatively major, and 10 percent ranked it as a top major obstacle. This highlights the difference between a producer who has enough land and one who does not.

Other Issues that ranked as minor obstacles

Other obstacles that were ranked low by producers were:

- Ability to maintain consistent quality
- Insurance costs
- Water availability (after the drought of 2019, perception of this factor may have changed)

The fact that water availability ranked low is interesting because some ranked it as the foremost major obstacle, and several commented on their dependence on rain or limited water supplies from catchments or surface sources.

I've got no water. It's all dependent on rain and storage, so a lot of times I don't have adequate water for the crops. That's why I like beets and kale, because they're tolerant of that.

Water is not an obstacle here. We irrigate from our well that has a lot of iron in it, which is drip tape delivered and computer controlled ... I can control it via the internet from anywhere.

Moving Forward

In order to support local producers in the future, it is important to understand how best to provide them with needed information. To this end, the survey asked producers which organizations provided them with useful information in the past, as well as what topics they wanted to learn more about. To learn from their experiences, respondents were also asked what they thought were the biggest overall challenges facing our local food system and what their advice would be for beginning farmers.

Organizations as sources of ag information

Interviewees were asked which organizations had provided them with agricultural information via publications, advice, informational meetings, workshops, etc. From the list provided, NRCS and Homer Soil & Water Conservation District were most commonly utilized, followed by UAF's Cooperative Extension Service (CES), Alaska Food Hub, Alaska Division of Agriculture, and the Alaska Farm Bureau. It is worth noting that the top four identified sources have staff active in Homer dedicated to providing direct outreach to area producers, which likely contributes to their popularity as go-to sources of information.

Organizations Providing Ag Information	% of producers using services
NRCS	76%
Homer Soil & Water Conservation District	70%
CES (Cooperative Extensive service, University of Alaska)	56%
Alaska Food Hub	54%
Alaska Division of Agriculture	49%
Alaska Farm Bureau	49%
Homer Garden Club	35%
USDA Rural Development	30%
SARE (Sustainable Agriculture Research and Education)	24%
Alaska Farmland Trust	14%

(Figure 43)

Other sources of information ranged from formal local groups, like the Alaska Peony Growers Association or the Central Peninsula Garden Club, to in-state operations, like Calypso Farm and Education Center, to national operations, like Johnny's Seed Company. Several producers expressed a lack of interest in obtaining information from agencies, some stating that information provided was too basic, didn't apply to their situation, or that they were discouraged by agency personnel. Many producers interviewed mentioned specific people, places, or conferences that had influenced and supported them. Several listed internet research as their main form of information gathering, one referenced specific videos that were made in Alaska by a specialty organization.

Topics of interest

Two survey questions asked what topics producers wanted more information about. One question asked about general farm information, such as business plans, marketing, or loans, while the other listed specific farming methods or practices, such as composting, cover crops, or pest management.

The topics of greatest interest to the most respondents were alternative energy and soil fertility. Other topics received a wide range of rankings. Leasing ag land was the topic of least interest to respondents. The following graphs show the topics of greatest and least interest.



(Figure 44)

Specifically, producers were asked about topics regarding different farming practices. Soil health and fertility ranked number one among the growing practices listed. Growers noted that building healthy soil is the key component of their operation, and they are eager to learn more about the topic. The next most popular topic was composting. Producers are interested in how other people compost and how best to promote the composting process in our climate with our resources. Other popular topics were high tunnel/greenhouse management, locally successful varieties, pest management, and seed saving.

Other specific topics came up for different specialties. For example, beekeepers have their own issues to learn about or peony growers may be interested in becoming certified “salmon safe” for niche marketing. With the new ground agriculture is breaking in Alaska, there’s always more to learn and more to try.



(Figure 45)

What producers believe are the Biggest Challenges Facing Our Local Food System

Climate, weather, latitude 59 north

Lack of public education on food and local food

Products here are undersold on high quality value

Cold storage- I could grow more if I had an affordable place to store it

Land availability for prices that young people could afford- the best agricultural land here is view property- \$100,000/acre

Getting into bigger markets like grocery stores, restaurants, and making sure it remains profitable for farmers with increased competition

Current market structure favors larger producers

Finding out the need vs supply- growers and buyers working collaboratively, plant for demand, not just growing a little bit of everything

No nearby slaughterhouse

Regulations and bureaucracy- for livestock and much more

We don't produce enough for AK- reducing the need to ship it in, carbon footprint

High farm costs make it hard to compete

Transportation and labor force

Reliability- people want stuff all the time

Composting fish waste, developing soil/fertility. Composting and root cellars are the key to the whole darn thing

Challenges for our local food system

Since farmers themselves are the individuals most engaged in the local food system--importing supplies, planting, growing, managing, preparing, marketing, and selling ag products--their comments are of great value in understanding the dynamics of that system. Comments they offered during this survey reveal a number of themes.

- Ten different comments centered on the demand for local food. Some stated that consumer education was necessary to increase appreciation for local food nutritionally and economically.
- Seven people mentioned weather, climate, and our latitude as major challenges.
- Seven others commented on trying to compete in terms of price with cheap imported food. Some said that grocery store prices were simply too low to compete with, while others stated that the economy here was so bad or the population so small that people just couldn't afford to pay appropriate prices for locally grown food.
- Four producers commented about the issue of supply and demand, how it is hard to meet large-scale demand with our few farmers, how hard it is to know when you will sell out or not, or how farmers need to collaborate to scale up into larger markets

Other challenges identified included needs for local compost, processing and storage, reliable labor, and affordable land.



(Figure 46)

Advice for beginning farmers – from farmers

When asked to give advice, producers interviewed for this survey shared what they wish they had known, but also what has been successful for them and what they have seen work here. Since our agricultural boom on the peninsula is so recent, many farmers have had to figure things out on their own. Some of the lessons learned were quite specific. For example, one producer identified the record keeping app called [Wave](#) (for [receipts](#), [invoices](#), and other financial records) that allows farmers to produce invoices for customers easily. The [Farmer-to-Farmer podcast](#) was specifically mentioned as worthwhile listening. Another producer pointed out that if we want farmers in the future, we will need to start nurturing them in schools now. One respondent simply recommended reading every book by Joel Salatin (of [Polyface Farms](#)) and watching all his videos.

But most advice to new and beginning farmers consisted of general comments focused on getting educated first, getting a mentor, or doing an internship to get experience. The fact is that farming is a complex vocation. There is plenty to learn every day.

“Investigate the market. Try to do what no one else is doing but grow what you know. Don't start too fast. Try grants, not loans.”

“Be prepared to go without sleep. If you like weekends, don't start. If you have dreams of a vacation, don't get an animal.”

“Educate yourself before you jump into it. Find resources to help you do it right.”

“Be realistic. Learn from somebody else, a mentor. Work on somebody else's farm first. Start small and take care of what you are growing well.”

“Hold on to your dream and intern under experience.”

“Manage your debt very carefully. With farming, like every third year you may have a crop failure. That's the way it is, something happens. And diversify your efforts, within reason.”

“Putting systems in place so that your farm works more efficiently-work smarter, not harder.”

“Utilize the experience of people who have done it.”

“Buy cleared land.”

“Continuous learning and improvement. Don't diversify too quickly. Learn from locals.”

“Start small and don't go too fast.”

“This is the most challenging undertaking short of child rearing and the similarities are many.”

“Learn as much as you can from everybody you meet because everyone has something to offer.”

“Find a niche.”

“Start slow and build up. Listen to people with experience while trying new things.”

“Don't do it without a plan.”

“When you estimate what you're going to make, cut that amount in half. Don't overestimate. Try to figure every little cost. Treat it like a business, not a hobby. Don't be afraid to screw up. Learn from it.”

“Pay attention to soil fertility from the beginning all the way through the end. Take care of the soil.”

“Good luck. Stay positive. Enjoy it while it lasts. These are the good times.”

“Don't give up!”

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Appendix A

Months Vegetable Crops Were Available for Sale

Vegetables	Number who sell	Percent who sell (of 34)	Number of producers who sell							
			Jan-May	June	July	Aug	Sept	Oct	Nov	Dec
beans	12	35%	1	1	7	12	10	1		
beets	21	62%	1	9	15	18	17	8	1	1
broccoli	19	56%	0	5	16	19	14	9	1	1
Brussels sprouts	7	21%	1	0	1	1	6	6	2	1
cabbage	17	50%	0	1	8	14	14	9	3	2
carrots	21	62%	2	3	14	18	19	12	5	2
cauliflower	18	53%	0	3	9	15	16	8	1	1
celery	9	27%	0	0	2	9	8	2	0	0
chard	15	45%	5	11	15	14	13	9	3	2
corn	2	6%	0	0	1	1	3	2	0	0
cucumbers	17	50%	3	5	13	18	15	6	1	1
garlic	6	18%	1	2	2	6	6	3	2	2
greens	17	50%	12	15	16	16	16	8	4	2
green onions	12	35%	5	7	10	11	10	4	1	1
kale	22	68%	5	11	21	23	23	14	6	2
kohlrabi	11	33%	0	1	8	11	7	2	0	0
leeks	8	24%	2	1	1	1	6	4	4	2
peas	15	45%	4	6	7	11	13	7	2	2
peppers	5	15%	0	0	1	3	6	1	0	0
potato	16	47%	1	1	1	6	17	13	4	3
radishes	17	50%	8	14	12	12	9	5	1	1
rhubarb	11	33%	3	9	9	7	3	2	0	0
rutabagas	2	6%	0	0	0	0	2	2	1	0
squash-summer	15	45%	1	2	12	14	15	6	3	1
squash- winter	6	18%	1	0	0	3	6	4	1	1
tomatoes	16	47%	4	5	11	17	16	10	4	2
turnips	13	39%	4	9	10	8	9	5	1	0

Months **Fruit Crops** Were Available for Sale

Fruits	Number who sell	Number of producers who sell							
		Jan-May	June	July	Aug	Sept	Oct	Nov	Dec
apples	5	0	0	0	4	4	2	1	1
blueberries	1	0	1	0	0	0	0	0	0
cherries	1	0	0	0	1	1	1	0	0
currants	1	0	0	0	1	1	0	0	0
gooseberries	1	0	0	0	1	1	0	0	0
grapes	0								
ground cherries	0								
peaches	0								
pears	0								
plums	0								
LISTED AS "OTHER"									
strawberries	2	1	1	1	1	2	1	1	1
crabapples	1				1	1			
raspberries	1				1	1			
black currants	1			1	1	1			
hardy kiwi	1					1			

Note: peaches, plums, other fruit grown here in high tunnels, but not sold.

Months **Herbs** Were Available for Sale

Herbs	Total who sell	Number of producers who sell							
		Jan-May	June	July	Aug	Sept	Oct	Nov	Dec
basil	13	6	8	13	13	11	5	4	3
chives	8	7	8	8	6	7	3	2	2
cilantro	9	4	7	8	9	8	3	2	2
dill	11	2	5	9	11	9	4	1	1
mint	9	5	6	8	9	8	6	3	3
oregano	8	3	6	8	8	8	3	2	1
parsley	10	2	6	8	10	10	6	3	2
rosemary	6	2	3	5	5	6	3	2	1
sage	7	2	5	6	7	7	3	1	1
thyme	8	3	5	8	8	8	3	2	0
hops	1	0	0	0	1	1	0	0	0

Months **Other Farm Products** Were Available for Sale

Misc.	Total who sell	Number of producers who sell							
		Jan-May	June	July	Aug	Sept	Oct	Nov	Dec
beef	1	0	0	0	0	0	1	1	1
chicken	4	1	1	2	1	3	3	1	1
duck	2	1	1	1	1	1	2	1	1
eggs	11	7	10	11	11	11	8	6	6
flowers (not peonies)	2	2	2	2	2	1	1	1	1
goat	1	0	0	0	0	0	1	0	0
hay	2	0	0	1	2	1	0	0	0
honey	2	1	0	0	2	1	1	1	1
lamb	0								
manure	3	1	3	3	2	2	2	1	1
milk products	1	1	1	1	1	1	1	1	0
mushrooms	1	1	1	1	1	1	1	0	0
peonies	5	0	0	5	5	3	1	0	0
pork	3	2	2	2	2	2	2	3	3
rabbit	2	0	0	1	2	1	1	0	0
<i>Rhodiola rosea</i>	1	0	0	1	0	0	0	0	0
turkey	3	0	0	0	0	0	2	2	1
wool or other fiber	2	2	2	2	2	2	2	1	1
value-added products (kraut, pickles, jam, etc.)	6	3	4	3	5	5	2	1	1

Appendix B

Ag Products: Sold Out Versus Did Not Sell Out in 2018

Vegetables	Sold out	Did not sell out	Fruits	Sold out	Did not sell out	Herbs	Sold out	Did not sell out	Misc.	Sold out	Did not sell out
beans	8	4	apples	2	2	basil	9	4	beef	1	0
beets	16	5	blueberries	0	0	chives	5	4	chicken	4	0
broccoli	15	4	cherries	0	1	cilantro	7	3	duck	2	0
Brussels sprouts	6	1	currants	1	0	dill	9	2	eggs	10	1
cabbage	13	4	gooseberries	1	0	mint	5	4	flowers (not peonies)	1	0
carrots	19	2	grapes	0	0	oregano	5	2	goat	1	0
cauliflower	15	3	ground cherries	0	0	parsley	5	6	hay	0	2
celery	7	2	peaches	0	0	rosemary	5	1	honey	2	0
chard	8	7	pears	0	0	sage	3	5	lamb	0	0
corn	2	0	plums	0	0	thyme	5	3	manure	0	2
cucumbers	13	4				hops	0	1	milk		
garlic	4	2							products	1	0
greens	14	3							mushrooms	1	0
green onions	9	3							peonies	3	1
kale	8	14							pork	2	0
kohlrabi	7	4							rabbit	1	1
leeks	4	4							<i>Rhodiola rosea</i>	no data	
peas	13	2							turkey	3	0
peppers	3	2							wool or other fiber	1	0
potato	8	8							value-added products	3	3
radishes	13	4									
rhubarb	9	2									
rutabagas	1	1									
squash-summer	11	4									
squash-winter	3	3									
tomatoes	11	5									
turnips	11	2									

Appendix C

Alaska Grown Items at the Homer Farmers Market

(source: Homer Farmers Market Weekly Checklist for the Market Newsletter's "Fresh List" 2019)

Vegetables:

Artichokes	Cucumbers	Miners Lettuce	Rhubarb
Asian Greens	Daikon Radish	Mixed Lettuce/ Greens	Romaine
Asparagus	Eggplant	Mizuna	Romanesco
Arugula	Fennel	Morels	Rutabaga
Arrowhead Cabbage	Garlic	Mushrooms	Savoy Cabbage
Beets	Green beans	Mustard Greens	Scallions
Beet greens	Green onions	Napa Cabbage	Shallots
Broccoli	Green garlic	Nettles	Spinach
Brussel sprouts	Green Peppers	Onions	Squash
Cabbage	Head Lettuce	Parsnips	Swiss Chard
Carrots	Horseradish	Peas	Tat soi/Pak choi/Bok choy
Cauliflower	Kale	Peppers	Tomatillos
Celery	Kohlrabi	Potatoes	Tomatoes
Chives	Leeks	Pumpkins	Turnips
Collard greens	Lettuce	Radicchio	Zucchini
Corn	Micro greens	Radish	

Vegetable Starts:

Artichokes	Cauliflower	Leeks	Sorel
Arugula	Celery	Lettuce	Squash
Artichokes	Chives	Melons	Strawberries
Asparagus	Corn	Okra	Swiss Chard
Bok Choy	Cucumbers	Peppers	Tobacco
Broccoli	Endive	Potatoes	Tomatillos
Broccoli Raab	Ground cherries	Pumpkins	Tomatoes
Brussel Sprouts	Horseradish	Rhubarb	Watermelon
Cabbage	Kale	Romanesco	Zucchini
Cantaloupe	Kohlrabi	Shallots	

Herbs:

Anise	Dill	Lovage	Sage
Basil	Epazote	Marjoram	Sorel
Catnip	Fennel	Mint	Summer savory
Chamomile	Garlic scapes	Oregano	Tarragon
Cilantro	Lavender	Parsley	Thyme
Comfrey	Lemon Balm	Rosemary	Tropical Oregano

Herb Starts:

Anise hyssop	Cilantro	Marjoram	Rosemary
Basil	Comfrey	Mint	Sage
Catnip	Dill	Oregano	Tarragon
Chamomile	Lavender	Parsley	Thyme
Chervil	Lovage	Rhodiola Rosea	Tropical Oregano

Fruit:

Apples	Cherries	Hascap	Saskatoon
Blackberries	Currants	Peaches	Strawberries
Blueberries	Gooseberries	Raspberries	Watermelon
Cantaloupe	Ground cherries		

Flower Starts:

Aloe	Daisies	Lobelia	Sedum
Alyssum	Delphiniums	Lupine	Snap dragons
Bachelor Buttons	Dalias	Marigolds	Sunflowers
Blue Poppies	Ferns	Monkshood	Sweet Williams
Calendula	Finnish orchid	Morning glories	Trolius
California poppies	Forget-me-nots	Nasturtiums	Valerian
Calla Lillie	Gladiolas	Oriental poppies	Violas
Campion	House Plants	Ornamental grasses	Wormwood
Campanula	Irises	Petunias	Yarrow
Columbine	Ligularia	Pansies	Zinnias
Creeping flox	Lilies	Peonies	
Dianthus	Livingston Daisies	Poppies	

Trees and Bushes:

Black Current
Chokecherry
Golden Raspberries
JostaBerry
Lilac
Raspberries
Rose
Saskatoon
Spirea
Spruce

Seafood & Meats:

Black cod
Clams
Crab
Halibut
Oysters
Pacific Cod
Rockfish
Salmon
Scallops
Shrimp
(by order)
Beef
Chicken
Goose
Pork
Rabbit
Turkey
Quail
Duck

Other:

Birch syrup
Chaga
Cut Flowers
Eggs
Ferments/Pickles
Honey

Appendix D

Market Producers Survey

(source: Homer Farmers Market Weekly Checklist 2019)

Ag Producer Survey

Summary:

Homer is experiencing a small-scale agricultural boom, with a thriving Farmer's Market, Community Supported Agriculture, direct farm-to-restaurant sales, and, as of 2016, a centralized Food Hub. This survey is designed to promote this trend by collecting information from ag producers on how they operate and what works for them. Through this survey, Homer Soil and Water anticipates gaining information and insights that can help ag producers increase profitability while helping the Homer area increase food security and economic development. The survey includes sections on crop choices, farming and ranching practices, soil management, labor, storage, marketing, and potential for production expansion. All personally identifiable information collected from survey respondents will be held in strictest confidence, and individuals will not be identified in any way when collating survey information. Homer Soil and Water will not provide individual information to any "authority," all submissions will remain anonymous. This survey will take approximately 30 minutes to complete. We appreciate your input on this survey and hope that the results will benefit you as you make local food production decisions. Feel free to contact Kyra Wagner at 907-235-8177 ex. 106 or at homerswcd@gmail.com if you have any questions.

Your contact information

1. Name(s) of farm business owners
2. Name of farm business
3. Business address
4. Email

Tell us about yourself

For this survey, "local" includes fresh and prepared foods grown or produced in Alaska, and "produce" includes vegetables, fruits, berries, and herbs.

5. What is (are) your age(s)?
6. What is (are) your gender(s)?

Check all that apply.

- Female
- Male
- Prefer not to say
- Other:

7. Did you grow up on a farm? If so, where?
8. If you grew up on a farm, what were the main products?
9. How many years of farming/ranching experience do you have?

Mark only one oval.

- 0-3 years
- 3-5 years
- 5-10 years
- 10 or more years

10. Comments

History of your farm/ranch

11. How many years have you been in commercial production in Alaska?

Mark only one oval.

- 0-3 years
- 3-5 years

- 5-10 years
- 10 or more years

12. Comments

13. Which (if any) federal or state programs listed below have provided you with financial assistance?

Check all that apply.

- Alaska Division of Agriculture
- FSA (Farm Service Agency)
- NRCS (Natural Resources Conservation Services Conservation Service)
- SARE (Sustainable Agriculture Research and Education)
- USDA Rural Development
- Other:

14. Specifics

15. Check any organizations in the following list that have provided you with ag information, including publications, advice, informational meetings, workshops, etc.

Check all that apply.

- Alaska Division of Agriculture
- Alaska Farm Bureau
- Alaska Farmland Trust
- CES (Cooperative Extension Service, University of Alaska)
- FSA (Farm Service Agency)
- Homer Garden Club
- Homer Soil and Water Conservation District ("Homer Soil and Water")
- Kenai Peninsula Food Hub
- NRCS (Natural Resources Conservation Services)
- SARE (Sustainable Agriculture Research and Education)
- USDA Rural Development
- Other:

16. Comments

Labor on your farm/ranch

17. How many workers, including yourself, do you typically use each year to operate your farm or ranch?

Mark only one oval.

- 1 (just you)
- 2
- 3
- 4
- 5-10
- 11-20
- more than 20

18. Comments

19. How many workers, including yourself, would be ideal for operating your farm or ranch?

Mark only one oval.

Jan Feb Mar Apr May June July Aug Sept Oct Nov Dec

Months	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- 1 (just you)
- 2
- 3
- 4
- 5-10
- 11-20

- more than 20

20. **Comments**

	Paid in cash	Paid in trade
Full-time year-round	<input type="checkbox"/>	<input type="checkbox"/>
Full-time seasonal	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>

21. **During what months do you typically use labor (besides your own)?**

Check all that apply.

22. **Comments**

23. **Which categories of workers helped on your farm in the 2017 growing season (not including you)?**

Check all that apply.

24. **If you chose "other" above, please explain.**

25. **Has your labor been primarily...**

Mark only one oval.

- skilled
 unskilled

26. **Which best describes the labor you've used most frequently in the past?**

Check all that apply.

- family
 paid workers with experience
 paid workers without experience
 trade-for-work labor (either experienced or not) who traded for food, housing, etc.
 volunteers
 interns

27. **Which of the following sources of labor have you used in the past?**

Check all that apply.

- Friends and/or Family (please circle which)
 Homer High School students
 Local college students (Kachemak Bay Campus)
 Local workers found through word of mouth
 Workers Facebook
 Alaska state job center in Homer (jobcenter@alaska.gov) or ALEXsys
 (<https://alexsys.dol.alaska.gov/Default.aspx>)
 WWOOFers (<https://wwoofusa.org/>)
 ATTRA (<https://attra.ncat.org/>)
 Good Food Jobs (<https://www.goodfoodjobs.com/>)
 Alaska Department of Corrections (parolee workers)
 Other

28. **If you pay workers, how much do you typically pay per hr, wk, month, task, etc.?**

29. **If you trade for work, what do you typically trade e.g., room? board? other?**

30. **If you chose "other" above, please explain.**

Production on your farm or ranch

if it's handy for you to know: an acre is 43,560 sq ft (e.g., 208.7 ft by 208.7 ft). A tenth of an acre (4356 sqft) is about 66 ft by 66 ft.

31. **In the most recent year, how many acres did you have in production on your farm or ranch?**

Please identify acres being used to produce fruits, vegetables, and/or animals.

32. **Of this acreage, how much was within a greenhouse or high tunnel? (You can just list the dimensions of the enclosed area.)**

33. **Over the past 5 years, have you expanded the acreage you use for farming or ranching?**

Mark only one oval.

- Yes
 No

34. **If you answered "yes" above, please explain**

35. Do you expect to expand/increase your acreage over the next 5 years?

Mark only one oval.

- Yes
- No
- Undecided

36. Comments

Marketing what you produce

37. The Kenai Peninsula Food Hub was started in 2016. Have you heard of the Food Hub?

	1-5%	5-25%	25-50%	50-75%	75-100%
Farmers markets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Roadside stand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Direct sales from your farm or business	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Community supported agriculture (CSA) subscriptions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Small retailers/local markets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Large retailers/supermarkets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Restaurants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Kenai Food Hub	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Mark only one oval.

- Yes
- No

38. Did you use the Food Hub to sell any products?

Mark only one oval.

- Yes
- No

39. In the most recent year, where did you sell your production? Please check box(es) matching percent of sales represented by each type of outlet.

Check all that apply.

40. If you answered "other" above, please explain.

41. Please check any of the following events offered at your farm or ranch.

Check all that apply.

- Bed and breakfast
- Cooking classes
- Farm/ranch tours
- Farm-to-table dinners
- Fundraisers
- Livestock interactions (petting, rides, etc.)
- Weddings
- Other farm/ranch experiences

42. If you answered "other" above, please explain.

43. Do you consider the Food Hub an important part of your farm's overall business plan?

Mark only one oval.

- Yes
- No

44. Comments

45. What are the advantages of the Food Hub?

46. What are the challenges of the Food Hub?

47. If you haven't used the Food Hub, why is that? (Please check all that apply)

Check all that apply.

- I don't have enough information about it
- I don't see how it fits into my farm's or ranch's business plan
- I don't need more options for selling my products
- I have tried it and it doesn't meet my needs
- I don't like using computers; I prefer face-to-face
- Other

48. If you answered "other" above, please explain.

49. Which of the following ways do you publicize your products?

Check all that apply.

- Ads (in newspapers, on the radio, in movie theaters, etc.)
- Collaborative marketing
- Craigslist
- Facebook page
- Facebook ads
- Flyers
- Hosting events/activities
- Promotion by buyers (grocery store, restaurant, etc.)
- Stickers/branding

	Jan-May	June	July	Aug	Sept	Oct	Nov	Dec	Yes sold out	No didn't sell out
beans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
beets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
broccoli	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Brussel sprouts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
cabbage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
carrots	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
cauliflower	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
celery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
chard	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
corn	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
cucumbers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
garlic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
greens	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
green oninos	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
kale	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
kohlrabi	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
leeks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
peas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
peppers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
potato	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
radishes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
rhubarb	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
squash-summer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
squash-winter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
tomatoes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
turnips	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
rutabagas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
other 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
other 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
other 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- Website
- Word of mouth
- Other

	Jan-May	June	July	Aug	Sept	Oct	Nov	Dec	Yes sold out	No didn't sell out
apples	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
blueberries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
cherries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
currants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
gooseberries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
grapes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ground cherries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
peaches	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
pears	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
plums	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
other 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
other 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
other 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

50. If you answered "other" above, please explain.

Ag product sales

Please indicate which agricultural products you produced for commercial sale in 2017. For crops produced, please list the months these were produced and whether or not they sold out. You can choose from four ag

	Jan-May	June	July	Aug	Sept	Oct	Nov	Dec	Yes sold out	No didn't sell out
basil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
chives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
cilantro	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
dill	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
mint	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
oregano	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
parsley	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
rosemary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
sage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
thyme	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
hops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
other 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
other 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
other 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

product lists: (1) vegetable, (2) fruits, (3) herbs, and (4) other ag products (such as mushrooms, honey, chickens, pigs, etc.).

	Jan-May	June	July	Aug	Sept	Oct	Nov	Dec	Yes sold out	No didn't sell out
beef	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
chicken	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
duck	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
eggs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
flowers (other than peonies)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
goat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
hay	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
honey	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
lamb	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
manure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
milk products	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
mushroom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
peonies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
pork	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
rabbit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rhodiola rosacea	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
turkey	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
wool or other fiber	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
value-added products (kraut, pickles, jams, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
other 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
other 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
other 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

51. **Vegetables:** please check months in which you had any of these vegetables available for sale in the most recent year and whether that crop sold out.

Check all that apply.

52. If you checked "other(s)," please identify.

53. **Fruits:** please check months in which you had any of these fruits available for sale in the most recent year and whether that crop sold out.

Check all that apply.

54. If you checked "other(s)," please identify.

55. **Herbs:** please check months in which you had any of these herbs available for sale in the most recent year and whether that crop sold out.

Check all that apply.

56. If you checked "other(s)," please identify.

57. **Other ag products:** please check months in which you had any of these products available for sale in the most recent year and whether they sold out.

	0-5% of total ag income	5-10%	10-25%	25-50%	50-100% of total ag income
ag product 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ag product 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ag product 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ag product 4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ag product 5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Check all that apply.

58. If you checked "other(s)," please identify.

59. Comments

Below, please list the top 5 ag products you produced in the most recent year and the approximate quantity of each you produced (number, weight, volume, etc.).

60. Ag Product 1:

61. Ag Product 2:

62. Ag Product 3:

63. Ag Product 4:

64. Ag Product 5:

65. For each ag product listed above, check the approximate percent of your total ag income it provided in the most recent year.

Check all that apply.

66. Comments

67. What percentage of your household income comes from off-farm employment?

Mark only one oval.

- 0%
- 1-25%
- 25-50%

	0-10%	10-25%	25-50%	50-75%	75-90%	90-100%
Organic sources (e.g., fishbone meal, compost)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Conventional sources (e.g., Arctic Grow 8-32-16, urea),	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- 50-75%
- 75-100%

68. Comments

69. In the most recent year, what was your estimated total gross sales of farm products (produce and other)?

(We're asking for this in order to determine current production levels and economies of scale for the industry. All responses are strictly confidential.)

70. Did your ag operation generate a profit in the most recent year?

Mark only one oval.

- Yes
- No

Farming or ranching practices

71. Do you have an NRCS conservation plan?

Mark only one oval.

- Yes
- No

72. Comments

73. What kind of fertilizers do you tend to use (organic and/or inorganic)?

Check all that apply.

74. Specifics

75. What, if any, fertilizer products that you want are in short supply or locally unavailable?

76. What is (are) your most significant pest problem(s)?

	1-low interest	2	3-neutral	4	5-high interest
animal husbandry	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
animal rotation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
composting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
cover cropping	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
crop rotation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
grazing techniques/pasture management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
high tunnel/greenhouse mgmt	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
hydroponics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
irrigation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
perennial crop management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
pest management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
seed saving	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
soil health/fertility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
successful local varieties	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
tillage practices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

77. How do you manage your most significant pest(s)?

Check all that apply.

- organic methods
- conventional methods

78. Specifics

79. Which of the following best describes your growing practices (including fertilizers, pesticides, livestock feed, etc)?

Mark only one oval.

- non-certified organic
- certified organic
- not organic

80. Are you interested in becoming USDA certified organic?

Mark only one oval.

- Yes
- No
- Undecided

	1-low interest	2	3-neutral	4	5-high interest
alternative energy systems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
beekeeping	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
business plans	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
farmland retention programs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
farm tools and equipment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
leasing land	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
loans	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
marketing wholesale versus retail	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
pollination/pollinators	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
salmon stream protection	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
water rights	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Web Soil Survey	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

81. Comments

82. On a scale of 1 – 5 (with 1 lowest and 5 highest) what is your interest in learning more about each of the practices listed below?

	1-minor obstacle	2	3	4	5-major obstacle
Access to capital and/or financing terms	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Labor availability (pool of qualified workers)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Labor costs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Land availability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Water availability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Crop storage availability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Equipment sales and/or service availability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Farm supplies availability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
On-farm infrastructure availability (e.g., high tunnels, greenhouses, chillers)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Off-farm infrastructure availability (e.g., commercial processors)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fuel costs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Insurance costs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Electricity costs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Transportation/shipping costs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Available market outlets	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Limited volume of product to sell	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Price that buyers are willing to pay is less than I need	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ability to maintain consistent quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inconsistent demand for existing product line	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of knowledge to produce new products or expand existing line	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
inadequate information and/or outreach from University and Cooperative Extension Service	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Government policies and regulations (e.g., zoning, taxes, permits). Please elaborate on comments line below.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Check all that apply.

83. Comments

Goals and constraints for your ag business

84. Do you want to increase production (expand your operation)?

Mark only one oval.

- Yes
- No
- Undecided

85. Comments

86. Do you have the capacity to increase production?

Mark only one oval.

- Yes
- No
- Don't know

87. Comments

90. On a scale of 1 – 5 (with 1 lowest and 5 highest) what is your interest in learning more about each of the topics listed below?



Homer Soil & Water

CONSERVATION DISTRICT

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