



Rural Guide to COMMUNITY SUPPORTED AGRICULTURE

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Robert Waggener read every word of the guide numerous times to correct writing, grammar, and reasoning. He also took photographs for the publication.

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Ted Craig at the Wyoming Department of Agriculture has been an enthusiastic supporter of innovative management methods and of efforts to engage agriculturalists about the opportunities available.

INTRODUCTION

The Community Supported Agriculture (CSA) model made its first appearance in the U.S. in the 1980s, arriving from Europe and with clear social, economic, and environmental goals. From less than a dozen CSA farms in the early 1990s, the movement has expanded to more than 3,000 across the country.

Many new CSA farmers find that agriculture in a CSA can be quite intense, especially when there are significant elements of business planning that accompany general day-to-day operations. This guide is meant to introduce producers to the concept and operation of CSA. In it, you will find basic information about different types of CSAs, including ways of organizing CSAs, managing production and distribution, deciding on products and product presentation, and building and maintaining a customer base.

As we began to prepare for this bulletin, we conducted a review of existing literature about CSAs. Much of the available information focused on producers in more populated areas with more friendly growing conditions. Since Wyoming and the rural Rocky Mountain West have unique physical and cultural circumstances that are not addressed by many existing guides, we conducted interviews with most of the CSA producers throughout Wyoming and a few in Idaho and Colorado in 2011 and 2012. As we conducted the project, we promised participants that names would not be used. The knowledge we gathered greatly informed our work, and we thank those generous CSA managers for their time and insights.

Throughout the guide, you will read quotes and stories that the CSA producers shared with us. These will be in italics. Names have been removed from the quotes to protect the privacy of the people who spoke with us. We hope you find this guide helpful in determining whether you may want to include CSA in the portfolio of your farm, ranch, other business, or start-up enterprise.



PART I. THE BASICS

CHAPTER 1.

What is Community Supported Agriculture?

Cole Ehmke and Melea Press

Community Supported Agriculture (CSA) is a marketing model in which a consumer purchases a “share” of the farm production and then gets a basket of vegetables (and maybe other farm products) regularly throughout the production season. It is a way for consumers to buy local, seasonal food directly from a farmer.

Typically, the CSA model operates on principles of shared risks and rewards. Simply put, customers become financial supporters of a CSA enterprise through their shares at the beginning of each season. In exchange, CSA members receive a share of produce or other products, typically each week. The CSA marketing model allows members to receive the freshest possible produce, develop a relationship with a particular farm, keep dollars local, and directly support a producer (or group of producers) in their community.

THE CSA MODEL

The CSA model of prepayment for shares allows producers to know and, in many cases, receive a large part of their operating budgets before the growing season begins. It also ensures a market since much of the produce is sold before it is planted or raised. In addition, this model passes some of the risks of farming to the customers. That is, members share in the risks and rewards of the growing season with producers, celebrating bumper crops while suffering through crop losses or lean seasons.

This marketing model is built on direct relationships between producers and customers. To help build these relationships, producers often invite CSA members to their farms, ranches, or other business enterprise for field days or harvest parties, where members can take part in farm activities and see where their food comes from. Unlike in populated areas, field days are not as common in the Mountain West where producers and their customers often live far apart. Still, occasional on-farm events are advisable to develop relationships with customers and build support for the farm. In considering developing a CSA, it is worth thinking about whether you are willing to invest the time and effort in building relationships with potential customers in your community and surrounding areas. Alternatively, it may be that you already have built such relationships through other organizations in which you participate.

CSA farms often grow according to organic standards and typically offer consumers fresh, locally-grown, chemical-free products. Some CSAs try to exceed U.S. Department of Agriculture (USDA) National Organic Program standards; others, including some in the Mountain West, emphasize the production of heirloom varieties (an old variety handed down from generation to generation). So-called “sensible”

production is another option, meaning that minimal non-natural inputs are employed along with natural inputs (such as compost, crop rotations, and cover crops) that improve soil quality and reduce pest burdens.

Historically, CSA has been a model for marketing vegetables, herbs, and fruits. However, in recent years this model has expanded to include milk, meat, eggs, flowers, and other items such as dried beans, grains, and a range of specialty and value-added items including bread, cheese, herbal teas, jams, or spice mixes that change throughout the season. What some farmers in our region call add-ons help generate additional revenue to compensate for the short growing season.

ESSENCE OF CSA VALUES

As you can see, the operational elements of CSA are straight forward: A CSA farm sells produce directly to consumers. Its members sign up and pay at the beginning of the growing season to receive a weekly quantity of fresh, local, seasonal produce for the duration of the season, thereby giving the farmer capital to be used to help run the farm.

While farmers are certainly a primary beneficiary since they receive advance payment for their efforts (thus reducing the risk of a loss from a poor growing or marketing season), the shareholders and even the wider community benefit. The shareholders benefit from the produce they receive. Since it is fresh, it is high in nutritional value. The broader community benefits through the money that, otherwise, would be spent in supermarkets now has a higher portion staying locally. In addition, waste is reduced because the local produce is not packaged, and energy costs for necessities such as transportation may be decreased as well.

But to characterize a CSA as a method of selling produce to shorten the food chain is to, in very large part, miss the point. As Steven Schnell writes in *Food With A Farmer's Face: Community supported agriculture in the United States* (2007):

The goals of CSA, however, go beyond being a simple economic exchange. CSA is, its defenders argue, a fundamental rethinking of the relationship among food, economics, and community, a move toward a greater degree of ecological sustainability and an attempt to partly disengage from the global supermarket and establish vital local agricultural economies.

CSA has an intentional aim to link consumers with their farmers, creating community relationships. The early North American CSAs were very much focused on the concept of community building. They had social connections and events as part of their function. But they went further still. For instance, operators sought to involve members in the structure, administration, and organization of their CSA. When the concept of CSA developed in New England in the 1980s, a “core group” of members would monitor the farm budget, organize events, coordinate drop-offs, and recruit new members, with farmers focusing on their main job – growing food (Feagan and Henderson, 2009: 205). Thus, CSA intentionally created community bonds among farmers, workers, and consumers, if not blurring the lines separating them.

In short, CSA is an approach that “decommodifies” and demystifies a quite specialized and refined food system – a system that effectively distances people from one another, from farms and ranches, and from the very seasons of the year.

CSA SUPPORTERS

The socioeconomic status of people in an area seems to affect CSA – more CSA farms are found in areas with higher average salaries. There is also a correlation between education and the number of CSA farms: the higher the average education rate of an area, the more likely it is to have a CSA option (Schnell, 2007: 557).

Women are notable contributors to CSA. The Teikei movement in Japan began as a way for Japanese housewives to obtain fresh food for their families. Women appear to be the initiators, even when a CSA venture is a family-run operation, and women join CSA projects more frequently than men (DeLind and Ferguson, 1999). This correlation could be attributed to women being more involved in the domestic activities of a household.

In a study from Burlington, Vermont, researchers found that, overall, on-site pick-ups helped lead to social interaction (Macias, 2008: 1,097). Goldsmith and Mander (1996) found the same thing: the shortened commodity chain between consumers and producers helped with social integration. And again, Macias (2008: 1,097) found that pick-up days were also good for natural human capital because it allowed children to see where food comes from. In some cases, the children might play in areas around the farm where CSA work is taking place or even be allowed to participate in the work (Henderson and Van En, 1999: 86).

CSA often attracts people with an interest in supporting sustainability. Jules Pretty (1998) lists the five central goals of a sustainable agricultural system. These goals are “a thorough integration of natural processes. . .a minimization or the use of those external and non-renewable inputs that damage the environment or harm the health of farmers and consumers. . .the participation of farmers and other rural people in all processes of problem analysis, and technology development, adaptation, and extension. . .a greater use of farmers’ knowledge and practices in combination with new technologies emerging from research. . .an enhancement of both the quality and quantity of wildlife, water, landscape, and other public goods of the countryside.”

TAKEAWAYS



- CSA is a way to sell products directly to consumers and is unique because customers join as members and prepay for the entire season of produce and/or other goods.
- CSA helps the farmer to manage risks associated with marketing and financing by identifying customers prior to the marketing season who provide money needed for preparing for the season when the farmer needs it most.
- A wide variety of products can be included in a weekly share, or box.
- CSA requires investments in relationships with customers.
- The CSA has four main components that make it different from other ventures: 1) a relatedness with consumers, 2) a perceived superiority of products, 3) the sharing of a complete experience of a farm, and 4) the use of sustainable agricultural practices.

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CHAPTER 2.

Community Supported Agriculture in Wyoming

Katherine Strand

There are approximately 20 CSAs in Wyoming and in the neighboring states of Idaho and Colorado that serve Wyoming. As Community Supported Agriculture (CSA) increases its presence in Wyoming, most areas of the state have access to this method of local food distribution. While most areas of the state may have access to CSA, many people have never heard of CSA or its business model. Thus, there is a big opportunity for producers who are interested in exploring CSA, but there are also hurdles to cross in educating customers about the CSA model. Most of the CSAs that serve Wyoming provide members primarily with vegetables. Producers grow a wide variety of vegetables to distribute to CSA members during the growing season, which is typically between 16 and 19 weeks. The season usually begins around June 1 and extends into September and October.

In addition to CSAs that offer produce, Wyoming also has several CSAs that sell sides, quarters, and individual cuts of beef, pork, chicken, and lamb to customers. Many CSAs in Wyoming offer a variety of add-on items such as cut flowers, bread, eggs, cheese, fresh herbs and other herbal products, and bath products. Finally, while it is not the case with most Wyoming CSAs, in other parts of the country many CSAs offer grains and legumes such as wheat, oats, or dry beans, and some include flour.

Most CSA producers in the state participate in local farmers' markets and list their businesses in local food directories, which are offered through University of Wyoming Extension. CSAs can also register with the LocalHarvest website (www.localharvest.org). Registering with this database makes it easy for potential customers to find CSAs, but many are not registered with the database.

Currently, demand for CSA shares in Wyoming outweighs the supply coming from Wyoming. Opportunities for additional CSA growth in Wyoming expanded when a large CSA in northeastern Colorado that provided shares for more than 200 customers in Laramie, 250 in Cheyenne, and additional customers in Casper, Rock Springs, and all the way up to Sheridan closed in early 2013. People in many parts of Wyoming have limited access to fresh, high-quality food, and interest in CSA is growing in all parts of the state. Thus, there is tremendous opportunity for the growth of a well-managed CSA as part of a business portfolio for Wyoming producers.

There are areas in Wyoming that are more like true food deserts. The growing climate's just not very productive, so those communities have really been latching onto it.

The things that attracted me to a CSA ... is to support a local producer, cut out all the middlemen, and the money I spend goes directly to them and their operating costs to help pay for their healthcare or whatever else. It's not getting skimmed off by a bunch of people in between. Another reason, it's good for our local economy. You know my family's been farming and ranching in Montana since the

1870s, so I really want to support local growers, so there was that. And then we prefer to buy organic if we can, and this is a way for us to have organic more or less.

NORTHWEST WYOMING

The area of Wyoming with the most CSAs is the northwest quarter including the communities of Jackson, Pinedale, and Star Valley. Most CSA farmers in this area sell all their shares each year and consider the region ideal for this type of local food marketing for a variety of reasons. The Star Valley area has a large retirement community that appreciates fresh food and actively participates in local CSAs. However, it may be more difficult to market CSAs to long-term residents of Star Valley. One Star Valley-based CSA explains this difficulty:

It's not something that you market toward the original Star Valley people. The original Star Valley people (who) surround us are fairly self-reliant. Most of them grow their own gardens... Most of the people (who) are attracted to this type of concept are actually people from outside of the valley; they're looking for something natural or chemical-free, and that's important to them. It's a change that I've had to go through. You asked this question: if we had ever thought about organic. I was raised in a traditional, conservative way. My only association with the organic movement was the extremist, environmental movement next door, in the Jackson Hole area. It's funny because that's our best market now, but that scared me just by association.

The best remedy for this marketing difficulty is increased consumer education. Long-term Star Valley residents may be more inclined to purchase a CSA share if they understand how the CSA supports local families and the local economy, which, in turn, supports Wyoming independence from the erratic global economy.

Jackson Hole has many opportunities for producers to sell both high-end ingredients to local residents who are interested in fresh and specialty foods and to sell products to residents who have an interest in knowing more about where their food comes from and how it is produced. One Star Valley farmer puts it this way:

There are people who are motivated by the cost, and then there are those who are motivated by the principles of it, and that's the environment of Jackson. They are motivated by the principles of local, sustainable, chemical-free, and that's kind of become our advertising.

In other words, the CSA label is kind of a short hand for producing in a fashion consistent with these “principles.” Jackson hosts two farmers’ markets per week during the growing season and has an active chapter of the Slow Food movement (Slow Food is an international movement founded in 1986. Promoted as an alternative to fast food, it strives to preserve traditional and regional cuisine and encourages farming of plants, seeds, and livestock characteristic of the local ecosystem): Slow Food in the Tetons (www.tetonslowfood.org). CSAs primarily selling to Jackson Hole customers can also enjoy the freedom of growing more “exotic” varieties of produce. One Idaho-based CSA calls Jackson Hole residents “adventurous” and attracts new customers with this line:

You climbed the Grand last week. You're obviously adventurous, so you can handle collard greens.

NORTHEAST WYOMING

The northeast quarter of the state includes such communities as Gillette, Buffalo, and Sheridan, all of which are served by CSAs. The largest CSA in the area is based out of Sheridan and offers produce. How-

ever, there is at least one opportunity to join a meat and an egg CSA in this part of the state. Area CSA producers say they sell shares to many young professionals and mothers with food safety concerns. Such mothers are a very attractive market for CSA all over the country, not just in the Mountain West. Producers also mention customers with special dietary needs or health concerns who hoped food from the CSA would help resolve. That is, the members reinforce the idea that local and organic produce is safer and healthier than other types of food. Producers in this region of the state seem less concerned about the environmental benefits of producing food locally and more concerned about food safety and security. One CSA farmer in this region explains:

Young families are a big part of it. I have a daughter, her mother, and her grandmother (who) all use most of what I produce. So yeah, three generations in that one family are supporters of what I do. The ones (who) I really feel good about are those people (who) are trying to change their situation by eating traditional wholesome foods rather than processed macaroni and fake cheese and you know things like that. [I have] two cancer patients (who) are trying to save their lives by eating real foods.

Customers in this region are also inclined to try a greater variety of food typically not offered in grocery stores. One customer explains:

I can always use a lot of something because I'll figure out a way to put it in a smoothie or something like that. I love odd things, so I really love the variety, and when somebody comes up with a new heritage seed for some kind of squash I've never seen, I revel in that.

SOUTHWEST AND CENTRAL WYOMING

The southwest and central region of the state includes such communities as Evanston, Rock Springs, Green River, Lander, Riverton, Rawlins, and Casper. This area has few CSAs, although it had more than 200 customers who bought from a Colorado CSA until the CSA closed in early 2013. This suggests that there is demand for locally produced food in this area that is not fulfilled. Residents of Rock Springs, Green River, Casper and many other communities can participate in the Bountiful Baskets Food Co-Op based in Utah. Bountiful Baskets is a fresh food distribution company. Unlike CSA, the food it delivers is not locally produced. Customers who buy from Bountiful Baskets are not able to support local farms, but the relative success of Bountiful Baskets again illustrates that the desire for fresh food across communities in Wyoming exists and highlights an opportunity for producers in Wyoming to fill through CSA and/or farmers' markets.

Many potential CSA customers purchase food from Bountiful Baskets because there are no CSAs available in their communities, or they purchase them during the CSA offseason to supplement their grocery store produce. The competition provided by other entities is a reminder of the strategic position CSA can enjoy if it focuses on delivering value by having the freshest produce available and giving customers an enjoyable pick-up experience or offering multiple pick-up times to avoid issues presented by large crowds picking up goods at the same time. Overall, local CSAs can typically be more flexible.

SOUTHEAST WYOMING

The southeast quarter of the state, including Laramie and Cheyenne, has several CSAs. In addition, customers in southeast Wyoming can join CSAs in Colorado. CSAs in this region describe their customers as having a wide range of reasons for joining CSAs. According to area producers, some customers are concerned about environmental preservation associated with organic and biodynamic farming practices,

while others simply want convenient, fresh produce. CSA farmers in southeast Wyoming are part of the population corridor that extends from southeast Wyoming to Colorado Springs, Colorado, and could sell their produce longer distances if they had the land, labor, and infrastructure resources (like high tunnels). One farmer in southeast Wyoming states that she believed she could sell more than 100 shares to Colorado's Front Range market without much effort. However, while marketing opportunities in Cheyenne, Laramie, and the Front Range may seem endless, CSA producers might face a greater challenge when attempting to market CSA in smaller communities along the Nebraska border, such as those in Goshen County. One CSA in this region explains:

If I wanted to do a CSA here in Goshen County and really make it successful, especially if I thought I was going to have more than a few customers, I think it would be really hard to do. For one thing, most people here don't see the value in vegetables; they think they're not worth anything. A lot of people grow their own or enough of their own stuff that they wouldn't be interested in a CSA, but it's amazing how many farmers go to the grocery store and buy everything. They don't even have a garden, but they don't value the vegetable crop.

Thus, new CSAs in this region may want to consider marketing their produce in more urban areas. While it may involve a longer distribution route, it may also result in a much larger customer base. CSA farmers in southeastern Wyoming also have the option of selling products through Triple Crown Commodities Cooperative. This project is still in its pilot phase. It facilitates Internet sales of a wide range of locally produced and crafted items to customers in the southeast region of the state.

TAKEAWAYS



- While CSA is often thought of as a produce exchange, it is possible to sell a wide variety of other products, including grains and dry beans, through the CSA.
- Demand typically far outweighs supply in Wyoming; thus, there are opportunities for further growth of CSA in Wyoming.

CHAPTER 3.

Is CSA Right for You?

Melea Press and Cole Ehmke

My advice to other CSA farmers is make sure it works for you; make sure it works for the farmer because if it doesn't, it's not gonna be sustainable in the long run

Before committing to a CSA, producers should consider carefully whether it is the right venture to pursue. If you are interested in selling directly to consumers, there are other options that require less commitment on your part and on the customers' part, such as selling at weekly farmers' markets, through websites, through commercial shipping companies, directly to consumers on an informal basis, or through social networks.

For direct-selling to customers in Wyoming, farmers' markets are the main alternative to CSA. Producers in Wyoming often use CSA in conjunction with farmers' markets as a delivery point and to sell additional produce and add-ons to customers.

Things to take into account are commitment, communication, payment, and the CSA model itself.

COMMITMENT

Selling at a farmers' market represents a much more flexible time commitment than having a CSA. With a CSA, consumers count on you to have a beautiful box or bag of produce for them each week and, depending on your arrangements, a nice variety of a few or an abundance of many items. This requires a commitment to harvesting and distributing produce each week. Customers may also expect to receive information about the farm and its operations along with recipes. The farmers' market is typically less demanding.

COMMUNICATION

Farmers' markets require you to show up and interact with customers while you are on-site. CSA requires an even higher level of communication on your part. Usually producers include a newsletter with each week's produce commenting on the season (the newsletter often includes recipes and other information). In addition, producers tend to have at least one event at their farm each year in which they invite CSA members to see operations first-hand. In other parts of the country, customer work days are sometimes organized.

MONEY EXCHANGE

In the CSA model, money is collected before the growing season begins, and much of the produce is pre-sold to shareholders. Some producers have excess produce and choose to sell at farmers' markets or other venues like local food stores for additional income. A CSA can take pressure off sales that must be made at farmers' markets and can be a good way to distribute excess items not used for the CSA. Others might consider selling produce at the wholesale level if the volume they can produce is high enough. Exchanging money on a one-time basis may also make selling to members of the community less personally stressful.

DIFFERENT BUSINESS MODEL

If you already engage in an agricultural endeavor, you will find that the CSA model is very different. Crop planning, timing, and growing techniques, financing, and customer relations will all be organized in potentially new ways. Conventional loans and insurance are not typically available to CSA operations. However, there is much less red tape involved.

SET THE STRATEGIC DIRECTION

As you begin your business venture – whether CSA or otherwise – the first step is to clarify what is most important to you. Having a clear purpose provides readers with the context for the venture and will give it meaning. Often a statement of purpose—a mission statement—is written to outline intentions and motivations.

Mission Statement

A mission statement is a description of the aspiration and purpose of the venture. It should describe what the management team sees the operation becoming for the individuals, the family, and for the team (since all three will be affected by the CSA). A mission statement should specify what the operation will focus on in the long run.

Communicating your mission with clarity is important because the goals you set, actions you take, and way you spend your time will be guided by this statement.

An example of a thoughtful, fully developed mission statement is that of Ben & Jerry's, the quirky, innovative, highly successful ice cream manufacturer. This example is from a few years ago.

Ben & Jerry's Mission Statement

Ben & Jerry's is founded on and dedicated to a sustainable corporate concept of linked prosperity. Our mission consists of three interrelated parts:

Product

To make, distribute, and sell the finest quality all-natural ice cream and euphoric concoctions with a continued commitment to incorporating wholesome, natural ingredients and promoting business practices that respect the Earth and the environment.

Economic

To operate the company on a sustainable financial basis of profitable growth, increasing value for our stakeholders and expanding opportunities for development and career growth for our employees.

Social

To operate the company in a way that actively recognizes the central role that business plays in society by initiating innovative ways to improve the quality of life locally, nationally, and internationally.

Central to the mission of Ben & Jerry's is the belief that all three parts must thrive equally in a manner that commands deep respect for individuals in and outside the company and supports the communities of which they are a part.

The Ben and Jerry's mission statement is specific and action-oriented. It describes exactly what the business of the venture is and mentions the quality ideals it sets for its products. It directly states that the company will focus on increasing profitability to enhance value for shareholders, yet it commits the company to taking an interest in broader social issues. Thus, the firm's values are clear.

Strategic Approach

Strategy is *how* to achieve the mission (or even a goal). It is a thoughtfully constructed plan or method or action that will be employed to achieve the result. For instance, in the case of a CSA, part of the strategy may be to support other local producers to a high degree (which would imply partnering with or purchasing products from area producers) as opposed to producing all products on the CSA farm exclusively.

Setting Goals

With a mission statement in hand, the next step of drafting operational goals can begin. Where the mission statement is the destination and the strategy is the general approach, goals define the specific waypoints in a travel plan. Each goal should support the mission statement since that statement is nurtured by the principles it contains. The goals represent specific steps you must accomplish to reach the envisioned destination.

Some goals are things that should be accomplished in a short time horizon – from now until three years. Other goals are longer term – three years and beyond, even to 10 or more years.

Since the resources of your venture are limited, not all goals can be reached at the same time. You'll need to prioritize set goals. This can help ensure that the most important things are done first.

To make goals actionable, the action steps, a timeline for completion, identification of who is responsible for completion of each step, and the identification of a product or output is needed to help make sure the goal is completed.

Should You Do It? Five Key Questions

Five questions to help you decide whether to initiate CSA:

1. Do I want to diversify my farm operations?
2. Do I like the idea of sharing risk with customers?
3. Do I like directly interacting with a lot of customers?
4. Do I want the responsibility of providing shares to a set number of CSA members every week?
5. Do I want flexibility during my summer to be out of town?

TAKEAWAYS

- CSA takes a large commitment to produce a regular and high volume of produce.
- CSA takes a willingness and desire to communicate with customers.
- CSA markets are local markets that can augment farmers' market sales.

READINESS ASSESSMENT

Rank on a scale of 1 (low) to 6 (high).

	1	2	3	4	5	6
I am knowledgeable about farming.						
I would like to diversify my farm operations.						
I like the idea of sharing risk with customers.						
I like directly interacting with a lot of customers.						
I want the responsibility of providing shares to a set number of CSA members every week.						
I don't really need flexibility during my summer to be out of town.						
I am committed to producing high-quality products.						
I am a team leader who can set the rules.						
I can give direction to others when necessary.						
I have a good understanding of soils.						
I have a good understanding of plants.						
I know about post-harvest handling.						
I have time to operate a CSA and get everything else done.						
I am committed to being a successful CSA operator.						
I can identify and reach potential customers through promotional efforts.						
There is need in the marketplace for my CSA.						
I arrive on time every time (at distribution days).						
I am willing to travel to distribute shares.						
I enjoy packing, transporting, and handling products for sale.						
I am willing and able to be away from the farm to sell at markets.						
I can keep necessary records for production and sales.						
I am confident that direct marketing through a CSA will create an acceptable profit.						
I have a plan for who will staff the farm.						
I am physically able to work full time in agriculture.						

If you agree with most of the statements above, then you are ready to begin a CSA. For any statements you rated yourself low, consider how those statements might affect your enthusiasm and commitment to running a CSA and how you will address those issues.

The readiness assessment questionnaire was modified from a quiz in *New Farmer's Guide: Cultivating Success at Farmers Markets*, by Randii MacNear and Shelly G. Keller (2012), Davis Farmers Market Association. The guide is available at www.davisfarmersmarket.org/new-farmers-guide.



PART II. ORGANIZING THE CSA

CHAPTER 4.

Setting Up Shares

Eric Arnould, Katherine Strand, and Cole Ehmke

We shoot for about 16 weeks on average. One year we only made it to 15. If the weather's nice, we'll go longer. One year we made it to 19 weeks. We don't change the price. We just kind of keep going, so yeah, it's totally weather-dependent in the fall.

CSA is a share-based system; however, it is not contract farming or truck farming. It is a system built around developing strong relationships with customers. The size of the operation has the potential to grow as the volume of shares sold to shareholders grows, but slow growth is recommended. Shares are sold prior to the agricultural season or during the year to help fund the farms' and other activities, and prepayment can help amass capital for on-farm or other investments. For example, one Mountain West CSA producer leveraged pre-season cash infusion to convince a bank to help fund expansion of her hoop house infrastructure.

MEMBER INVOLVEMENT

In some CSA models, members or a subgroup of members are active participants in the management and operation of the CSA. In addition to standard cash-based shares, some CSAs offer work shares based on a weekly or seasonal input of labor. This arrangement is rare in the Mountain West. In other CSA models, and more typical of CSA in the Mountain West, members may be involved if the producer actively encourages participation and members are interested. More typically, because farms are at a significant distance from members, there is likely to be either no or minimal on-farm or other work requirements from members.

You should be aware, however, that an engaged, core group of members who perform jobs such as a recipe distributor, drop-site coordinator, outreach coordinator, contact person, newsletter editor, and so on are key to long-term success since they may take some management burden off the shoulders of producers.

NUMBER OF SHARES

So you face two challenges. The first challenge is determining what and how much produce you can grow or craft in a season. This is a typical starting point for determining shares and length of season. For those growing produce, a CSA requires a good sense of the farm's productive potential in terms of the volumes of selected crop and varieties produced and in terms of growing season. Both of these are based on experimentation and good recordkeeping about past farm operations.

A Mountain West CSA season may run 14 to 16 weeks (which can be extended significantly if you have a hoop house or greenhouse). One CSA used free access to late-season veggies from its hoop house as an incentive to encourage members to buy regular-season shares. The typical CSA farm grows 30 or more types of produce over the course of the season; however, you can expect to offer fewer items, especially at the beginning and end of the season.

New CSA managers, and new producers especially, must face this first challenge of how to deliver a reasonable mix early and directly. A complete familiarity with the crop and variety mix, succession plantings, and season extension are quite important when keeping customers happy.

There are all these little things that need to be managed every week, and it's just easier to start small. I would also recommend that anybody who thinks they want to start a CSA should be on their piece of ground and have harvest records for at least a couple of years before they go out and do it. Market food another way, through farmers' market, through grocery stores or whatever, but you should get a real record of performance because these people are going to expect this food.

The second challenge is figuring out how many shares and/or half shares you can produce. One of the High Mountain West CSAs figured out the number of shares to offer by the number of rows of vegetables that were planted. She determined she could grow 20 100-foot rows, and each row could feed a family of four. This meant she could produce 20 shares. Twenty to 30 shares is about average for a Mountain West CSA. One started with just seven.

It is in your interest as a producer to offer just one size share because it minimizes the amount of work required in harvesting, cleaning, and packaging. CSAs tend to encourage people to split a large share among a few families if the amount is too much for the shareholder. Nevertheless, most CSAs offer a full and a half share. One alternative is to offer a full share every other week rather than a half share. With this approach, you can limit your management burden, though the shareholder loses something in freshness. As you can see, CSAs can have quite different approaches for how to minimize the management burden – some take the approach of having members pack their own boxes.

CONTENT OF A SHARE

You also have to decide to what exactly members will receive in their baskets. It is probably a good idea to make at least three quarters of the share universal items that most people will know and like. The remainder could be more unusual items. Members may feel badly if they don't use up what you give them or if they don't know what you are giving them, so it is probably best to stick mainly to things they are already familiar with. Give them something a little out of the ordinary as an occasional surprise.

As Goland (2002) pointed out, "Ironically, the very thing that most excited CSA members in the spring was the same thing that drove their discontent in the fall. In the spring, new shareholders expressed excited anticipation at the chance to try new kinds of vegetables and increase their overall vegetable consumption. Yet by fall this excitement had turned to frustration at trying to incorporate those same foods into their diets."

Clearly, new members face a number of lifestyle adjustments once they commit to a share: a regular distribution time every single week for the entire length of the season, a mix of produce that they did not select, volumes of produce that they did not choose, and new items with which they are unfamiliar. A new member may have aspired to eat more "local organic produce," but the day-to-day work of using a share can become wearying, to the point that the CSA manager will not be able to keep those new members as customers.

To make the transition to life as a CSA member as smoothly as possible, it's good to generate or to collect and distribute recipes and tips on how to use the produce. It also helps to keep new types of produce carefully managed so that the volume and variety of new items doesn't become overwhelming. As a manager, remember that part of the value and fun of running a CSA is educating members about the produce you provide.

One Mountain West CSA added a "take it or leave it" table, where if there was something members didn't want, they could put it back on a table at the farm or place of distribution, and if there were members who wanted extra of that item, they could pick it up. And if the producers had excess of an item, they put that out for members as well. Most CSAs in the Mountain West are less than five years old, so they are still experimenting with shares. Flowers are a lot of work, so after initial experiments, many have abandoned these, while some are hoping to add fruit such as stone fruit (plums, cherries, peaches, etc.) or strawberries as trees and plants mature.

Another consideration is whether to include items in addition to produce in the share, such as eggs, cheese, or bread, for instance. Differentiating the share creates an opportunity to distinguish your CSA, and if you already grow or raise other items on your farm, this can provide an additional distribution outlet.

TYPES OF SHARES

We have a bit of that convenience. We do have a lot of options for pick-up locations, and then we also not only offer vegetables, but we offer fruit, bread, cheese, flowers. We raise meat and poultry... We do offer a winter share with veggies and fruits that's one delivery a month for three months. So for December, January, and February, it's one large box called pantry produce.

We've got two shares. One is for our family of four, and the other share we split with another member. She takes half the share, and we take the other half of that share, and we gift it to an elderly family friend who had a huge garden... She can't grow a garden anymore, so we kind of figured she gave away produce her whole life to people from her giant garden, and she misses garden produce, so that's what we do for her. —CSA customer

FULL AND HALF SHARES

CSAs typically offer a variety of shares to meet the demands of a large variety of customers. Most CSAs around Wyoming offer both whole and half shares. Whole shares typically feed three to four adults, while half shares feed one to two adults, on average. Many CSAs offer half shares but dislike them because, as one Idaho farmer said, "You do the same amount of work to make the half shares as you do the full share." This means that you cannot simply divide the cost of the whole share to create the half-share cost, something which customers often find confusing or unfair. It is also difficult to create half-share baskets because some items simply cannot be halved. For example, if one cucumber is included in the whole share, it is not practical or safe to create a half-share basket using produce that must be cut in half. One solution is to avoid any guarantees that the same items will appear in both half and whole baskets each week. (Note: cutting produce in half introduces contamination, and food safety should be of paramount concern to any CSA that sells produce.)

Some producers like offering half shares because they meet the needs of a wider range of customers, including smaller families, single people, people on a tight budget, and larger families that do not consume enough produce to warrant the purchase of a whole share. Local CSAs have come up with a few solutions

to some of the issues presented with half shares. Some CSAs encourage members to join with friends or neighbors and split a whole share themselves. In this scenario, it is up to individual customers to work out how the weekly basket and the payment will be divided and who will collect the basket each week.

One CSA created a different type of half share, offering the option of receiving a whole share every other week instead of a half share every week. If your CSA is small and you want to keep things simple, offer only whole shares but provide a “take it or leave it table.” Most customers do not like to take food they know they will not use, and this is an easy way to share food and keep waste to a minimum. This table could be set up at the farm or drop-off delivery site to allow customers to leave unused or disliked items for other customers. Items left on this table could also be donated to local food banks or soup kitchens, where permissible.

WORK SHARES

Another type of share typically offered by CSAs is the “work share.” Customers who choose this share promise the farmer a specific number of labor hours per week or per month in exchange for their share or a discount to a share. Wyoming CSAs generally ask for three to five hours of work per week per customer. They ask customers to help with planting, weeding, harvesting, cleaning produce, and general farm chores. For those customers who cannot handle manual labor, the owners ask for help with the farm website, transportation to delivery sites, or supervision at delivery sites. If the CSA also sells produce at a farmers’ market, they might ask their work shares to manage the farm stand for a day. CSAs elsewhere ask for help with the newsletter, with recipes, or managing a website.

I could see pretty early on a couple of my members who had said that they wanted to work on the farm, the labor was just too much for them, so I offered out, ‘Would you like to go to the farmers’ market and help there?’ ‘Oh yes. That sounds really great.’ So yeah it doesn’t just have to be about pulling weeds. (There are) a lot of things that can be done. A working share can be someone doing the website, and we actually had someone do that the first year – created the website template for us, so that was great.

Work shares can help farmers supplement labor needs; however, there are some drawbacks to the work-share option. Farmers must take extra time to talk with and train work-share customers about farming, food safety, and farm safety. In general, workers who participate in work shares do not have experience in agriculture; thus, they need training prior to the busy growing season.

Local CSAs also report that work-share customers can be unreliable. To ensure that work-share customers fulfill their end of the bargain, some CSAs ask them to sign a contract before the season. They also ask work-share customers to sign up for certain days and times each week and to provide a list of substitutes in case they cannot work their hours one week. Some CSAs ask for a money deposit at the beginning of the season. If the work shareholders fulfill their obligations, then their deposit is returned at the end of the season; however, this is an uncommon approach.

Overall, work shares can be a great option that many customers appreciate, especially those who involve their children and those looking to build relationships with other folks in the community.

I don’t want to be a full-time farmer, but I love working at the farm. I love having the responsibility for my children to work at the farm; I love for them to see really what the process is of how they get their food, so it’s not just a grocery store kind of a thing. And the idea of bringing the community together, so that we are working together to support our community, I just love that idea of it. —Wyoming CSA customer

It's \$90 off your vegetable share cost for working 18 hours over the course of the summer... Last year we had 250 members who were working-share members, and we're hoping that that doubles this year because those are the folks who we have the highest retention—members who have come and worked on the farm and have gotten actual experience with what it takes.

OTHER TYPES OF SHARES AND ADD-ONS

As we've seen, there are a number of ways CSAs in the Mountain West offer share size and effort contributed to the farm. There are also a variety of ways to compose the shares.

The Flex Plan

Some CSAs around Wyoming offer what is called a flex plan or market CSA. This plan gives customers credit to spend at farmers' markets or on-farm stores for whatever type of produce, meat, or other items producers have available.

We do have something fairly unique to our CSA called the 'Veggie Bucks'. This year it's \$35; it's included in the fee that they pay. I just have a little index card that I have for each customer; they start out at the beginning of the season with \$35 in an account, and they can use it to purchase anything extra that they want, like eggs or meat or extra tomatoes or whatever they may like to have.

One producer in Colorado offered only this option: they asked customers to pay the share price at the beginning of the season knowing that the CSA would not provide weekly baskets. Instead, customers came to the CSA's stand at farmers' markets and purchased items using their credit. This Colorado farm liked the arrangement because it still received payment for operating costs prior to the growing season, but it did not use extra labor to put individual shares together each week. In addition, some members like the arrangement because they choose the exact items they want each week. The farmer says he chose this option because many of his customers complained about having no control over items included in each basket.

A downside of not distributing a share in baskets is that producers do not know exactly how much of each item to bring to the farmers' market each week to ensure that enough is available for CSA members and other farmers' market shoppers. An upside is that producers economize on distribution costs in addition to the labor of assembling share boxes or baskets.

Share Add-Ons

Many CSAs offer add-ons to their regular shares. Add-ons might include meat, cheese, eggs, bread, fruit, flowers, bath products, and herbal products. Farmers either produce these items themselves or create arrangements with other local producers. One Mountain West CSA included meat, cheese, and mushrooms as optional additions to their weekly share. The meat they produced themselves, and the cheese and mushrooms came from nearby farms.

Add-ons are usually ordered when customers pay for their regular share; however, some CSAs allow customers to order these items throughout the season. As a manager, it is important to clarify with cooperating farms how their items will get to the CSA members and how payment will be managed. Often, the items are included with the regular share, and payment may be through the CSA (rather than directly with the customer). But the logistics and price still need to be arranged. Local CSAs like the option of add-ons because they say it helps them attract more customers and support other local producers.

A few Wyoming CSA producers use a creative system that allows customers to add extra things at their discretion. The system begins with a credit, which is included in a member's regular CSA membership fee. This credit can purchase anything extra that the members want from among the CSA offerings, such as eggs, meat, or extra tomatoes. One manager said, "A lot of people use that for meat, or they use it for extra vegetables."

Another producer collaborated with a local chef to offer CSA members a free cooking class using local, seasonal ingredients. The same chef also wrote weekly recipes for the CSA to distribute to members and add to their website.

Meat Shares

Some CSAs in Wyoming offer meat shares and/or winter shares. These shares are organized differently than the typical late spring through early fall produce share. CSAs with meat shares usually deliver only once per month because people can store meat in their freezer for long periods of time. This option may be more desirable than selling at the farmers' market or selling to restaurants because CSA producers can give their customers a variety of meat each month. Restaurant owners and farmers' market customers tend to buy only prime cuts, thus leaving meat producers with large supplies of ground meat and cuts that are purchased less frequently. However, producers should keep in mind that Wyoming, at least, does not have a USDA-inspected meatpacking facility, meaning that transportation to and from one is more of a factor. But it does have 20 State of Wyoming-inspected meatpacking facilities and 24 custom-exempt plants. Individual cuts of meat can only be sold in the state if they are processed in either a state- or USDA-inspected facility. Meat from a state-inspected facility can be sold to any stores or individuals within the state but cannot be sold out of state. Meat from a custom-exempt plant can only go back to the owner – it cannot be sold.

I'm really laidback about my CSA as far as requirements or whatever. Basically it's 10 pounds of meat a month... If you pay it 6 months ahead you can get a 5- or 10-percent discount... then I basically pick the cuts that go in it, but I always try to do a balance of ground beef and steaks and roasts.

Winter Shares

Winter shares are usually offered as extensions to summer whole and half shares. CSAs in Wyoming that offer winter extensions typically charge under \$100 for bulk deliveries in November and December. These bulk deliveries typically include items like root vegetables, greens, and seasonal items like pumpkins and squash. They may also include bulk tomatoes for canning and sauces. Producers may want to offer food preservation tips or direct customers to University of Wyoming Extension publications to help them with canning, dehydrating, and food processing. One Wyoming CSA in 2012 started selling shares for delivery throughout the year. A heated hoop house allows the CSA to grow produce throughout the winter.

When I worked the ground, and when I spent five hours weeding the garlic, I didn't want to kill it. I didn't want to bottle it, so that's when I started dehydrating. I started looking into how to preserve something without killing all the enzymes in it, so now I pretty much dehydrate everything.

TAKEAWAYS



- Start with a clear understanding of the potential of your farm or other enterprise.
- Start small with the CSA, and grow over the course of a few years.
- Start with a base of produce that your customers are familiar with; save the Chinese bitter melons for later ☺.
- Keep education as a value, and keep members prepared when their baskets include new and unfamiliar vegetables.
- There are many different ways to organize shares in a CSA – full and half shares, add-ons, meat and winter shares, so be aware of what customers want and match that to your interests and abilities. You need to do what works best for you.
- Half shares are more than half the work of full shares.
- Keep in mind management and labor costs when making choices so that you don't become overwhelmed in peak season.

Reference

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CHAPTER 5.

Pricing and Payment

Eric Arnould and Bill Schepelev

The hardest thing I think is to charge a fair price for what you're selling, you know, because I think a lot of farmers undersell themselves. And I think that you know in order to make the food system work, we need to charge what it costs to make a living, and I think that's, I know that's hard for people.... I used to really struggle with it...

They think it's a cheaper option, and that's something we're always careful about in farming, because we don't. Any CSA doesn't grow cheap food. Cheap food is exactly cheap food. With CSAs, you know it's a fair value to the local farmer and the member.

Pricing produce and ensuring an income stream can be troublesome to farmers. The bottom line is that the CSA enterprise must cover producers' costs and, ultimately, turn a profit to be successful. Mountain West producers are frugal by nature, so what is offered here are ideas you may not have considered and tips from what others are doing.

USE FARM BUDGETING

If you are using CSA income to cover costs not covered by existing farm/ranch operations, the price of shares must build in sufficient "profit" to help cover these expenses in addition to the costs of production including labor, capital investments, delivery, and other inputs. To get a clear picture of what these expenses are, use farm-budgeting techniques with your CSA operations, and then take a look at the prices you'd have to charge based on alternative ways to set a share's price.

Pricing strategies are based on the perceived value of your products and services, your cost of doing business, your marketing goals, and expected competitive actions. A wide range of pricing strategies are available, from simple rules of thumb to sophisticated approaches that involve carefully measuring the value delivered by your farm to your target market.

As you make pricing decisions, it will be helpful to think about your cost to produce a product or service. This will provide a "floor" on your price. You should also think about what other products similar to yours sell for in the market. Finally, give some thought to why the price of your product or service should be above or below "market price." Above all, you'll want to demonstrate that your price will allow a profit.

Market-Based Pricing. In a market-based pricing model, the CSA farmer would use other local CSA share prices and local customers to determine the share price. For example, if there are three CSAs within 100 miles of your CSA that sell shares for \$350, \$420, and \$400 (assuming goods are similar in each basket) and you have strong interest from local residents, then you might price the CSA shares on the high end of the spread. On the other hand, if interest is waning, you might price CSA shares at or just under \$350.

Cost-Based Pricing. Cost-based pricing bases prices on the actual expenses of the CSA operation including reasonable labor costs for the farmer. In this model, the CSA farmer attempts to identify ALL actual costs associated with operations. Expenditures are added together, and then the CSA farmer adds a reasonable profit factor. The following example demonstrates a cost-based pricing model:

Operating Expense	Estimate
Seed	\$1,000.00
Manure, compost, etc.	\$150.00
Water	\$1,200.00
Electricity	\$960.00
Fuel (diesel, gas)	\$1,800.00
Packaging	\$220.00
Marketing (brochure printing, Internet, etc.)	\$250.00
Transportation (delivery)	\$920.00
Depreciations on tractor/equipment	\$760.00
Labor at \$10/hr (820 hours of labor [includes tax estimate])	\$10,250.00
Total Costs	\$17,510.00
Profit Margin @ 5%	\$875.50
Total	\$18,385.50
Projected Number of Shares	50
CSA Share Price	\$367.71

The more complete the costs are identified the more accurate you can price shares. The profit margin needs to consider risks associated with CSA operations: Will fuel prices increase? What if the tractor breaks down? What if you misestimated labor costs?

Using both the market-based and cost-based pricing models to price CSA shares serves two purposes: it helps reduce risk of failure and helps ensure that “money is not left on the table.” Consider the case if market-based pricing suggests price shares need to be priced at \$250/share and the cost model shows a price of \$350/share. In this case, it would be ill-advised to pursue a CSA without a long-term analysis that addresses the cash-flow deficiency that will be experienced. On the other hand, if the market-based pricing model suggests that share prices can be priced at \$420/share and the cost-based pricing model shows a price of \$350/share then the CSA farmer would be leaving \$70/share on the table. That additional money can be used for personal income, growth, infrastructure improvement, etc.

STICK TO THE CORE CSA MODEL

The core of the CSA model is selling membership shares in advance of the growing season. The aim of this is to provide producers with working capital and to reduce production risks by spreading the risk to shareholders. Producers are strongly encouraged to stick with this model.

EXAMINE MARKET PRICES

As mentioned, share prices must cover production and transportation costs. These set the floor. But they're not the sole force to be considered with setting a price. The aim in setting a price is to get as close

to the value that a consumer places on the products offered as possible. This value may be above the floor price of your expenses (unfortunately, it could be below the value you've put into the products, but that is a different consideration). In any case, looking at market prices could provide important information. For instance, the price you arrive at should also make sense within the market because customers don't operate without options, and a personal budget is one of them. For another instance, if you don't have a baseline of knowledge or even rough estimates of your own operating expenses, the prices in the market could be a proxy (though perhaps a quite flawed one since using someone else's numbers for your own is not reliable).

Across the nation, the average price for full-season shares is about \$412 while the average price for seasonal half shares is \$264. For a 20-week season, this comes to \$20.60/week for full shares and \$13.20/week for half shares. The data the authors gathered from Mountain West CSAs shows full shares averaged \$450 while half shares averaged \$368. Production and especially transportation costs are high in the Mountain West, and producers must take this into account in setting share prices. We identified one CSA with a "season extension" price of \$70. It is important that producers set small- or half-share prices to reflect the fact that putting up a half share is actually *more* than half as costly as putting up a full share. The management costs of a half share are nearly as much as a full share even though the amount of produce is generally half the amount. Some CSAs partner with institutional buyers such as schools, hospitals, churches, and restaurants, which occasionally pay higher prices for shares than individual customers, but such arrangements may require producers to make additional service guarantees or plant specialty items.

When judging the market prices against your own, keep in mind two things. First, fresh, small-batch produce or livestock may be of superior quality to food sold in grocery stores, but you should assess the degree to which your customers see it that way. To build a differentiated position for CSA-grown produce in the overall marketplace, it is important to stress quality differences to customers at every opportunity. Growing distinctive varieties can also help justify higher prices for shares, for example, heirloom varieties or specialty items. To set prices, first consider setting a reasonable target mark-up of 30 to 40 percent on costs.

Second, compare your prices to similar produce and products in grocery stores, farmers' markets, restaurants, and other CSAs. A smart consumer is aware of prices; you should be, too, since the price factor is often an important one for customers. With knowledge of your competition, you can prepare a response.

When investigating prices, look at specialty grocers such as food co-ops and so-called natural food stores as well as grocery stores, suppliers at farmers' markets, restaurants, and other CSAs. A limitation of using grocery store offerings as a comparison to CSA products is the dramatic differences in costs associated with industrial-scale production compared to the costs of growing natural or organic food on a small scale for the CSA.

Another source of price information is organic produce price reports such as the:

- Maine Organic Farmers and Gardeners Association price survey (www.mofga.org/Default.aspx?tabid=260),
- Canadian Organic Growers price tracker (www.organicpricetracker.ca),
- and Rodale Institute price tracker (www.rodaleinstitute.org/Organic-Price-Report).

If you search the Internet, you may find other price trackers. What a great project for a junior computer savvy member of your family! Commercially available price lists can also be found.

Third, one of the core aims of CSA is to help preserve family agricultural operations and enterprises as part of a diversified farm/ranch management strategy. Producers should communicate this to potential customers to help justify prices.

REWARD CORE CUSTOMERS

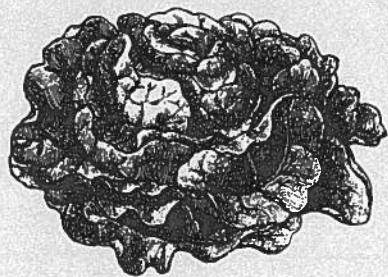
As previously mentioned, one aim of the CSA is to secure capital and reduce producer risk. To this end, CSAs often try to secure a core group of supporters. You can use price to help achieve this by offering a pre-season discount to shareholders. A 10-percent discount offered from November–January could be reduced to a 5-percent discount from January–March. An early-bird discount may also help attract new customers. You may also consider providing 10-percent discounts to members who refer a new member or a discount to a member who provides space on his or her property for a drop-off/pick-up point for weekly shares.

OVERCOMING STICKER SHOCK

Several generations of intentionally low food prices have conditioned consumers to think food should be inexpensive. Although studies show that CSA members are not as sensitive to price as you might think, the belief in low-cost food can be difficult to overcome. One way of reducing the “sticker shock” associated with an annual pre-pay is to offer a payment plan. We found that a number of Mountain West CSAs do this. The “pros” of offering a payment plan is that it reduces sticker shock and may attract additional customers having lower incomes to the CSA. The “cons” include the fact that this goes against the core aim of reducing producer risk while increasing operating capital. In addition, producers may find themselves pursuing delinquents. One way of resolving this is to require shareholders participating in a payment plan to provide a series of pre-dated checks up front that can be cashed as the season progresses. In general, it’s probably best for new CSAs to keep pricing schemes as simple as possible. There will be enough confusion (both for you during the season to keep on top of depositing checks and for customers to remember to have funds available).

CSA is not a charity, so resist the temptation to sell at a discount. One alternative is to offer a very limited number of work shares. That is to say, people can obtain a share for a certain number of days of work on the farm or doing something special to help the CSA. In the original CSA model, these work shares were offered only for farm labor. But, as mentioned earlier, you can get creative here. Consider offering a share to someone in exchange for improving recordkeeping and accounting, producing the newsletter, or developing a visually appealing, user-friendly website for the CSA and keeping it current over the course of the season. The key is making sure that you get value from the work share at least equivalent to the produce you offer in exchange.

TAKEAWAYS



- CSA is not about low-cost food; it’s about developing relationships between producers and consumers and building strong and healthy communities.
- Consider keeping pricing schemes simple.
- Prices must cover costs and provide a reasonable profit.

CHAPTER 6A.

Finding and Communicating with Customers

Melea Press, Cole Ehmke, and Bill Schepeler

Our main source of public advertising I guess would be the underrated public radio stations.

We put up flyers in every coffee shop, yoga studio, any doctor that had any kind of holistic, you know, practice whether it was holistic chiropractor or naturopath or somebody who understood the nutritional link to health; we would ask if we could put brochures in their office.

We've gone from those early adopters – those people who have been a member of a CSA for years. They understand there's the economic responsibility of it. You're supporting local agriculture; you're supporting local economies; you're reducing your carbon footprint – all those things that go into it. And on top of it you're getting local produce. There are folks who understand that from the beginning, but you can't make changes purely on the early adopters. There's not a mass there. You need to get into the mainstream America, mainstream folks.

Attracting and retaining customers can be a challenge for those new to CSA. CSAs approach recruiting and retaining in different ways, but many function with minimal advertising due to the cost, and most rely heavily on websites, flyers, and word of mouth instead.

USING EXISTING MARKETING CHANNELS TO PROMOTE CSA

Finding customers for your CSA is the daunting first step. To begin, realize that “marketing” can take many forms: an advertisement placed in a newspaper, a coupon distributed to potential customers, an interview with a reporter, an open house at the farm. All can help market the CSA, but some cost money.

Because a CSA requires a high degree of comfort with the productive capabilities of your soil and growing conditions (as well as the planning and work requirements), it would probably be wise to start with a market garden selling vegetables at a farmers’ market or farm stand before adding a CSA. Starting with a related venture not only helps you gain data on the capabilities you are working and learn how to produce a consistent volume of quality produce, but it gives you time to better understand the local market, explore other marketing options (such as sales to local food retailers), and gather a mailing list to be used for a potential CSA. So a farmers’ market can certainly complement or supplement (as an outlet for surplus produce after CSA share needs have been met) the farm, rather than compete.

At this point, marketing the CSA venture can begin. Basic methods are advertising and public relations. If you’ve been in business for a while, you may know what works best for your enterprise. Advertising tends to mean paid placements promoting your enterprise. Public relations tend to mean the activities you do to make a good name for yourself. It’s possible, using public relations, to have a substantial presence

at very low cost. You can do this by contributing informative articles for area newspapers, doing interviews, hosting open houses, answering questions, and so on. Advertising is usually quite costly because it requires repeat insertions to be effective; budgets necessary for repeat coverage are often beyond what many small businesses can afford.

Let's begin with marketing since it often sets the tone of your public impression. Interviews with successful CSA operators show that each one had a comprehensive plan to ensure continual interaction with customers.

First, your CSA should be listed on www.localharvest.org, a nationally known website devoted to promoting CSAs and related products.

Second, CSA operators indicated that they found selling shares was easiest when personal interactions were possible at local farmers' markets, where they were able to explain how CSAs work.

Lastly, CSA owners commonly indicated that their most effective marketing strategy was through satisfied customers who commonly brought new customers to the CSA.

Keep those three prospecting priorities in mind as you build marketing materials that will support your recruiting efforts. Brochures and website are the most common forms of marketing materials CSAs use, and they make sense. Having a brochure with a concise presentation of who you are and what you offer is something to hand out to prospective supporters at events and to leave on countertops. And a website means you can be found via web searches and have a place to post current information.

As you consider print and electronic advertising efforts, consider that promotions can include giveaways, special events, and discounts for referrals. Ask yourself questions like these to narrow your efforts:

1. What kind of advertising can you use to best reach your target market?
2. What mix of advertising will you start with?
3. Are there other advertising campaigns that are similar to the one you have in mind? If so, consider including some examples in a folder for reference.

Then, once some advertising tools are in place, use relationships you already have in the community to get the word out that you have a CSA. Remember that CSAs in the Mountain West tend to rely on personal interactions. New customers can come from anywhere within the area, so be sure to talk about your new business. You know where you and others in the community gather. Place marketing materials there.

There are many inexpensive ways to work on communicating with customers and potential customers. You could invite a local newspaper reporter to come out to your farm to do a story about an event or activity going on with your CSA (though, keep in mind that just inviting a reporter out to write a feature would be too much like asking for free advertising, but inviting a reporter to an interesting and unique event might be newsworthy enough to tempt a reporter and perhaps even a photographer). You could post flyers for your CSA in local grocery stores, health food stores, coffee shops, cafes, bookstores, churches, libraries, or anywhere else you can think of and gain permission. You can begin an online blog about your CSA, a very common and inexpensive technique of communication adopted by many CSAs around the country.

It is important to make sure you are approaching potential customers with marketing material that resonates with their values and their needs. Many people in the Mountain West value independence and

self-sufficiency, but they also value the preservation of rural ways of life. You may find that newcomers want to help longtime residents in this regard.

So reinforce the reasons why customers should support the CSA: It's not just about getting fresh produce but a way to support and diversify local agriculture and local producing families. As a CSA operation, you cannot and should not be competing entirely on price but instead building relationships with CSA members. These are the areas where grocery stores and delivery services cannot compete with you.

MAINTAINING CUSTOMER RELATIONSHIPS

It takes a lot to manage CSA members, and probably the thing I learned the most was it's really important to dedicate one person in the business probably to the CSA (who) can look after all of the logistics and communicate with the members and such. And it's a big chore if you're having to do a lot of other things in the business, too – all the growing, all the marketing, all that kind of stuff.

After attracting customers, work hard to maintain – and build – excellent relationships with them. CSAs tend to invest in a lot of communication between producers and members. Some members join a CSA because they want a direct relationship with a farmer, others want to learn more about food, still others want to teach their children about food and the value of work, and still others want high quality local produce. These varied needs in the consumer often come down to the same needs from you – communication.

There are several ways to work to maintain relationships with your customers. We mention several of these, but do not be afraid to start out simple and easy.

Create a Website

Most CSAs maintain websites that can be easily updated each week with news from the farm. Many producers will post short stories about what is going on in the fields (e.g., the broccoli is just about ready to harvest; today we planted six rows of green beans; our new chicks hatched this week; the tractor broke down Tuesday, and we spent three hours fixing it [concerning the latter, offer some real-life workings of the farm and consider adding something humorous to them]). Many producers include pictures with their stories. Producers also include weekly newsletters and recipes on their websites highlighting unusual produce that was harvested each week. Maintaining the CSA website is a good way to involve your kids and/or core CSA members in the CSA.

Send a Regular Newsletter

CSAs have different models for how they let their customers know what they are growing. In Mountain West CSA, there are two main models. In one, producers highlight the exciting adventure of getting a CSA share: customers don't always know what they will get, and customers often get foods they are not familiar with. Nationally, CSA members often say that getting a box of produce each week is like a Christmas gift because they are always surprised.

So CSAs often email a note to shareholders, usually a few days in advance of the weekly pick-up. The newsletter serves two primary purposes: 1) informs members about what to expect, 2) reminds members to pick up their share.

But there are many secondary benefits. The newsletter is an excellent platform to share detailed information about the characteristics of products as well as how to store and prepare them. Recipes are a natural item to include, particularly for new vegetables with unknown cooking properties, as well as for common

vegetables in need of a fresh use. Farm activities, planned events, planning/harvest dates, expected yields, or even the risks associated with farming are also engaging. Consider personal stories from the growers or members associated with the farm. Printed information could be distributed with the box of produce to draw shareholder's attention to something notable. In short, communications from the farm help maintain a level of excitement and feeling of community awareness while decreasing frustration.

All too often newsletter plans go awry as a result of over ambition – so keep newsletter goals realistic and simple. A regular newsletter – perhaps something separate from the weekly reminder – can provide the platform you need to reach shareholders while not burdening them with “noise” that fills space. Develop a standard format that simplifies this job and ensures you communicate key information with shareholders. Consider the following as a basic outline to develop a newsletter on:

1. Important farm news (farmers note/letter)
2. Looking Forward
 - a. Harvest dates and expected yields
 - b. Possible risks (weather/drought/insects)
3. Looking Backward
 - a. Yields/delivered goods
 - b. Issues/lessons learned
4. Community Outreach
 - a. Consumer question(s) answered
 - b. Local crafter/supplier highlight (i.e., soap maker)
 - c. One or two recipes – focus on less common farm products in current or near-term harvest (i.e., beets, turnips, kale)

The four items listed above—when delivered in a regular newsletter (print or email)—will help provide a solid communication platform that will enable you to build a solid marketing platform. As the CSA grows, the newsletter can grow—for example, expanding content to include recipes, profiles of employees or customers, features of vegetables, and so on.

Maintaining the newsletter is a good way to involve your children and/or core CSA members in the CSA. To ensure professionalism, have someone proofread each newsletter, checking for readability, grammar, and spelling issues. Newsletter templates are readily available on the Internet: identify a template that is easy to read and meets your needs, and utilize that template.

Have a Regular Blog

Apart from the regular weekly newsletter, either online and/or on paper, some CSAs also keep a running commentary on the website, blog, and/or Facebook and other social media pages to keep members informed about what is happening at the farm on a daily or regular basis (this is also a good way to steer visitors to a website). The following quotes sum it up pretty nicely:

It's just as important to do the blog as it is to irrigate – like irrigating the customer.

We do a recipe every week, and I let them know what's coming in their share and what's planned for the next week's share, although I make them well aware of the fact that that can change. I also put in a couple of paragraphs of what's going on at the farm, what we're planting, or news about last week's hailstorm or the wind, little things so they feel like they're connected to the farm a little bit.

Offer On-Farm Activities

CSA producers usually host a few on-farm activities throughout their growing season. These are times when CSA members can come and visit the farm and talk with producers. These events could be harvest dinners, weeding days, farm tours, kids' days, and cooking lessons. Each farm does this in its own way, so figure out what works best for you, but most successful CSAs do have at least one event each year. Given the distance between CSAs and customers in the Mountain West, it is probably not realistic to shoot for more than one such event a year except under special or unusual circumstances.

Create A CSA Manual

Many CSAs email their members (or provide a hardcopy) a simple guide or manual that details what to expect from the CSA in terms of logistics, rules, and what they will receive each week.

We have a member manual that has all the general preservation tips that get you set up for success.

It's an adventure to do the CSA, you know. So you've got to be willing to try new things. So I think it just kind of depends on the person. Some people are adventurous people.

Customer Surveys

One way to collect customer feedback is by conducting surveys before and after the growing season, and even possibly during the season. Before the season, producers ask questions about what type of produce or extra items customers would like to receive as part of their shares. After the season, producers ask questions to gauge customer satisfaction with the CSA and to obtain suggestions about what and how much to grow for the following season, as well as general suggestions for improving the customer experience. These surveys do not need to be long or detailed, but it is useful to assess your customers' general feelings about your CSA. You can easily collect information when people sign up for the CSA and when they collect their final share of the year.

TAKEAWAYS



- Take every chance you have to get to know your customers and their wants and needs.
- Have a plan for how you will establish a unique niche for your CSA in the marketplace.
- Have a set of clear messages you want to communicate to customers, and do so clearly and often.
- Review techniques used in managing your farm to keep in touch with the needs and preferences of members. An ever-increasing selection of local, sustainably produced farm products are competing for CSA customers. So always be looking for ideas to apply to your own operation.

CHAPTER 6B.

Finding and Communicating with Customers

Conflict Management Skills for CSAs

Lucy Pawley

Conflict is unfortunately a part of our everyday life. From a neighbor's barking dog to a lawsuit over the division of a relative's estate, the level of conflict varies from situation to situation. Unmanaged conflict can be detrimental to an individual and an organization's productivity, efficiency, and reputation and, in the case of a business like a CSA, ultimately its profitability. Effective businesses develop a plan to address situations before they become conflicts and strategies for minimizing the negative effects of conflict after they happen. And core to their strategies are some clear thinking about communicating about conflict. As a CSA producer, you may face a variety of situations that involve conflict. Here are some strategies and techniques to consider as you work and communicate with members, but also with your CSA's employees and partners.

COMMON CAUSES OF CONFLICT IN CSAS

In researching CSAs across the country and talking with individuals familiar with CSAs in Wyoming, the most common conflict that occurs is miscommunication between producers and CSA members. Perhaps members are expecting a wider variety of produce than what is contained in the weekly share during the first weeks of the CSA's season, typically spring or early summer. Maybe the customer doesn't understand the value of the different vegetables and feels like the weekly delivery isn't worth the price he or she is paying. In a few isolated instances, CSA members may be concerned that higher quality and more varied produce is being saved to sell at the local farmers' market. In contrast, perhaps a CSA sold more shares than what it could adequately handle in a typical week, or a start-up CSA began selling shares before it was truly ready, i.e., it hadn't "worked out all the kinks" before going public. A common theme was the issue of crop failure. When buying a CSA share, members agree to the terms of a CSA, but when a crop failure happens, they might forget about that crucial detail and be unhappy with the lack of produce. Furthermore, when volunteers come out to complete work days, they may have different expectations of their job duties, and resulting personality clashes may lead to conflict. Larger CSAs may face conflicts with employees regarding hours and pay, job responsibilities, and work ethics. Agricultural producers, in general, may find themselves involved in disputes regarding shared fences, road maintenance, water allocation, payment for services, agricultural credit, and more.

RESPONSES TO CONFLICT

Everyone has their own style in responding to conflict, and each style has advantages and disadvantages. Concerning the latter, sometimes a conflict can be exacerbated by the styles of the individuals involved. We often expect the other person to respond to conflict in the way that we do, and when they don't, we feel even more frustrated, ignored, disrespected, etc. According to the Mediation and Facilitation Training Manual (Mennonite Conciliation Service, 2000) the five basic styles of conflict response are avoiders, accommodators, compromisers, forcers, and collaborators.

Avoiders tend to view conflict as hopeless. They accept disagreement and delay or avoid a response. Accommodators consider conflict to be disastrous; therefore, they tend to sacrifice their own interests to keep peace at any cost. Compromisers believe that conflict provides an opportunity to meet halfway, and they look to split the difference. Forcers see conflict as a question of who is right and who is wrong and are most concerned with controlling the outcome and discouraging disagreement. Collaborators view conflict as a natural part of life and recognize the tensions between relationships and differences in viewpoint; as a result, they try to find a solution that meets as many concerns as possible.

Each conflict strategy has advantages and disadvantages:

- For the avoiders, if their issue is trivial, time for decision-making is short and they have little authority, then this strategy can be effective. However, if the avoider cares about both the relationship and the outcome and they use this style for most issues, avoiding conflict may create more problems than it solves.
- Accommodating can be an effective strategy if you really don't care about the issue. Like with the avoiders, if this is your primary style for every negotiation you may be missing an opportunity to strengthen relationships.
- Compromising is appropriate when cooperation is important, but there isn't a lot of time and resources are limited. Compromising might also be effective if any solution is better than a deadlock. However, compromising is inappropriate if it's important that the parties develop a creative solution or if one side can't live with the outcome.
- Forcing is appropriate if there's an emergency at hand or you are sure you are right and being right is more important than maintaining the relationship. Forcing obviously has drawbacks.
- If cooperation and collaboration haven't been attempted and you use this style for most issues, you might find that others avoid trying to solve problems or negotiate with you. Collaborating, which many consider to be the gold standard of conflict styles, is appropriate when both sides view the relationship and the issue as equally important and when there is a reasonable chance to meet everyone's concerns. However, even collaboration has its drawbacks. If time is short and the issues are unimportant, people may find collaboration to be cumbersome and feel overloaded with the process.

Insight into your own conflict style can be an important step in managing conflict. If you tend to be a forcer or even an avoider, consider how this strategy may affect those with whom you interact regularly. Compromising or accommodating each time may mean that you are missing the chance to use creative decision-making to find a long-term solution that will transform the situation. There are many tools available to help you determine your conflict style. Information for this section is adapted from the Peace and Justice Support Network of Mennonite Church USA's "Adult Personal Conflict Style Inventory," which can be accessed at <http://www.peace.mennolink.org/resources/conflictstyle/>.

TIPS FOR MANAGING CONFLICT

The first and most effective tip for managing conflict is clear communication. According to Roger Fisher and William Ury in *Getting to Yes* (1981), when you are involved in a conflict or a tough negotiation, “[People] see the world from their own personal vantage point, and they frequently confuse their perceptions with reality. Routinely, they fail to interpret what you say in the way you intend and do not mean what you understand them to say.” We listen to others, but we filter that information through our own viewpoints and frequently misunderstand what they mean to tell us. With your CSA, you may feel that you’ve explained to your members what each share will look like, how much it will contain, and when different produce will be available. However, new members or new-to-the-community members may have visions of canning tomatoes in June and enjoying fresh corn on the cob long into the fall. While you are providing them with the information, they are still filtering it through their own perspective. You’ve read in other chapters the importance of good communication with your customers. It might take several weeks or even a full season of weekly emails, newsletters, a field day or two, and other sources of education for some of the participants to fully understand how your CSA operates. Breaking the cycle of miscommunication can go a long ways toward resolving conflict and preventing future disputes from occurring.

Another important tool in preventing miscommunication is to actively and intently listen. Listening is always important, but in tense situations or conflicts, it becomes even more important. To listen actively means to pay attention to not only the other speaker’s words but also to his or her emotions. Active listeners ask questions for clarification and demonstrate through body language that they are paying attention. According to Fisher and Ury, active listeners pay close attention to what is being said, ask others to spell out carefully and clearly what they want, and request that ideas be repeated if there is any ambiguity or uncertainty in what is being said. Remember that understanding what the other person is saying is not the same as agreeing with them.

Pay attention to your body language and communication blockers. You are probably familiar with the non-verbal language that inhibits conversation: lack of eye contact, arms crossed, multi-tasking or fidgeting, yawning, or other distracting gestures that indicate that you aren’t paying attention. The *Mediation and Facilitation Training Manual* points out that there are also verbal communication blockers that prevent listening and disempower the other speaker. Examples of verbal blockers include advising the other party “Why don’t you just....” or judging the other speaker and negatively evaluating his or her program. Examples of judging include “Don’t get so uptight about it” or “That’s not a very constructive attitude.” There may be situations when these kinds of responses are helpful, but if you are trying to demonstrate that you are listening, it’s important to avoid such responses.

Active listeners also use tools such as paraphrasing to demonstrate that they are listening and paying attention. Paraphrasing is reflecting in your own words what you heard the other person say. This strategy helps demonstrate that you want to understand.

INTEREST-BASED NEGOTIATION

Integrated or interest-based negotiation can be another effective tool for managing conflict. Popularized in Fisher and Ury’s *Getting to Yes* text, interest-based negotiation can be another tool in helping disputing parties resolve conflict. The process begins with separating the people from the problem. In most conflicts, the personalities and the issues become intermixed, and we frequently allow our perceptions about the other side to color how we see the conflict. Next, we focus on interests and not positions.

Positions are the stances we take (“There will be no pets in this house!”), while interests are our concerns (allergies, costs, responsibilities, etc.). If we are able to identify not only our own interests but also those of the other parties, we can focus on our shared interests and find ways to satisfy us both. Next, we try to generate a variety of options and then agree on objective criteria that can be used to evaluate each option. Finally, as we decide upon an agreement, we try to ensure that the agreement is solid by taking turns playing “devil’s advocate” and asking “what if” questions to ensure that we are developing something that will last into the future.

TOUGH CONVERSATIONS

As you operate your CSA, you may have occasion to have a “tough” conversation with a CSA member. Whether it’s a disagreement about the share size or a crop failure that cuts short the CSA season, preparing for a tough conversation is important in managing conflict. The *Mediation and Facilitation Training Manual* lays out a few ground rules for useful discussions that can be very effective. Think together about what you’d like to get out of your discussions. Listen carefully to what others are saying, especially if their ideas are different from yours. When disagreement occurs, keep talking. Search for common concerns. Don’t build your own argument in your head while the other person is talking. Be open to changing your mind, possibly about the issue being discussed but perhaps even about the other person bringing it up. Speak your mind freely, but give others equal time to do that and be civil, no matter what.

CONFLICT OUTBURSTS

Sometimes you may find yourself as an unwitting partner in a conflict situation. At your scheduled day and time for CSA pick-ups, you are approached by a member who is unhappy with his or her produce and launches in to you about the quality of the kale. Let’s refer to this type of a situation as a “conflict outburst.” In his book *Getting Past NO* (1991), William Ury offers several strategies for working through conflict outbursts. The first is to figure out: What is the issue? To do this, he advises, “Go to the balcony.” The balcony is a metaphor to describe the emotional disconnect you should have instead of reacting to the conflict. Instead of firing back or reacting emotionally, take a minute to look at the situation to try to figure out what the real issue is. Is this conversation really about you and the CSA? Is it a financial issue? Something else? Second, what does the other person want from you? Does he or she simply need someone to listen? Does the person want you to change the situation? Next, you have to decide what you can provide them. In some cases, they’ve agreed to the terms of the CSA and you’ve educated them about how the process works. Is there really anything else that you can do? If you aren’t a good empathetic listener, is there someone else in the CSA they can visit with? While you do not have to negotiate every conversation, finding a way to diffuse a conflict outburst may help prevent a bigger conflict down the road.

EXAMPLES OF A CONFLICT RESOLUTION STATEMENT

In researching other CSAs around the country, it has been difficult to find any conflict resolution statements or member guidelines pertaining specifically to the resolution of dispute. This example from Chinook Farms in Washington (<http://www.chinookfarms.com/index.html>) provides a good example of addressing a crop failure issue proactively. Under the “Join CSA” link at the top of the main page is the following section under “The Guarantee”:

If for any reason we experience a major crop failure, we will refund your money (on a pro rata basis) or you may choose to apply the credit to the 2013 season. It is our mission to provide a fair volume of

healthy, organic produce for a fair price. By joining a farm-share Program, you not only support a local farm, but as a member, you also accept the seasonal variability that the farmers endure. Please keep in mind that a wet and cold spring usually means a slow start to the season, and your June shares may reflect this. However, with August/Sept comes an overwhelming abundance and diversity of veggies, and your boxes will reveal this bounty!

OTHER METHODS FOR RESOLVING CONFLICTS

You may find yourself in a situation where you've tried to clear up miscommunication and worked together to negotiate, but for a variety of reasons, the conflict still exists. At this point, you might consider bringing in a neutral third-party to help both sides have a civil, constructive conversation and try to find a mutually agreed upon solution. A mediator or a facilitator can help the parties overcome differing conflict styles, communication difficulties, or an inability to see each other's perspective and help them find common ground and develop an agreement that meets everyone's needs. More information about agricultural mediation in Wyoming can be found on the Wyoming Agriculture and Natural Resource Mediation Program's website at <http://wyagric.state.wy.us/divisions/nrp/mediation-program>. The program offers a process to assist Wyoming citizens in resolving disputes in a way that is voluntary, confidential, low-cost, and time-saving. Call 307-777-8788 or toll-free 888-996-9278, or email lucy.pauley@wyo.gov.

TAKEAWAYS



- TAKEAWAYS
- Don't be afraid to address conflict as it occurs. Managing it early can help prevent bigger problems later on.
- Focus on clear communication, active listening, and interest-based negotiation techniques to prevent conflict from having an adverse effect on your operation.
- Have everything in place to help ensure that you get off to a good start, and then work hard to hold up your end of the deal each and every season.
- Have a process in place to address customer complaints and conflicts, and make sure that your CSA members understand the process.

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CHAPTER 7.

Distribution

Eric Arnould

We deliver, and then the hosts manage it, and typically the better they set it up from day one, the better the members kind of follow the patterns. When you're dealing with people, it's always interesting how things work, but people pick-up usually on a three-hour window, so we may deliver an hour before people start picking up.

We also allowed people a couple different pick-up times. So on Wednesday afternoons the people (who) wanted a mid-week pick-up would come to the cooking school... and I'd sit there for a couple hours in her parking lot and hand out CSA shares and chat with members. And then on [Fridays and] Saturdays they could come to the farmers' market[s] and pick-up.

Distribution is one of the trickiest elements for CSA in the low-population, rural Mountain West region. In areas of higher density, the standard approach to distributing CSA produce is to invite shareholders to visit the farm once a week during the growing season to pick up their share in a bag or reusable box or basket. The point of this approach is to familiarize shareholders with the farm operation, provide an opportunity for shareholders to meet you and see for themselves how you grow quality produce, and, above all, minimize transport costs that cut into your bottom line. Minimizing costs should be central to your distribution strategy.

CSAs in the Mountain West have adopted a number of strategies for distributing produce in addition to the conventional weekly on-farm pick-up approach. One technique is a supervised drop-off. For example, some CSAs cart shares to farmers' markets they frequent where shareholders can pick-up shares. Others make use of supportive local food cooperatives that allow the CSA to store boxes on their premises for shareholder pick-up. One CSA found a disused preschool in town that they were able to use as a pick-up point. This minimized on-farm chaos associated with a day-long parade of shareholders.

Unsupervised drop-off is another approach – shares are left at a predetermined location for pick-up at shareholders' convenience. The advantage to you is that you are not waiting for shareholders to come by for pick up. The disadvantage is you aren't able to police pick-up, particularly if you offer some special or extra items.

A meat CSA is a little bit special because this tends to involve high-value, low-frequency delivery. In this case, some options are to offer on-farm pick-up just like produce CSA, obtain a cooperative agreement with a produce CSA to handle pick-up and delivery of the meat portion of the overall share, or offer delivery at flat rates within concentric mileage zones. This is similar to how a logistics company like UPS might handle its charges. Minimally, delivery prices must cover costs (labor, fuel plus depreciation of your

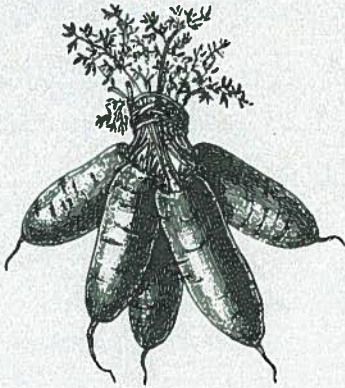
vehicle, etc.). A guide for the current mileage rate can be found from the U.S. General Services Administration at [gsa.gov/mileage](https://www.gsa.gov/mileage), or calculate your own rate.

Because of the short growing season in the Mountain West, one twist on distribution to consider is to consolidate end-of-season pick-ups. In other words, once late September–early October rolls around, consider harvesting everything left in the fields and inviting shareholders to pick up an entire month’s share at one time to avoid losses from frost and snow. This especially works well for items that don’t perish quickly.

We found that quite a few CSA ventures in the Mountain West also frequent farmers’ markets, and some even distribute to grocery stores. While this may be necessary to assure as much sales as possible, the extra costs associated with packing and transport to the former and the low prices offered by the latter may reduce the attractiveness of these distribution options.

I would drop off all the boxes there, and anything that needed to be refrigerated were in coolers and refrigerators and such. And people came in and took their boxes. Um that was a little tricky because there was no one there to oversee things, and we did have issues of people kind of rummaging through boxes and taking what they wanted as opposed to just taking their box.

TAKEAWAYS



- Key to your strategy is minimizing costs.
- Prices must cover fuel and other vehicle expenses like tires, maintenance, depreciation, packaging materials, labor, etc.
- Consider distributing from central points like a farmers’ market or a food cooperative.
- Consider monthly rather than weekly distributions for items that are easy to store and don’t perish quickly (like frozen meat).



PART III. PHYSICAL OPERATIONS

CHAPTER 8.

Growing Produce for Your CSA in High-Altitude Conditions

Karen Panter and Katherine Strand

So we'll prep the beds, water (them), get the first crop of weeds up, and then we're figuring out if it's better to rotary hoe, which goes beneath the surface and blasts some of the roots, or we flame them. But we get that first crop of weeds out of the way and plant right after that, so the vegetables get a head start on the weeds.

Labor and weeds are like our biggest issue. We need labor to get after the weeds.

We put up a 32x70 high tunnel in the spring of 2009... I think it made our CSA a little better because even though it didn't increase the number of shares, I am able to give them a much wider variety (of produce) over a much longer season now.

Growing produce in the Mountain West presents a number of challenges. The growing season is short (unless season-extending systems are used), the weather is unpredictable, and inputs (particularly organic inputs) may be difficult to find locally. Labor shortages and water quality also present challenges to some CSAs in Wyoming.

Starting small—perhaps with a garden to meet your own needs—will help you discover if growing produce is the idea you'd like to explore for a larger income. Once you decide to move from hobby garden to growing as a business, move slowly. Be thoughtful. Growth must come from your ability to supply produce. Precisely how you increase production and what you choose to produce is something that we must, unfortunately, pass over. In this manual we focus on business operations that may allow your business to successfully grow. The question that will drive you is: “How can I deliver on the promises and expectations for my CSA?”

INFRASTRUCTURE AND INPUTS – WHAT IS NEEDED?

Land. Large areas of land are not required for a CSA operation, but any property for season-extension purposes should be relatively flat and easily accessible. Soil will need to be tested before planting any crop because most Wyoming soils are heavy in texture (high clay content), high in pH (alkaline), and sometimes high in salts and/or sodium (saline and/or sodic). Growing directly in the ground may be possible but usually only with the addition of organic amendments such as good-quality compost, sphagnum peat moss, and/or other plant-derived matter (quality compost can also be made with a mixture of plant- and animal-derived matter [manure] if correct procedures are followed).

Water. The next and most important component of any growing operation is the water supply. Not only is consistent quantity required but high quality is also crucial as the majority of horticultural crops do not tolerate poor quality water (high salts, high sodium, etc.). Most vegetables, fruits, and many flowering plants require consistent irrigation and an evenly-distributed water supply. Also, most of these crops are sensitive to high salts, and often our groundwater is quite salty. Surface water sources may not be much better. There may be other components dissolved in the water. These components can include carbonates, bicarbonates, and sodium to name a few. It is possible to clean up poor quality water using filtration, ozone, reverse osmosis, or other techniques, all of which will require additional capital. A water test is crucial to determine what problems there are and to forestall any production problems during the growing season.

Electricity. If growers are using hot beds or have full-fledged greenhouses, electricity is a necessity. It is needed to run heating coils in the bottom of hot beds. In greenhouses, electricity runs most of the heating systems as well as water pumps and fans for cooling (natural gas is also used to successfully heat greenhouses, and some CSA operators use a combination of wood stoves/furnaces and fans). Any type of lighting will require electricity as will any support buildings for the operation. Some types of irrigation systems use pumps that require electricity. Also, solenoid valves used to turn greenhouse irrigation and mist systems on and off will require electric inputs. Lastly, some type of refrigeration may be necessary to cool crops after bringing them in from the field, high tunnels, or greenhouse. Electricity will be needed for any refrigeration equipment.

Fuel. Not only do farm vehicles need fuel but greenhouse heating systems usually run on either natural gas or propane.

Labor. This should be a given but is often the last thing producers think about. Specialty crops require daily attention and do not take weekends off. Key times of the year when labor supplies are crucial include seeding time in the spring, transplanting time out in the field or high tunnels, weeding, harvesting, and marketing. Growing in a greenhouse can be even more intense because production can occur year-round; therefore, a consistent labor supply is even more important. And don't forget about post-harvest tasks. Once produce is gathered, it must be graded and sorted, washed and dried, packaged, kept cool until delivery, and delivered – or arrangements must be made for pick-up by consumers.

GREENHOUSES, HOOP HOUSES, AND OTHER SEASON EXTENDERS

The simplest of the season extenders are hotbeds and cold frames. The difference between the two is that hotbeds have heating coils in the bottom while cold frames do not. Each is basically a wooden box with a cover that light can penetrate and that can be propped open during warm sunny days. There is typically no bottom as the frames are set directly on the ground. Hotbeds have electric coils in the bottom to keep the bed warm during cool spring nights when it is still too early to plant in the field. See the University of Wyoming Extension bulletin, B-1151, *Gardening: Hotbeds and Cold Frames*, available at www.wyomingextension.org/agpubs/pubs/B1151.pdf.

High Tunnels. High tunnels are increasing in popularity and use because they are relatively inexpensive to construct and typically don't need any inputs other than water and labor (like greenhouses, some high tunnels do have a heat source). High tunnels are generally temporary structures – the original idea was to have an easily transported structure that could be moved from place to place in the field. Nowadays, they are still temporary, but most growers don't move them around. They normally do not have concrete anchoring, but posts are sunk two to three feet in the ground to keep the structures from blowing down – and even away – in the high winds of the Mountain West. High tunnel frames can be anything from bent PVC pipe to aluminum to galvanized steel. They are covered with a layer of polyethylene greenhouse plastic

or a woven material that allows light to penetrate. End walls may be solid, such as wood or double-layer greenhouse polycarbonate, but may also be plastic or woven material. However, work at the University of Wyoming suggests that solid end walls are critical in keeping these structures stable. Polyethylene plastic will usually last two years in a harsh climate while woven material may last a year or two longer.

There is usually no environmental control in a high tunnel. Typically, the sides are rolled up to allow for ventilation during warm days and rolled back down to keep heat in at night, especially during spring and fall. Temperatures in these seasons are normally quite variable and are the times when opening the tunnels in the morning is important so they don't get too hot during the day and closing them in the later afternoon/evening to trap warm air inside during the night. Growing is typically done directly in the ground, so the previous discussions about soil and water quality/testing are crucial.

When dealing with high tunnel production, farmers are encouraged to keep a few important things in mind. First, it is recommended that you arrange your high tunnel so that the two ends face east and west. This maximizes the amount of south-facing exposure to the sun and, subsequently, the amount of heat and light, particularly during spring and fall, when the sun is at a lower angle. Second, make sure that you have high quality water with a pH level between 5 and 7 and a salt level of less than 0.5 percent. Use drip tape or PVC piping with holes for efficient watering. Avoid overhead watering in the high tunnel because water sitting on the leafy portions of plants can promote bacterial and fungal growth. Finally, maximize air circulation in your high tunnel by adding rollup sides, ventilation panels, and fans (both intake and exhaust are ideal). Without air circulation, high tunnels can get very hot and humid. These are the perfect conditions for the growth of bacteria, fungus, and problem insects.

Numerous resources on high tunnel construction and operation are available, including an article in the magazine *Barnyards & Backyards* on how to build a hoop house. www.uwyo.edu/barnbackyard/files/documents/magazine/2010/winter/hoophouse-winter-2010-bb.pdf. www.wyomingextension.org/agpubs/pubs/B1234.pdf

There is a YouTube video focusing on a cost-benefit study at UW to determine the effects of different methods used in hoop house construction. www.youtube.com/watch?v=qQ65iGsFdpo

Greenhouses. Greenhouses are controlled-environment structures, built to grow in year-round. They require inputs of electricity, fuel, water, and labor (and sometimes other inputs such as natural gas/wood for heat) on a consistent basis. They are the most expensive of the season-extension tools we have to build and operate, but they are also the most versatile. They are used worldwide to grow herbaceous ornamental crops, fresh cut flowers, vegetables, and a few fruits (mostly strawberries). The UW Extension bulletin *Greenhouse Structures*, B-1147, is available at www.wyomingextension.org/agpubs/pubs/B1147.pdf.

Specialty Crop Reimbursement

The Wyoming Department of Agriculture offers several programs for specialty crop producers, including those using some type of season-extension technology. For further information go to <http://wyagric.state.wy.us/component/content/article/34-agnews/178-specialty-crop-grant-information>, and click on Producer High Tunnel/Season Extension Grant Application.

This program is available to private-sector, Wyoming-based agricultural producers, as defined by the USDA. Producers applying must be able to demonstrate that they are able to capitalize on methods to enhance production of specialty crops using season-extension techniques. Applicants must also have in hand a recommendation from a local entity or individual stating that they are indeed involved in agricultural crop production.

WHAT TO DO...OR NOT

Do have soil and water tested at least annually. These tests are important for overall crop health and highest yield. Irrigation water can change during the year, whether from a well or surface supply. And knowing the fertility levels in the soil or growing medium allows the grower to adjust fertilization and supply only the difference between what the soil or medium contains and the levels the plants need.

Don't start plants too early. When seeds are sown too soon in the season, they may become weak and leggy, especially if not given enough light. Alternatively, they may get too big and may become cumbersome and difficult to care for. The larger they are, the more water, fertilizer, and space they need, all of which increase requirements for labor and other inputs. It is possible to hold plants, especially in a greenhouse or cold frame, but this takes some level of expertise and is not easily accomplished.

Don't start plants too late. If seeds are sown too late, plants will not have time to develop large enough root systems to support the rest of the plant. Sometimes their growth can be speeded up by using warmer temperatures, but this often leads to other problems such as disease susceptibility and higher irrigation needs. If transplants are not large enough by the time they are needed in the field or high tunnel, their growth will be delayed and yields may be lower and also later than expected.

Don't over-water. Irrigating too much or too often quickly becomes problematic, especially if the growing medium or soil is a heavy one that does not drain well (such as clay). Any number of root-rotting pathogens can infect weakened plants, and the grower may lose the crop before it even has a chance to mature. Symptoms of over-watering include plants that wilt but do not recover after watering, yellowing lower foliage, and premature leaf drop. These symptoms frequently mimic those of under-watering.

Watering is by far the most important facet of horticultural crop production so make sure the person at the end of the hose or who is in charge of the automatic system is well trained and reliable. One of the best ways to tell if a plant is healthy, especially if it's in a pot of some sort, is to take it out of the pot and check the root system. If it is white and smells fresh and earthy, it is probably healthy. But if the roots are turning brown and smell like something is rotting, they are not healthy, and over-watering may be the culprit.

Don't under-water. Under-watering is also damaging, and the symptoms can look the same. Plants will wilt and may not recover. Leaves will turn yellow and then brown from the outside in. Foliage may drop prematurely leading to lower yields. If the plant is in a pot, take it out and check the root system to see if it's white and healthy.

Don't over-fertilize. Fertilizers are made of salts so each time you add a fertilizer (even organics) you are adding salt. Too many salts will burn the tips of roots, killing them along with some of the top of the plant. Most crops prefer consistent and moderate levels of fertilizer, especially during flowering and fruit set. Symptoms of over-fertilizing include wilting of the upper part of the plant that does not recover after watering, yellowing and browning foliage, and leaf and flower drop.

Don't under-fertilize. Too little fertilizer and plants will be stunted and will not produce well. Symptoms of under-fertilizing vary with each particular nutrient. It is, therefore, important for growers to know their plants and to know how much of each nutrient each type of plant needs. By the time you see deficiency symptoms on a plant, it is too late to correct and you have lost production.

Do give adequate light. Plants will become leggy from stretching toward any available light. They will usually be weak and often are chlorotic or light green in color. Make sure adequate light is available for

all plants, especially young seedlings. It is far easier to block light if too much is available than it is to add supplemental light.

Don't use poor growing medium/soil. Problems with poor substrates are myriad and can result in yield losses. A healthy root system depends on a good growing medium with proper air-holding and water-holding capacities. Native field soils are not recommended for starting seeds or using as substrates in any sort of container. They are usually heavy and full of weed seeds and fungal and bacterial pathogens. Go with the best quality pre-mixed bagged medium you can afford. The worst component of any production system to skimp on is the growing medium.

GROWING PRODUCE IN THE MOUNTAIN WEST

Season. A typical production season for most CSA farmers begins in January or February with the purchase of seeds. Seeds for organic production and heirloom varieties tend to sell out quickly; thus, most CSAs recommend purchasing them as early as possible – the previous fall if at all possible. Most CSAs begin planting starts in February or March and continue until July or even later. They move their starts into the fields and high tunnels beginning in April with salad greens, sometimes even earlier especially in high tunnels. Crops are typically ready for the first CSA delivery in June and generally are delivered each week until the end of October. In Wyoming, CSA crops are grown on owned, leased, rented, or borrowed land and can range in size from one to 12 acres of cultivated land.

High tunnels. Due to the short growing season and unpredictable weather in Wyoming, most CSA growers suggest that new farmers purchase a high tunnel, also known as a hoop house. As discussed earlier, these structures can be permanent or moveable and can extend the season by keeping crops protected, especially during spring and fall. These structures vary widely in construction, cost, and size. One local CSA farmer recommends that beginners should buy the largest structure they can afford because this allows for future growth. High tunnels can be costly (\$2 to \$15 per square foot); thus, many Wyoming CSA farmers apply for reimbursement through programs like Wyoming Department of Agriculture's Specialty Crop Grant Program and through the USDA's Natural Resources Conservation Service.

Tunnel construction. CSA farmers also recommend using materials around your house or farm to construct your own high tunnel structures for crop protection. CSAs in Wyoming use cattle panels, old tent poles, and a variety of other materials to protect their crops. All you need is a stable structure to fasten plastic on to cover the crop. Farmers also convert porches, unused rooms, and barns into growing areas for plant starters. Hail netting, row covers, and landscape fabric also provide protection from the elements (and insects).

Keep in mind. When dealing with high tunnel production, farmers need to keep a few important things in mind. First, it is recommended that you arrange your tunnel so that the longest sides are facing east and west. This maximizes the amount of heat and light (southern sun exposure) to your greenhouse. Second, make sure that you have high quality water with a pH level from 5 to 7 and a salt level of less than 0.5 percent or 3 dS m⁻¹. Use drip tape or PVC piping with holes to water. Avoid overhead watering in greenhouses because water sitting on the leafy portions of plants can promote bacterial and fungal growth. Finally, maximize air circulation in your greenhouse by adding roll-up sides and ventilation panels (and perhaps fans). Without air circulation, high tunnels can get very hot and humid. These are the perfect conditions for the growth of bacteria, fungi, and problem insects.

Other equipment. In addition to high tunnels, CSA farms require basic equipment like hand tools, rototillers, seeders, and tractors. Most CSA farmers in Wyoming move crops between locations in a field

each year to ensure that no single crop is grown in the same area two years in a row. This is especially important when considering deep-rooted and shallow-rooted crops. Root crops can follow a crop like lettuce because their roots draw nutrition at different levels in the soil. Thus the lettuce plant draws nutrition near the surface, while the root crop utilizes soil nutrients at a greater depth.

Cover crops. Some CSAs in Wyoming include cover crops in their rotations to protect soil from erosion and to increase soil fertility. Cover crops such as peas, alfalfa, clover, Sudan grass, and buckwheat can be grown and plowed under as “green manure” to improve soil fertility, particularly nitrogen content.

Soil amendments. Wyoming CSA farmers can use a wide variety of soil amendments to improve the fertility of their soils. Among them are bone meal, rock phosphate, kelp, fish emulsions, and compost tea. These products are either tilled into the soil or applied through water lines (be careful of clogging drip systems, though). Most of these soil amendments are organic and can be expensive. Farmers in the Mountain West must order them through companies like Peaceful Valley Farm Supply in California and Planet Natural in Montana, which means freight costs must be considered.

Most local producers consider compost to be the most cost effective and valuable soil amendment available. Some farmers produce their own compost with food scraps and plant remnants. Others purchase compost, which can be difficult to find locally if you need an organic product.

Weed/pest problems. Unfortunately, there is no single solution for weeds, insects, and other pests. Organic farmers usually just pull weeds by hand. However, some farmers utilize vinegar, red plastic, weed barrier, landscape fabric, and straw to manage weed populations. Insecticidal soaps are the weapon of choice for most CSA insect infestations. Some farmers use everything from drowning slugs in beer to capturing earwigs in yogurt cups. Organic farm supply stores offer a wide variety of solutions for insect and pest problems.

Workers. Labor for many CSAs in Wyoming is the main factor limiting growth. Work shares can help farmers supplement labor shortages. In addition to work shares, local CSAs have found other ways to resolve this issue without hiring employees. One option that several CSAs use is interns. Interns are usually university students who offer their labor in exchange for a summer filled with hands-on education in agriculture. Interns are usually paid, and they also receive college credit from their universities. CSA farmers typically provide housing and food for the interns. Unfortunately, many CSAs avoid this option because they either cannot provide housing or they worry about fulfilling the education requirement associated with hiring an intern. The best places to start when investigating this option are horticulture and plant science departments at community colleges and universities, such as the UW Department of Plant Sciences.

WWOOF. CSAs also can look to the World Wide Opportunities on Organic Farms, or WWOOF, program to find additional help. This program connects farmers with people from all over the world through its Internet site (www.woof.org/). Farmers and people interested in working on a farm pay a small fee to join. Farmers advertise their operation on the Internet site, and people offer to work in exchange for room and board. CSAs in Wyoming who utilize this service recommend only accepting people who want to stay for an extended period of time (one month or longer) and people who have some experience in agriculture. This way, producers can spend less time instructing their workers because there is less WWOOF turnover.

One CSA in Colorado recommends contacting local unemployment or workforce offices to see if they have an “apprentice-type” program available. In the case of this CSA in Colorado, the local workforce office paid the wages of two young adults for 10 weeks of labor on the farm. This program was designed

to introduce young adults to various career options, and it also benefited the CSA tremendously.

Finally, a CSA in Wyoming resolved the labor shortage problem by renting out space in its high tunnels. The CSA offers local community members a chunk of fertile soil with water to grow their own crops. In exchange for the space, the community members work for one hour per week on the CSA crops.

Do you need to be certified organic?

No, you do not need to be certified organic to have a CSA, but you do need to communicate to your customers about your growing practices. Most CSA members want produce that is grown organically, but many consumers do not distinguish between official organic certification and the word of the producer that you are following good practices that avoid the use of agricultural chemicals and emphasize natural systems. Most customers will be satisfied if you are growing using organic or biodynamic practices (if you are unfamiliar with biodynamic agriculture, there are many Internet resources that can help), and you are willing and able to talk with them about what those practices are and what they mean for them, for their children, and for rivers, streams, and groundwater in the area, and if you are able to explain why you grow that way and why you are not certified organic.

Certification Information to Consider

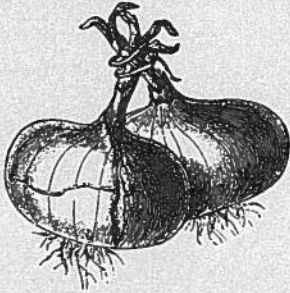
- Organic (USDA or other certifier), and the many other certifications available (kasher, sustainable, predator friendly, etc.)
- Certifiers servicing your area
- Cost of certifications (and value to the end product)

What varieties are appropriate to grow?

The answer: know your customers! This issue comes up most often in terms of heirloom varieties. In some places, customers highly value heirloom varieties, especially tomatoes. However, in other places people find heirloom varieties funny looking and do not want to eat them. Some customers will have a pretty limited appreciation for unusual veggies; others will accept a wider array of produce. You can enlist your more adventurous customers to share their experiences with less adventurous customers through your CSA newsletter. Invite them to tell others about veggies they like and recipes they use. This is a good way to share the educational burden with core CSA members.

There is a tremendous variety of crops that CSAs might grow, but it is beyond the intent of this publication to provide information on growing each of them. However, the table that follows details germination temperatures for various vegetable crops along with other data CSA growers may find helpful. This chart, and other information, is contained in the Colorado State University Extension, Colorado Master Gardener *GardenNotes* #720. This publication and others in the *GardenNotes* series is available at www.cmg.colostate.edu/gardennotes.shtml. Rather than using a calendar to start planting in the spring, it is far better to use soil temperatures as a guide. The climate in the northern Mountain West is too fickle.

TAKEAWAYS



- CSA may require some investment in infrastructure and equipment.
- CSA requires carefully timing the cropping calendar.
- CSA may require investments in some novel inputs like soil amendments and natural weed and insect controls.
- There are creative solutions to labor constraints.

Vegetable Planting Guide

Vegetable	Germination Temperature ¹			Plant Spacing ²	Planting Depth	Days to Germination	Typical Days to Harvest	Age of Transplants (weeks)
	Minimum	Optimum	Maximum					
Cool-Season Crops³								
Beets	40°	80°	90°	4 - 6"	3/4 - 1"	7 - 10 days	60	
Broccoli	40°	80°	90°	18"	1/2"	3 - 10 days	65	5 - 7 ^a
Cabbage	40°	80°	90°	18"	1/2"	3 - 10 days	85	5 - 7 ^a
Carrots	40°	80°	90°	2 - 3"	1/4"	10 - 17 days	70	
Cauliflower	40°	80°	90°	18"	1/2"	3 - 10 days	65	5 - 7 ^a
Kohlrabi	40°	80°	90°	7 - 9"	1/2"	3 - 10 days	50	
Leeks	40°	80°	90°	4 - 6"	1/4"	7 - 12 days	120	
Lettuce (leaf types)	35°	70°	70°	7 - 9"	1/4"	4 - 10 days	60	
Onion, green	35°	80°	90°	2 - 3"	1/4"	7 - 12 days	60	
Onions, dry (seed)	35°	80°	90°	4 - 6"	1/4"	7 - 12 days	110	
Onions, dry (sets)				4 - 6"	1 - 2"			
Parsnips	35°	70°	90°	5 - 6"	1/2"	15 - 25 days	70	
Peas	40°	70°	80°	4 - 6" or 3" x 8"	1"	6 - 15 days	65	
Potatoes	45°			12 - 15"	4 - 6"		125	
Radish	40°	80°	90°	2 - 3"	1/2"	3 - 10 days	30	
Spinach	40°	70°	70°	4 - 6"	1/2"	6 - 14 days	40	
Swiss Chard	40°	85°	95°	7 - 9"	1"	7 - 10 days	60	
Turnips	40°	80°	100°	4 - 6"	1/2"	3 - 10 days	50	

Warm-Season Crops								
Beans	50°	80°	90°	6" or 4" x 12"	1 - 1-1/2"	6 - 14 days	60	
Cantaloupe	60°	90°	100°	36 - 48"	1 - 1-1/2"	3 - 12 days	85	2 - 3 ^b
Corn	50°	80°	100°	12 x 30" or 9" x 36"	1 - 1-1/2"	5 - 10 days	60 - 90	
Cucumbers	60°	90°	100°	6" trellised or 24 - 36" untrellised	1"	6 - 10 days	55	2 - 3 ^b
Eggplant	60°	80°	90°	18 - 24"	1/4"	7 - 14 days	60	6 - 9 ^c
Pepper	60°	80°	90°	15 - 18"	1/4"	10 - 20 days	70	6 - 8 ^c
Tomato	50°	80°	100°	24" trellised	1/4"	6 - 14 days	65	5 - 7 ^c
Squash, summer	60°	90°	100°	36 - 48"	1 - 1-1/2"	3 - 12 days	50	2 - 3 ^d
Squash, winter	60°	90°	100°	36 - 48"	1 - 1-1/2"	6 - 10 days	100	2 - 3 ^d
Watermelons	60°	90°	100°	36 - 48"	1 - 1-1/2"	3 - 12 days	85	2 - 3 ^d

¹ Germination temperature – Soil temperature is one of the best methods to determine spring planting time. Plant when soils reach minimum temperature measured at 8 a.m., 4 inches deep. Beans are an exception, being measured at 6 inches deep. Optimum temperatures listed in the table are useful for starting seeds indoors. Maximum temperatures are listed in regard to high soil temperatures that may interfere with seed germination in the heat of summer.

² Plant spacing – Spacings given are equal-distance spacing for crops grown in block or close-row style beds. For example, beets, with a spacing of 6 inches, are thinned to 6 inches between plants in all directions. In other words, beets are thinned to 6 inches between beets in the row and 6 inches between rows. The closer spacing listed should be used only on improved soils with 4- to 5-percent organic matter. Close-row or block-style planting works well for raised-bed gardening, with blocks/beds 4 feet wide (any length desired) and 2-foot wide walkways between blocks/beds.

^a Cool-season crops – Cool-season crops prefer cool soil. Lawn clippings and newspapers make excellent mulch for these crops by cooling the soil, preventing weed germination, and conserving water. Apply fresh grass clippings only in thin layers (less than 1/2 inch), and allow it to dry between applications. Thick layers will mat and smell. Do not use clippings from lawns treated with weed killers or other pesticides. Several layers of newspapers covered with grass clippings also work well between rows. Do not use glossy print materials.

^b Transplanted cole crops – Since cole crops (cabbage, cauliflower, broccoli) germinate better in warmer soil, they are typically started from transplants in the spring. Days to harvest are from transplants. In warmer areas, these crops produce the best quality when direct-seeded in mid-summer (early July for lower elevations) for harvest during cooler fall weather. Before planting out, harden off seedlings.

^c Transplanting vine crops – Roots of vine crops (cucumbers, squash, melons) are extremely intolerant of being disturbed, and perform best when grown by direct-seeding rather than by transplants. With the use of black plastic to warm the soil, direct-seeded crops germinate rapidly. If using transplants, select small, young plants, not more than two to three weeks from seeding.

^d Solanaceous crops – Solanaceous plants (tomatoes, peppers, eggplants) are traditionally planted as transplants. In warmer areas, they can also be direct-seeded with minimal delay. Days to harvest are from transplants.

CHAPTER 9.

Good Agricultural Practices (GAP): Safety with Food

Jeff Edwards

Good Agricultural Practices (GAP) are a compilation of guidelines established to protect American consumers from a variety of microbial organisms that have the ability to contaminate the food supply and cause significant illness and death. As a whole, Americans enjoy one of the safest supplies of fresh produce in the world. However, over the last several years, outbreaks of food-borne illness associated with both domestic and imported fresh fruits and vegetables, along with meat, has increased—such as ground beef in 2013; spinach, cantaloupe, ground beef, and poultry in 2012; cantaloupe, ground beef, and lettuce in 2011, lettuce in 2010; beef in 2009; peppers and cantaloupe in 2008; and spinach and tomatoes in 2006. Food safety should be a top concern of all CSA owners and other food producers. The 2011 listeria outbreak in cantaloupe grown by a farm in southeast Colorado, for example, was responsible for about 30 deaths, dozens of hospitalizations, and millions of dollars in lawsuits, which ultimately led to the owners of the farm filing for bankruptcy.

On October 2, 1997, President Clinton introduced a food safety initiative to provide, in part, further assurance that fruits and vegetables consumed by Americans, whether grown domestically or imported from other countries, meet the highest health and safety standards. As part of this initiative, the President directed the Department of Health and Human Services, in partnership with the USDA and in close cooperation with the agricultural community, to issue guidance on GAP, good handling practices (GHP), and good manufacturing practices (GMP) for fruits and vegetables. *The important thing to remember is that “the guide” describing GAP, GHP, and GMP are suggested best practices and not laws.*

“The guide” covers all aspects of production to packing of fresh produce, and the food safety initiative is not limited to the farm. It focuses on all stages of the farm-to-table food chain. For example, the U.S. Food and Drug Administration’s (FDA) Food Code provides advice and information to state and local agencies about safe food handling practices in grocery stores, institutions, restaurants, and other retail establishments.

(Source: ncsu.edu/enterprises/ncfreshproducesafety/good-agricultural-practices-gaps/gaps-info/gaps-history/)

GAP BASICS

By identifying basic principles of microbial food safety within the realm of growing, harvesting, packing, and transporting fresh produce, growers will be better prepared to recognize and address the principal elements known to give rise to microbial food safety concerns. GAP can be defined by eight key points.

1. *Prevention* of microbial contamination of fresh produce is favored over reliance on *corrective actions* once contamination has occurred.
2. To minimize microbial food safety hazards in fresh produce, growers, packers, and shippers should use good agricultural and management practices *in those areas over which they have control*.
3. Fresh produce can become microbiologically contaminated at any point along the farm-to-table food chain. The major source of microbial contamination with fresh produce is associated with *human or animal feces*.
4. Whenever *water* comes in contact with produce, its source and quality dictates the potential for contamination. Minimize the potential of microbial contamination from water used with fresh fruits and vegetables.
5. Practices using *animal manure or municipal biosolid wastes* should be managed closely to minimize the potential for microbial contamination of fresh produce.
6. *Worker hygiene and sanitation* practices during production, harvesting, sorting, packing, and transport play a critical role in minimizing the potential for microbial contamination of fresh produce.
7. Follow *all applicable local, state, and federal laws and regulations*, or corresponding or similar laws, regulations, or standards for operators outside the U.S., for agricultural practices.
8. Accountability at all levels of the agricultural environment (farm, packing facility, distribution center, and transport operation) is important to a successful food safety program.
9. There must be *qualified personnel and effective monitoring* to ensure all elements of the program function correctly and to help track produce back through the distribution channels to the producer.

(Source: Food and Agriculture Organization of the United Nations' "Good Agricultural Practices" website at www.fao.org/prods/gap/)

POTENTIAL BENEFITS OF USING GAP

- Use of GAP should improve the safety and quality of food and other agricultural products.
- It may help reduce the risk of other chemical, microbiological, and physical contamination hazards.
- Adoption of GAP will promote sustainable agriculture and will contribute to meeting national and international environment and social development objectives.

CHALLENGES RELATED TO GAP

- In some cases, GAP implementation and especially recordkeeping and certification will increase production costs. In this respect, lack of harmonization between existing GAP-related schemes and availability of affordable certification systems often leads to increased confusion and certification costs for farmers and exporters.

- GAP standards can be used to serve competing interests of specific stakeholders in food-supply chains by modifying supplier–buyer relations.
- There is a high risk that small-scale farmers will not be able to seize market opportunities unless they are adequately informed, technically prepared, and organized to meet this new challenge with governments and public agencies playing a facilitating role.
- Compliance with GAP standards does not always foster all the environmental and social benefits that are claimed.

Awareness is needed of “win-win” practices that lead to improvements in terms of yield and production efficiencies as well as environment and health and safety of workers. One such approach is Integrated Production and Pest Management (IPPM).

ADDITIONAL GAP RESOURCES

Guidance for Industry: Guide to minimize microbial food safety hazards of fresh-cut fruits and vegetables.

The 1998 FDA document addresses microbial food safety hazards and good agricultural and management practices common to the growing, harvesting, washing, sorting, packing, and transporting of most fruits and vegetables sold to consumers in an unprocessed or minimally processed (raw) form.

There is also an updated version of this publication.

These and other FDA “Food Guidance” documents can be found at <http://www.fda.gov/Food/GuidanceRegulation/GuidanceDocumentsRegulatoryInformation/default.htm>

Food safety begins on the farm, A grower’s guide: Good agricultural practices for fresh fruits and vegetables www.gaps.cornell.edu/Educationalmaterials/Samples/FSBFEngMED.pdf Cornell University’s information- and descriptive picture-filled publication and GAP explanation for growers. (2000)

Additional Food Production Regulation on the forefront

Since 1998, produce growers have had available the “Good Agricultural Practices” issued by FDA and the USDA. On Jan. 4, 2011, President Obama signed the FDA Food Safety Modernization Act into law. This law establishes mandatory, science-based, minimum standards for the safe growing, harvesting, sorting, packing, and storage of fresh fruits and vegetables. As with other laws, compliance by food producers, food manufacturers, and food handlers will no longer be optional. Portions of this law went into effect in 2012 and more will in the future.

CHAPTER 10.

Organic Production

Kelli Belden

Question: *So is the CSA that you're going to be a part of – is it organic?*

Answer from CSA customer: *Yeah. Oh yeah. Top priority. And I'm not just interested in organic. I don't just go to Whole Foods and buy organic—it's organic and local that's important to me.*

My only association with the organic movement was the extremist, environmental movement next door, in the Jackson Hole area. It's funny, because that's our best market now, but that scared me just by association.

“Organic production” is both a federal law and a philosophy. In the United States, “organic” is a legal labeling term that refers to an agricultural product grown in accordance with the Organic Foods Production Act under Title 21 of the 1990 Farm Bill and the regulations in the act. If the product is not produced in accordance with the act, it may not be called organic.

Philosophically, “organic” is often interpreted as something that has minimal contamination from artificial chemicals and is in balance with nature. Although the vast majority of organic producers do their utmost to minimize chemical or biological contamination, the realities of the Wyoming wind make it difficult to prevent all contact with prohibited substances. Your organic inspector is aware of these limitations and may require large buffer zones around your organic fields. Additionally, many of our waters may also contain substances that are prohibited in organic production. Water samples may be required to ensure that your water is not unreasonably high in prohibited compounds. Your inspecting agency will offer guidance with regard to these issues.

The basic organic principles are biodiversity, integration of production practices (animal and plant production joined when possible), environmental sustainability (especially the maintenance and improvement of soil quality), natural plant nutrition, integrity of the organic product, and natural pest management. Organic practices include the use of crop rotations, green manure, cover crops, animal manure, compost, intercropping, mulching, natural pesticides, biocontrols, and buffer strips. Organic management replaces many chemical controls with intensive monitoring and physical intervention (hand weeding, hand insect removal, etc.). There are naturally occurring organic chemicals that can be used. For those who grow under high tunnels, conversion to an organic system will usually benefit from the extra hands-on effort that is characteristic of sound high tunnel management.

Federal regulations are designed to help prevent contamination and commingling. Contamination is any physical contact between a prohibited or unacceptable material or product with an organic product. Commingling is any physical contact between unpacked, organically produced, agricultural products and non-organic products during production, processing, transportation, storage, or handling.

Except for operations with less than \$5,000 in receipts in a year, you must be certified for compliance with the Federal Rule by an independent certifying agency if you want to use the labels “100-percent organic,” “organic,” or “made with organic.” Operations with less than \$5,000 in receipts must follow the same rules, develop an organic system plan, and keep the same records as certified producers. They must also be able to produce these records if asked to show compliance, but they do not need to be inspected and certified by an independent agency at this time. Products produced organically but not certified may not be used for production of any other product that is labeled organic. So, you can’t label preserves made with uncertified organic peaches as organic.

It should be noted that the act is a living document that is updated frequently: a practice or product that was valid one year may not be valid the next. It is the producer’s responsibility to keep informed about any changes and to adjust practices accordingly. Some of the information in this chapter may become obsolete the next time the rule is updated.

ORGANIC CERTIFICATION

Certification requires an Organic System Plan. The plan must identify the operation physically and operationally. Maps of the areas being used with documentation of all organic practices being implemented in each area are essential. All inputs, processes, and outputs must be documented by a verifiable audit trail. The plan must identify all substances used: their composition, source, location of use, and documentation of availability. The plan must identify all monitoring practices and procedures and the frequency of their verification by the producer. Physical barriers that prevent commingling or prohibited contact must be identified. Management practices (crop rotations, fertility, irrigation, tillage, pest control) must be described. A description of recordkeeping practices that are sufficient in detail to be readily understood and audited needs to be included. The records must be maintained for five years and contain sufficient information to demonstrate compliance with the act.

Planning for organic production starts with the land. Soil must be managed organically for three years before the first harvest can be certified. Sufficient land area must be available to allow for buffer zones between organic and non-organic sites. Soil fertility practices must maintain or improve the physical, chemical, and biological health of the soil. Nutrients can be managed through the use of crop rotations and cover crops, the application of fertilizers approved for organic use, and the application of approved plant and animal materials. Objectives are to improve organic matter and soil quality and to prevent contamination. If growing under a high tunnel, buffer zones can sometimes be smaller since vents can be closed, minimizing the potential for drift contamination from conventional sites that may be near the tunnel. It is important to remember that with the extended growing season in a high tunnel, nutrient removal from the soil will be accelerated. The establishment of permanent beds in a high tunnel can facilitate the addition of organic matter to the soil as the application area is confined and maintained over time.

Compost is frequently used and must meet certain requirements for food to be labeled “organic.” The carbon to nitrogen ratio (C/N ratio) must be between 25:1 and 40:1. The compost must be held at 131 to 170 degrees Fahrenheit for three days in a vessel or static aerated pile. If a windrow is being used for composting, it must be held at 131 to 170 degrees Fahrenheit for 15 days, and the pile must be turned five times. Un-composted plant materials may be added to the soil at any time. You may use un-composted manure if 120 days will pass before harvesting of any product that may have transient contact with the soil. This includes produce that grows on vines like tomatoes. Soil nutrient amendments may include synthetics from the national list cited by the act, mined substances of low solubility, mined substances of high solubility if used in compliance with the non-synthetic list cited by the act, and plant and animal material that has not been altered by a manufacturing process.

Seeds and planting stock are your next concern. You must use organically produced seeds unless none are commercially available. Price is not a consideration. You must be able to document that no organic seeds were available. If none are available, you may use conventional seeds as long as there has been no treatment with a prohibited substance. For perennial planting stock, you may use conventional as long as they have been managed organically for one year and no prohibited substances have been used. Crop rotation must be implemented. This helps to maintain and improve organic matter and is a vital tool in pest management. It can also help with managing soil nutrient status. Adding forage legumes to the crop rotation is an excellent way to add organic matter and nitrogen to the soil.

Organic practices must be used to prevent pests and diseases. You will not pass a certification inspection by becoming “organic by neglect.” Good management practices such as crop rotation, sanitation, use of resistant crop varieties, and cultural practices that promote plant health should be included in your management plan. Pests may be controlled by mechanical or physical means, by using pest predators and pest parasites, and by using organically allowed lures, traps, pesticides, or repellants. Small alterations in a high tunnel design can make big differences in insect management. The addition of screening on tunnel vents can cut down on insect migration into a tunnel. Screening will also aid in retaining beneficial insects that are introduced into tunnels.

Weeds may be controlled by mulching with biodegradable materials, by mowing, by hand weeding and mechanical cultivation, with flame or heat, and with approved plastic or synthetic mulches if removed from the field at the end of the season. Targeted irrigation using drip tape and the rain-excluding nature of high tunnels will suppress many shallow-rooted weeds.

Diseases can be controlled by non-synthetic biological or botanical inputs and by using resistant varieties. If prevention and primary control methods fail, substances on the National List of synthetics cited in the Organic Foods Production Act may be used, but conditions for use must be documented in your plan.

Your audit trail is the last vital part of your program. Everything you do throughout the year must be documented. Seed source certifications, receipts or documentation for all inputs showing suitability for organic production, equipment sanitation, storage records, sales records, and transportation records all need to be maintained. Remember, all parts of your operation are subject to inspection, even areas that are not a direct part of your organic program.

After passing initial certification, you must undergo inspection every year.

For more information on organic production, consult the following:

- USDA National Organic Program. www.ams.usda.gov/AMSV1.0/nop
- National Sustainable Agriculture Information Service, known as ATTRA – A sustainable agriculture information center that provides technical assistance to farmers, market gardeners, Extension educators, and others. It offers many workbooks and other information useful for setting up an organic operation. www.attra.org
- Organic Materials Review Institute, or OMRI – An organization that maintains lists of allowed, regulated, and prohibited substances. www.omri.org

CHAPTER 11.

Cleaning and Preparing Baskets

Katherine Strand

Well, dirt is actually good for root vegetables. You want to keep it on there, and why is it that we have to clean? We grow all the vegetables. We spend all that time growing them and harvesting them and packing. Where's it say that we have to wash everything for you?

Harvesting and preparing baskets for customers are both crucial and time consuming activities for CSA producers. As one Colorado CSA farmer says, “Every hour you harvest things, you spend an hour washing them.”

Harvesting tools include basic items such as knives, clippers, and baskets. CSA farmers also need to establish a cleaning center and continuously wash counter tops, cutting boards, and utensils with hot, soapy water to prevent bacterial, fungal, and microbial contamination (Zander and Bunning, 2010) in line with good agricultural and food safety practices. Most CSAs in Wyoming use home kitchens for cleaning vegetables and preparing baskets; however, others construct washing stations near their gardens.

CLEANING PRODUCE

Food safety starts with prudent decisions in the garden. If possible, use potable, treated water when irrigating. You must use potable water to wash produce. If you are using well water, have it tested every one to two years, and use soaker hoses and drip irrigation to minimize direct contact between the water and edible parts of the plant (Bunning and Newby, 2010). Make sure manure and materials such as food scraps are composted at appropriate temperatures before working into the garden (a later section of the document covers how to make compost). Bacteria can survive in raw manure for more than a year. Prevent cross-contamination of your fields by washing tools and gloves after finishing work in one field. Finally, eliminate excess debris around fields and garden access to livestock, wild animals, and pets.

Some tips for keeping freshly harvested produce clean and safe for human consumption include waiting to wash produce until you are ready to consume the items or deliver them to customers. Washing produce before storage can accelerate spoilage and promote bacterial growth. Store items for no more than five days (less is preferable) in a cool or refrigerated location. Most CSA farmers in Wyoming harvest produce the night before or morning of basket delivery. Therefore, they do not need extensive refrigeration and can get by with home refrigerators and root cellars. In general, wash produce under running water, and briskly rub items with your hands. Do not use the sink to soak vegetables and fruits because sinks tend to harbor microorganisms. If you need to immerse produce under water, use a large, clean bowl. Hard-skinned fruits and vegetables can be washed using a vegetable brush. Be sure to keep your water 10

degrees cooler than the produce to prevent microorganisms from entering the stem or blossom end of the produce (Zander and Bunning, 2010).

See the chapter on good agricultural practices for more information on this topic.

BASKET PREPARATION

CSAs in Wyoming, Colorado, and Idaho approach basket preparation in different ways. Some CSA farmers believe that it is extremely important to spend a lot of time cleaning and preparing baskets for customers. As one Colorado farmer says, “It was really important to us that our CSA boxes looked just like a box of produce that would arrive at a restaurant. Everything nice and clean – you know: well organized.” This level of preparation might include multiple washings, color-coded bagging, and precise weighing of all produce. It takes a large amount of work and time, yet these farmers believe that customers really appreciate the extra effort.

Other CSA farmers do not take as much time preparing baskets. Some farmers save time by only washing their root vegetables once and leaving customers to take over some of the additional washings. They also save time by bringing the produce to delivery sites in bulk. They ask customers to divide the produce themselves, providing scales at the delivery sites. Customers bring their own bags and divide each type of produce according to the specifications of the CSA. Farmers who ask their customers to prepare their own shares say that customers do not mind spending an additional 15 minutes during pick-up. However, CSA farmers are advised to closely supervise delivery sites to make sure customers take the correct amount of produce.

People weigh their own shares. We don't pre-bag stuff or put it in baskets. We have it in bulk, so they do it themselves. We figured it takes each person about 15 minutes, so that would be 50 labor hours for us, and we just don't have the time. So that's something that we don't do anymore, and that way people can reuse bags, too.

TAKEAWAYS



- Harvesting, washing, drying, and packing produce is time consuming, but important.
- Food safety starts in the fields and continues through washing, storage, and distribution.
- There are ways to have your members take over some of these jobs.

References

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- Zander, A., and M. Bunning. 2010. *Guide to washing fresh produce*, Colorado State University Extension, Fact Sheet 9.380, www.ext.colostate.edu/pubs/foodnut/09380.html.



PART IV. BUSINESS OPERATIONS

CHAPTER 12.

General Management Practices

Bill Schepeler

There are all these little things that need to be managed every week, and it's just easier to start small. I would also recommend that anybody who thinks they want to start a CSA should be on their piece of ground and have harvest records for at least a couple of years before they go out and do it.

A CSA is a business venture, and, like all ventures that should one day stand on their own, an owner(s) should approach it using good business practices. Setting the bar high for good business practices will help ensure success as well as protect from financial losses.

So, prior to starting the CSA:

- prepare recordkeeping practices you'll need,
- develop general management practices,
- consider safety issues.

The development of each of these issues into a cohesive written plan helps ensure that the CSA is not only successful but that it operates efficiently, both financially and in time management. Through the development of a written plan, you will identify risks, limitations, and problems that may hinder or disrupt your CSA and then pre-plan for those issues.

RECORDKEEPING

We also found out that if you're going to do this you have to do a lot more planning. You have to know how much it takes to feed a family of four, which is what we do, and how much to grow and what your germination is, so you're always reading about this stuff – educating yourself. So I'm much more educated now than what I was about plants.

At minimum, basic recordkeeping is essential; however, the more advanced and developed the system is the better you will be at not only looking where you “have been” but forecasting where you “will be.” Consider the following as the absolute minimum for good CSA practice:

Crop Journal. Your memory from year to year won't be nearly as reliable as written notes recorded throughout the season, particularly if you're trying new varieties or techniques. Notes on variety, seed source, germination, transplant date, yield under whatever conditions, disease resistance, eating quality, vigor and productivity, timing (too early? too late?) and so on will be extremely useful when planning. Tracking harvest yield, for instance, would be very helpful for estimating future requirements as the CSA grows.

Labor Log. Record the labor hours that you, your employees, and your volunteers, if any, work. This data will allow you to estimate labor costs and determine how the CSA will grow. For example, do you need one volunteer per three new share purchases? Do you sell two cash shares and one volunteer share to support the growth? To make the data useful for tracking labor for each crop, keep a three-ring binder handy to record all field labor (soil prep, transplanting, seeding, weeding, cultivating, thinning, etc.). Every time work is done, record it on that crop's page in the log. This allows you to assess the amount of work associated with each crop, and, thus, how much you have invested.

Financial Records. This is the bread and butter of any business. Without these records, you will never know if you are making money, breaking even, or losing money. These records are required to help determine share price, measure cash flow, and plan expansion. The easiest method for maintaining solid financial records is to purchase and use a software package such as QuickBooks®, in which standard business accounts are pre-identified. It also provides excellent financial forecasting tools to help predict future cash flow and develop budgets.

Farmers seeking to sell vegetables as certified organic under the USDA National Organic Program must maintain much more extensive records. The NOP states that certified operations must maintain records for production, harvesting, and handling of products. The Carolina Farm Stewardship Association identifies the following elements as the basic records required for recordkeeping (see Chapter 10 for more information on certification).

1. Farm and field maps
2. Field history sheets
3. Seed purchase records
4. Input records (soil amendments, foliar sprays, pest control products, and compost production records)
5. Activity logs
6. Harvest records
7. Storage records
8. Lot numbering system for wholesale sales
9. Sales records
10. Other records

The emphasis of the farm's records should ensure that inspectors can easily review and audit the functions of the operations, tracing each crop from the field to harvest and final sales. This includes any treatments to the plants, soil, or product.

Farmers can create their own records. James Riddle and Joyce Ford have developed a set of basic guidelines for the Carolina Farm Stewardship Association. Those guidelines are provided at the end of this chapter.

A good way to start is to scan the Internet for recordkeeping tools.

- The University of Wisconsin–Madison has developed a free recordkeeping tool called Veggie Compass (www.veggiecompass.com), a whole-farm profit-management tool that is ideally suited for CSA farmers.

- North Carolina State University offers a series of tools at no cost for farm planning and record keeping on its “Growing Small Farms” web page (chatham.ces.ncsu.edu/growingsmallfarms/farm-records.html).
- Fee-based tools such as FarmLogs (www.farmlogs.com) also offer basic recordkeeping options.

Utilizing the tools from the University of Wisconsin–Madison or North Carolina State University has the added benefit that they have already been utilized by many farmers seeking certification.

Whether free or commercially available, recordkeeping systems usually need some customization to track specific enterprises, crops, and activities relevant to any specific farm. But if good recordkeeping doesn't come naturally or you aren't familiar with Microsoft Excel or accounting software, then start simple, perhaps even with paper and pencil.

GENERAL MANAGEMENT PRACTICES

You need to set the guidelines and the boundaries as the farmer because if you don't, people will take advantage of that. They'll show up at all hours. They'll expect all kinds of things.

It is important to remember that CSAs are businesses, and a CSA operator should approach the CSA from that position. That does not mean that a CSA should be “profit” centered, but rather the CSA operator should approach every decision using sound management concepts. In unique ways, the CSA is more complex than large corporate farms. Large corporate farms tend to plant and harvest one or two crops per year; whereas, CSAs are continually planting and harvesting a wide variety of crops throughout the growing season. Consequently, management of CSA requires careful planning to maximize yields and minimize crop conflicts.

Set time aside each week to “get out of the trenches” and manage the operation. Ensure previous decisions that you or others made are good ones. What decisions are outstanding? Is a crop having issues, and is it worth trying to save? These and many other issues cannot be made from the “trenches,” and good managers will remove themselves from the immediacy of the situation.

Once the growing season is over, focus should change to strategic issues and planning for the next growing season. Records should serve as the factual basis for analysis of the past season. Year-over-year analysis should serve to identify trends and possible issues that are developing or may arise in the upcoming season. The “Looking Backward: Issues/Lessons Learned” section covered later offers important information that was recorded in your own words “at the moment” that may go beyond the recorded records.

During the analysis, be honest – identify what was done well, and do not change it. The key to effective strategic analysis is determining one's weaknesses and identifying the 4Ws and 1H;

1. What was the issue?
2. When was the issue?
3. Where was the issue?
4. Why did the issue occur?
5. How can the issue be avoided in the future?

Answer these questions for each identified issue; take the time to write the answers onto paper or in a computer. Prioritize the issues by importance and do-ability, focusing on the top three to five issues.

Then develop a written strategic plan for the upcoming season. The plan should include how progress or change will be measured and what is considered success. This structured approach helps ensure that you maintain focus over time and improves overall management.

Another key element that should be developed during the off-season is a budget. The budget should be developed from the previous year's records and your developed strategic plan. This is where "push comes to shove." Your budget should serve as the final test of whether the strategic plan is realistic. The budget and the strategic plan must work hand in hand to achieve the plan; if there is disparity or conflict, this is the time to adjust one or the other. Once both are complete, the CSA should have a solid foundation to move into the upcoming growing season and allow the farmer to once again focus on details required to achieve the developed plan.

The application of this structured process helps ensure that the CSA is efficient, productive, and sustainable for yourself and shareholders over time.

Business Liability

There are a number of different types of business insurance available to cover your operation against loss. Which type you choose and how much you pay for this coverage depend on a number of factors. Larger agricultural operations may find that the CSA operation may already be covered by existing insurance policies. Smaller operations might discover that they do not have any existing coverage. There are other factors that affect price, such as whether you have a retail location on the property or not, whether you lease or own the property, who you distribute product to, and whether your business is operated from home.

When you think of liability protection for your business, think in terms of layers of protection, such as:

- Common sense
- Statutory protection (some states offer a registration process for agritourism, for instance)
- Signage
- Liability waivers/releases
- Business entities, such as a limited liability company (LLC)
- Contracts
- Agritourism liability insurance (under which parts of a CSA might fall)

Consult with your insurance agent or broker to see what kind of coverage you already have, might need, and can afford. If you don't have any coverage for the CSA, insurance is a powerful tool to help manage business risk. An agent or broker can help devise a risk management plan for your operation. Be open when discussing your operation so he or she can offer complete advice. If you fail to disclose some aspects of the business, you could find that the policy won't cover a claim in that risk area.

Here are some of the types of business insurance that your operation may need:

General Liability Insurance. Business owners purchase general liability insurance to cover against the risk of legal issues caused by accident, injuries, and claims of negligence. These policies may protect against payments that result from bodily injury, property damage, medical expenses, the cost of defending your business from lawsuits, and any libel and slander lawsuits. This type of insurance is usually considered the minimum coverage for a business and is designed to protect owners from risks outside the business.

Commercial Property Insurance. This coverage is designed to protect against the loss and/or damage of company property from perils such as fire, smoke, water, weather, and vandalism. Policies are either sold as “all-risk,” which cover against the broad range of risks most businesses face such as those described above, or “peril-specific,” which cover against individual risks. Most businesses purchase all-risk policies but are required to add a peril-specific policy to protect against an elevated risk as identified by a lender or investor. For example, a building located in a flood plain may have an all-risk policy and be required by its bank to add a specific flood policy to provide extra coverage in the event of a flood.

Many commercial property policies include coverage for cash flow lost due to covered perils. This coverage is called “business interruption” insurance. This coverage is usually offered as a peril-specific but is often required by businesses that use bank financing.

Product Liability Insurance. Businesses that produce and distribute products to the general public may be held liable for its safety. This coverage protects the company against loss that results from the harm a product could cause to the end consumer. Product liability insurance is especially important if you distribute produce through restaurants or retail grocers. The cost coverage depends on how much harm the product could cause to consumers.

Home-Based Business Insurance. Many homeowners are unaware that their homeowners’ policy does not cover losses to their business or business property located in their home. Many homeowners’ policies offer the opportunity to purchase a rider for a home-based business that will cover against normal business risks. Often, this rider is offered at a very competitive cost. Check with your insurance provider to understand costs and coverage options.

Crop Insurance. Agricultural businesses can purchase coverage against loss of crop production from drought and other weather-related incidents, pest damage, or a variety of other causes. There are many policies available to growers so do some research before choosing whether or how to ensure your crop. The USDA Risk Management Agency (RMA) offers a good overview of policies at www.rma.usda.gov/policies.

Workers’ Compensation and Unemployment Insurance. These are covered in Chapter 14.

Of particular interest to vegetable producers is the insurance product known as adjusted gross revenue-Lite. AGR-Lite is a whole-farm revenue protection plan of insurance that protects against low revenue due to unavoidable natural disasters and market fluctuations. Most farm-raised crops, animals, and animal products are eligible. More information is on the USDS RMA website.

WORKPLACE SAFETY

Agriculture is consistently ranked as one of the three most hazardous occupations in the United States along with mining and construction. While the death rate in all three industries has declined over time, the death rate in agriculture is declining at a much lower rate than the other two industries.

Due to the nature of agriculture businesses, safety statistics are difficult to track. Because many operations use family labor, injuries to family members working on farms and ranches are often categorized as non-work related. A “cowboy tough” mentality leads many injuries to go untreated by medical professionals (and, therefore, unreported).

Here is a list of safety issues many CSAs face:

Child Safety. Agricultural operations are sometimes located near the owner’s principal residence and,

therefore, involve family and young children. Thousands of children are injured and hundreds of fatalities occur on farms and ranches every year. Here are some strategies to follow to lower the risk to children:

- Assign age-appropriate tasks to children helping with the business. Take into account their physical and mental abilities when giving them tasks. Always provide close supervision.
- Provide safe areas where younger children can play away from work areas, animal pens, equipment, and chemicals. Make sure hazards such as large livestock can't enter, and children can't get out.
- Keep hazards such as chemical storage and shop areas locked so that children can't access. When these facilities need to be open, ensure that children are under close supervision.
- Don't allow children to operate farm equipment without appropriate training and supervision.

All-Terrain Vehicle (ATV) Safety. These vehicles are being used with increasing frequency on Wyoming agricultural operations as both work and recreational tools. If your operation utilizes these vehicles, make safe operation a priority.

- Provide training for anyone who will use an ATV.
- Make sure the ATV is the appropriate size for the age of the operator.
- Wear appropriate safety equipment while riding.
- Be aware of other traffic and terrain hazards.

For more information on safe ATV operation, see the ATV Safety Institute website at: www.atvsafety.org/

Crop Chemical Safety. Fertilizers and pesticides are used on many CSAs to enhance production and help prevent weeds, pests, and diseases from reducing yields and quality. These same chemicals can cause serious short- and long-term injuries and even death if workers are improperly exposed. Here are some guidelines to follow when handling agricultural chemicals:

- Read labeling materials. Understand what chemicals are on your property and the risks involved in handling.
- Maintain copies of material safety data sheets (MSDS) for all chemicals. The information will help your operation handle them safely and provides details on what to do in the event of an emergency.
- Wear personal protective equipment (PPE) when called for. Chemical labels and MSDS sheets can help identify what application equipment is necessary. Make sure all PPE is properly maintained and functioning.
- Store chemicals in a locked area.

Tractor Safety. Studies show that farm tractors are involved in a high proportion of farm fatalities and severe injuries. Both driving and using power take-off (PTO) capabilities of farm tractors carry significant risk of injury. Here are some guidelines to lower the risk of some tractor-related injuries:

- Provide training for all operators. Make sure all operators are physically and mentally capable of safe operation.
- Shut down equipment completely, and wait for moving parts to stop before dismounting.
- Maintain a safe area around the machine. Stop operation when people enter this area.
- Don't allow extra riders.

- Make sure tractors are equipped with a rollover protective structure (ROP) to protect the operator in the event of a rollover.
- Wear seatbelts, hearing protection, and other PPE when appropriate.

Livestock Handling. Many CSAs are managed in conjunction with livestock operations. Livestock-handling injuries represent a significant number of agriculture-related injuries and even deaths in Wyoming each year. Having livestock near a CSA with visitors can present unique safety issues.

- Label livestock handling areas to alert visitors to potential hazards.
- Design facilities for easy entry and exit. Many injuries result from the handler being unable to get away from livestock.
- Use restraining equipment. Make sure workers have been trained to utilize this equipment properly.
- Train workers in safe livestock handling. Animals are unpredictable. Without proper training, many workers won't know the dangers they could face.
- Never work with livestock alone. Make sure at least one member of the team is experienced in livestock handling.

Exposure. Field operations expose workers to the elements. Sun and wind can be deadly to workers. Key things to prepare for are

- **Water.** Make sure workers drink enough water (or electrolyte replacement drink) to replace body fluid lost through sweating.
- **Acclimatization.** Have workers gradually adjust to working in the heat.
- **Rest breaks.** Have workers take periodic breaks in shady areas.
- **When controlling heat stress, take into account**
 - » **Weather.** Direct sun increases the heating effect. Wind reduces the risk of heat illness by increasing evaporation of sweat.
 - » **Workload.** The body generates more heat during heavy work than light or moderate.
 - » **Clothing and protective equipment.** Evaporation of sweat helps cool a person. With two layers (a cotton T-shirt and a long-sleeved sun-block shirt, for example), the sweat is slower to evaporate, and it takes longer to cool down. Fibers like cotton next to the skin are slow to move moisture away. Consider wearing lightweight, loose-fitting, light-colored clothing made with a material that helps block the sun. Wear sunglasses, sunscreen rated at SPF 30 to 45, and a hat with a brim (a lightweight, vented hat helps keep your head cool). Also, keep insect repellent on hand for you and employees.
 - » **The age and physical condition of the workers.** Younger workers, well-rested workers, and physically fit workers are less likely to suffer heat illness. But all workers can become seriously ill. Many drugs, including alcohol and cold and allergy medications containing antihistamines, can increase the risk of heat illness.

Choosing to operate a safe business pays off in fewer injuries and increased profitability. Many consider human resources to be the most valuable asset of a business. For help with safety and health issues in your business, request assistance from the Wyoming Department of Workforce Services or an Occupational Safety and Health consultation at: www.wyomingworkforce.org/employers-and-businesses/osha/Pages/safety-and-health-consultation.aspx. Consultations are offered free of charge.

WORKING WITH A DISABILITY

When disability strikes a ranch or farm family, everything changes—except perhaps the desire to continue ranching or farming.

- Ranching and farming are physically demanding and hazardous professions. The goal of **AgrAbility** is to inform, educate, and assist ranchers, farmers, and farm workers with disabilities and their families so that they can continue doing what they love—ranching and farming.
- In Wyoming, AgrAbility is a partnership of the University of Wyoming Extension, Wyoming Institute for Disabilities, Wyoming Independent Living Rehabilitation, and Wyoming Services for Independent Living.

Wyoming AgrAbility is part of a national program administered through the USDA, focused on promoting independence for members of the agricultural community who have disabilities resulting from injury, illness, aging, or other causes. For more information about AgrAbility, call 1-866-395-4986, email agrability@uwyo.edu, or visit www.uwyo.edu/agrability.

CHAPTER 13.

Financial Health:

Building Forecasted Financial Statements

Cole Ehmke and Alan Miller

We have chosen to look at the CSA especially as an investment. People are paying upfront for their share, and really they're investing in the farm. My approach to that is that I want to maximize their benefits and minimize their loss.

Forecasting your business finances may seem difficult, but it really is only a matter of making educated estimates about how much money you'll generate and spend. There are four general-purpose business financial statements that are typically part of a complete set of forecasted financial statements. We recommend that you prepare these for each of the first three to five years of your venture:

- Statement of cash flows
- Income statement
- Statement of changes in owners' equity
- Balance sheet

An illustrative set of forecasted financial statements for the first year of a hypothetical start-up company is included in this document. Don't get hung up on formatting or which types of accounts to include. The sample forecasted financial statements presented in this document use typical formats and typical accounts, but accounting and financial reporting favors substance and usefulness over format. Focus on the numbers.

THE STATEMENT OF CASH FLOWS

The forecasted cash-flow statement (see example) shows how the cash balance of your business is expected to change from the beginning to the end of each year as a result of operating, investing, and financing activities. It summarizes the net cash flow either provided or used by each of these three major categories of business activity. Generally, for a business to be successful, the operating activity needs to become a significant provider of cash at some point in the early life of the business.

The sources and uses of cash reported for an accounting period must equal. If not, look for an error. Likewise, the net cash provided or used during the year by operating, investing, and financing activities should exactly explain the increase or decrease in the cash balance reported on the ending balance sheet.

THE INCOME STATEMENT

The forecasted income statement shows your expected revenues, expenses, and profit for each year of operation. Revenues increase an owner's equity. Expenses decrease an owner's equity. Profit occurs when revenues exceed expenses, producing a net increase in the owner's equity for an accounting period.

Net cash flow and profit are fundamentally quite different. Cash is necessary to pay bills, but profit is necessary if your business is ultimately going to generate money to repay debt and to pay a return to yourself (the owner). The fact that a business is temporarily awash in cash is not proof that it is profitable. Nor is the fact that a business is temporarily short of cash proof that the business is not profitable. Cash flow and profitability are both important to a business.

THE STATEMENT OF CHANGES IN OWNERS' EQUITY

This is usually the shortest of the four general-purpose business financial statements. It shows how the owners' investment in a business changes as a result of profitability and transactions between the owners and the business during the accounting period. Oftentimes, because it is short and so heavily influenced by profitability, it is combined with the income statement as in the example in this document. The net profit of the business (after adjustment for any contributions or withdrawals by the owners) reported on the income statement for a particular year should completely explain the change in the net financial position of the business (owners' equity) as reported on the ending balance sheet for that year.

Arguably the most important change in owners' equity results from business profits or losses. Other changes can come from capital paid in by the owners or dividends/withdrawals from the owners' invested capital. Typically, stock or an interest in the company will be exchanged for cash or other property as a part of the initial capitalization of the business during start-up. This paid-in capital will be included in the owner's equity section of the balance sheet and should be forecast when preparing forecasted financial statements.

THE BALANCE SHEET

The forecasted balance sheet shows your financial position as of a particular future date by listing the expected value of your venture's assets, liabilities, and owner's equity on that date. If the forecasted statement of cash flows reports that the cash provided by operating, financing, and investing activities is expected to exceed the cash used by such activities, the cash balance reported on the ending balance sheet will increase by a corresponding amount. If the forecasted income statement reports that the business is expected to be profitable, then the owner's equity reported on the ending balance sheet will increase by a corresponding amount unless the owners withdraw that profit before the ending balance sheet date.

The balance sheet summarizes the financial strength of your business at a stated point in time. It lists the assets and liabilities of your company and shows your owners' equity. Owners' equity equals the difference between assets and liabilities. Thus, it will help you determine your financial condition at a given point in time. Many business owners do their financial reporting on a calendar-year basis so their balance sheet date is December 31 of each year.

Classified balance sheets separate assets and liabilities into current and noncurrent classes. The noncurrent assets consist primarily of assets that are used to operate the business, such as land, buildings, and equipment. Current assets are cash and other assets that will be converted to cash as part of normal operations during the next year. The most common current assets include

- Cash
- Accounts receivable
- Inventory
- Prepaid expenses

Liabilities are classified in a similar fashion as either current or noncurrent liabilities. Current liabilities are those enforceable obligations that will be paid during the next year. Noncurrent liabilities are debts and other enforceable obligations to pay over more than one year. Both assets and liabilities should reflect your intended production capacity. If you are unsure of what assets you might require and their cost, then do research to find out.

The final lines on the balance sheet track the business' equity accounts – the portion of the business' assets owned by investors in the business. The two main sources of equity that will be reported in the owners' equity section of the balance sheet are: 1) contributed/paid-in capital, and 2) retained earnings. If any noncurrent assets are reported in the balance sheet at fair market value, then a third source of equity called "valuation equity" will need to be reported.

Remember, the Financial Statements are Interrelated

The general-purpose financial statements are always interrelated systematically. Financial statements interrelate because they reflect different aspects of the same transactions or other events affecting the business. They summarize amounts derived from an accounting system. Thus, if something changes on one of the statements, such as the balance sheet, one should expect to need to make corresponding changes in the other financial statements.

Construction Process Outlined

Estimating the financials for your venture follows a relatively straightforward process, which is outlined here and will be expanded on later in the discussions of each statement.

Step 1.

Begin by constructing a cash-flow budget for each month of the first year of operations. Longer periods than a month, such as quarterly or annual periods, can be used but will be less useful than a monthly cash budget for managing the timing of cash flows. A cash budget generally is prepared in a format that shows a beginning cash balance for each period and expected cash inflows during the period followed by expected cash outflows during the period. Beginning cash plus cash inflows minus cash outflows result in either a cash balance or a cash deficit at the end of each period. Generally, borrowing is required to make up a cash deficit at the end of any period.

It may be helpful to prepare a separate sales forecast first that estimates sales by month. Here you can record details about product mix, product quantities, pricing considerations, demand forecasting methods, key customers, and other information pertinent to the sales forecast that there won't be room for in the cash-flow budget.

Then summarize expected monthly sales to the cash-flow budget. Sales volume ultimately drives product costs. Add estimated costs for labor and materials scaled to the sales volume you have projected. Then estimate other expense items based on what you expect the company will need to operate: rent, utilities, advertising, personnel, and so on. By doing this you will have completed the first draft of your cash-flow budget. The monthly revenues and expenditures can then be summarized into your forecasted statement of cash flows for the first year of operations.

Continue the work you've done by preparing cash-flow budgets for each of the first few years of business operations. Typically, a new business must transition toward expected normal operating capacity during the first few months (or years) of operation. Creating forecasted cash-flow budgets for this growth period will provide a valuable management tool.

Step 2.

With a statement of cash flows in hand you can then project what resources you require to produce the product volume you are expecting. This information will be the starting point for your forecasted balance

sheets. The estimate of the sales volume for each year will guide the capital equipment and financing requirements needed to satisfy production. First, list the equipment, materials, and other physical resources needed to operate, as well as other assets such as receivables and inventory. For instance, a wholesale business would use its estimate of sales volume to determine how large a warehouse to buy, how many forklifts and delivery trucks are needed, and how much inventory is necessary.

Liabilities, too, should be estimated. Once you know the estimated dollar value of required assets, you can then estimate financing needed to gain those resources. Borrowed and invested capital and trade credit should be among your list of expected liabilities. These important liabilities should be typical for your industry. The list of assets and liabilities will be reported on your balance sheet.

Carefully examine your cash-flow budget by period to identify cash shortfalls that will require financing. An operating loan will need to be arranged to finance a cash shortfall at the end of any monthly period. Alternatively, businesses may sell products to their customers on account with the expectation that they will be paid 30 to 90 days after delivery of goods. The resulting accounts receivable are oftentimes used as a source of cash by assigning the receivables to a lender to secure a loan. The cash proceeds of such trade credit on so-called “trade receivables” is then used to purchase new inventory and to continue the business of turning out more products. Make sure that you plugged your trade credit amounts and collections against trade receivables into your cash-flow statement. It is relatively easy to overlook what can be sizeable short-term liabilities if the financing required to continue operations while earlier sales are still being converted to cash receipts is overlooked.

The cash-flow budget should also anticipate transactions between the business and its owners, such as additional paid-in capital or planned dividend distributions. These will need to be reported in the statement of changes in owners' equity as well.

Step 3.

To this point in the forecasting process you will have created information for the statement of cash flows and some information for the ending balance sheet and the statement of changes in owners' equity. To measure the profitability during any accounting period, revenues and expenses must be measured. Revenues and expenses generally are different than cash receipts and cash expenditures reported on the statement of cash flows. Why? Let's consider revenues first.

Income is earned at the point of sale. Cash receipts associated with the collection of accounts receivable may not be collected from customers until well after the point in time that a sale occurs. Generally a sale occurs when a product is delivered to a customer. Thus, cash receipts will oftentimes lag behind the actual revenues of your business if products are sold on account.

If accounts receivable exist at year end, they are an asset of the business and should be added to the ending balance sheet. Accounts receivable will be reported as a current asset on the balance sheet because one would expect them to be converted to cash through collections of the accounts receivable during the upcoming year.

If the ending balance of accounts receivable increased from the last balance sheet date, this means that sales revenue exceeded cash collected from customers during the accounting period and reported on the statement of cash flows. Sales revenues reported on the income statement will, thus, exceed cash income

and will provide a more accurate measure of the revenue earned by the business than cash receipts can provide. Also, the income statement provides the rationale for the increase in the accounts receivable balance on its balance sheet and the amount of the increase.

Now let's consider expenses instead. Expense recognition for income statement reporting follows the matching concept, which states that costs associated with the revenue of a period are expenses in that period. Generally two different types of expenses are reported on an income statement. The first of these are product expenses that are traceable to the products a company sells. Product-related expenses should be recognized as an expense when the product is sold. If we don't match the product expense to the product sale how can we ever determine the profit from selling the product? Product expenses show up on an income statement in the cost of goods sold. All other expenses are period expenses. Period expenses are matched against revenues in the accounting period in which they are incurred. Period expenses include the general and administrative expenses and selling expenses of the business. A typical income statement reporting format would report revenues at the top followed by cost of goods sold (product expenses) and then followed by period expenses.

Those materials that were purchased and paid for in one year, but are still in the ending inventory of unfinished products at year end, will be reported in cash expenditures on the statement of cash flows. But, the cash expenditures won't be included in expenses on the income statement until the following year when the inventory has been turned into finished product and the product has been sold. Thus, product expenses are not necessarily incurred in the same accounting period that the corresponding cash expenditure is made. The benefit to the business from incurring expense to generate revenue does not occur until product is sold. Until that time, the cost of products is carried as an asset by the business.

Even period expenses can result in differences between cash expenditures reported on the statement of cash flows and expenses reported on the income statement. Office supplies are a good example of a period expense. Consider the possibility that your company, which prepares its financial statements on a calendar-year basis, buys office supplies on account in early December and uses them up in December. When an asset is used up or consumed in the operation of your business, an expense is incurred. Assume that you pay the account balance in early January of the following year. An enforceable obligation to pay existed on the balance sheet date even though no cash had yet changed hands, and the supplies have already been used so they cannot be returned. Expenses on your income statement for the period ending in December should include the amount of this obligation because the benefit from the purchased supplies was received in the accounting period. The obligation should be reported on the ending balance sheet as a current liability. The amount won't be reported as a cash expenditure on the statement of cash flows until next year. The liability reported on the balance sheet explains how expenses could exceed cash expenditures.

Timing is the key to accurately measuring revenues, expenses, and profitability. Timing is the reason that net cash provided or used by operating the business in a particular accounting period will invariably be different than business profitability. The process of getting the timing right in terms of when revenues and expenses are reported in the Income Statement is oftentimes described as accrual accounting to distinguish it from accounting for cash receipts and cash expenditures. Only accrual accounting can produce a reliable measure of profitability for a particular accounting period, whether in the past or in the future.

Draw up forecasted financial statements for each period in the first few critical transition years of starting up the new business. Examine the statements carefully to make sure they represent your expectations as completely and accurately as possible.

ILLUSTRATIVE STATEMENT OF CASH FLOWS

Year one of Stewart Winery Inc. (a start-up company)

Forecasted Cash-Flow Statement

Year Ending 31 December 2014

Cash flows from operating activities	
Cash inflows received from customers	82,270
Cash paid to suppliers	55,885
Selling expenses	9,075
General and administrative expenses	7,130
Interest expense	1,950
Other operating cash outflows and interest payments	18,155
Cash tax payments	1,200
Net cash provided (used) by operating	7,030
Cash flows from investing activities	
Purchase of fixed assets	7,900
Purchase of other current assets	30
Purchase of patents and other intangible assets	2,500
Net cash provided (used) for investing	-10,430
Cash flows from financing activities	
Proceeds from long-term debt	5,400
Common stock dividends	-1,500
Net cash provided (used) by financing activities	3,900
Cash at Beginning of Year	
Net Increase in Cash	500
Cash at End of Year	4,400

Reconciliation of net cash provided by operating activities to net income	
Net cash provided by operating activity	7,030
Plus increases in current assets	
(inventory 3,440 and receivables 750)	4,190
Minus increases in current liabilities	
(accrued expenses 50, taxes 539, interest payable 50, and accounts payable 1,530)	-2,169
Minus depreciation expense	2,820
Equals Net Income	6,231

ILLUSTRATIVE INCOME AND OWNERS' EQUITY STATEMENT

Year one of Stewart Winery Inc. (a start-up company)
Forecasted Statement of Income and Changes in Owners' Equity
Year Ending 31 December 2014

	Forecasted 2014
Net Sales	83,020
Cost of Goods Sold	53,975
Gross Profit (Net Sales - Cost of Goods Sold)	29,045
Operating expenses	
Selling expenses	9,075
Production wages	
Sales commissions	
Uncollectible Accounts	
Advertising	
Automobile	
Office Supplies	
Miscellaneous Expenses	
Total operating expenses	9,075
General and administrative expenses (fixed expenses)	
Rent	7,180
Depreciation	2,820
Utilities	
Insurance	
License/permits	
Legal/Accounting	
Loan payments	
Total fixed expenses	10,000
Total Expenses	19,075
Operating income	9,970
Interest expense	2,000
Earnings before tax	7,970
Income tax	1,739
Net income	6,231
Dividends Paid	1,500
Change in retained earnings	4,731

ILLUSTRATIVE BALANCE SHEET

Year one of Stewart Winery Inc. (a start-up company)

Forecasted Balance Sheet

31 December 2014

Assets

Current Assets

Cash	4,400	
Accounts receivable	7,800	
Inventory	21,140	
Other current assets	1,380	
Total current assets		34,720

Noncurrent Assets

Plant (buildings)	56,400	
Equipment	27,400	
Accumulated depreciation (buildings and equipment)	(38,320)	
Net plant and equipment	45,480	
Land	7,000	
Total Property, Plant, and Equipment		52,480

Purchased goodwill

Patents	3,500	
Trademarks	2,000	
Total intangible assets	5,500	
Total Noncurrent Assets		92,700

Liabilities and Equity

Current Liabilities

Accounts Payable	7,611	
Notes Payables		
Interest Payable	250	
Payroll	390	
Taxes Payable (federal, state, self-employment, sales, property)	1,739	
Total current liabilities	9,990	
Noncurrent Liabilities	20,000	

Total Liabilities		29,990
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Stockholder's equity

Capital stock (paid-in capital)	30,000	
Retained earnings	32,710	

Valuation equity (if any)		
Total stockholders' equity		62,710

Total liabilities and equity		92,700
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EVALUATING THE POTENTIAL FOR SUCCESS

Without these forecasted financial statements for the early years of the start-up, it is hard to conceive of how potential investors (yourself included) can evaluate the potential for the success of a proposed business venture. Without these statements, it is equally difficult to imagine how creditors can evaluate the merits of making loans to the new business. If you cannot make money on paper, you aren't likely to make money when actual operations commence, so it is always a good idea to quantify your business plans with forecasted financial information.

Once business operations commence, the very same financial statements should be used at the end of each year to assess the actual results of operations and the actual financial position of the business. Without these financial statements you may think you're making money right up until the day you go broke.

MANAGING CASH FLOWS

A monthly cash-flow budget tells you when you'll have cash and when you'll need it. In addition to providing information to support your Forecasted Statement of Cash Flows, the monthly cash-flow budget is a superb management tool. You can use the monthly cash-flow budget to plan financing for operations, to achieve control over spending (by comparing actual spending to the planned spending reported in the budget), and to recognize when plans are not being achieved and strategies need rethinking. New businesses have to survive in order to thrive. Cash flow is the lifeblood of a new business. Without it, the business withers and dies.

Careful cash management is most important during the first few years. Inevitably, new businesses go through a period of growth. As your venture grows it will have to fund increased expenses before sales can increase. The monthly cash-flow budget will help you anticipate both how much and when cash infusions are necessary.

REPORTING START-UP AND ORGANIZATIONAL COSTS

New businesses will also need to estimate start-up and organizational costs – the one-time expenses associated with preparing for operation. Start-up costs include the costs of investigating the creation or acquisition of a trade or business such as legal and professional fees. Start-up costs also include costs incurred in anticipation of an activity becoming a trade or business that would, otherwise, be currently deductible as trade or business expenses if the business was up and running. Organizational costs are the actual costs of organizing the business. These costs are treated by the federal tax code as capital expenses.

But, business owners can elect to deduct the first \$5,000 of eligible start-up costs and the first \$5,000 of eligible organizational costs that are paid or incurred after October 22, 2004 may be reported as tax deductible trade or business expenses. The deductible amount must be reduced for every dollar start-up costs or organizational costs exceed \$50,000. Costs in excess of the amount deductible under this rule must be amortized ratably over the first 180 months of business operation. For a more detailed and authoritative discussion of this topic, see Internal Revenue Service (IRS) Publication 535, *Business Expenses*, at www.irs.gov. Click on the "Forms & Pubs" link on top of the page. Then click on "Current Forms & Pubs."

As a general rule, large start-up businesses that require an accountant to review or audit historical financial statements will typically recognize these costs as expenses on their business income statements in the first accounting period in which they have revenue. Many small businesses would recognize these expenses

es on their actual income statements in the same accounting periods and in the same amounts as they report on their federal income tax returns. Pick whichever approach you feel more comfortable with for your forecasted financial statements and go with it.

KEEP IT REAL

Keep your forecasts realistic. First, make sure your forecasts contain a reasonable salary for yourself and other owner-managers. Then make sure your forecasted financial statements produce performance measures that are reasonably in line with the standard performance in your industry. For example, the typical net profit margin (net profit/net sales) for many agricultural businesses is 2 to 3 percent. If your forecasted income statements report a 50-percent net profit margin, rethink your forecast. Have you missed something? Through this process of comparing their own forecasted financials to industry standards, entrepreneurs can develop more realistic expectations about the future financial performance of their new business.

General Tips for Constructing Forecasted Financial Statements

- After starting a business you will want to hire an accountant or employ a good accounting software program to keep financial records for your business. That accountant or software may be just as helpful when you are preparing and using forecasted financial statements.
- Support market and sales forecasts by market research. When your financial forecasts are part of a business plan, ensure that there is a direct link between market analysis, sales forecasts, and financial forecasts.
- Use the best information available.
- Be realistic about sales expectations and operating costs. Unreasonably optimistic forecasts will only hurt you once your venture is started.
- Keep track of assumptions. A narrative set of notes should accompany your financial forecasts in which you summarize and highlight your assumptions and their impact on estimated numbers. Make sure you discuss important assumptions in detail and that you explain the background.
- Try to anticipate the questions the readers of your forecasted financial statements (creditors, investors, business partners, family members) will ask.
- Compare your forecasts with industry standards before start-up, then adjust your forecast accordingly.
- Compare your forecasts with reality after start-up, then adjust your management of the new business accordingly.
- A good working knowledge of your forecasted financial statements is useful not only for decision making but also for communicating effectively with potential investors and lenders.
- Does the monthly cash-flow budget have a negative ending cash balance at the end of any month? If so, plan to increase sales, cut expenses, or obtain more money through equity investments or loans from creditors.

- Does the forecasted Statement of Cash Flows show that the net source of cash each year for the first few years is borrowing? New business owners can only go to the credit well so often before it starts to dry up. Focus on managing the business to generate net cash inflows from operating activities as soon as possible.
- Maintain tight control of the net use of cash for investments after the initial start-up period. Don't sink huge amounts of additional cash into the business until and unless it is clear that the operating activity is going to provide plenty of net cash flow. Generally it is not a good sign for a business that isn't growing revenues to be a net user of large amounts of cash for investing activities year after year. Unproductive investments lead to unprofitable businesses. If the business turns out to be a dog, don't throw good money after bad.
- Does the income statement forecast sufficient profit to grow business equity? Earned income retained in the business is generally an important source of funds for financing growth.
- Does the balance sheet forecast adequate working capital (current assets – current liabilities) and owners' equity to ride out the challenges facing a start-up business?
- Have you developed both best-case and worst-case scenarios?

CHAPTER 14.

Working with Labor

Alan Schroeder and Bill Schepeler

Labor and weeds are our biggest issue. We need labor to get after the weeds.

I could see pretty early on a couple of my members who had said that they wanted to work on the farm, the labor was just too much for them, so I offered out, 'Would you like to go to the farmers' market and help there?' 'Oh yes. That sounds really great.' So it doesn't just have to be about pulling weeds. There's a lot of things that can be done. A working share can be someone doing the website, and we actually had someone do that the first year – created the website template for us, so that was great.

INTRODUCTION: LABOR CHALLENGES FOR YOUR CSA

Interviews with CSA owners seem to have a common theme: they underestimate the labor demand to operate their CSAs. Labor is a fundamental requirement for each stage of a successful produce-based CSA, be it land preparation, planting, cultivation, pollination, thinning, weeding, pest control, harvesting, storage, cleaning, packaging, delivering, or marketing. Each type of CSAs will have its own specific labor needs.

Along with other inputs, estimate your labor needs/costs to assess whether their CSAs will be profitable and to ensure you have the required number of workers to timely and properly carry out each stage of their CSAs' operations. Also be aware of state and federal labor law requirements in operating your CSA. These laws have special rules depending upon how the workers and activities are classified (e.g., agricultural or nonagricultural).

This chapter outlines five labor questions CSA owners should consider: 1) different forms of labor their CSAs can use; 2) labor needs of their CSA; 3) CSAs' liability for workers' actions; 4) select CSAs' federal and state statutory obligations to their workers; and 5) worker recruitment and training. While it introduces a number of important legal concepts for CSAs employing labor, this chapter is not intended to provide legal advice. Work with your attorney and accountant to make sure your CSA complies with all legal and financing requirements.

LABOR AND CSAS

General

A 2002 national survey of primarily produce and essentially organic CSAs in 43 states—not including Wyoming—asked respondents the number of workers and total hours worked on their farms.¹ Median farm size was 15 acres with 7 acres of cropland. Responding CSAs generally provided 24 weeks of produce to their members. Table 1 summarizes the respondents' labor needs:

Table 1: Number of Workers and Total Hours Worked on Surveyed 2001 Farms

Types of Reported Labor	Number of People			Estimated Total Hours			Percent Paid a Wage
	n ¹	Mean	Median	n ¹	Mean	Median	
Growers	271	1.79	2.0	187	2479	2160	35.0
Family of Growers	105	2.43	2.0	69	932	400	11.8
Workers (including interns, apprentices, etc.)	215	4.13	3.0	167	2370	1000	48.1
Members	124	14.9	6.0	105	326	120	0.0
Other	32	23.7		30	547	275	3.2

¹The number of farms reporting out of 902 CSA's contacted.

The executive summary for this survey reports that nearly 68 percent of the responding CSAs used one to four workers and about half were paid a wage. Food, housing, and educational experience were also given as compensation. Table 1 provides useful information on potential labor needs and types of labor used. Neither the table nor survey tells us the total labor requirements (the means and medians for each category of worker cannot be summed to estimate total labor needs).

Different Forms of Labor for CSAs

As Table 1 illustrates, a CSA's workers may be characterized in a number of ways. How workers are characterized will be important in determining a CSA's liability for workers' actions along with its statutory duties (e.g., tax, safety) to its workers. Respondents in Table 1 self-identified how their workers are characterized. Other observers and federal and state laws might characterize these workers differently. Let's look at several characterizations and their implications.

Owner versus Nonowner Labor. Who owns and operates the CSA? Is the CSA a place where family or nonfamily members work or a joint enterprise where the workers participate in its management, its capitalization, and its potential profits or losses? The answer to this question will be relevant in determining whether workers are subject to the federal Fair Labor Standards Act's (FLSA's) protections regarding minimum wages, overtime compensation, and child labor restrictions (see below). If the intent is to operate the CSA as a joint enterprise or partnership, what documentation of this fact can be shown?

Member versus Nonmember Labor. As explained in an earlier chapter, some customers pay for the goods they receive by providing labor to the CSA. These labor share members are not owners. Indeed, they are debtors of the CSA who have agreed to work a specific number of hours to pay for the commodities they will receive. Table 1 should be revealing to if you are expecting to rely significantly on

¹ Daniel Lass, Ashley Bevis, G.W. Stevenson, John Hendrickson and Kathy Ruhf. 2002. *Community Supported Agriculture Entering the 21st Century: Results from the 2001 National Survey*, available at www.cias.wisc.edu/wp-content/uploads/2008/07/csa_survey_01.pdf.

your members' labor. While the mean number of member workers reported in the survey was 14.9, the median for reporting CSA relied on six or fewer member workers—still a large number. More interesting is the median number of total hours share members work: 120. While this is still a large number, it is the smallest number of hours across the listed categories.

If you are considering using share labor, establish a fair hourly rate for labor (for example, \$10.00/hour) and calculate required hours for the labor share price (i.e., share price is \$400 – earning a half of a labor share would require 20 hours of work). You can then establish actual work hours for these individuals, and track those hours. You might set the policy that un-worked hours will be charged back at a pre-calculated price. It is not unreasonable to charge back at a higher rate as the lost labor may result in reduced harvests or higher labor costs.

Employees versus Others (Independent Contractors and Guests). The median CSA in Table 1 utilized three “employees” (including interns and apprentices) who worked 1,000 hours during the reporting year. The respondents indicated that 48.1 percent of persons in this category were paid a wage. As noted earlier, nonwage earning employees in this category may receive other forms of reimbursement in the forms of housing, food, and training.

Many CSAs also hire neighboring farmers and independent contractors, who have required farm equipment and special skills, to carry out specific tasks for the businesses. These activities include field preparation, bee pollination, trucking, etc. Others may use the labor of volunteers and friends who simply want to visit and work on the CSA with no expectation of payment. The median CSA in the 2001 survey reported using 3.5 workers in the “other” category providing a more targeted 275 hours of work. Surprisingly, only 3.2 percent of workers in this category were reported to have been paid a wage. Again, this percentage may underrepresent those who receive payment in other ways (e.g., rent, trade of services, etc.).

Whether these “others” can be categorized as “employees” as opposed to “independent contractors” will be important in determining whether a CSA is legally liable for these workers' actions under Wyoming's tort (e.g., injury to another in auto accident) and contract (e.g., breach of promises made to the CSA's customers or suppliers) law or subject to Wyoming or federal employment law. Once again, different laws apply different standards in determining whether a particular person is an “employee.” The Wyoming Supreme Court has indicated:

In Wyoming, the overriding element in determining whether one is an employee or an independent contractor is dependent on whether the employer has a right to control the details of the work whereby liability is sought to be established.²

This quotation comes from a Wyoming case dealing with the defendants' liability for an alleged employee's actions. Control is also a key factor in determining who is an “employee” under Wyoming's workers' compensation statutes (see Wyo. Stat. Ann. § 27-14-101 *et seq.* (2013)). Wyoming's workers' compensation law (Wyo. Stat. Ann. § 27-14-102(a) (2013)) gives this description for “independent contractors”:

(xxiii) “Independent Contractor” means an individual who performs services for another individual or entity and:

(A) Is free from control or direction over the details of the performance of services by contract and by fact;

² *Franks v. Indep. Prod. Co.*, 2004 WY 97; 96 P.3d 484, 490 (Wyo. 2004) (inside quotation marks and citations dropped).

(C) *Represents his services to the public as a self-employed individual or an independent contractor; and*

(D) *May substitute another person to perform his services.*

This same statute (Wyo. Stat. Ann. § 27-14-102(a) (vii) (K) (2013) states that “volunteers” are not “employees,” with certain exceptions. It is not clear whether the Wyoming Supreme Court will use this same language in deciding whether a volunteer will be treated as an employee in tort or contract (nonworkers’ compensation) cases.

Federal labor laws have their own definitions as to who will be treated as “employees.” The FLSA’s 29 USCS § 203 (g) (2013)—“‘Employ’ includes to suffer or permit to work”—is not particularly helpful.³ Courts, interpreting the term within the FLSA and Migrant and Seasonal Agricultural Worker Protection Act (MSAWPA) (see below), have utilized the “economic reality” test in deciding if a worker is an employee: (1) the degree of control exerted by the alleged employer; (2) the worker’s opportunity for profit or loss; (3) the worker’s investment in the business; (4) the permanence of the working relationship; (5) the degree of skill to perform the work; and (6) the degree that the work is an integral part of the alleged employer’s business.⁴

Note that none of these interpretations depend upon whether the worker is paid. Indeed, there have been cases where state and federal agencies have concluded that internships are subject to federal and state labor laws.⁵ Work with your attorney to determine whether those laboring on your CSA qualify as employees for purposes of the applicable law.

Family versus Nonfamily Labor. The median CSA in Table 1 relied on two family members to carry out its operation. Of those reporting use of family labor, only 11.8 percent report paying them wages.

The Farmers Legal Action Group (FLAG), in a 2012 report on federal and Minnesota (state) labor laws, points out that—despite many people’s beliefs—family labor is subject to most of the same federal and state protections as nonfamily labor.⁶ Some exceptions do exist, though which family members excepted are often limited:⁷

- Minimum wage protection under the federal FLSA exempts from protection agricultural employees who are “the parent, spouse, child, or other member of his employer’s immediate family” (29 USCS § 213 (6) (B) (2013).
- Workplace safety standards under the federal Occupational Safety and Health Act (OSHA) exempt from coverage farm employer’s “immediate family” members.
- Federal Social Security and Medicare Tax provisions exempt parents of working children under the age of 18, working on a farm or ranch, from withholding or paying these taxes.
- Federal Income Tax Withholding provisions also exempt agriculturists from withholding requirements for their children under age 18.

³ Wyoming’s child labor (Wyo. Stat. Ann. § 27-4-201 (a)(ii) (2012)) and equal pay laws (Wyo. Stat. § 27-4-301 (c) (2012)) have adopted this same definition of “employ.”

⁴ *Secretary of Labor v. Lauritzen*, 835 F.2d 1529 (7th Cir. 1987).

⁵ Jennifer J. Kalyuzhny, *Comment: Cultivating the Next Generation: Why Farming Internships Should Be Legal*, 21 S.J. AGRIC. L. REV. 131 (2011/2012).

⁶ Farmers’ Legal Action Group, Inc., *Farmers’ Guide to Farm Employees: Federal and Minnesota Labor and Employment Law for Small-Scale Family Farm* (2012) [hereinafter FLAG] *Id.*, Chapter 2.

⁷ *Id.*, 2-9 to 2-12.

The exemption of “immediate family members” has generally been held not to cover agricultural employers’ brothers, sisters, nieces, or nephews.⁸ Additionally, the federal unemployment tax law (FUTA) makes no exemptions for family members. Work with your attorney and accountant to determine if any family exemptions apply to your CSA.

Agricultural versus Nonagricultural Labor. Federal and state employment laws provide a number of exemptions from their coverage for certain agricultural employers. These exceptions include:

- **Minimum wage:** agricultural employers are only subject to the FLSA’s minimum wage requirements if they employed more than 500 man-days in any calendar quarter the previous year (29 USC § 213(a)(6)(A) (2013).
- **Overtime:** agricultural employers are exempt from overtime provisions of the FLSA. 29 USCS § 213 (b)(12) (2013).
- **Child Labor:** child labor protections under the FLSA are loosened for agricultural employees (see below).
- **Unionization:** individuals employed in agriculture are not protected under the National Labor Relations Act (NLRA). 21 USC § 152(3) (2013).

To understand these exemptions it is important to understand what qualifies as “agriculture.” The definition section of the FLSA (29 USCS 203 [2013]) provides a widely used description:

(f) «Agriculture» includes farming in all its branches and among other things includes the cultivation and tillage of the soil, dairying, the production, cultivation, growing, and harvesting of any agricultural or horticultural commodities (including commodities defined as agricultural commodities in section 15(g) of the Agricultural Marketing Act, as amended, the raising of livestock, bees, fur-bearing animals, or poultry, and any practices (including any forestry or lumbering operations) performed by a farmer or on a farm as incident to or in conjunction with such farming operations, including preparation for market, delivery to storage or to market or to carriers for transportation to market.

It is important to recognize that while most activities of CSAs—“farming operations, including preparation for market, delivery to storage or to market or to carriers for transportation to market”—qualify as “agricultural,” certain value-added activities (e.g., processing, marketing) may not. Again, talk with your attorney to determine if your CSA’s activities qualify as “agriculture.”

LABOR NEEDS OF YOUR CSA

Table 2 asks you to outline the labor needs of your CSA over the production season. The production season includes growing and non-growing months. Your CSA may need workers during non-growing months for such things as marketing, value-added processing, and packing and delivery of stored CSA commodities.

In completing this table, it is important to recognize that certain activities are time specific and others more flexible; some activities require specific, time-consuming training and others brief instructions on how the work is to be done. These timing and training requirements may determine which type of labor (see above) should be used to carry out specific tasks. The table can be used in preparing the CSA’s labor schedule for its production season. Table 2 also asks you to establish an expected hourly wage rate by

⁸ FLAG, *op cit*.

CSAS' LIABILITY FOR THEIR WORKERS' ACTIONS

CSAs' Liability for Their Employees' Torts

Under common law, “Breach of contract is the failure to perform a duty expressly stated or implied by the terms of the agreement, whereas a tort is the violation of a duty (that) is imposed by law.”⁹ Under both, the injured party can sue for damages caused by the breach.

Wyoming law follows the traditional (common law) concept of “respondeat superior” in determining if employers are liable for tortous actions of their employees:

Under the respondeat superior theory, an employer is liable for the negligence of an employee acting within the scope of his employment... The conduct of an employee is within the scope of his employment only if it is of the kind he is employed to perform; it occurs substantially within the authorized time and space limits; and it is actuated, at least in part, by a purpose to serve the master. Restatement (Second) of Agency, § 228 (1958)¹⁰.

Under this theory, a CSA will be liable if: a) the person (employee) is acting under its control; b) the person was working for the CSA at the time; and c) the action(s) causing the harm was/were within that person's scope of employment. Thus, a CSA would not be responsible for damages that occurred when an employee was driving the employee's car to work (the person was not an employee at the time). In contrast, the CSA will be liable if its employee was involved in a vehicular accident while delivering produce to designated customers as part of the employee's assigned tasks. The delivery would be part of the employee's scope of employment, even though the CSA did not counsel the employee to drive negligently.

CSAs' Liability for the Actions of Their Independent Contractors

The Wyoming Supreme Court has held that hirers are typically not liable for the physical harm caused to others by their independent contractors with several recognized exceptions: 1) the injury arose as a result of the hirers' exercise of control over the independent contractors; 2) the hirer assumed specific safety duties; 3) the activity is ultrahazardous (such liability cannot be delegated); 4) the injury occurred as a result of the failure of equipment lent to the independent contractor by the hirer (bailment); or 5) hirers' negligence in selecting an incompetent independent contractor.¹¹ In each of these instances the hirer will still be liable for the independent contractor's acts or omissions.

Principal's Liability for the Actions of Their Agents

Similarly, Wyoming law follows traditional (common) law rules governing the authority of one person (agent) to make a binding agreement on behalf of another (principal): 1) actual authority, either expressly or impliedly given; and 2) apparent authority “when the [apparent] principal holds the [apparent] agent out as possessing the authority to bind the principal, or when the principal allows the agent to claim such authority agency.”¹² The issue of authority with respect to CSAs is most likely to occur in the promises or claims made by the owners or their apparent agents in marketing the CSAs' goods.

⁹ *Kemper Architects, P.C. v. McFall, Konkel & Kimball Consulting Engineers, Inc.*, 843 P.2d 1178, 1185 (Wyo. 1992).

¹⁰ *Austin v. Kaness*, 950 P.2d 561, 563 (Wyo. 1997).

¹¹ *Cornelius v. Powder River Energy Corp. Inc.*, 2007 WY 30; 152 P.3d 387 (Wyo. 2007) (grounds 1-3); *Romero v. Schulze*, 974 P.2d 959, 964 (Wyo. 1999) (“the torts of negligent hiring and supervision do not depend upon an employment relationship” (dicta)).

¹² *Ohio Cas. Ins. Co. v. W. N. McMurry Constr. Co.*, 2010 WY 57; 230 P.3d 312, 326 (Wyo. 2010).

SELECT FEDERAL AND WYOMING EMPLOYMENT LAWS AFFECTING CSAS

Federal Minimum Wage Law (Fair Labor Standards Act [FLSA])

The current minimum wage under the FLSA is \$7.25/hour (29 USCS § 206 [2013]). However, as noted above, small agricultural operations—those with fewer than 500 man-days of employment in any calendar quarter of the previous year—are exempt from both the minimum wage and overtime requirements. Examine your records and talk with your attorneys to see if your CSA is exempt.

Wyoming Minimum Wage Law

Wyoming's minimum wage for those not covered by federal law is \$5.15/hour (Wyo. Stat. Ann. § 27-4-202 (a) [2012]). The Wyoming statutes exempt agricultural employment (Wyo. Stat. § 27-4-201 (a) (iv) (A) [2012]). This statute does not define what constitutes "agricultural" employment.

Federal Child Labor Law

The FLSA (29 USCS § 203(l), 212 (c) [2013]; 29 CFR § 570.2 [2013]) also makes it unlawful for any person to engage in "oppressive child labor" in commerce or the production of goods for commerce. Again, special rules apply regarding child labor in agriculture. A Department of Labor Fact Sheet summarizes current coverage and exceptions. For minors 16 and under:

Youths aged 14 and 15 may work outside school hours in jobs not declared hazardous by the Secretary of Labor.

Youths 12 and 13 years of age may work outside of school hours in non-hazardous jobs on farms that also employ their parent(s) or with written parental consent.

Youths under 12 years of age may work outside of school hours in non-hazardous jobs with parental consent, but only on farms where none of the employees are subject to the minimum wage requirements of the FLSA.

Local youths 10 and 11 may hand harvest short-season crops outside school hours for no more than 8 weeks between June 1 and October 15 if their employers have obtained special waivers from the Secretary of Labor.

Youths of any age may work at any time in any job on a farm owned or operated by their parents.¹³

These standards differ from those for nonagricultural employment. The Department of Labor has designated the following work "hazardous":

Minors under 16 may not work in the following occupations declared hazardous

- *operating a tractor of over 20 PTO horsepower, or connecting or disconnecting an implement or any of its parts to or from such a tractor;*
- *operating or working with a corn picker, cotton picker, grain combine, hay mower, forage harvester, hay baler, potato digger, mobile pea viner, feed grinder, crop dryer, forage blower, auger conveyor, unloading mechanism of a nongravity-type self-unloading wagon or trailer, power post-hole digger, power post driver, or nonwalking-type rotary tiller;*
- *operating or working with a trencher or earthmoving equipment, fork lift, potato combine, or power-driven circular, band or chain saw;*

¹³ U.S. Department of Labor Wage and Hour Division, Fact Sheet #40: Federal Youth Employment Laws in Farm Jobs (revised July 2008), available at www.dol.gov/whd/regs/compliance/whdfs40.htm.

- working in a yard, pen, or stall occupied by a bull, boar, or stud horse maintained for breeding purposes; a sow with suckling pigs; or a cow with a newborn calf (with umbilical cord present);
- felling, bucking, skidding, loading, or unloading timber with a butt diameter of more than 6 inches;
- working from a ladder or scaffold at a height of over 20 feet;
- driving a bus, truck or automobile to transport passengers, or riding on a tractor as a passenger or helper;
- working inside: a fruit, forage, or grain storage designed to retain an oxygen-deficient or toxic atmosphere; an upright silo within 2 weeks after silage has been added or when a top unloading device is in operating position; a manure pit; or a horizontal silo while operating a tractor for packing purposes;
- handling or applying toxic agricultural chemical identified by the words “danger,” “poison,” or “warning” or a skull and crossbones on the label;
- handling or using explosives; and
- transporting, transferring, or applying anhydrous ammonia.¹⁴

These prohibitions do not apply to children working on their parents’ farms or ranches. Additionally, youths ages 14 and 15 may engage in certain hazardous work if enrolled in qualifying vocational agricultural programs or holding training certificates from 4-H or vocational training programs.¹⁵

WYOMING CHILD LABOR LAW

Wyoming law (Wyo. Stat. Ann. § 27-6-107 (2013) provides:

It shall be unlawful for any person, firm or corporation to employ, permit or allow any child under the age of fourteen (14) years to work at any gainful occupation except farm, domestic or lawn and yard service. To ensure that a child is of proper age to be employed under this section, every person, firm or corporation employing a child under sixteen (16) years of age shall procure and have on file where the child is employed, a form of proof of age as required under W.S. 27-6-108; provided however that under no circumstances shall any child under sixteen (16) years of age be employed in any occupation listed in W.S. 27-6-112 or in any occupation declared by the Department of Workforce Services to be hazardous for children under sixteen (16) years of age.

Wyoming’s child labor statutes do not define what constitutes a “farm.” The list of profited occupations under Wyo. Stat. Ann. § 27-6-112 (2013) include working on heavy construction equipment or with explosives or dangerous chemicals.

OCCUPATIONAL SAFETY REQUIREMENT (OCCUPATIONAL, SAFETY, AND HEALTH ACT [OSHA])

Congress established OSHA in 1970 to “reduce employment related hazards” and to “assure so far as possible every working man and woman in the Nation safe and healthful working conditions.” The Secretary of Labor administers OSHA through his/her designee. States may adopt their own occupation-

¹⁴ *Id.*

¹⁵ *Id.*

al safety and health standards in place of OSHA's. States may assume responsibility to oversee OSHA's application. To qualify, the state regulations must be at least as strong as OSHA's rules. Wyoming administers its own program.

Employers are subject to two separate substantive requirements under the Act. First, the Act's general duty clause requires all employers to furnish their employees with "employment and a place of employment...free from recognized hazards that are causing or are likely to cause death or serious physical harm." Second, the agency has adopted a number of specific occupational safety standards for particular industries and activities. Additionally, OSHA's procedural rules require covered employers to keep records of work-related accidents and illnesses and post specific information for employees.

OSHA exempts agricultural operations from its coverage in several ways. First, Congress in appropriation bills has routinely forbidden enforcement of OSHA standards against "any person who is engaged in a farming operation which does not maintain a temporary labor camp and employs ten or fewer employees" (112 P.L. 74 § 436; 125 Stat. 786, Dec. 23, 2011). Similarly, agricultural operations are subject only to the following specific safety standards (29 CFR § 1928.21 [2013]): "(1) Temporary labor camps... (2) Storage and handling of anhydrous ammonia... (3) Logging operations... (4) Slow moving vehicles... (5) Hazard communication... (6) Cadmium... [and] (7) Retention of DOT markings, placards and label..." Additionally agricultural operations using tractors must comply with roll-over protection requirements (29 CFR 1928.51 [2013]).

Many CSAs grow and sell produce to their customers. For them, these Department of Labor field sanitation rules (29 CFR 1928.110 [2013]) will apply:

a) Scope. This section shall apply to any agricultural establishment where eleven (11) or more employees are engaged on any given day in hand-labor operations in the field.

(b) Definitions. Agricultural employer means any person, corporation, association, or other legal entity that:

(i) Owns or operates an agricultural establishment;

(ii) Contracts with the owner or operator of an agricultural establishment in advance of production for the purchase of a crop and exercises substantial control over production; or

(iii) Recruits and supervises employees or is responsible for the management and condition of an agricultural establishment.

Agricultural establishment is a business operation that uses paid employees in the production of food, fiber, or other materials such as seed, seedlings, plants, or parts of plants.

Hand-labor operations means agricultural activities or agricultural operations performed by hand or with hand tools. Except for purposes of paragraph (c) (2) (iii) of this section, hand-labor operations also include other activities or operations performed in conjunction with hand labor in the field.

Some examples of hand-labor operations are the hand-cultivation, hand-weeding, hand-planting and hand-harvesting of vegetables, nuts, fruits, seedlings or other crops, including mushrooms, and the hand packing of produce into containers, whether done on the ground, on a moving machine or in a temporary packing shed located in the field. Hand-labor does not include such activities as logging operations, the care or feeding of livestock, or hand-labor operations in permanent structures (e.g., canning facilities or packing houses).

Hand-washing facility means a facility providing either a basin, container, or outlet with an adequate supply of potable water, soap and single-use towels.

Potable water means water that meets the standards for drinking purposes of the State or local authority having jurisdiction, or water that meets the quality standards prescribed by the U.S. Environmental Protection Agency's National Primary Drinking Water Regulations (40 CFR part 141).

Toilet facility means a fixed or portable facility designed for the purpose of adequate collection and containment of the products of both defecation and urination which is supplied with toilet paper adequate to employee needs. Toilet facility includes biological, chemical, flush and combustion toilets and sanitary privies.

(c) Requirements. Agricultural employers shall provide the following for employees engaged in hand-labor operations in the field, without cost to the employee:

(1) Potable drinking water. (i) Potable water shall be provided and placed in locations readily accessible to all employees.

(ii) The water shall be suitably cool and in sufficient amounts, taking into account the air temperature, humidity and the nature of the work performed, to meet the needs of all employees.

(iii) The water shall be dispensed in single-use drinking cups or by fountains. The use of common drinking cups or dippers is prohibited.

(2) Toilet and hand-washing facilities. (i) One toilet facility and one hand-washing facility shall be provided for each twenty (20) employees or fraction thereof, except as stated in paragraph (c) (2) (v) of this section.

(ii) Toilet facilities shall be adequately ventilated, appropriately screened, have self-closing doors that can be closed and latched from the inside and shall be constructed to ensure privacy.

(iii) Toilet and hand-washing facilities shall be accessibly located and in close proximity to each other. The facilities shall be located within a one-quarter-mile walk of each hand laborer's place of work in the field.

(iv) Where due to terrain it is not feasible to locate facilities as required above, the facilities shall be located at the point of closest vehicular access.

(v) Toilet and hand-washing facilities are not required for employees who perform field work for a period of three (3) hours or less (including transportation time to and from the field) during the day.

(3) Maintenance. Potable drinking water and toilet and hand-washing facilities shall be maintained in accordance with appropriate public health sanitation practices, including the following:

(i) Drinking water containers shall be constructed of materials that maintain water quality, shall be refilled daily or more often as necessary, shall be kept covered and shall be regularly cleaned.

(ii) Toilet facilities shall be operational and maintained in clean and sanitary condition.

(iii) Hand-washing facilities shall be refilled with potable water as necessary to ensure an adequate supply and shall be maintained in a clean and sanitary condition; and

(iv) Disposal of wastes from facilities shall not cause unsanitary conditions.

(4) Reasonable use. The employer shall notify each employee of the location of the sanitation facilities and water and shall allow each employee reasonable opportunities during the workday to use them. The employer also shall inform each employee of the importance

of each of the following good hygiene practices to minimize exposure to the hazards in the field of heat, communicable diseases, retention of urine and agrichemical residues:

- (i) Use the water and facilities provided for drinking, hand-washing and elimination;*
- (ii) Drink water frequently and especially on hot days;*
- (iii) Urinate as frequently as necessary;*
- (iv) Wash hands both before and after using the toilet; and*
- (v) Wash hands before eating and smoking.*

Large CSAs should talk with their attorneys to make sure they are in compliance with Department of Labor OSHA requirements.

FEDERAL MIGRANT AND SEASONAL AGRICULTURAL WORKER PROTECTION ACT (MSAWPA)

The MSAWPA requires nonexempt agricultural employers, associations, and contractors who “recruit, solicit, hire, employ, furnish transport or house” migrant or seasonal workers to:

- Disclose the terms and conditions of employment to each migrant worker in writing at the time of recruitment and to each seasonal worker when employment is offered, in writing if requested;
- Post information about worker protections at the worksite;
- Pay each worker the wages owed when due and provide each with an itemized statement of earnings and deductions;
- Ensure that housing, if provided, complies with substantive federal and state safety and health standards;
- Ensure that each vehicle, if transportation is provided, meets applicable federal and state safety standards and insurance requirements and that each driver be properly licensed;
- Comply with the terms of any working arrangement made with the workers; and
- Make and keep payroll records for each employee for three years.¹⁶

The definition section of the MSAWPA, 29 USCS § 1802 (2013), provides a number of important definitions of who is covered by the Act:

Agricultural Employer: “(2)... any person who owns or operates a farm, ranch, processing establishment, cannery, gin, packing shed or nursery, or who produces or conditions seed, and who either recruits, solicits, hires, employs, furnishes, or transports any migrant or seasonal agricultural worker.”

Agricultural Employment: “(3) ... employment in any service or activity included within the provisions of [the FLSA] and the handling, planting, drying, packing, packaging, processing, freezing, or grading prior to delivery for storage of any agricultural or horticultural commodity in its unmanufactured state.

¹⁶ U.S. Department of Labor, The Migrant and Seasonal Agricultural Worker Protection Act (MSPA), available at www.dol.gov/compliance/laws/comp-msawpa.htm. For an older, more thorough description of the Act, see Susan A. Schneider, *Notes on the Migrant and Seasonal Agricultural Worker Protection Act*, 2001 Ark. L. Notes 57.

Day-Haul Operation: “(4) the assembly of workers at a pick-up point waiting to be hired and employed, transportation of such workers to agricultural employment, and the return of such workers to a drop-off point on the same day.”

Employ: “(5) ... has the meaning given such term under [the FLSA].”

Farm Labor Contracting Activity: “(6) ... recruiting, soliciting, hiring, employing, furnishing, or transporting any migrant or seasonal agricultural worker..”

Farm Labor Contractor: “(7)...any person, other than any agricultural employer, an agricultural association, or an employee of an agricultural employer or agricultural association, who, for any money or other valuable consideration paid or promised to be paid, performs any farm labor contracting activity.”

Migrant Worker: “(8)...means an individual who is employed in agricultural employment of a seasonal or other temporary nature, and who is required to be absent overnight from his permanent place of residence..”

Seasonal Worker: “(10)... means an individual who is employed in agricultural employment of a seasonal or other temporary nature and is not required to be absent overnight from his permanent place of residence— (i) when employed on a farm or ranch performing field work related to planting, cultivating, or harvesting operations; or (ii) when employed in canning, packing, ginning, seed conditioning or related research, or processing operations, and transported, or caused to be transported, to or from the place of employment by means of a day-haul operation.”

The MSAWPA’s requirements do not apply to persons engaged in farm labor contracting for themselves or immediate family members. It also does not apply to persons—other than labor contractors—not having 500 man-days per previous calendar quarter under the FLSA (29 USCS § 1803 (a) (1), (2) [2013]). The terms “migrant worker” and “seasonal worker” do not include immediate family members of the employer or contractor or persons admitted under separate provisions of the Immigration and Nationality Act. The MSAWPA protections do not apply to independent contractors or their employees. However, covered workers may have more than one employer (joint employers; see discussion of employment above) and any joint employer will be liable if any other joint employer fails to give covered workers the required information. Farm labor contractors must register with the U.S. Department of Labor. CSAs using seasonal or migrant agricultural workers should talk with their attorneys to ensure they comply with the MSAWPA’s requirements.

Wyoming Workers’ Compensation Law

Wyoming law has established a workers’ compensation program, providing workers benefits for covered injuries and limiting their ability to sue employers, for designated “extra hazardous employment.” That said, and despite the fact that data show agricultural employment can be very dangerous, the Wyoming statutory listing of “extra hazardous” employment does not include agricultural employment other than forestry and logging (Wyo. Stat. Ann. § 108-14-27 (a)(ii)(A) [2012]). Employers who are not covered may still elect to participate (Wyo. Stat. Ann. § 108-14-27 (j) [2012]). Talk with your attorney and accountant to determine whether to elect to participate.

Selected Tax Coverage

CSA’s may be responsible for collecting and/or contributing to a number of federal or state tax provisions for their employees. The Department of Treasury’s *Farmer’s Tax Guide* provides taxpayers a comprehensive summary of federal tax law. Regarding employment taxes, it notes:

You must withhold federal income, Social Security, and Medicare taxes required to be withheld from the salaries and wages of your employees. You are liable for the payment of these taxes to the federal government whether or not you collect them from your employees. If, for example, you withhold less than the correct tax from an employee's wages, you are still liable for the full amount. You must also pay the employer's share of Social Security and Medicare taxes.¹⁷

Work with your attorney and accountant to determine which of your workers are covered by these tax provisions and what their tax obligations will be.

Social Security. The *Farmer's Tax Guide* states:

All cash wages you pay to an employee during the year for farmwork are subject to Social Security and Medicare taxes if you meet either of the following tests.

- *You pay the employee \$150 or more in cash wages (count all wages paid on a time, piecework, or other basis) during the year for farmwork (the \$150 test). The \$150 test applies separately to each farmworker (who) you employ. If you employ a family of workers, each member is treated separately. Do not count wages paid by other employers*
- *You pay cash and noncash wages of \$2,500 or more during the year to all your employees for farmwork (the \$2,500 test).¹⁸*

Even if the \$2,500 cash wage floor is not met, the \$150 trigger still applies. The applicable tax, according to the Guide:

The employee tax rate for Social Security is 4.2% and the employer tax rate for social security is 6.2%, unchanged from 2011. The Medicare tax rate is 1.45% each for employers and employees.

Do not withhold or pay Social Security tax after an employee reaches \$110,100 in Social Security wages for the year. There is no limit on the amount of wages subject to Medicare tax.¹⁹

Federal Income Tax Withholding. Federal law requires employers to withhold federal income taxes for their employees if:

If the cash wages [an employer] pays to farmworkers are subject to Social Security and Medicare taxes, they are also subject to federal income tax withholding. Although noncash wages are subject to federal income tax, withhold income tax only if [an employer] and the employee agree to do so. The amount to withhold is figured on gross wages without taking out Social Security and Medicare taxes, union dues, insurance, etc.

...[CSAs] do not have to withhold federal income tax on payments for services to individuals who are not [their] employees. However, [these CSAs] may be required to report these payments on Form 1099MISC, Miscellaneous Income, and to withhold under the backup withholding rules.²⁰

¹⁷ Department of the Treasury, Internal Revenue Service, *Farmer's Tax Guide* (Pub. 225, 2012), available at www.irs.gov/pub/irs-pdf/p225.pdf [hereinafter Guide].

¹⁸ *Id.*, at 78.

¹⁹ *Id.*, at 76.

²⁰ *Id.*, at 79.

Unemployment Taxes. The Federal Unemployment Tax Act (FUTA) program provides weekly unemployment insurance payments to qualifying unemployed. States oversee the program; in Wyoming, this is the Department of Workforce Services' Unemployment Insurance Division.

CSAs must contribute to the FUTA program if they:

- *Paid cash wages of \$20,000 or more to farm workers in any calendar quarter in the current or prior tax year (2012 or 2013, for example), or*
- *Employed 10 or more farm workers during at least some part of a day during any 20 or more different weeks in the current or prior tax year.*²¹

If you fall under either category, then work with your attorney and accountant to determine what and how to pay your FUTA obligations.

Several Other Federal Labor Laws Potentially Affecting CSAs

The Federal Insecticide, Fungicide, and Rodenticide Act of 1947, as amended. FIFRA establishes rules governing not only the registration, efficacy, and use of restricted pesticides and also authorizes rules governing safe working conditions for those employed in businesses (e.g., agriculture, greenhouses) that use pesticides.²²

The Immigration Reform and Control Act of 1986. Among other things, IRCA requires employers to verify that an employee is qualified to work in the United States and prohibits discrimination against any employee based upon his/her status. This is the basis for the I-9 document applicants for employment must fill out. Federal law also establishes protocols to hire foreign workers (H-2A program) when domestic agricultural workers are not available.²³

The Family and Medical Leave Act of 1993. Requires covered employers to grant eligible employees unpaid leave for certain family or medical reasons. The employee must be allowed to come back to work, either in his/her original or equivalent job.

The Equal Pay Act of 1963. Prohibits wage discrimination based upon an employee's sex. The Act also makes it illegal to retaliate against an employee who files a complaint or initiates or participates in a proceeding brought under its provisions.

Title VII of the Civil Rights Act of 1964. Makes it illegal to refuse to hire, discharge, or discriminate against an individual on the basis of national origin (other than an undocumented worker) or to discriminate with respect to pay, terms of employment or other condition because of the employee's race, color, religion, sex or national origin, or to classify any person based upon race, color, religion, sex, or national origin in any way that would deprive him/her of employment opportunities or job status. The Act also makes it illegal to retaliate against any employee because she/he opposes practices made illegal under the Act or files a complaint, testifies, assists or participates in a proceeding under its provisions.

The Age Discrimination in Employment Act of 1967. Prohibits employment discrimination based upon age including refusing to hire, discharge, or discriminate because of age alone.

²¹ *Id.*, at 80.

²² For additional information, see USDA, *EPA Worker Protection Standards* (2002), available at www.thecre.com/fedlaw/legal2/wpsspage.htm.

²³ The H-2A program is described in U.S. Department of Labor, Work Authorization for Non-U.S. Citizens: Temporary Agricultural Workers (H-2A Visas) at www.dol.gov/compliance/guide/taw.htm.

The Americans with Disabilities Act of 1990 (ADA). Prohibits discrimination against qualified individuals with disabilities in all aspects of employment. It prohibits utilizing standards, criteria, or methods of administration not job related and consistent with business necessity and that have the effect of discrimination on the basis of disability. It requires that covered employers make reasonable accommodation to the known physical or mental limitations of an otherwise qualified applicant or employee with a disability, unless the employer can demonstrate that the accommodation would impose an undue hardship on the operation of the employer's business.

Employment Regulations' Posters and Other Information.

A number of federal and state laws require employers to inform workers of their rights under these statutes. To find information on and examples of such posters you can go to U.S. Department of Labor, Posters, available at www.dol.gov/compliance/topics/posters.htm, to find:

- Employee Rights Under the Fair Labor Standards Act.
- Job Safety and Health: It's the Law (OSHA).
- Employee Rights and Responsibilities Under the Family and Medical Leave Act.
- Equal Employment Opportunity is the Law.
- Migrant and Seasonal Agricultural Worker Protection Act Notice.

Additional Information

You can also obtain additional information on labor law and other issues from the Wyoming Department of Workforce Services at 307-777-8650, and local workforce centers. For a listing of offices (see: wyomingworkforce.org/contact/Pages/default.aspx). For more information on basic labor standards under Wyoming law, refer to the Wyoming Department of Workforce Services "Handy Reference Guide" at: www.wyomingworkforce.org/Documents/Labor%20Standards/Handy%20Reference%20Guide.pdf

RECRUITING EMPLOYEES FOR YOUR CSA

Attracting, hiring, and maintaining good employees can be one of the most challenging aspects of managing a CSA. Here are some steps that can make the process more successful.

1. Create a job description – a written job description will help a manager get all of the ideas they have about what a new employee will be doing. A basic job description will cover the duties a new employee will need to perform, the qualifications they need to be able to perform those duties, and basic information about the job such as a job title, work hours, pay range, and benefits. For information on job descriptions and examples for different jobs, visit www.onetonline.org. Don't be overwhelmed by the writing process. It is most important to get your ideas into a format you can begin to refine. Many job descriptions are written as bulleted lists.
2. When you have this information compiled, you can begin the recruiting process. Spend time looking at the local job market. Make sure you understand who you will be competing against to attract employees. This has a large effect on the wages employees will expect and the level of knowledge and experience you can expect to attract to your CSA. The Wyoming Department of Workforce Services offers labor market information (LMI) that you can use to research the local job market. You can sign up to access this data for free. Go to <http://doe.state.wy.us/lmi/wyoatworkinfo.htm>. And then click on "Subscribe."

3. Decide how you will inform potential applicants of your opening. There are many ways to “get the word out” on job openings. You will need to consider the cost involved in an advertising opportunity and weigh it against the number of qualified applicants you expect will see your job posting with each opportunity. Remember, increased cost may not lead to increased results.

Here are some potential methods for advertising you job opening:

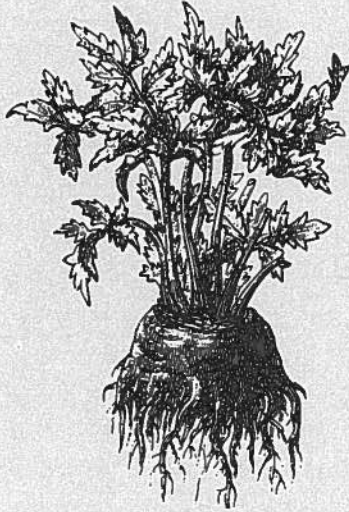
- a. Traditional media – radio and/or newspaper advertising. Rates usually depend on the number of times the posting is advertised.
- b. Internet job sites – these services, such as Monster.com, specialize in advertising job postings online. They can be great for reaching a national audience, but they can also be very expensive.
- c. Local job sites – these sites are sometimes administered by traditional advertising media, local economic development organizations, or area employers. www.wyomingatwork.com is a free service for Wyoming job postings.
- d. Bulletin boards – printed copies of your job posting can be advertised in many local businesses. There is usually no cost to place your job announcement on a bulletin board.
- e. Word of mouth – ask other businesses if they know of qualified employees. Sometimes another business owner will know of someone who is looking for work. Another potential source is schools such as high schools, colleges, and universities. Some CSAs have created internship programs.

You may need to use more than one channel to advertise your job posting, especially in areas with low unemployment rates. It may also take some time, so make sure to plan ahead.

1. After you have advertised the job opening, begin gathering applications. Plan to wait long enough from the time you begin advertising to collect a good number of applications. Typically, one or two weeks should give applicants enough time to get an application to you. When you have a good applicant pool, review applications and choose which applicants you would like to interview.
2. Schedule a time to interview selected applicants. There are many different interviewing techniques and theories. In general, an interview is an opportunity for the employer to learn if the applicant can perform the requirements of the job, is excited to do that work according to the job description, will follow directions, and will be reliable, conscientious, and a team player. There are a number of resources available in Wyoming to help guide you through this process. The Wyoming Small Business Development Center, which is part of Wyoming Entrepreneur, offers in-person and online classes. Look under “Classes” here for offerings: www.wyomingentrepreneur.biz. Wyomingatwork.com also offers online classes in human resources’ topics at www.wyomingatwork.com/training.asp.
3. Before making a hiring decision, check with the references provided by the applicant to gain insight into the person’s background and experience. Remember, applicants usually give references that they are reasonably sure will have positive things to say about their experience with the applicant. It’s important to keep perspective when considering the value of the referral.
4. Hire the best candidate. Following a process won’t guarantee that you find the right person for your business, but it will increase the likelihood that the person is a good fit for your CSA. Now, the real work of managing employees begins.

For a more complete description of employee recruitment and supervision, see *Ag Help Wanted: Guidelines for Managing Agricultural Labor* (2001) by Rosenberg, H.R. R. Carkner, J.P. Hewlett, L. Owen, T. Teegerstrom, J.E. Tranel, and R.R. Weigel. Western Farm Management Extension Committee.

TAKEAWAYS



- A key challenge for any successful CSA is to properly determine, employ, train, and schedule workers to carry out necessary activities.
- CSAs utilize different forms of labor—from family to employees to independent contractors—to achieve their ends.
- CSAs must comply with a wide range of federal and state employment laws in selecting, utilizing, and compensating these workers.
- CSA owners should spend time: a) detailing a clear job description for necessary work and workers; b) establishing a training program to ensure work done meets their CSAs' standards; and c) supervising either the work or outcome—depending upon the type of worker—to make sure the activities are properly done.

CHAPTER 15.

Steps to Forming a CSA Venture

Cole Ehmke

I did a lot of research on all the different CSA models I could find and people that I know who have CSAs in Colorado and Boulder County and Larimer County and such... A lot of CSAs have such good information on their websites about, you know, what's in a share and how it works and how the working memberships work. And one of the things that I wanted to do was also help support other local businesses if I could, so I kind of gleaned what I thought was the best from some of the other CSA models, but then I also offered out to our customers, our CSA members, a free cooking class with a local chef here in town who teaches cooking classes. And she came on board and wrote weekly recipes for us and such to add to the website. You know just try to collaborate with others, too, so the CSA members could see some other local businesses going on that were food related.

STARTING A BUSINESS

Proper planning can eliminate some of the troubling and frustrating aspects of starting a successful business. The following checklist can serve as a guide:

- Consider your business structure (sole proprietorship, limited liability company, partnership, etc.).
- Register your business with your secretary of state's office and receive a federal tax identification number (FEIN) for tax filing purposes.
- Register your business with your state's department of revenue and receive a tax identification number for remitting sales tax.
- If serving food to guests, contact the proper authority (a state or local agency) for inspection, permit, and licensing requirements.
- Purchase liability insurance coverage. Insurance might pay not only for a successful lawsuit against you but also for your legal defense even if you were not found liable. If you do not have insurance coverage specific to your farming operation, contact your current insurance provider to see if your CSA activities are covered. Typical farm insurance policies do not offer protection for activities related to agritourism. If you do have insurance coverage, ask your agent to provide written confirmation that all the specific activities of your CSA business are included in the policy.
- Research planning and zoning requirements in your county.
- Prepare business and marketing plans for your company.

- Financial Documentation – existing business
- Current balance sheet and past three full years income (profit and loss)
- Projection of revenues, expenses, and profits for next 12 months
- Cash-flow projection for next 12 months
- Written business plan with narrative of major assumptions
- Current personal financial statement for each owner, partner, or stockholder
- List of collateral
- Statement of the amount and intended uses of the loan
- Financial Documentation – new business
- Prepare a detailed estimate of how much capital is needed to start
- 12-month projection of revenues, expenses, and profits
- 12-month projection of cash flow
- Written business plan with narrative of major assumptions
- List of collateral

FARM INCOME AND TAXES

To the IRS, it doesn't matter whether you are a full-time or part-time farmer or rancher: you are still in business to make money.

As with any business, the farm or ranch has expenses needed to operate. Under the federal tax code, these expenses can be deducted from the income generated by the farm, and they can help reduce your tax bill.

Farm Taxes: Schedule F

Taxpayers usually file one of the IRS 1040 forms to report income. Farmers then use an additional form called Form 1040 Schedule F (Profit or Loss from Farming) to report income that comes from farming.

Farm Income

On the Schedule F, the farm taxpayer reports the income generated from all sources of farm income. Examples include

- Livestock sold (either from animals you raised or that you bought to resell)
- Crops sold
- Gains from selling property
- Interest income received
- Rents
- Partnership or cooperative income

Then the form asks about the expenses associated with operating the farm.

Deductible Expenses

The IRS allows any expense that is normal in the farm industry and is necessary to keep the farm running to be deductible against gross profits of the farm.

Remember, the basic structure of the income tax system begins with summing the items constituting gross income. Gross income is reduced by allowable deductions to calculate the taxable income. Taxable income is then multiplied by the rate for people in your tax bracket to find your tax liability.

Deductible expenses for farmers include

- Car and truck expenses
- Chemicals
- Some conservation practices
- Depreciation
- Employee benefits
- Feed
- Fertilizer
- Freight
- Fuel
- Interest
- Insurance
- Legal and professional fees
- Office supplies
- Rent
- Repairs and maintenance
- Seeds
- Utilities
- Vet bills

One of the deductible expenses is depreciation. Farmers can depreciate most types of tangible property – except land – such as buildings, machinery, equipment, vehicles, certain livestock, and furniture. They can also depreciate some intangible property, such as copyrights, patents, and computer software. Depreciation or amortization may be required if an asset has a useful life of more than one year. Amortization allows you to spread the cost of certain things over several years for tax purposes.

Some expenses paid during the tax year may be partly personal and partly business. Examples include gasoline, oil, fuel, water, rent, electricity, telephone, automobile upkeep, repairs, insurance, interest, and taxes. Farmers must allocate these expenses between business and personal uses. Generally, personal use of these expenses is not deductible.

Farm Gains and Losses

The net profits shown on Schedule F will flow to a person's 1040 tax return. The profit is taxable, along with any other income sources the person may have.

The tax code benefits farmers and others who own their own business. So losses can be used to offset other income. Keep in mind that losses are deductible if they are attributable to a business. If you operate your farm as a hobby (with no profit aim), then that would be a concern for the IRS and they may have to make a determination about how you should file, which might reduce your tax benefits.

The Farmer's Tax Guide

The *Farmer's Tax Guide* is an excellent resource on understanding and reporting ag income – a working knowledge of the tax code would certainly benefit any farmer. It is available electronically at www.irs.gov/publications/p225/index.html (the pdf is at www.irs.gov/pub/irs-pdf/p225.pdf). You can also order a hard copy from the IRS.

Another resource is Rural Tax Education. It has informational articles, worksheets, and sample completed tax forms. Find it at ruraltax.org.

FUNDING SOURCES

There are two sources of operating funds: debt and equity. Loans (debt) are acquired through a bank or other creditor. Equity will come through stock sales to people (investors) you know or through public offerings. Other equity sources will come from your own contributions to the business. Equity capital is generally considered more costly than debt capital but is more resilient in the face of risk. So the more risky a new venture, the more likely that significant equity capital financing will be required. Debt capital can be extremely limiting in terms of growing the business and achieving competitive size/scale. The amount that may be borrowed from creditors is typically limited by the amount of equity brought to the table by the business owners. Business owners that can attract additional equity capital to their ventures can minimize this constraint.

Getting a loan will require forecasted financial information (see Chapter 13) and supporting data such as a forecast of sales, costs, and profit or loss organized by time period. Your forecasted financial statements should be well supported. Potential creditors and equity investors alike will be very interested in how you arrived at your forecasts to evaluate whether your assumptions are reasonable.

The financing of your CSA will come from various sources, including those funds generated by the venture itself. This section profiles common sources, including a topic that is often of interest: grants. Note that some of the grant and cost-share funding available may be useful not for operating or promotional funds (since the aim of these programs is rarely to provide general operational funds) but for improvement of the resources used by the CSA in a specific area. So there should be a good match between your aims and the aims of the grant source.

Personal Capital

The nature of the CSA helps provide capital when it is most needed by the farm manager – the venture is self-funded. But revenue from shares cannot be the sole source of funds since they will be unlikely to provide the level needed for the many expenses associated with starting up or expanding an agricultural enterprise. In large part, these funds are most often contributed by the owner/manager. They may take the form of saved money contributed to the venture or, in the worst case, unsecured debt at a high interest rate (credit cards).

Private Banking

Funding sources for a CSA will likely have to come from untraditional sources since the ag division of a commercial bank might be unresponsive to a venture for either the purchase of land or equipment, or an operating loan.

If a commercial bank is interested but hesitant, then you can help allay their concerns with well-thought-out projections and by providing lots of equity. Other assurances, such as a guarantee for a loan through the U.S. Small Business Administration (SBA), would certainly be a practical step. To guarantee a loan through the SBA, you must meet its requirements (provide a written business plan, among others).

Department of Agriculture

Your state's department of agriculture likely supports a number of programs that can help a CSA manager. For instance, in Wyoming there are grants available for high tunnel and season-extension projects for producers and for nonprofits. Or your state may provide funds to market products created in the state (particularly if they can be exported outside the state).

Investment Capital

Outside sources of capital might come from angel investors – wealthy individuals who provide capital for a business start-up in the form of debt or ownership. They often fill the gap between friends and family and start-up venture capital, or perhaps lending institutions.

Farm Credit Administration

The Farm Credit Administration is a network of federally chartered, borrower-owned lending institutions and related service organizations that specialize in providing credit and related services to farmers (including young and beginning), ranchers, and producers, as well as those people living in the country.

www.fca.gov/FCS-Institutions.htm

Farm Credit Services of America

Farm Credit Services of America is the region serving Wyoming, Nebraska, South Dakota, and Iowa of the Farm Credit system. www.fcsamerica.com

USDA Farm Service Agency

The Farm Service Agency (FSA) provides a variety of farm loan programs, including traditional operating loans, beginning farmer and rancher loans, and loans for women and minority farmers and ranchers. FSA also includes a mediation program for agricultural disputes.

- Farm Loan Programs Information, www.fsa.usda.gov/FSA/webapp?area=home&subject=fmlp&topic=landing
- Loans for Beginning Farmers and Ranchers, www.fsa.usda.gov/FSA/webapp?area=home&subject=fmlp&topic=bfl
- Loans for Minority and Women Farmers and Ranchers, www.fsa.usda.gov/FSA/webapp?area=home&subject=fmlp&topic=sdl

USDA Sustainable Agriculture Research and Education

Sustainable Agriculture Research and Education (SARE) is an organization that fosters sustainability through grants that enable cutting-edge research and education. Specifically it is a USDA program that

functions through competitive grants conducted cooperatively by farmers, ranchers, researchers, and ag professionals to advance farm and ranch systems that are profitable, environmentally sound, and good for communities.

Numerous granting programs are available to help with on-farm research. For example, funds for exploring the viability of a non-traditional crop in your area may help expand a CSA or other venture into something with a distinct product offering. General information about SARE and specific information for your region can be found at:

SARE: www.sare.org

Western SARE: www.westernsare.org

North Central SARE: www.northcentralsare.org

Conservation Districts

Cost-share funds for projects to conserve soil, water, and energy and to beautify a space may be available from a local conservation district. For instance, funds for planting trees (for windbreaks or to obscure unsightly objects), irrigation, energy demonstration (solar, wind, water), and fencing all may provide either direct or indirect benefits to the CSA. Find a Wyoming conservation district at www.conservewy.com.

Natural Resources Conservation Service (NRCS)

The NRCS offers programs to eligible landowners and agricultural producers to provide financial and technical assistance to help manage natural resources in a sustainable manner. Financial assistance to help plan and implement conservation practices that address natural resource concerns or opportunities to help save energy and improve soil, water, plant, air, animal, and related resources on agricultural lands and non-industrial private forest land may be eligible from the NRCS' numerous programs. For instance, funding for a micro-irrigation system in a high tunnel or pest management on a farm may be available. Watch for the deadlines, and make sure you meet the eligibility requirements (www.nrcs.usda.gov).

CONCLUSION

CSA can be a great addition (or even a stand-alone business) to your portfolio of business endeavors. It is our hope that this guide has answered many of your questions about what CSA is and how you might set one up or improve your existing operation. There are many resources available online and through university Extension offices, departments of agriculture, and other local, state, and federal agencies and organizations (many of them are listed throughout the text, above, and also below).

Starting a new venture requires resources, careful management, hard work, risk, and a want-to attitude. Before committing time and resources to an enterprise, it is important to look at the feasibility of the idea on paper.



PART V. ADDITIONAL RESOURCES

Bookmarks for Agriculture

This is a short list of Internet sites oriented to farm and business management. In many cases, the site listed is a good starting point to find more information.

LOCAL AND STATE RESOURCES

Eat Wyoming: Wyoming Local Foods: A directory of Wyoming producers. www.wyomingextension.org/catwyoming

University of Wyoming Extension: www.uwyo.edu/ces

A starting point to reach resources and the practical research conducted by the University of Wyoming Extension and UW College of Agriculture and Natural Resources. Main focuses include agriculture and natural resources, consumer and family sciences, 4-H and youth development, and leadership and community development.

Wyoming Business Council: www.wyomingbusiness.org

The state agency that promotes business in Wyoming, including agricultural ventures.

Wyoming Department of Agriculture: wyagric.state.wy.us

The state agency that regulates and supports agriculture in Wyoming.

Wyoming Department of Workforce Services: www.wyomingworkforce.org

State agency that aims to build a workforce to meet the changing demands of Wyoming's diverse businesses, citizens, and economy.

Wyoming Entrepreneur: www.wyomingentrepreneur.biz

A network of three programs at UW with offices throughout the state. It assists in starting a business, buying or selling a business, finding necessary funds, and marketing a business. The programs include the Small Business Development Center, Procurement Technical Assistance Center, and Market Research Center.

Wyoming Hoop House Info Network: www.wyomingextension.org/whhin

An informational site for individuals using high tunnels/hoop houses to extend the growing season in Wyoming.

Wyoming Farmers Marketing Association: www.wyomingfarmersmarkets.org

An organization that promotes and assists with the operation of farmers' markets.

Wyoming AgrAbility: www.uwyo.edu/agrability

A program of UW Extension and partnering organizations that help those with a disability become more active in the work of agriculture.

Wyoming Association of Conservation Districts: www.conservewy.com

The WACD works with landowners and others on a wide variety of conservation-related projects and programs.

NATIONAL RESOURCES

LocalHarvest: localharvest.org

A database of CSAs and other ventures.

Value-Added Agriculture: www.valueaddedag.org

A resource for researching and planning ventures in which the producer adds value to an agricultural product.

Rural Tax Education: ruraltax.org

It has informational articles, worksheets, and sample completed tax forms.

National Sustainable Agriculture Information Service (ATTRA): attra.ncat.org

ATTRA provides an online resource for sustainable agriculture and organic farming news, publications, events, and funding opportunities. An extensive library is available.

The ATTRA toll-free hotline at 800-346-9140 (or the Spanish-language ATTRA hotline at 800-411-3222) can provide expert advice.

University of Illinois' farmdoc: www.farmdoc.illinois.edu

Provides farmers with comprehensive and integrated risk-management information and analysis. Articles, decision tools, and databases related to a variety of risk-management issues are found throughout the site. Subject matter sections cover finance, marketing and outlook, management, and law and taxation.

Farm Management Canada: www.farmcentre.com

Wide range of information from software downloads to brochures and reports. It has a special section on succession planning and good farm management information and tools.

USDA: www.usda.gov

Links to many of the various USDA branches and agencies such as the Forest Service; Agricultural Research Service; Foreign Agricultural Service; Food, Nutrition and Consumer Services; National Agricultural Statistics Service; and National Agricultural Library.

USDA National Agricultural Library – The USDA's CSA resource page and bibliography at www.nal.usda.gov/afsic/pubs/csa/csa.shtml

USDA Economic Research Service (ERS) – information at www.ers.usda.gov

USDA Natural Resources Conservation Service: www.nrcs.usda.gov

The NRCS works with landowners through conservation planning and assistance to benefit soil, water, air, plants, and animals.

USDA Farm Service Agency: www.fsa.usda.gov

Provides information on farm loans, price supports, conservation programs, disaster assistance, and commodity operations.

USDA Risk Management Agency: www.act.fcic.usda.gov

Administers the federal crop insurance program. Site has many tools and resources oriented around managing risk.

U.S. Small Business Administration: www.sba.gov

Provides financial, technical, and management assistance to help Americans start, run, and grow businesses.

U.S. Food and Drug Administration's Center for Food Safety and Applied Nutrition:

www.fda.gov/Food

Provides information about food safety, toxicology, food additives, cosmetics, and biotechnology.

Agriculture Network Information Collaborative (AgNIC): www.agnic.org

Established by an alliance of the National Agricultural Library (NAL), land-grant universities, and other organizations, AgNIC provides access to agriculture-related information, subject-area experts, and other resources, including conferences, directories, NAL Catalog (AGRICOLA), AgDB (an agriculture database and information-system directory), and online reference services.

AgricultureLaw.com: www.agriculturelaw.com

Links to a wide range of ag websites and legal information.

EVENTS

MOSES (Midwest Organic and Sustainable Education Service) Organic Farming Conference www.mosesorganic.org

The MOSES Organic Farming Conference is the largest conference in the U.S. focusing on organic and sustainable farming. The MOSES conference offers more than 70 workshops taught by experts in their fields, inspiring keynote speakers, and a trade show with more than 170 exhibitors open exclusively to conference attendees. Every February, this event draws more than 3,000 farmers, advocates, educators, students, and more to La Crosse, Wisconsin. The website also includes a calendar that lists numerous other events that CSA operators may be interested in attending.

Wyoming Farmers Marketing Association, Annual Conference. Held in the spring each year.

www.wyomingfarmersmarkets.org

In addition to the annual conference, other events of interest are also included.

Pesticide Applicator Training Resources, including classes, can be found at the following locations:

uwyoextension.org/psep/

wyagric.state.wy.us/divisions/ts/sections-a-programs/pesticide/210

Annual EcoFarm Conference. Held in the winter by the Ecological Farming Association.

www.eco-farm.org

The EcoFarm conference is convened to create, maintain, and promote healthy and just food/farming systems. The multi-day conference offers a myriad of opportunities for more than 1,500 participants to network with colleagues, discover the newest ecological agricultural research and techniques, and build, both individually and as a community.

PUBLICATIONS

Ag Help Wanted: Guidelines for managing agricultural labor. Western Farm Management Extension Committee. 2001. Order copies at aghelpwanted.org

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Sell what you sow!: The grower's guide to successful produce marketing. Gibson, Eric. 1994. New World Publishing.

The New Farmers' Market: Farm Fresh Ideas for Producers, Managers, and Communities. Vance Corum, Marcie Rosenzweig, and Eric Gibson. 2001. New World Pub.; White River Junction, Vt.: Distributed by Chelsea Green Pub. Co.

Farms of Tomorrow. Community Supported Farms, Farm Supported Communities. Trauger Groh and Steven McFadden. 1990. Bio-Dynamic Farming and Gardening Association.

Local Harvest: A Multifarm CSA Handbook. Scott Franzblau and Jill Perry. 2010. Sustainable Agriculture Research and Extension (SARE).

Whole-Farm Planning: Ecological Imperatives, Personal Values and Economics. Elizabeth Henderson and Karl North. 2004. Northeast Organic Farming Association (NOFA).

Guide for Weed Management. University of Nebraska–Lincoln Extension. Long the “go-to” resource on herbicides use in controlling weeds in field crops and non-crop areas. It now includes information on insecticides and disease control fungicides for field crops as well. Many crop consultants and many farmers and ranchers routinely order this publication each year for their records.

Online: www.ianrpubs.unl.edu/epublic/live/ec130/build/ec130%20insect%20control%20by%20crop.pdf.

You can also order a copy in print for \$8 (+tax if you reside in Nebraska) from Nebraska Extension's publications website at: marketplace.unl.edu/extension/catalogsearch/result/?q=2013+guide+-for+weed+management

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“Getting started in farming? 5 keys to success.” Richards, Steve. 2002. *Small Farm Quarterly* (January 26, 2004): p. 15. A condensed version is available at hortmgt.dyson.cornell.edu/pdf/smart_marketing/richards10-02.pdf.

Guide to washing fresh produce. Zander, A., and M. Bunning. 2010. Colorado State University Extension, Fact Sheet 9.380, www.ext.colostate.edu/pubs/foodnut/09380.html.

Glossary

A quick reference for many relevant food-related terms


Glossary is courtesy of the Eat Wyoming: Wyoming Local Foods project, www.wyomingextension.org/eatwyoming

- **Animal welfare** – Definitions vary. According to the Farm Animal Welfare Council, the welfare of animals depends on their freedom: from hunger and thirst (with ready access to fresh water and a diet to maintain full health and vigor); from discomfort (by providing an appropriate environment with shelter and a resting area); from pain, injury, and disease (by prevention or rapid diagnosis and treatment); to express normal behavior (by providing sufficient space, proper facilities, and company of the animal’s own kind); and from fear and distress (by ensuring conditions and treatment that avoid mental suffering).¹ Various groups offer certification or seals of approval for producers in relation to their procedures for animal care, but standards vary. For example, with poultry, “Animal Welfare Approved” standards stipulate that hens spend their adult lives outside and that beak cutting is prohibited while “Certified Humane” standards can apply to hens uncaged inside barns or warehouses without access to the outdoors and beak cutting is permitted.²
- **Biodiversity** – The sum total of all the plants, animals, fungi, and microorganisms in a particular area; all of their individual variation; and all the interactions between them.³
- **Cage free** – Refers to hens that live outside of cages in barns or warehouses but usually without access to the outdoors.²
- **Carbon footprint** – A representation of the effect human activities have on the climate in terms of the total amount of greenhouse gases* produced (measured in units of carbon dioxide).³ The term “greenhouse gases” is often used to refer to gases from natural sources and human activity that trap heat in the earth’s atmosphere. The principal greenhouse gases that enter the atmosphere because of human activity are carbon dioxide, methane, nitrous oxide, and fluorinated gases.⁴

*Greenhouse gases refer to atmospheric gases that absorb radiation and contribute to the greenhouse effect of trapping and reflecting heat to the earth’s surface, thus contributing to global warming.
- **Certified organic** – A legal term used with agricultural products that are produced and processed in accordance with USDA National Organic Program (NOP) standards. Organic crops are raised without using most conventional pesticides, petroleum-based fertilizers, or sewage sludge-based fertilizers. Animals raised in an organic operation must be fed organic feed and given access to the outdoors, and they are given no antibiotics or growth hormones. NOP regulations prohibit the use of genetic engineering, ionizing radiation, and sewage sludge in organic production and handling. As a general rule, all natural (non-synthetic) substances are allowed in organic production, and all synthetic substances are prohibited. For a product to be labeled “organic,” a government-approved certifier inspects the farm where the food is grown to make sure the farmer is following all rules necessary to meet USDA organic standards. Companies that handle or process organic food before it gets to local supermarkets or restaurants must be certified, too.⁵⁻⁷ An online USDA handbook that gives guidance for certification is available at www.ams.usda.gov/NOPProgramHandbook.
- **What is the cost of becoming “certified organic?”** This varies widely from a few hundred dollars to several thousand dollars depending on a range of factors, including (but not limited to) complexity

and size of the operation and the categories of products to be certified. In addition to dollar costs is the time required for documentation and record-keeping. The bottom line: Becoming certified organic can represent a significant investment of money and time on the part of producers.

- **Crop rotation** – The practice of growing a variety of crops in a sequential system throughout the field, with the intention of avoiding a buildup of diseases and pests associated with monocropping. Crop rotation promotes good soil health by alternating crops with different nutrient needs, therefore avoiding depletion of any one necessary element present in the soil. Crop rotation can also benefit overall soil structure by alternating deep and shallow rooting plants, breaking up subsoil, and reducing the effects of plow pan (that is, an impenetrable layer six to eight inches deep that crop roots typically can't grow through). Crop rotation is ancient in its use and is widely recognized as a cornerstone of good agricultural practice.⁸⁻¹⁰
- **CSA/Community Supported Agriculture** – A marketing and distribution arrangement whereby consumers support a farm by purchasing shares of produce or goods at the beginning of the season. They subsequently receive weekly shares of the farm's bounty as the foods become available. CSAs help ensure that farms have a market regardless of seasonal disturbances out of farmers' control. Additionally, these advance sales directly to community members provide the farmer with working capital in advance, and growers generally receive better prices for their crops, gain some financial security, and are relieved of much of the burden of marketing.³
- **Ecological footprint** – A measure of how much land and water is needed to produce the resources humans consume and to dispose of the waste they produce.³ The term "foodprint" is sometimes used to refer specifically to the ecological footprint of food collectively consumed by humans.
- **Family farm** – Definitions vary, but the term generally conveys an agricultural enterprise with majority control, ownership, and labor provided by a family (related by blood, marriage, or adoption)¹¹ versus ownership and operation managed by an agribusiness corporation.¹² Family farms are seen as essential to the viability of rural communities, with family farmers buying most of their inputs from local suppliers and selling most of their products in local and regional markets and with many of the business enterprises in rural towns and small cities connected with these family farms.¹³
- **Food miles** – The distance food is transported from the place of its production until it reaches the consumer.³
- **Free range/Free roaming** – Terms used to identify poultry raised outside of cages in conditions that allow access to the outside.¹⁴ There are no specifics, however, as to the amount of time in a hen's lifespan nor the size of space in which the animal is allowed to roam out of doors.²
- **GMO/Genetically modified organism** – An organism whose genetic material has been altered with genetic material from another (often unrelated) organism in order to produce certain traits or characteristics. The term "transgenic" is also used to refer to organisms that have acquired novel genes from other organisms by gene-transfer methods carried out in laboratories.¹⁵
- **Grain-fed/Grain-finished** – A descriptive term referring to beef from cattle moved to a feedlot approximately four to six months prior to slaughter where they are fed a diet that includes grain, a regimen that yields a more tender product.¹⁶
- **Grass-fed** – A term referring to beef from cattle that are fed grass and/or forage for the lifetime of the animal, with the exception of milk consumed prior to weaning. Grass-fed animals cannot be fed grain or grain by-products and must have continuous access to pasture during the growing season.¹⁷

- **Herbicide-free** – Crops grown without the use of synthetic chemicals used to kill unwanted plants or weeds.
- **Local foods** – Definitions vary. Typically, the term refers to foods produced near their point of consumption, but there is no consensus as to what distances constitute “local.”¹⁸ In general, local food refers to food that is produced, processed, and distributed within a particular geographic boundary that consumers associate with their own community.¹⁹
-  **Made in Wyoming**- The *Wyoming First* Program is a way to identify and showcase products made in Wyoming. All *Wyoming First* companies call Wyoming home.²⁰
- **Monoculture/Monocropping** – The planting of genetically similar or uniform crop varieties over large tracts of land, sometimes without rotation to other crops in space or time. The risks associated with monoculture systems include a narrowing of the crop gene pool, resulting in greater vulnerability to pests, increased dependence on biocides to control pests, and loss of soil and silt buildup in waterways as a result of wind and water erosion in the absence of cover crops.²¹ Monoculture farming has advantages in terms of efficiency and ease of management, but the loss of the crop in any one year can put a farm out of business and/or seriously disrupt the stability of a community dependent on that crop. By growing a variety of crops, farmers spread economic risk and are less susceptible to the radical price fluctuations associated with changes in supply and demand.²²
- **Natural** (meat and poultry only) – There is no legal definition of “natural” for use with all foods, but in relation to meat and poultry labeling, the term may be used on a product that contains no artificial ingredients or added color and that is only minimally processed (that is, a process that does not fundamentally alter the raw product). The label must explain the use of the term natural (for example, no added colorings or artificial ingredients; minimally processed).¹⁴ The term has no bearing on the way the animal was raised or the food and additives that it was fed.
- **No antibiotics** (red meat and poultry only) – Claim that can be made about red meat and poultry with documentation that the animal was raised without use of antibiotics. The label can read “no antibiotics added.”¹⁴
- **No hormones** (beef only) – Claim that can be made about beef with documentation that the animal was raised without use of hormones. The label can read “no hormones administered.” Because hormones are not allowed in raising hogs or poultry, “no hormones added” cannot be used on pork or poultry labels unless the label also states that it is not allowable to raise pork or poultry with hormones, making it clear that such a claim on pork or poultry is for advertising only.¹⁴
- **Pesticide-Free** – Crops grown without the use of synthetic chemicals used to kill, prevent, or deter unwanted insects or pests.
- **rBGH/rBST** – Acronyms for recombinant bovine growth hormone/recombinant bovine somatotropin, which are synthetic growth hormones often used in dairy cattle to increase milk production. The U.S. Food and Drug Administration has determined that no significant differences exist between milk derived from rBST-treated cows and untreated cows. Consequently, labels of products made from milk from cows not treated with rBST can make that claim, but to avoid misleading consumers, the label cannot imply a nutritional difference in those products compared to milk from cows treated with rBST.²³

- **Seasonal** – Refers to the natural growing time of produce that is picked at its natural peak of ripeness or flavor. Foods in season are often at their lowest price and highest nutritional value. Seasonal eating refers to planning meals and cooking in ways that use more foods in season than out of season (for example, eating more winter squash and less green salad in December and vice versa in June).
- **Slow Food** – A non-profit organization founded in 1989 to counter the rise of fast food and fast life, the disappearance of local food traditions, and people’s dwindling interest in the food they eat, where it comes from, how it tastes, and how their food choices affect the rest of the world. With supporters in 150 countries around the world, Slow Food is now global, including several local groups in Wyoming.²⁴
- **Whole food** – Food that is unprocessed and unrefined or processed and refined as little as possible before being consumed. Whole foods typically do not contain added ingredients such as sugar, salt, or fat. Examples include whole grains, vegetables, fruit, and unprocessed meat, poultry, and fish.²⁵

Approaches to agriculture based on holistic philosophies

- **Agroecology** – An environmentally and socially sensitive approach to the study of agriculture that focuses not only on production, but also on the ecological sustainability of the production system.³
- **Biodynamic farming** – A concept, practice, and movement that arose out of the spiritual insights and perceptions of an early 20th century Austrian philosopher and scientist (Rudolf Steiner) who viewed horticulture as one facet of the connection among spirit, mind, and body. French intensive methods, including double-digging garden beds (made by loosening soil to a depth of two spade blades), are consistent with biodynamic techniques.^{3,21}
- **Integrated farm systems** – The concept of viewing farms and the food production system as an integrated whole, allowing more efficient use of natural, economic, and social resources.³
- **IPM/Integrated pest management** – An ecologically-based approach to pest (animal and weed) control that utilizes a multi-disciplinary knowledge of crop/pest relationships, establishment of acceptable economic thresholds for pest populations, and constant field monitoring for potential problems. Management may include such practices as the use of resistant varieties, crop rotation, cultural practices, optimal use of biological control organisms, certified seed, protective seed treatments, disease-free transplants or rootstock, timeliness of crop cultivation, improved timing of pesticide applications and removal or “plow down” of infested plant material.³
- **Permaculture** – Short for “permanent agriculture.” An alternative agriculture system based on the goal of producing an efficient, low-maintenance integration of plants, animals, people and structure, applied at the scale of a home garden, all the way through to a large farm.³
- **Sustainable agriculture** – An integrated system of food production and distribution that satisfies human needs while enhancing environmental quality and efficiently using natural resources. Sustainable agriculture addresses the **ecological**, **economic**, and **social** aspects of agriculture. To be sustainable, agriculture can operate only when the environment, its caretakers, and surrounding communities are healthy.¹⁰

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Appendices

**SCHEDULE F
(Form 1040)**

Department of the Treasury
Internal Revenue Service (99)

Name of proprietor

Profit or Loss From Farming

▶ Attach to Form 1040, Form 1040NR, Form 1041, Form 1065, or Form 1065-B.
▶ Information about Schedule F and its separate instructions is at www.irs.gov/form1040.

OMB No. 1545-0074

2012
Attachment
Sequence No. **14**

Social security number (SSN)

A Principal crop or activity	B Enter code from Part IV	C Accounting method: <input type="checkbox"/> Cash <input type="checkbox"/> Accrual	D
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E Did you "materially participate" in the operation of this business during 2012? If "No," see instructions for limit on passive losses Yes No

F Did you make any payments in 2012 that would require you to file Form(s) 1099 (see instructions) Yes No

G If "Yes," did you or will you file required Forms 1099? Yes No

Part I Farm Income—Cash Method. Complete Parts I and II (Accrual method. Complete Parts II and III, and Part I, line 9.)

1a Sales of livestock and other resale items (see instructions)	1a			
b Cost or other basis of livestock or other items reported on line 1a	1b			
c Subtract line 1b from line 1a			1c	
2 Sales of livestock, produce, grains, and other products you raised			2	
3a Cooperative distributions (Form(s) 1099-PATR)	3a	3b Taxable amount	3b	
4a Agricultural program payments	4a			
5a Commodity Credit Corporation (CCC) loans reported under election			5a	
b CCC loans forfeited	5b	5c Taxable amount	5c	
6 Crop insurance proceeds and federal crop disaster payments (see instructions)				
a Amount received in 2012	6a	6b Taxable amount	6b	
c If election to defer to 2013 is attached, check here <input type="checkbox"/>		6d Amount deferred from 2011	6d	
7 Custom hire (machine work) income			7	
8 Other income (see instructions)			8	
9 Gross income. Add amounts in the right column (lines 1c, 2, 3b, 4b, 5a, 5c, 6b, 6d, 7, and 8). If you use the accrual method, enter the amount from Part III, line 50 (see instructions)			9	

Part II Farm Expenses—Cash and Accrual Method. Do not include personal or living expenses (see instructions).

10				
11 Chemicals	11	a Vehicles, machinery, equipment	24a	
12				
13 Custom hire (machine work)	13	25 Repairs and maintenance	25	
14 Depreciation and section 179 expense (see instructions)	14	26 Seeds and plants	26	
15 Employee benefit programs other than on line 23	15	27 Storage and warehousing	27	
16 Feed	16	28 Supplies	28	
17 Fertilizers and lime	17	29 Taxes	29	
18 Freight and trucking	18	30 Utilities	30	
19 Gasoline, fuel, and oil	19	31 Veterinary, breeding, and medicine	31	
20 Insurance (other than health)	20	32 Other expenses (specify):		
21 Interest:		a -----	32a	
a Mortgage (paid to banks, etc.)	21a	b -----	32b	
b Other	21b	c -----	32c	
22		d -----	32d	
		e -----	32e	

33 **Total expenses.** Add lines 10 through 32f. If line 32f is negative, see instructions

34 **Net farm profit or (loss).** Subtract line 33 from line 9

If a profit, stop here and see instructions for where to report. If a loss, complete lines 35 and 36.

35 Did you receive an applicable subsidy in 2012? (see instructions) Yes No

36 Check the box that describes your investment in this activity and see instructions for where to report your loss.

a All investment is at risk. **b** Some investment is not at risk.

Part III Farm Income—Accrual Method (see instructions).

37	Sales of livestock, produce, grains, and other products (see instructions)			37		
38a	Cooperative distributions (Form(s) 1099-PATR)	38a		38b	Taxable amount	38b
39a	Agricultural program payments	39a		39b	Taxable amount	39b
40	Commodity Credit Corporation (CCC) loans:					
a	CCC loans reported under election			40a		
b	CCC loans forfeited	40b		40c	Taxable amount	40c
41	Crop insurance proceeds			41		
42	Custom hire (machine work) income			42		
43	Other income (see instructions)			43		
44	Add amounts in the right column for lines 37 through 43 (lines 37, 38b, 39b, 40a, 40c, 41, 42, and 43)			44		
45	Inventory of livestock, produce, grains, and other products at beginning of the year. Do not include sales reported on Form 4797	45				
46	Cost of livestock, produce, grains, and other products purchased during the year	46				
47	Add lines 45 and 46	47				
48	Inventory of livestock, produce, grains, and other products at end of year	48				
49	Cost of livestock, produce, grains, and other products sold. Subtract line 48 from line 47*			49		
50	Gross income. Subtract line 49 from line 44. Enter the result here and on Part I, line 9			50		

*If you use the unit-livestock-price method or the farm-price method of valuing inventory and the amount on line 48 is larger than the amount on line 47, subtract line 47 from line 48. Enter the result on line 49. Add lines 44 and 49. Enter the total on line 50 and on Part I, line 9.

Part IV Principal Agricultural Activity Codes



Do not file Schedule F (Form 1040) to report the following.

- Income from providing agricultural services such as soil preparation, veterinary, farm labor, horticultural, or management for a fee or on a contract basis. Instead file Schedule C (Form 1040) or Schedule C-EZ (Form 1040).
- Income from breeding, raising, or caring for dogs, cats, or other pet animals. Instead file Schedule C (Form 1040) or Schedule C-EZ (Form 1040).
- Sales of livestock held for draft, breeding, sport, or dairy purposes. Instead file Form 4797.

These codes for the Principal Agricultural Activity classify farms by their primary activity to facilitate the administration of the Internal Revenue Code. These six-digit codes are based on the North American Industry Classification System (NAICS).

Select the code that best identifies your primary farming activity and enter the six-digit number on line B.

Crop Production

- 111100 Oilseed and grain farming
- 111210 Vegetable and melon farming

- 111300 Fruit and tree nut farming
- 111400 Greenhouse, nursery, and floriculture production
- 111900 Other crop farming

Animal Production

- 112111 Beef cattle ranching and farming
- 112112 Cattle feedlots
- 112120 Dairy cattle and milk production
- 112210 Hog and pig farming
- 112300 Poultry and egg production
- 112400 Sheep and goat farming
- 112510 Aquaculture
- 112900 Other animal production

Forestry and Logging

- 113000 Forestry and logging (including forest nurseries and timber tracts)

Adjusted Gross Revenue-Lite

November 2010

Adjusted Gross Revenue-Lite (AGR-Lite) is a whole-farm, revenue-protection plan of insurance. The plan provides protection against low revenue due to unavoidable natural disasters and market fluctuations that affect income during the insurance year. Most farm-raised crops, animals, and animal products are eligible for protection.

AGR-Lite can stand alone or be used in conjunction with other Federal crop insurance plans, except Adjusted Gross Revenue (AGR). When producers purchase both AGR-Lite and other Federal crop insurance the AGR-Lite premium will be reduced.

The AGR-Lite concept:

- Uses a producer's 5-year historical farm average revenue as reported on the IRS tax return (Schedule F or equivalent forms) and an annual farm report as a base to provide a level of guaranteed revenue for the insurance period;
- Provides insurance coverage for multiple agricultural commodities in one insurance product; and
- Establishes revenue as a common denominator for the insurance of all agricultural commodities.

AGR-Lite Timeline

Sales Closing Date: March 15.

Cancellation and Termination Date: January 31.

Contract Change Date: August 31.

Year of Insurance: For the application year, you will not be covered for any losses that occur earlier than 10 days after we receive your properly completed application. For carry-over policies, any unavoidable natural disaster that occurred during the previous or current insurance year is covered.

Insurance Year: Defined as a calendar year in which the sales closing date occurs and includes both calendar year and fiscal year filings (corresponding to the producer's IRS tax period).

Claims: Claims are settled after taxes are filed for the insurance year.

Availability

AGR-Lite is available in: Alabama, Alaska (selected counties), Arizona, Colorado, Connecticut, Delaware, Florida, Georgia, Hawaii, Idaho, Illinois, Kansas, Maine, Maryland, Massachusetts, Minnesota, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York (selected counties), North Carolina, Oregon, Pennsylvania (except Philadelphia County), Rhode Island, South

Carolina, Tennessee, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, and Wyoming.

Producer Eligibility

To be eligible for AGR-Lite coverage, a producer must:

- Be a U.S. citizen or resident;
- File a calendar year or fiscal year farm tax return;
- Produce agricultural commodities primarily in counties where AGR-Lite is available (includes income from contiguous counties);
- Have liability not exceeding \$1 million (less than \$2,051,282 in approved gross income);
- Have had the same tax entity for 7 years (filed 5 consecutive years of Schedule F tax forms, plus previous year and insurance year) unless a change in the tax entity is reviewed and approved by the insurance provider;
- Have no more than 50 percent of total revenue from commodities purchased for resale; and
- Have no more than 83.35 percent of total revenue from potatoes.

Premium Subsidy

The Government will pay a portion of the premium for the AGR-Lite policy that equals 48 percent, 55 percent, and 59 percent of the total premiums for the coverage levels of 80 percent, 75 percent, and 65 percent, respectively.

Insured Causes of Loss

Insurance is provided against revenue loss due to any unavoidable natural occurrences during the current or previous insurance year or due to market fluctuations that cause a loss of revenue during the current insurance year. No payment will be made for losses due to negligence, mismanagement, or wrongdoing by the producer, the producer's family, members of the household, tenants, employees, or contractors; crop abandonment; bypassing of acreage; or other uninsurable causes listed in the insurance policy.

AGR-Lite Application Information

Producers must provide the following information when completing an AGR-Lite application:

- History calculation worksheet, including 5 years of allowable income and expense data from IRS tax returns (Schedule F or equivalent forms);
- An annual farm report for the insurance year listing each commodity to be produced, the expected quantity of the commodity to be produced, and the expected

- price for the commodity; and
- Indication of changes that will result in less income for the insurance year than the historical average.

Choosing a Revenue Guarantee

Coverage levels and payment rates vary with the number of commodities produced and are selected by the producer (see table below) from the Special Provisions of Insurance. AGR-Lite liability is calculated by multiplying the approved adjusted gross revenue by the selected coverage level and payment rate. The coverage level will determine when indemnity payments begin. The payment rate will determine how much the producer will be paid for each dollar lost under the coverage level. A producer selects one amount of coverage that will cover all commodities.

Available Protection Amounts

Coverage Payment		Minimum # of Commodities*	Maximum Annual Income**
Level	Rate		
65	75	1	\$2,051,282
65	90	1	\$1,709,401
75	75	1	\$1,777,777
75	90	1	\$1,481,481
80	75	3	\$1,666,666
80	90	3	\$1,388,888

*Must meet minimum income requirements. Commodity grouping is available for the 80-percent coverage level.

**The Maximum Annual Income represents the maximum approved farm revenue at each coverage level and payment rate to be eligible for AGR-Lite due to the \$1,000,000 maximum liability allowed.

Loss Payments

Loss payments are triggered when the adjusted income for the insured year is less than the loss inception point. The loss inception point is calculated by multiplying the approved adjusted gross revenue times the selected coverage level. Once a revenue loss is triggered, the producer is paid based on the payment rate selected, either 75 cents or 90 cents for each dollar lost.

Loss Payment Example

Assumptions:

- 80-percent coverage level and 75-percent payment rate chosen;
- Approved adjusted gross revenue of \$100,000 and actual revenue from the farm for the year was \$70,000;
- Liability: $\$100,000 \times 0.80 \times 0.75 = \$60,000$; then
- Loss Inception Point: $\$100,000 \times 0.80 = \$80,000$;

Loss Scenario:

\$80,000 - \$70,000 revenue to count = \$10,000 loss of revenue; then
 $\$10,000 \times 0.75$ payment rate = \$7,500 indemnity payment.

Note: If the producer's allowable expenses for the current crop year fall below 70 percent of the approved expenses, the approved AGR-Lite payments will be reduced.

This summary is for general illustration purposes only. Please contact a private crop insurance agent to learn more about AGR-Lite.

Contact Us

United States Department of Agriculture
 Risk Management Agency
 1400 Independence Ave., SW, Stop 0801
 Washington, D.C. 20250-0801
Telephone: (202) 690-2803
Fax: (202) 690-2818
Web site: <http://www.rma.usda.gov>
E-mail: rma.cco@rma.usda.gov

For More Information

AGR-Lite insurance policies are available from private insurance agents. A list of crop insurance agents is available at all USDA Service Centers throughout the United States, or see RMA's online agent locator at: <http://www3.rma.usda.gov/tools/agents/companies/>.

Policies: <http://www.rma.usda.gov/policies/index.html>
 Draft Manual 13 Requirements: <http://www.rma.usda.gov/data/m13>
 Premium Calculation: <http://www3.rma.usda.gov/apps/premcalc/>

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WEATHER



Compliments of the Wyoming Business Council

Photo by Crystal Berryman, Worland, Wyoming

**AVERAGE MONTHLY AND ANNUAL TEMPERATURES:
SELECTED STATIONS AND DRAINAGE AREAS, WYOMING, 2011**

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	
													Average	Change from Normal
Fahrenheit														
NW DISTRICT														
Basin	14.7	14.0	37.1	43.7	52.0	64.0	75.4	72.6	61.4	49.9	29.9	18.9	44.5	-1.0
Cody	26.6	20.7	37.1	40.2	48.2	61.2	74.1	71.9	63.1	49.9	33.0	25.6	46.0	-0.2
Lander A.P.	22.7	18.5	37.1	41.7	47.9	60.9	73.3	72.7	61.9	49.2	32.3	16.6	44.6	-0.4
Loveell	16.4	13.4	33.5	41.1	49.9	61.3	72.7	69.8	60.1	48.8	30.3	19.3	43.1	-1.7
Pavillion	22.3	18.1	37.2	41.4	47.6	60.9	71.3	70.6	61.9	50.0	31.0	17.4	44.1	-0.4
Powell F.S.	17.6	13.2	32.6	40.4	48.1	59.7	71.6	69.2	59.9	47.9	28.8	19.1	42.3	-2.7
Riverton	16.2	15.1	37.6	43.3	48.3	62.3	73.5	71.9	61.1	49.3	30.7	16.4	43.8	0.6
Thermopolis	19.0	19.6	39.3	44.1	51.0	64.7	76.4	68.9	58.2	51.9	35.1	22.5	45.9	-0.1
Worland	21.1	12.8	36.8	43.1	50.3	63.7	75.8	72.6	61.5	50.9	31.7	20.9	45.1	0.2
NE DISTRICT														
Buffalo	*	*	34.7	40.9	46.6	58.7	71.0	68.4	60.4	49.2	30.8	24.4	*	*
Colony	19.8	*	32.1	43.2	50.0	61.9	74.1	72.0	61.7	51.3	*	31.6	*	*
Dillinger	*	16.4	33.6	41.8	47.9	61.7	74.0	71.8	59.7	48.3	31.4	25.2	*	*
Kaycee	23.0	18.4	34.7	40.7	46.7	60.9	74.4	73.9	63.1	49.3	33.3	26.0	45.4	0.9
Moorcroft 3S	19.6	14.1	31.0	39.3	45.8	59.9	73.2	71.7	60.3	*	32.5	*	*	*
Newcastle	22.0	18.8	34.7	42.0	49.1	62.0	76.1	74.1	62.7	50.1	34.2	25.8	46.0	-0.3
Sheridan A.P.	23.2	20.2	35.1	41.3	48.0	60.6	72.4	71.2	60.8	50.0	31.3	25.6	45.0	0.3
Sundance	21.8	18.3	32.7	40.9	47.5	61.6	72.5	71.1	60.0	48.6	33.3	26.2	44.5	0.8
WEST DISTRICT														
Afton	*	*	*	*	*	*	*	*	*	42.6	24.3	9.9	*	*
Evanston 1E	21.5	21.6	28.6	36.0	*	*	*	*	*	*	*	19.6	*	*
Jackson	14.7	16.9	25.4	31.6	39.0	50.7	61.7	*	53.1	42.5	26.5	13.2	*	*
Kemmerer 2N	15.1	11.0	22.5	30.8	40.3	51.2	61.8	60.9	52.6	39.9	22.6	14.3	35.3	-3.2
Moran 5WNW	14.5	15.4	*	31.4	40.3	50.2	*	*	*	*	*	11.3	*	*
Pinedale	15.4	12.6	20.8	*	*	*	*	*	51.2	40.3	*	16.3	*	*
SC DISTRICT														
Casper WSCMO	24.1	23.0	37.0	28.3	47.3	60.5	72.9	71.7	60.0	48.6	32.6	24.0	44.2	-0.7
Green River	20.8	20.8	33.3	40.2	46.0	59.8	70.1	70.4	61.3	47.8	28.1	19.6	43.2	0.7
Jeffrey City	18.7	14.3	31.6	38.3	44.5	56.3	68.4	66.9	56.4	45.2	29.3	16.0	40.5	-1.0
Laramie 2NW	20.8	19.1	34.2	38.0	44.8	57.3	66.9	65.5	54.0	43.3	31.5	21.4	41.4	1.0
Rock Springs A.P.	*	20.0	32.8	38.3	45.9	59.3	69.3	68.8	60.3	47.9	27.9	22.0	*	*
Seminole Dam	*	*	*	*	*	*	*	*	*	*	*	*	*	*
SE DISTRICT														
Cheyenne A.P.	27.7	23.9	38.0	42.0	47.1	61.7	71.2	70.8	58.7	47.0	34.9	26.0	45.8	0.8
Chugwater	27.5	22.9	38.0	42.9	47.3	62.8	72.4	73.2	61.0	48.5	37.6	26.7	46.7	1.7
Douglas 1SE	24.5	20.1	37.6	42.5	47.7	62.8	74.2	72.3	59.4	48.0	33.8	22.2	45.4	-0.4
LaGrange	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Torrington 29N	22.8	18.9	35.4	41.2	46.7	61.1	73.2	72.3	60.3	48.1	32.1	24.6	44.7	-2.9
Wheatland 4N	28.7	27.7	41.6	46.2	51.0	65.2	74.8	74.8	62.5	50.9	38.3	28.1	49.2	0.0
DRAINAGE AREA														
Yellowstone	17.2	14.0	28.8	35.6	44.8	54.9	63.8	65.2	55.6	43.4	26.8	16.7	38.9	0.9
Snake	14.7	13.9	24.8	30.4	39.3	49.8	59.4	58.8	51.6	40.6	22.3	11.3	34.7	-1.0
Green & Bear	17.3	16.6	28.0	36.6	44.1	56.1	65.8	65.2	55.4	43.9	26.0	17.6	39.4	0.7
Big Horn	18.4	16.0	34.5	40.0	47.6	59.8	71.7	69.7	60.0	48.2	30.5	20.9	43.1	-1.0
Powder, Little MO & Tongue	22.2	18.6	33.5	39.5	45.8	59.8	70.7	70.4	59.4	48.0	30.9	24.8	43.6	0.0
Belle Fourche	20.6	16.8	33.2	41.2	47.9	61.1	72.9	71.2	60.1	48.8	32.3	26.3	44.4	0.1
Cheyenne & Niobrara	21.2	18.9	34.8	42.2	48.6	62.4	74.5	72.9	60.6	48.6	32.4	24.7	45.2	0.1
Lower Platte	25.8	22.7	37.8	42.9	48.0	62.0	72.6	71.9	59.7	47.9	34.9	24.7	45.9	0.0
Wind River	21.1	17.8	36.1	42.0	46.8	59.6	71.0	69.5	59.8	49.0	30.7	17.4	43.4	0.1
Upper Platte	19.4	16.5	32.2	37.1	43.8	56.6	66.6	65.8	54.9	44.0	28.9	17.6	40.3	-0.8

Source: Climatological Data, U. S. Dept. of Commerce, NOAA.
* = Data are partially or entirely missing.
See River Drainage Area Map on Page 36.

**MONTHLY AND ANNUAL PRECIPITATION:
SELECTED STATIONS AND DRAINAGE AREAS, WYOMING, 2011**

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	
													Total	Change from Normal
Inches														
NW DISTRICT														
Basin	0.35	0.50	0.41	1.23	2.88	1.56	0.16	0.19	0.37	2.70	0.32	0.17	10.84	4.07
Cody	0.22	0.52	0.38	2.45	5.15	1.24	0.51	0.68	0.25	1.63	1.33	0.62	14.98	4.15
Lander A.P.	0.62*	1.39	0.28	1.10	6.79	0.55	0.07*	0.07*	0.66	1.90	0.99	0.97	15.39*	*
Lovell	0.12	0.72	0.29	0.95	2.43	1.56	0.03	0.26	0.05	2.37	0.30	0.11	9.19	2.45
Pavillion	0.05	*	0.07	0.47	1.92	0.43	0.50	0.17	0.67	1.88	0.28	*	*	*
Powell F.S.	0.00	0.15	0.13	0.72	3.06	0.26	0.05	0.40*	0.54	1.59	0.42	0.05	7.37*	*
Riverton	0.25	0.75	0.08	0.28	5.29	0.68	0.08	0.53	0.43	1.66	0.45	0.20	10.68	2.48
Thermopolis	0.11	0.03*	0.25*	0.84*	4.49*	2.03*	0.28	0.51	0.09	2.08	0.56	0.27	11.54*	*
Worland	0.20	0.26	0.65	0.97	4.43	2.59	0.13	0.06	0.11	2.57	0.28	0.14	12.39	4.36
NE DISTRICT														
Buffalo	*	*	1.03*	0.94*	7.68	1.54	0.85	0.50	0.52	1.74*	1.09	0.41	*	*
Colony	0.86	0.35	0.41	1.86	6.07	1.80	0.28	0.99	0.29	1.31	*	0.07	*	*
Dillinger	*	0.74	0.95	2.37	7.44	1.50	0.37	0.95	1.17	1.13	1.30	0.36	*	*
Kaycee	0.07	0.05	0.20	1.83	6.00	2.27	0.41	0.11	1.13	1.41	0.66	0.25	14.39	1.13
Moorcroft 3S	0.58	0.20	0.58	1.59	5.53*	*	*	1.04	1.55	*	0.69	*	*	*
Newcastle	0.73	0.63	1.10	1.57	8.29	1.49	0.12	1.55	0.87	0.90	0.82	0.26	18.33	2.29
Sheridan A.P.	0.74	0.28	2.70	1.66	5.91	1.68	0.50	0.70	0.12	3.72	1.14	0.58	19.73	5.01
Sundance	1.53	0.84	1.58	2.14	5.40	1.93	2.60	1.08	0.97	0.54	0.16	0.31	19.08	0.30
WEST DISTRICT														
Afton	*	*	*	*	*	*	*	*	*	1.48	1.09	0.73	*	*
Evanston 1E	*	0.41*	1.31*	*	*	*	*	*	*	*	*	*	*	*
Jackson	1.20	0.22	*	0.44	*	1.94	0.05	*	0.35	0.25	1.79	1.17	*	*
Kemmerer 2N	0.90	1.28	0.57	0.75	3.70	0.52	0.67	0.53	0.57	0.74	0.92	0.19	11.34	0.46
Moran 5WNW	2.06	1.70	*	5.09	4.61	2.20	*	*	*	*	*	2.08	*	*
Pinedale	0.77	0.72	0.55	*	*	*	*	*	0.11	1.00	*	0.31	*	*
SC DISTRICT														
Casper WSCMO	0.42*	0.86	0.46	0.97*	3.37	1.55	1.12*	0.23	0.10	1.44	1.24	0.71	12.47*	*
Green River	0.02	0.42	0.58	1.43	3.04	0.70	1.33	0.05	0.32	1.30	1.60	0.31	11.10	1.66
Jeffrey City	0.08	0.68	0.32	1.22	2.43	0.44	0.59	0.13	0.38	0.47	0.72	0.95	8.41	-2.11
Laramie 2NW	0.40	0.31*	0.54	1.96	1.21	1.24	1.90	0.55	0.97	1.29	0.41	0.25	11.03*	*
Rock Springs A.P.	0.04	0.27*	0.42	1.30	2.44	0.81	0.66	0.46	0.17	0.64	1.46	0.11	8.78*	*
Seminole Dam	*	*	*	*	*	*	*	0.16	*	*	*	*	*	*
SE DISTRICT														
Cheyenne A.P.	0.06*	*	*	1.51*	2.87*	2.02	5.63	1.56	0.45	1.72	0.82	0.49	*	*
Chugwater	0.58*	0.55	0.99	1.96	5.09	1.74	1.21*	1.52	0.42	2.73	0.70	0.97	18.46*	*
Douglas 1SE	0.55	0.58	0.36	1.62	4.68	1.55	0.81	1.45*	0.14	1.66	0.74	0.23	14.37*	*
LaGrange	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Torrington 29N	0.35	0.41	0.75	1.78	5.99	2.40	1.27	1.08	0.65	0.40	0.34	0.16	15.58	1.74
Wheatland 4N	0.30*	0.67	0.42	2.61	5.06	3.03	1.22	0.50	0.11	1.10	0.46	0.30	15.78*	*
DRAINAGE AREA														
Yellowstone	1.11	1.01	1.59	1.16	2.66	1.31	0.70	0.91	0.35	1.08	1.59	0.74	14.21	-0.87
Snake	2.38	1.88	2.85	4.84	4.56	2.32	0.93	1.36	0.53	2.18	2.11	1.50	27.44	5.74
Green & Bear	0.31	0.65	0.58	1.00	2.54	0.68	1.01	0.55	0.48	0.84	0.90	0.44	9.98	0.13
Big Horn	0.62	0.60	0.76	1.66	4.70	1.83	0.34	0.53	0.31	2.19	0.72	0.64	14.90	4.61
Powder, Little MO & Tongue	0.92	0.61	1.23	2.51	7.26	1.96	0.70	0.77	0.43	2.34	1.21	0.86	20.80	6.34
Belle Fourche	1.16	0.61	0.95	2.13	6.63	2.10	1.16	1.09	0.80	1.11	0.91	0.52	19.17	2.35
Cheyenne & Niobrara	0.85	0.77	0.92	1.90	5.99	1.84	1.53	1.62	1.01	1.17	0.75	0.37	18.72	4.74
Lower Platte	0.30	0.65	0.70	1.89	4.28	1.76	2.09	1.02	0.34	1.63	0.68	0.47	15.81	1.40
Wind River	0.22	0.63	0.15	0.74	5.38	0.53	0.26	0.53	0.42	1.62	0.37	0.52	11.37	2.13
Upper Platte	0.44	0.96	0.71	1.94	2.39	0.99	1.01	0.43	0.48	1.34	0.95	0.59	12.23	0.36

Source: Climatological Data, U. S. Dept. of Commerce, NOAA.

* = Data are partially or entirely missing.

See River Drainage Area Map on Page 36.

SPRING FREEZE HAZARD TABLE

This table shows the probability of the temperature dropping below 32 degrees or 28 degrees later in the spring than indicated.

Station	Below 32 Degrees			Below 28 Degrees		
	90%	50%	10%	90%	50%	10%
Afton	Jun 16	Jul 02	Jul 19	May 16	Jun 07	Jun 28
Albin	May 01	May 13	May 26	Apr 21	May 04	May 16
Alta 1NNW	Jun 04	Jun 25	Jul 15	May 04	May 28	Jun 21
Archer	May 08	May 26	Jun 12	Apr 27	May 08	May 19
Basin	Apr 25	May 13	May 31	Apr 18	May 01	May 14
Big Piney	Jun 15	Jul 06	Jul 27	May 23	Jun 15	Jul 08
Bondurant 3NW	Jul 20	Jul 27	Aug 02	Jun 30	Jul 14	Jul 28
Boysen Dam	Apr 22	May 08	May 24	Apr 05	Apr 24	May 13
Buffalo Bill Dam	Apr 19	May 12	Jun 04	Mar 28	Apr 23	May 20
Carpenter 3E	May 02	May 18	Jun 03	Apr 27	May 07	May 18
Casper AP	May 05	May 22	Jun 08	Apr 21	May 05	May 18
Cheyenne AP	Apr 27	May 12	May 26	Apr 18	May 01	May 14
Chugwater	May 11	May 28	Jun 15	Apr 26	May 11	May 26
Clearmont	May 06	May 31	Jun 24	May 01	May 13	May 26
Cody	May 01	May 17	Jun 01	Apr 17	May 02	May 17
Colony	Apr 27	May 11	May 25	Apr 15	Apr 30	May 15
Deaver	May 03	May 19	Jun 04	Apr 20	May 05	May 20
Dillinger	May 05	May 28	Jun 20	Apr 28	May 12	May 26
Diversion Dam	May 11	May 27	Jun 12	Apr 27	May 10	May 23
Dubois	Jun 04	Jun 24	Jul 14	May 09	Jun 01	Jun 24
Dull Center 1SE	Apr 28	May 21	Jun 13	Apr 24	May 04	May 15
Elk Mountain	May 19	Jun 04	Jun 20	May 01	May 18	Jun 05
Emblem	Apr 26	May 11	May 25	Apr 16	Apr 29	May 12
Evanston 1E	May 25	Jun 18	Jul 11	May 10	May 30	Jun 19
Farson 5N	Jun 06	Jun 25	Jul 14	May 19	June 05	Jun 22
Gillette 6SE	May 05	May 18	May 30	Apr 19	May 03	May 16
Glenrock 5ESE	Apr 27	May 11	May 26	Apr 17	Apr 29	May 12
Green River	May 16	Jun 04	Jun 23	May 05	May 24	Jun 11
Heart Mountain	May 05	May 21	Jun 07	Apr 24	May 09	May 23
Hulett	May 05	May 27	Jun 18	Apr 19	May 06	May 24
Jackson	Jun 24	Jul 10	Jul 26	May 27	Jun 19	Jul 11
Jeffrey City	May 20	Jun 06	Jun 23	May 06	May 23	Jun 08
Kaycee	May 02	May 21	Jun 09	Apr 25	May 07	May 18
Kemmerer 2N	Jun 05	Jun 24	Jul 13	May 11	Jun 05	Jul 01
Lagrange	May 03	May 21	Jun 07	Apr 24	May 06	May 18
Lander AP	Apr 30	May 19	Jun 06	Apr 21	May 04	May 17
Laramie FAA Airport	May 20	Jun 07	Jun 25	May 04	May 21	Jun 08
Lovell	Apr 27	May 15	Jun 01	Apr 15	Apr 27	May 09
Lusk 2SW	May 11	May 27	Jun 12	Apr 28	May 11	May 25
Mammoth, Y.P.	May 20	Jun 09	Jun 28	Apr 28	May 21	Jun 13
Medicine Bow	May 15	Jun 05	Jun 27	Apr 28	May 17	Jun 06
Midwest	Apr 30	May 16	Jun 02	Apr 22	May 04	May 16
Moorcroft 3S	May 02	May 21	Jun 09	Apr 19	May 06	May 23
Moran 5WNW	Jun 08	Jul 03	Jul 18	May 21	Jun 08	Jun 27
Newcastle	May 02	May 14	May 27	Apr 20	May 01	May 12
Pavillion	May 07	May 22	Jun 06	Apr 17	May 06	May 25
Phillips	May 01	May 21	Jun 10	Apr 21	May 06	May 21
Pinedale	Jun 19	Jul 05	Jul 21	May 26	Jun 13	Jun 30
Rawlins AP	May 11	Jun 01	Jun 21	Apr 28	May 18	Jun 07
Redbird	May 06	May 21	Jun 05	Apr 21	May 03	May 15
Riverton	May 03	May 26	Jun 18	Apr 24	May 08	May 23
Rochelle 3E	May 11	Jun 01	Jun 22	Apr 28	May 11	May 24
Rock Springs AP	May 12	May 28	Jun 13	Apr 25	May 12	May 29
Saratoga	May 17	Jun 02	Jun 17	Apr 30	May 19	Jun 07
Sheridan Field Station	May 06	May 28	Jun 18	Apr 23	May 10	May 27
Sundance	May 09	May 28	Jun 16	Apr 23	May 06	May 19
Thermopolis	Apr 10	Apr 24	May 08	Apr 05	Apr 16	Apr 28
Torrington Exp. Farm	May 01	May 15	May 30	Apr 21	May 03	May 15
Upton	Apr 30	May 25	Jun 20	Apr 25	May 09	May 23
Weston 1 E	May 03	May 22	Jun 09	Apr 24	May 07	May 19
Wheatland 4N	Apr 30	May 15	May 30	Apr 18	May 01	May 14
Worland	Apr 24	May 09	May 23	Apr 12	Apr 25	May 09
Yoder 2 WSW	May 01	May 16	Jun 01	Apr 22	May 05	May 17

Source: Climatology of the United States, No. 20, 1971-2000. National Climatic Data Center, U.S. Dept. of Commerce, NOAA.

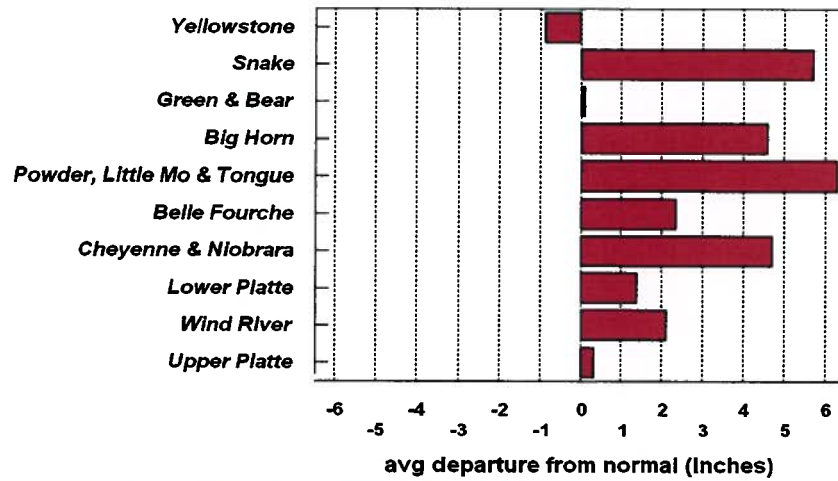
FALL FREEZE HAZARD TABLE

This table shows the probability of the temperature dropping below 32 degrees or 28 degrees earlier in the fall than indicated.

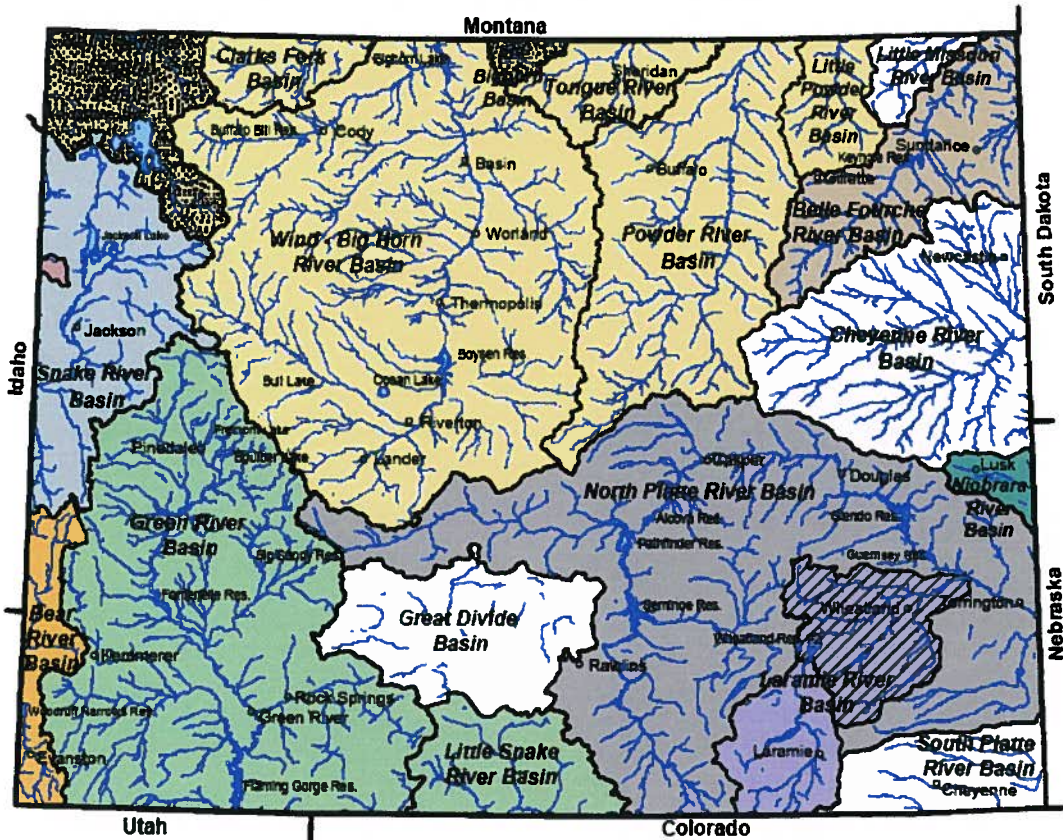
Station	Below 32 Degrees			Below 28 Degrees		
	10%	50%	90%	10%	50%	90%
Afton	Aug 07	Aug 26	Sep 13	Aug 22	Sep 08	Sep 25
Albin	Sep 13	Sep 24	Oct 05	Sep 19	Oct 04	Oct 18
Alta 1NNW	Aug 16	Sep 05	Sep 25	Sep 01	Sep 16	Oct 02
Archer	Sep 12	Sep 21	Sep 30	Sep 16	Sep 28	Oct 10
Basin	Sep 09	Sep 20	Oct 02	Sep 18	Oct 02	Oct 16
Big Piney	Aug 02	Aug 14	Aug 26	Aug 09	Aug 28	Sep 16
Bondurant	Jul 29	Aug 05	Aug 12	Jul 30	Aug 11	Aug 25
Boysen Dam	Sep 19	Oct 05	Oct 20	Sep 28	Oct 16	Nov 02
Buffalo Bill Dam	Sep 18	Oct 05	Oct 22	Sep 24	Oct 13	Oct 31
Carpenter 3E	Sep 13	Sep 24	Oct 06	Sep 19	Oct 01	Oct 12
Casper AP	Sep 10	Sep 19	Sep 29	Sep 15	Sep 28	Oct 12
Cheyenne AP	Sep 14	Sep 26	Oct 08	Sep 19	Oct 06	Oct 22
Chugwater	Sep 05	Sep 18	Sep 30	Sep 12	Sep 24	Oct 05
Clearmont	Aug 27	Sep 12	Sep 27	Sep 10	Sep 21	Oct 03
Cody	Sep 10	Sep 21	Oct 03	Sep 17	Oct 02	Oct 17
Colony	Sep 15	Sep 28	Oct 11	Sep 21	Oct 09	Oct 27
Deaver	Sep 06	Sep 18	Sep 29	Sep 10	Sep 26	Oct 12
Dillinger	Sep 05	Sep 16	Sep 27	Sep 10	Sep 25	Oct 09
Diversion Dam	Sep 05	Sep 17	Sep 29	Sep 13	Sep 26	Oct 09
Dubois	Aug 11	Aug 30	Sep 17	Aug 27	Sep 12	Sep 27
Dull Center 1SE	Sep 08	Sep 20	Oct 01	Sep 16	Sep 29	Oct 11
Elk Mountain	Sep 03	Sep 13	Sep 23	Sep 11	Sep 22	Oct 03
Emblem	Sep 10	Sep 20	Oct 01	Sep 19	Oct 03	Oct 17
Evanston 1E	Aug 16	Sep 05	Sep 24	Sep 01	Sep 16	Oct 01
Farson 5N	Aug 10	Aug 28	Sep 15	Aug 22	Sep 06	Sep 20
Gillette 6SE	Sep 12	Sep 22	Oct 03	Sep 15	Oct 02	Oct 18
Glenrock 5ESE	Sep 09	Sep 20	Oct 01	Sep 17	Oct 01	Oct 15
Green River	Aug 15	Sep 04	Sep 25	Sep 06	Sep 18	Sep 29
Heart Mountain	Sep 04	Sep 16	Sep 29	Sep 11	Sep 25	Oct 10
Hulett	Sep 07	Sep 18	Sep 28	Sep 11	Sep 28	Oct 15
Jackson	Jul 31	Aug 16	Sep 01	Aug 14	Aug 30	Sep 16
Jeffrey City	Sep 01	Sep 12	Sep 23	Sep 08	Sep 19	Sep 30
Kaycee	Sep 08	Sep 18	Sep 29	Sep 14	Sep 29	Oct 14
Kemmerer 2N	Aug 11	Aug 30	Sep 18	Aug 25	Sep 11	Sep 28
Lagrange	Sep 09	Sep 20	Oct 01	Sep 15	Sep 28	Oct 11
Lander AP	Sep 13	Sep 24	Oct 05	Sep 18	Oct 03	Oct 18
Laramie Airport	Sep 01	Sep 14	Sep 27	Sep 07	Sep 19	Oct 01
Lovell	Sep 07	Sep 20	Oct 04	Sep 14	Oct 01	Oct 18
Lusk 2SW	Sep 08	Sep 18	Sep 28	Sep 11	Sep 24	Oct 06
Mammoth, Y.P.	Aug 24	Sep 10	Sep 26	Sep 03	Sep 18	Oct 03
Medicine Bow	Aug 26	Sep 09	Sep 24	Sep 02	Sep 17	Oct 01
Midwest	Aug 25	Sep 13	Oct 01	Sep 14	Sep 28	Oct 11
Moorcroft 3S	Sep 11	Sep 18	Sep 26	Sep 15	Sep 27	Oct 09
Moran 5WNW	Aug 11	Aug 27	Sep 12	Aug 24	Sep 08	Sep 24
Newcastle	Sep 11	Sep 23	Oct 05	Sep 16	Oct 03	Oct 21
Pavillion	Sep 12	Sep 22	Oct 03	Sep 16	Oct 03	Oct 19
Phillips	Sep 05	Sep 19	Oct 04	Sep 10	Sep 26	Oct 13
Pinedale	Aug 02	Aug 18	Sep 04	Aug 12	Aug 28	Sep 13
Rawlins AP	Sep 10	Sep 18	Sep 25	Sep 12	Sep 23	Oct 05
Redbird	Sep 08	Sep 17	Sep 27	Sep 11	Sep 25	Oct 09
Riverton	Sep 03	Sep 15	Sep 28	Sep 14	Sep 25	Oct 06
Rochelle 3E	Sep 03	Sep 14	Sep 25	Sep 08	Sep 20	Oct 01
Rock Springs AP	Sep 09	Sep 19	Sep 30	Sep 13	Sep 28	Oct 13
Saratoga	Sep 01	Sep 13	Sep 25	Sep 12	Sep 23	Oct 05
Sheridan Field Station	Aug 30	Sep 13	Sep 28	Sep 10	Sep 24	Oct 08
Sundance	Sep 09	Sep 19	Sep 28	Sep 14	Sep 30	Oct 15
Thermopolis	Sep 25	Oct 06	Oct 16	Oct 01	Oct 16	Oct 31
Torrington Exp. Farm	Sep 11	Sep 20	Sep 29	Sep 17	Sep 29	Oct 11
Upton	Sep 07	Sep 19	Sep 30	Sep 09	Sep 25	Oct 10
Weston 1E	Sep 06	Sep 17	Sep 27	Sep 12	Sep 25	Oct 08
Wheatland 4N	Sep 10	Sep 21	Oct 01	Sep 18	Sep 30	Oct 12
Worland	Sep 11	Sep 24	Oct 08	Sep 18	Oct 06	Oct 23
Yoder 2WSW	Sep 11	Sep 21	Oct 01	Sep 16	Sep 30	Oct 13

Source: Climatology of the United States, No. 20, 1971-2000. National Climatic Data Center, U.S. Dept. of Commerce, NOAA.

Departures From Normal Precipitation Wyoming River Drainage Areas, 2011



Wyoming River Basin Compacts and Decrees



0 50 100 Miles

Wyoming State Engineer's Office

Produce growers should review federal proposal

Food-safety expert: Produce growers should review federal proposal

UNIVERSITY PARK, PA – Growers should be aware of the Produce Safety Rule proposed Jan. 4 by the U.S. Food and Drug Administration, according to a food-safety expert in Penn State's College of Agricultural Sciences. If adopted, it will establish mandatory practices that farmers must employ to prevent microbial contamination of fresh produce. The draft regulation is far reaching, explained Luke LaBorde, professor of food science. It will address worker health and hygiene, the quality of agricultural water, biological soil amendments, the use of domesticated animals, potential contamination by wild animals and sanitation standards for equipment, tools and buildings.

LaBorde stressed some important points about the proposed rule. "First, it covers only fresh produce that is sold commercially," he said. "It does not apply to produce used for personal consumption, such as home gardens." The focus of the new regulation is on fruits, vegetables, nuts, herbs, mushrooms and sprouts that typically are eaten raw, not commodities that generally are cooked or further processed, LaBorde noted. "For example, potatoes, eggplant, winter squash, beets and beans for drying are exempt," he said.

Not all farms that grow fresh produce will be required to comply with the rule. Farms with gross food sales under \$25,000 are exempt. Farms with gross food sales over \$500,000 generally are required to comply. "Those with total sales of between \$25,000 and \$500,000 may or may not receive exemptions, depending on what kind of marketing channels are used," LaBorde explained. "For instance, if farmers sell more than half of their strawberry crop directly to consumers — such as at a farmers market or farm stand — or if they deliver it directly to a grocery store or restaurant, they are exempt from the regulation. "However, to receive this exemption, these kinds of direct sales must be to buyers in the same state as the farm, or if out of state, no farther than 275 miles from the farm."

If a crop is sold mostly through wholesale outlets, such as through distributors, warehouses or fresh-cut processors, the farm is not exempt and is covered under the rule, according to LaBorde. "Exemptions can be cancelled if the Food and Drug Administration determines that a farm may be a source of contaminated produce," he said. "And finally, keep in mind that growers of any size who sell at least some of their crop through wholesale marketing channels, even if technically not covered by the federal regulation, have been facing and will continue to face standards at least as stringent as anything in the final regulations."

LaBorde provided highlights of the requirements FDA would issue in the final regulation:

- **Worker health and hygiene:** Farm and packinghouse workers who harvest or handle fresh produce, and their supervisors, must receive training on personal hygiene and health conditions that can increase the risk of food contamination. Growers are required to show proof of training by keeping written records. Also, toilet facilities have to be readily accessible, kept reasonably clean and supplied with toilet paper, hand-washing stations must be close to toilet facilities and supplied with potable running water, hand soap and clean, single-use towels.
- **Agricultural water:** Growers must be able to demonstrate that the water they use for irrigation, pesticide preparation, cooling and washing, and so forth is safe for its intended use. Maximum average *E. coli* levels of 126 cells per 100 milliliters have been proposed for irrigation water that can contact the edible part of the crop. Water used for post-harvest operations faces more stringent

standards. No detectable levels of E. coli are allowed.

- **Biological soil amendments:** At least a nine month interval would be required between application of raw animal manure to produce fields and harvesting if there is a possibility that the manure may contact the produce. Composted animal manures can be applied from 0 to 45 days before harvest depending on whether or not it can contact the crop. Growers or their commercial compost suppliers must provide proof through laboratory testing that the composting process was adequate to make their compost safe to use. No human waste is allowed on fields except in the case of sewage sludge biosolids that are treated according to already existing regulations.

- **Domesticated animals:** Working animals, such as mules and horses, are allowed in produce fields as long as the grower can demonstrate that he or she has taken adequate measures to prevent contamination. If animals are allowed to graze in areas intended for produce growing, the nine-month waiting period specified for application of raw manure would apply.

- **Wild animals:** The Food and Drug Administration recognizes that it is impossible to keep all wild animals away from produce fields. If the situation is out of control and there is a reasonable probability that wild animals can contaminate produce, growers would be required to monitor their fields for signs of animals and take some kind of preventative measure to keep them out or discourage them from entering.

- **Equipment, tools, and buildings:** Equipment and tools need to be kept reasonably clean. Sanitation standards for packing buildings require good water drainage, control of dripping condensation, a pest-control program and regular clean-up of trash. Partially enclosed packing buildings are acceptable if the grower or packer takes precautions to prevent birds and other pests from becoming established in the buildings.

"Remember, this is a proposed rule and it is not a final regulation," LaBorde said. "This means that growers have an opportunity to comment on any part of the rule they do not understand or that they object to."

The draft ruling is available for viewing online at www.fda.gov/Food/FoodSafety/FSMA/ucm304045.htm. The public can submit comment on the draft rule until May 16. Before this date, the Food and Drug Administration will be holding public meetings to explain the proposal and to provide additional opportunity for input.

There are two ways to send comments. They may be submitted through the Internet at www.regulations.gov. Instructions for submitting comments are on the site.

Also, written comments may be faxed to FDA at 301-827-6870, or mailed to the Division of Dockets Management (HFA-305), Food and Drug Administration, 5630 Fishers Lane, Room. 1061, Rockville, MD 20852. All written submissions received must include the Docket No. (FDA-2011-N-0921).

For updates on the rule-making process and information on Good Agricultural Practices training opportunities, visit the Perm State Farm Food Safety website at <http://extension.psu.edu/food-safety/farm>, or contact LaBorde at If15@psu.edu or 814-863-2298.

Budget: Mixed vegetable production, Northern Front Range of Colorado

The following budget is based on financial information from four, intensively managed, mixed vegetable farms along Colorado's Northern Front Range. Three years of self-reported cost data for each grower were incorporated into eight input expenditure categories that were common to all growers. Although some growers provided very detailed cost information, others provided their expenditures in broad categories, thus allowing the calculation of summary costs by general category only. For interpretation purposes please note the following:

- Median costs per acre were calculated for each input category, and are presented with the lowest and the highest reported costs per acre for each category.¹ These median costs can be considered a representative baseline for each expenditure category.
- No one grower consistently had the lowest (or highest) cost structure across all cost categories, due to differing input usage (for example, types and application rates of soil amendments, using transplants versus direct seeding for some crops, or sources of on-farm labor), as well as the growers' individual management skills.² However, this shows that growers make individual management decisions to invest time and resources in the activities they believe are important for their specific production and marketing strategies. Also, understanding an individual grower's cost structure may be as informative as knowing average costs per acre when evaluating an enterprise.
- Therefore, this budget may best be used by new growers to understand the range of potential costs and returns on similar production units, and by more experienced growers to compare their current farm budgets to those of their peers.

The production years upon which this budget is based range from 2005 to 2011 (depending on the data provided by each grower); however, only three years of information for each grower were used to create the budget summary. All costs and revenues are presented in 2011 dollars, and reported per acre cultivated. For these production years, acreage under cultivation ranged from 0.8 acres to 7.0 acres, with all growers increasing their total cultivated acreage over the study period, so standardizing to the acre partially controls for reported growth.

The typical crop production season runs from February/March to October/November, depending on the grower and the market into which s/he sells. Each grower uses a combination of wholesale restaurant accounts and direct-to-consumer market outlets that include selling their products at farmers' markets, through a community supported agriculture program, and other on-farm outlets such as a farm stand or farm event.

¹ The median represents the cost per acre above which 50% of the growers' incurred their input costs (or generated their returns), and below which the other 50% incurred costs (or returns).

² Therefore, the ranges reported in this summary budget cannot be expected from any one grower; rather they should be used only to compare individual costs and not summed to calculate total costs in order to determine either a low-cost grower or a high-cost grower. Likewise, the total costs cannot be subtracted from the total revenues to calculate net revenues. Rather median values are presented for the summary cost and return information calculated across all growers in this study.

The summary budget below presents median costs and returns from four Northern Colorado mixed vegetable production enterprises:

Mixed vegetable production, median farm size= 4 acres	Median value per acre	Per acre ranges	
		Low	High
Fertilizer/amendments (compost, manure, cover crop incorporation, other amendments)	393.81	102.46	1,340.63
Seed	1,647.07	792.76	2,231.30
Hired labor (field, mechanical)	7,464.36	2,028.13	14,829.97
Supplies & other expenses	3,976.81	1,681.43	9,554.75
Utilities	716.04	68.75	1,034.58
Vehicle: gas/fuel/oil	426.07	128.44	1,545.87
Marketing costs (packaging, stall fees)	983.51	220.30	1,661.89
Repairs & maintenance	629.88	455.67	3,092.38
Total variable costs	\$ 15,079.92	\$ 10,435.53	\$ 24,291.53
Insurance/taxes/licenses	691.25	45.57	2,963.39
Rental payments for land	2,844.00	172.64	4,550.00
Irrigation	378.52	247.87	2,923.25
Car & truck	623.68	106.00	2,913.68
Office/administrative	320.29	129.32	2,551.37
Equipment	1,138.03	429.72	2,430.27
Other fixed expenses	481.54	36.86	929.49
Depreciation charges, interest, capital investments	407.37	68.80	1,147.63
Total fixed costs	\$ 6,073.90	\$ 2,949.70	\$ 9,622.96
Total variable & fixed costs	\$ 22,309.13	\$ 14,926.27	\$ 27,397.72
Gross farm income	\$ 33,369.94	\$ 18,546.00	\$ 51,417.37
Net farm income	\$ 12,548.65	\$ 576.96	\$ 30,249.46

All growers in this study produce some crops under cover in order to extend the market season during which they have produce available for sale (thus they start some crops in small greenhouses or high tunnels in February or March, and replant in these structures to extend production into October/November). This longer production period is particularly important for those who maintain high-value wholesale accounts such as restaurants, or those who seek to be early-season entrants in other markets where there is frequently a 70-100% price premium on fresh produce such as greens and tomatoes. Each grower cultivates multiple varieties of lettuce and greens, broccoli, cabbage, brussel sprouts, and root crops (beets, carrots, turnips, radishes, potato, onions, garlic), and warm season crops of cucumber, zucchini, eggplant, leeks, summer squash, winter squash, tomatoes, peppers, okra, peppers, and herbs. The total number of individual varieties planted may range from 50 to 100, over all acreage planted, throughout the production season.



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