

Business Planning and Management

FARMING ISSUES AND BUSINESS RESOURCES

BIOSECURITY ON THE FARM OR RANCH

Biosecurity has always been an important component of animal and crop disease control programs. The program is designed by the owner with the help and guidance of the owner's veterinarian or other animal and crop health care professionals.

The goals of a biosecurity program are to prevent the introduction of disease onto the farm from outside sources, as well as prevent the transfer of disease within the farm environment. Biosecurity is not about building fences with razor wire, guarded gates, or water filled moats. It is about how you can protect your operation from profit robbing diseases. The costs of a biosecurity program are minimal while the benefits are great. Biosecurity is a way of thinking and it should be a top priority when planning and making important management decisions.

DEVELOP A PLAN

Biosecurity requires a plan. The concept of avoiding or preventing the introduction of disease requires some thinking and planning in order for the results to be successful. No two biosecurity plans are exactly the same since no two properties or production units are exactly alike. Keep in mind that biosecurity is basically an economic decision. That is, there is a cost related to certain diseases in your animals or crops, and there is a cost to preventing them. A good plan will be useful and allow an operation to be profitable while the biosecurity plan is being implemented. It is important to consult with your veterinarian or crop health professional so that your efforts will be effective.

IDENTIFY RISKS

What factors constitute disease exposure (or biosecurity risks)?

- risks related to animals
- risks related to seed and other plant material
- risks related to mechanical traffic and/or human traffic
- risks related to feeds from off-site sources.

Fundamental points common to all biosecurity programs

- Observe your animals and crops daily for signs of disease.
- Be aware of unusual events or behavior changes in your animals.
- Minimize contact with animals belonging to others.
- Know the health status and disease control programs of any herd or flock from which you buy animals.
- Screen visitors who are in contact with your animals and crops.

TECHNICAL ASSISTANCE

OREGON DEPARTMENT OF AGRICULTURE

State veterinarian

635 Capitol St. NE

Salem, OR 97301-2532

Phone _____ 503-986-4680

Web _____ oregon.gov/ODA/AHID

Plant Health Programs

Phone _____ 503-986-4620

Web _____ oregon.gov/ODA/CID/PLANT_HEALTH

US DEPARTMENT OF AGRICULTURE

Area veterinarian in charge

Phone _____ 503-399-5871

Plant Protection and Quarantine Program

Phone _____ 503-326-2814

BIRD, PREDATOR, AND RODENT DAMAGE CONTROL

WHO MUST COMPLY?

Persons experiencing agricultural damage by migratory birds need to obtain a federal depredation permit from the US Fish and Wildlife Service (USFWS) if birds are going to be killed. No federal or state permit is required to scare (haze) migratory birds, per OAR 635-043-00. The hazing of bald eagles, which are also protected by the Eagle Protection Act and the Endangered Species Act, will require permits from the USFWS. If fireworks are to be used to haze birds from crops, a permit is required from the Office of the State Fire Marshal.

The use of certain methods and techniques to kill predatory animals may require permits.

The use of propane cannons, however, is a non-regulated activity in exclusive farm zones—meaning no agency has legal authority to prohibit or license activities that create noise.

Note: See section on “Right to Farm”

However, the use of a propane/noise cannon needs to be conducted in a reasonable and prudent manner, and to be generally accepted as a practice for which it is being used. Farmers employing noise cannons should use best management practices, monitor and move the cannons, and mix other control methods into the process so birds do not become acclimated.

Noise cannons can create conflicts with neighbors. For tips on being a good farm neighbor, see: http://oregon.gov/ODA/docs/pdf/Good_Neighbor.pdf

For Best Management Practices (BMPs) recommended by the Oregon Winegrowers Association for use of propane cannons in wine grapes for bird control, see: <http://oregon.gov/ODA/doc/pdf/BirdPractices.pdf>

PERMITS AND LICENSES

Livestock owners or landowners are required to have an aerial hunting permit before killing coyotes from an aircraft. This permit is issued by the Oregon Department of Agriculture (ODA), Animal Health and Identification Division, 503-986-4680.

A pesticide applicator license may also be required if a farmer or rancher intends to use certain EPA/ODA registered pesticides to control vertebrate animals. Contact the Oregon Department of Agriculture Pesticides Division, 503-986-4635.

Hazing any wildlife using agricultural fireworks requires a permit from the Office of the State Fire Marshal, Bureau of Hazardous Materials, 503-378-2885.

Permits to kill game animals causing damage to agricultural crops and property are issued by the Oregon Department of Fish and Wildlife, 503-229-5454, ext. 467 or ext. 478.

RESOURCES

The US Department of Agriculture Animal and Plant Health Inspection Service (APHIS), Wildlife Services (USDA/WS) provides recommendations to the US Fish and Wildlife Service for federal permits to take (kill) protected migratory birds that are damaging agricultural crops or property.

USDA/WS provides demonstrations, loan or sale of supplies and equipment to haze (scare) migratory birds, and makes recommendations to the Office of the State Fire Marshal regarding issuance of permits for agricultural use of fireworks.

Additionally, USDA/WS provides resources to farmers or ranchers and residential property owners regarding wildlife damage management. USDA/WS provides direct control activities in some counties. USDA/WS also provides recommendations to farmers or ranchers; property owners; and federal, state and municipal land managing agencies regarding field rodent damage control. The program may provide control or technical assistance (extension/education) activities to those having property loss by field rodents (ground squirrels, gophers, moles, beaver, nutria, etc.) depending on county funding. USDA/WS also conducts control activities (e.g., bird control, predator control, etc.).

COMPLIANCE

Contact USDA/WS and request assistance before taking control measures. USDA/WS will respond to the request and make recommendations based on demonstrated need. Special permits may be needed in some circumstances. The landowner is responsible for complying with all applicable state and federal laws or regulations and conditions of the permit. USDA/WS is available to explain these laws to agricultural producers. USDA/WS may be contacted at 503-326-2346.

RECORD KEEPING

Licenses issued by the respective agencies outline the required record keeping requirements.

SAFETY AND TRAINING

The Office of the State Fire Marshal has specific responsibilities regarding storage and use of fireworks for protection of agricultural crops. USDA/WS provides assistance and training in the safe and proper use of all wildlife damage control methods and techniques, including fireworks.

The Oregon Department of Agriculture has regulatory authority for all pesticides registered and used for wildlife damage management. Several other sources of information for safety and training are available as well, including the OSU County Extension Offices and ODA Pesticides Division.

TECHNICAL ASSISTANCE**US DEPARTMENT OF AGRICULTURE****Animal and Plant Health Inspection Service (APHIS)**

Wildlife Services (USDA/WS)

David E. Williams

6135 NE 80th, Suite A-8

Portland, OR 97218

Phone _____ 503-326-2346

Web _____ www.aphis.usda.gov/ws

Pesticide registration**OREGON DEPARTMENT OF AGRICULTURE****Pesticides Division**

635 Capitol St. NE

Salem, OR 97301-2532

Phone _____ 503-986-4635

Web _____ oregon.gov/ODA/PEST

Fireworks permits**OREGON OFFICE OF THE STATE FIRE MARSHAL****Bureau of Hazardous Materials**

Phone _____ 503-378-2885

ENERGY AND AGRICULTURE

Major opportunities exist for Oregon agriculture in the fields of renewable energy and energy efficiency. Oregon farms and ranches create many potential feedstocks to generate energy and fuels, and can also develop energy facilities such as solar-powered systems, wind turbines, small hydropower facilities, and geothermal systems. A variety of tools and practices are available to producers to reduce energy use and costs. Technologies and incentives for renewable energy and energy conservation are improving.

25 x '25

25 x '25 is a broad coalition of business, conservation, and government representatives who share the following vision: by 2025, America's farms, forests and ranches will provide 25 percent of the total energy consumed in the United States, while continuing to produce safe, abundant, and affordable food, feed, and fiber. To find out more, visit <http://www.25x25.org>.

ENERGY EFFICIENCY

As fuel and power costs rise, most growers are exploring opportunities to save energy. A variety of programs and technologies are available to reduce energy use for different components of agricultural operations. No-till or reduced tillage offers fuel savings in addition to benefits to soil quality. Precision farming equipment can reduce both fuel and fertilizer use. In addition to changing to more efficient

irrigation equipment, management strategies such as soil moisture monitoring and frequent nozzle inspection and replacement can help reduce energy use from irrigation. Livestock buildings, agricultural processing facilities, and greenhouses can save energy by replacing lighting, switching to more efficient heating and cooling systems, and other strategies.

BIOMASS AND BIOFUELS

A variety of agricultural crops and by-products can generate heat, electricity, and fuel. Oilseed crops can be crushed and converted to biodiesel, and corn can be processed to produce ethanol. Several biofuel companies and researchers are refining technologies to produce cellulosic ethanol, pellets, and electricity from materials such as grass straw, poplars, and biosolids. Livestock manure, crop residues, and food processing by-products can be used in methane digesters. Wood waste from nursery clippings, poplars, junipers, and forest slash materials can power boilers to generate heat and electricity.

SOLAR ENERGY

Solar energy systems work well across Oregon, which receives as much sun as the national average. Photovoltaic (PV) systems generate electricity for a variety of home and business uses. In agriculture, growers may be able to use PV systems to power pumps for irrigation and livestock watering, supply electricity to buildings, heat water, and

charge electric fencing. “Passive solar” buildings can also be designed to maximize heating with solar energy.

HYDROPOWER

Small hydroelectric or micro-hydro systems may be installed in irrigation ditches as well as streams. Water may be diverted by pipe (called a penstock) or channel to a turbine, generating electricity. Small hydro projects are generally highly efficient once installed. The permitting process to install small hydro projects has been streamlined for many cases, but it still can be fairly extensive compared with other types of renewable energy.

WIND

Oregon farms and ranches host large-scale wind power developments, and can also use smaller wind turbines to supply power to their own operations. Turbine output depends heavily on wind speeds, both at your site and at the specific height of the turbine. Wind power is generally economical only if your site has an average wind speed of 10 miles per hour or more. Several websites can help you determine if wind power may be an option at your operation:

Energy Trust of Oregon has a wind mapping tool on its website, <http://energytrust.org>

GEOTHERMAL

Geothermal wells deliver steam or hot water to the ground surface, which can be used for heating or electricity generation. Geothermal heat pumps can also be used for heating at the home and farm scale. Examples of agricultural uses of geothermal energy include heating greenhouses, heating processing water, or heating a fruit or vegetable drying facility.

Geothermal resources exist in parts of central, eastern, and southern Oregon. The Oregon Institute of Technology has a list of known geothermal resources at <http://geoheat.oit.edu/oregon.htm>.

INCENTIVES FOR ENERGY PROJECTS

Oregon’s Business Energy Tax Credit provides a 35 percent credit for energy and fuel conservation projects, and a 50 percent credit for certain renewable energy projects. You must apply in advance for this credit. Application processes for the renewable energy credit have been established for three tiers of total project costs. For more information, visit the Oregon Department of Energy website at <http://oregon.gov/ENERGY>.

The Energy Trust of Oregon provides incentives and support to help businesses install qualified energy efficient equipment and install certain renewable energy projects. Oregon customers of Pacific Power, Portland General Electric, NW Natural Gas, and Cascade Natural Gas are eligible for efficiency projects. Oregon customers of Pacific Power and Portland General Electric are eligible for renewable energy projects connected to the Pacific Power or PGE power grid. For more information, call Energy Trust toll-free at 1-866-368-7878 or visit <http://energytrust.org/>.

USDA Rural Development’s Rural Energy for America Program offers competitive grants for up to 25 percent of the costs of energy efficiency and renewable projects, as well as guaranteed loans for up to 50 percent of project costs. For more information, contact the USDA Rural Development office at 503-414-3366 in Portland or in Pendleton at 541-278-8049 x129, or go to <http://www.rurdev.usda.gov/or/energy.htm>.

Oregon’s biomass credit offers per-unit incentives for eligible biopower and biofuel feedstocks. More information and application forms are available on the Oregon Department of Energy’s website, <http://www.oregon.gov/ENERGY>.

The Oregon Department of Energy offers loans for renewable energy and energy efficiency projects, as well as use of recycled materials to create products and projects that use alternative fuels. Loan amounts typically range from \$20,000 to \$20,000,000. More information is available on the Oregon Department of Energy website at <http://oregon.gov/ENERGY>.

A variety of federal tax credits are available for energy efficiency and renewable energy projects. For example, there is a 30 percent federal investment tax credit for solar and small wind projects. For more information, visit <http://www.dsireusa.org>.

FOR MORE INFORMATION

OREGON DEPARTMENT OF ENERGY

Web www.oregon.gov/ENERGY
25 X '25

For inquiries regarding agricultural, forestry and conservation sector involvement, please contact

Ernie Shea

Email eshea@25x25.org

Web www.25x25.org

EXCLUSIVE FARM USE (EFU) ZONES AND PERMITTED NON-FARM USES

Oregon law establishes the following statewide policy for use of agricultural land (ORS 215.243):

- Open land used for agriculture is a vital natural and economic asset for all the people of the state.
- Preservation of a maximum amount of agricultural land, in large blocks, is necessary to maintain the agricultural economy of the state and for the assurance of adequate, healthful and nutritious food.
- Expansion of urban development in rural areas is a public concern because of the conflicts between farm and urban activities.
- Incentives and privileges are justified to owners of land in exclusive farm use zones because such zoning substantially limits alternatives to the use of rural lands.

Statewide Planning Goal 3, "Agricultural Lands" requires all agricultural lands to be inventoried and preserved by adopting exclusive farm use zones. Local counties are responsible for planning and zoning, subject to approval by the Oregon Department of Land Conservation and Development (DLCD). Allowable non-farm uses are incorporated into local zoning regulations.

DEFINITION OF FARM USE (ORS 215.203)

Farm use means the current employment of land primarily for obtaining a monetary profit by raising, harvesting, and selling crops; feeding, breeding, managing and selling livestock, poultry, fur-bearing animals, and honeybees; dairying; or any other agricultural or horticultural use. Farm use also includes the preparation, storage, and disposal by marketing or otherwise of the products or by-products raised on such land for human or animal use. The definition includes land lying fallow for one year as a normal and regular requirement of good agricultural husbandry; land planted in orchards or other perennials prior to maturity; any land constituting a woodlot of less than 20 acres contiguous to and owned by the owner of land classified for farm use; dry or water covered wasteland in or adjacent to land in farm use; land under dwellings or buildings supporting farm practices; or land used for processing crops from the farm into biofuels to be used on the farm or neighboring farms. Farm use also includes the stabling or training of equines (horses, mules, etc.) along with riding lessons and training clinics; the propagation, cultivation, maintenance and harvesting of aquatic, bird or animal species as allowed by the state Fish and Wildlife Commission. Farm use does not include land subject to

timber assessment under ORS Chapter 321, except for Christmas trees and poplar farms.

ELIGIBILITY FOR SPECIAL TAX USE ZONING

To be eligible for preferential farm value, the land must be employed in a farm use as described in ORS 308A.056. For lands located outside an exclusive farm use zone, the landowner must file an application with the county assessor by April 1 of the first year in which such assessment is desired. Applications for farm use special assessment are only necessary in non-EFU zones.

Note: Refer to the "Property Tax Special Assessment" section of this handbook for more information.

LIMITATION ON RESTRICTIONS BY GOVERNING BODIES

No state agency, city, county, or political subdivision may enact local laws or ordinances, restrictions or regulations that would restrict or regulate farm structures or accepted farming practices because of noise, dust, odor, or other materials carried in the air, arising from farm operations in farm use zones, that do not extend into an adopted urban growth boundary, unless the practice affects the health, safety and welfare of the citizens of the state. (ORS 215.253)

NUISANCE COMPLAINTS

State law requires a county governing body or its designate to apply a condition of approval of a single-family dwelling, that the landowner of the dwelling sign a statement declaring that the landowner will not complain about accepted farming or forest practices on nearby lands devoted to farm or forest use (ORS 215.293). Farm operators may want to contact their county planning department regarding this requirement if nuisance complaints are increasing as a result of new single-family dwellings near exclusive-use farm land. Additionally, the 1993 Oregon Legislature passed "right-to-farm" provisions (see Chapter 792, Oregon Laws 1993. ORS 30.930-30.947), which protect acceptable farming practices from nuisance suits. Contact the Oregon Department of Agriculture (Jim Johnson, 503-986-4706) for information on the right-to-farm law.

Another option for resolving nuisance complaints is mediation. Contact the Oregon Department of Agriculture Farm Mediation Program (800-347-7028) to discuss this alternative. Mediation is a voluntary process involving a

third-party mediator who facilitates discussions and seeks potential resolutions to the disputes of the parties.

Note: For more information see the "Oregon Farm Mediation Program" section of this handbook.

PERMITTED NON-FARM USES ON EFU LAND (ORS CHAPTER 215)

All rural landowners should contact their county planning department prior to siting or building any structure or starting any non-farm use activity. Non-farm uses require prior approval by the respective county. Fines may be levied by the county if prior approval is not obtained.

Certain non-farm uses may be allowed, and their approval standards are incorporated into local zoning regulations; additional approval standards may apply to non-farm use on high value farmland.

Technical variations exist between counties, so contact your county planning department or Department of Land Conservation and Development (DLCD), 503-373-0050, for details. The following types of non-farm uses, among others, are generally allowed in exclusive farm use zones except that some uses (*) are not allowed on "high value" farmland (ORS 215.710):

- public or private K-12 schools serving rural communities*
- forest product propagation and harvesting
- dwelling for farm use
- farm buildings
- farm stands
- mineral exploration and mining
- farm-worker housing
- land based application of reclaimed water for farm use
- winery
- private playgrounds or campgrounds*
- dog kennels*
- room and board services (five guest limit) in existing residences
- home occupations including bed and breakfasts
- commercial activities in conjunction with farm use including biofuels
- churches and cemeteries*
- utility service
- geothermal exploration or production
- community centers for rural communities
- replacement of an existing dwelling

- landscaping business in conjunction with a nursery
- guest ranches in Eastern Oregon
- siting for solid waste disposal*
- creation or restoration of wetlands
- private hunting and fishing preserves*
- golf courses*
- small scale crop processing facility including biofuels.

OTHER ON-FARM ACTIVITIES

The 2011 Oregon Legislature amended Oregon land use law to provide for farm-related events on farmland under certain circumstances. The following is a summary of the legislation that passed. Because much of what was established is optional, one should contact their local land use planning official to determine the applicability in their county.

SB 960 Agri-tourism

Expands the opportunities for farmers to supplement their farm income with agri-tourism activities, like special events and weddings that are related to and supportive of agriculture, in compliance with county approvals and permits.

<http://www.leg.state.or.us/11reg/measpdf/sb0900.dir/sb0960.en.pdf>

HB 3280 Expands on-site winery activities

Allows wineries to market and sell wine produced in conjunction with the winery, conduct associated events and activities including food service. Authorizes up to 25 days of events. Creates a new "large winery" category, with greater number of events and food service available.

<http://www.leg.state.or.us/11reg/measpdf/hb3200.dir/hb3280.en.pdf>

TECHNICAL ASSISTANCE

OREGON DEPARTMENT OF LAND CONSERVATION AND DEVELOPMENT

635 Capitol St NE, Suite 150
Salem, OR 97301-2540

Phone _____ 503-373-0050

Fax _____ 503-378-5518

E-mail _____ katherine.daniels@state.or.us

Web _____ oregon.gov/DLCD

DLCD regional representatives

Farm and Forest Lands Specialist

Katherine Daniels _____ 503-373-0050, ext 329

Central Oregon

Phone _____ 541-325-6927

Central Willamette Valley and Southern Oregon

Phone _____ 971-239-9453

Clackamas and Multnomah counties

Phone _____ 971-673-0963

Columbia and Washington counties

Phone _____ 503-725-2182

Eastern Oregon

Phone _____ 541-663-1393

North Coast

Phone _____ 541-574-1095

Northern Willamette Valley

Phone _____ 503-373-0050, ext 259

South Coast

Phone _____ 541-574-1584

FARM MEDIATION PROGRAM

WHAT IS MEDIATION?

Farming and ranching are getting more complicated. Many of the challenges facing producers involve issues that affect other parties.

Mediation offers a way to bring people together to resolve differences outside the courtroom. This is one of the most beneficial things about mediation—bringing all interested parties to the table at the same time—saving everyone time and money. Mediation is conducted by trained, professional mediators who know how to help people resolve problems.

WHEN TO CONSIDER MEDIATION

If you are having problems with any of the following types of ag-related disputes, mediation may be a way to resolve the situation:

- nuisance complaints
- boundary disagreements
- trespass situations

- labor or wage disputes between ag employer and employee(s)
- sales agreements or contracts
- landlord or tenant issues
- multiple party agreements
- partnership dissolution
- family farm transfers.

WHAT DOES IT COST?

The Oregon Farm Mediation Program provides professional mediators for agricultural and rural disputes at \$30 per hour, per party.

TECHNICAL ASSISTANCE

OREGON DEPARTMENT OF AGRICULTURE

Farm Mediation Program

Brent Searle

635 Capitol St. NE

Salem, OR 97301-2532

Phone _____ 800-347-7028

Web _____ oregon.gov/ODA/mediation.shtml

FARM SCALES

WHO MUST COMPLY?

Owners or operators of farm scales used for commercial purposes (buying, selling, or processing commodities by weight, and using those weights to determine charges or payments), in Oregon, must obtain an annual scale license from the Oregon Department of Agriculture's Measurement Standards Division, as provided for by ORS 618.121. In basic terms, whenever money, credit, or something of value changes hands based on the reading of a farm or ranch scale, that scale is being used commercially in Oregon. This applies to the sale of commodities, supplies, produce, livestock, etc., or to the custom cleaning or processing by weight of any such items.

TYPES OF FARM SCALES COVERED

The licensing requirement applies to all types of weighing devices or scales used on a farm for commercial purposes. Types of scales may include, but are not limited to, roadside stand produce scales, feed, seed, or fertilizer scales, livestock and animal scales, and truck scales.

EXEMPTIONS

Scales that are located on a farm or ranch but are not used for any commercial purpose are not covered by licensing requirements.

LICENSING PERIOD

The annual license period for scales and weighing devices in Oregon is July 1 through June 30 of the following year. Scales are to be licensed prior to use. Annual renewal notices are mailed out each year in mid-May, preceding their June 30 expiration date. Farm or ranch scales licensed for use beginning other than July 1, pay the full annual license fee. There is no prorating of fees for scales licensed midyear, since the cost of official field certification remains the same.

PENALTY FEE FOR DELINQUENT RENEWALS

ORS 561.300 provides for the Oregon Department of Agriculture to collect a delinquent renewal penalty fee if the licensee fails to renew the license before the 60th day after the license expiration date. Renewals cannot be processed until delinquent fees are paid.

SCALE LICENSE FEE AMOUNTS

Annual scale license fees are based on the scale manufacturer's rated weighing capacity of the system, not a lesser "used" amount.

Rated capacity	Current fee
0 to 400 pounds capacity	\$ 39
401 to 1,160 pounds capacity	\$ 80
1,161 to 7,500 pounds capacity	\$ 161
7,501 to 60,000 pounds capacity	\$ 242
Over 60,000 pounds capacity	\$ 242
Under 10 tons per hour*	\$ 304
10 to 150 tons per hour*	\$ 473
151 to 1,000 tons per hour*	\$ 946
Over 1,000 tons per hour*	\$ 2,101

- Continuous weighing systems (i.e., automatic bulk weighing systems, belt scales and mass flow meters).

OFFICIAL CERTIFICATION

Currently licensed farm and ranch scales are audited and certified by the department's inspectors on a periodic basis. For most scales, that is normally within a 12-18 month interval. Seasonally used scales are normally audited and

certified just prior to the season when they are used. Scales that are licensed, suitable for their intended use, correctly installed, properly maintained, and accurate, will be certified and receive an examination seal when inspected and tested by a department inspector.

All scales approved for commercial use in Oregon must meet National Institute of Standards and Technology Handbook 44 requirements for commercial weighing and must have an active National Type Evaluation Program (NTEP) Certificate of Conformance unless otherwise exempted. In addition, any device put into commercial use must be licensed and must have a "Placed in Service" report filed with the Measurement Standards Division. "Not-legal-for-trade" weighing devices are not intended by their manufacturers to be used commercially and cannot be accepted in Oregon.

The necessary test equipment and standards to perform adequate performance tests of all scales are not continuously available in all parts of Oregon all months of the year. Scales that cannot be certified when the appropriate agency equipment is in the area may have to wait until the next visit. If a scale test is required on a more frequent basis, such as to satisfy USDA Grain Inspection Service or Packers and Stockyards Administration requirements, the testing may be done by a qualified scale company, at the scale owner/operator's expense.

REPAIR OR REPLACEMENT

If a farm or ranch scale is tagged with a "repair notice order" or "stop use order" following an agency inspection, it will need to be corrected within the time specified. If it cannot be corrected within the time specified, or if it is not able to be repaired, it must be replaced or permanently taken out of service. Current scale licenses can be transferred to replacement devices.

TECHNICAL ASSISTANCE

OREGON DEPARTMENT OF AGRICULTURE

Measurement Standards Division

635 Capitol St NE

Salem, OR 97301-2532

Phone _____ 503-986-4670

Fax _____ 503-986-4784

Web _____ oregon.gov/ODA/MSD

FARM TO SCHOOL

WHAT IS FARM TO SCHOOL IN OREGON?

While farm to school programs are unique to the place and people who run them, they consist of a spectrum of activities that both serve up and celebrate our agricultural bounty. These programs connect local farmers and food processors with school cafeterias in preschools, grades K-12, and colleges. They include serving more Oregon agricultural products on the lunch line, and activities that directly connect youth to food production such as school gardens, field trips to ranches, and farmers in the classroom. Increasingly, similar procurement and promotion is occurring in other institutions such as health care facilities.

In Oregon, there are approximately 90 school districts out of 187 that indicate that they are purchasing Oregon agricultural products in addition to milk. These 90 districts serve over 65 percent of the school-aged children.

How do you find a school interested in buying locally produced foods?

FoodHub boasts a list of over 230 pre-schools, K-12 schools, colleges, and health care facilities interested in purchasing locally. Logon for free at www.food-hub.org and start meeting schools interested in purchasing locally.

What locally produced foods are schools buying?

Everything! Many farm to school efforts start off with schools purchasing fresh fruits and vegetables directly from neighboring farmers. Schools want fresh and minimally processed fruits and vegetables, as well as multi-ingredient menu items. Increasingly, schools are interested in locally produced grains, beef, and seafood.

How do schools define “local” for the purposes of buying local?

It is at the discretion of each school to define local. In Oregon, some schools define local as within 20 miles, others within in the county, and some larger districts use “the Pacific Northwest” to include Oregon, and parts of Washington and Northern California.

TECHNICAL ASSISTANCE

To learn more about Farm to School and to access answers to frequently asked questions, visit the USDA Farm to School website contact Michelle Markesteyn Ratcliffe at the Oregon Department of Agriculture.

USDA FARM TO SCHOOL INITIATIVE

Web <http://www.fns.usda.gov/cnd/f2s>

OREGON DEPARTMENT OF AGRICULTURE

Farm to School Program

Michelle Markesteyn Ratcliffe

Phone 503-872-6600

Email mmarkesteyn@oda.state.or.us

FEDERAL MOTOR CARRIER SAFETY REGULATIONS (FMCSR)

WHO MUST COMPLY?

The federal motor carrier safety regulations apply to farm operations if a commercial motor vehicle is used to transport property or passengers in interstate commerce. FMCSR also apply to anyone transporting migrant farm workers in interstate commerce.

DEFINITIONS

A commercial motor vehicle means

- a truck and/or trailer combination with a gross weight, GVWR or GCWR of 10,001 pounds or more.
- a vehicle of any size that is used to transport a hazardous material requiring placarding.
- a bus designed to transport more than 15 persons, including the driver.

Interstate commerce means

- to operate across state lines, including international boundaries.
- to operate wholly within a state as part of a through-movement that originates or terminates in another state or country.

The first requirement is to obtain a USDOT number, one per legal entity, and mark that on the vehicle(s) used in interstate commerce. You may obtain a USDOT number for free on the Internet at <http://www.fmcsa.dot.gov/registration-licensing>.

The FMCSR has several parts, each covering a separate subject, including qualification of drivers, working and driving limitations for drivers, parts and accessories

necessary for safe operation of vehicles, inspection of vehicles, repair and maintenance requirements for vehicles, specific rules for transporting migrant farm workers (additional equipment and inspections are required for vehicles used to transport migrant farm workers).

Note: Also see the sections on “Migrant and Seasonal Agricultural Worker Protection Act,” “Federal hazardous materials regulations,” and “Pesticide use, distribution, transportation, and storage” regarding the transport of hazardous materials.

Additionally, under some circumstances a commercial drivers license (CDL) and drug and alcohol testing may be required. Anyone who operates a CMV over 10,000 pounds in interstate commerce must have a valid medical card in his/her possession that meets USDOT requirements.

TECHNICAL ASSISTANCE

US Department of Transportation

Federal Motor Carrier Safety Administration

530 Center St NE, Suite 440

Salem, OR 97301

Phone _____ 503-399-5775

Fax _____ 503-316-2580

Web _____ www.fmcsa.dot.gov

USDOT number registration

Web _____ www.fmcsa.dot.gov/registration-licensing

Safety status by USDOT number

Web _____ www.safer.fmcsa.dot.gov

Education and technical assistance

Web _____ www.fmcsa.dot.gov/safety-security/eta

Compliance safety and accountability

Web _____ <http://csa.fmcsa.dot.gov>

FIELD BURNING

WHO MUST COMPLY?

In the Willamette Valley of Western Oregon, permission to field/stack/propane grass seed and cereal grain crop residue must be obtained from the Oregon Department of Agriculture (ODA).

The 2009 Oregon Legislative Assembly passed Senate Bill 528, changing how field burning is conducted in the Willamette Valley.

These changes include:

- The reduction of acres that can be burned from 65,000 acres annually to 15,000 acres annually. Of these 15,000 acres, only identified species (specific varieties of grass seed residue) can be burned.
- Stack burning and propane flaming will be allowed through 2012 only.
- Fees to register acreage for burning increased from \$2.00 per acre to \$4.00 per acre.
- Fees to burn registered fields increased from \$8.00 per acre to \$16.00 per acre.
- Burning can no longer be conducted in Benton, Lane, and certain portions of Linn counties.

Current law regulating field burning can be found in ORS 468.550 and administrative rules 603-077-0101 through 603-077-0195.

Each year in March, growers are required to pre-register all acreage to be burned with the ODA Smoke Management

Program. Once field burning commences (generally in mid-July) growers must obtain a permit in order to burn their fields. If a grower is new to the program, he or she can receive more information by calling the Smoke Management Program at 503-986-4701.

During the summer field burning season, ODA closely monitors Willamette Valley weather conditions. ODA issues field burning permits when it is anticipated that weather conditions are conducive for smoke dispersal to accommodate a maximum amount of burning with minimal impact to the public.

COMPLIANCE

Grass seed growers must

- register each field and pay appropriate fees.
- obtain field burn permits prior to any burning.
- notify their local fire district of intent to burn.
- monitor the smoke management radio network for authorization or prohibition of burning.
- burn only specific fields at specific times as directed by ODA.
- prepare fields as required prior to burning.
- have proper fire fighting equipment on site prior to burning.
- execute burning in a timely fashion.

- provide advance warning signage and flaggers on roadways near field burns as appropriate.
- extinguish fires when directed by ODA.

RECORD KEEPING

ODA keeps records of registration, mapping of registered acreage, issuance of burn permits, weekly burn reports, receipt and processing fees, meteorological conditions and authorizations or prohibitions.

SAFETY AND TRAINING

Each grower must prepare firebreaks prior to burning and have the required fire-fighting equipment on site prior to burning. Growers should be familiar with smoke management and state fire marshal rules and regulations.

INSPECTIONS

ODA employs field inspectors to ensure program compliance through on-site visits, document review, and complaint investigation. Violations may involve verbal or written warnings or civil penalties up to \$100,000 depending upon the severity of the violation.

FEE SCHEDULE

Registration for open field burning

\$4.00 per acre

\$2.00 per acres for propane flaming

No registration fee for stack burning

Burn fees

- \$16.00 per acre for open field burning
- \$4.00 per acre for propane flaming
- \$10.00 per acre for stack burning

TECHNICAL ASSISTANCE

Questions regarding field burning, propane flaming, stack burning, rule interpretation, fire safety buffer zones, and problem resolution can be directed to the Smoke Management Program, Oregon Department of Agriculture.

OREGON DEPARTMENT OF AGRICULTURE

Smoke Management Program

635 Capitol St NE

Salem, OR 97301-2532

Phone _____ 503-986-4701

OREGON SEED COUNCIL

494 State St, Suite 220

Salem, OR 97301

Phone _____ 503-585-1157

OFFICE OF THE STATE FIRE MARSHAL

4760 Portland Road NE

Salem, OR 97305-1540

Phone _____ 503-378-3473

OREGON STATE UNIVERSITY

Crop and Soil Science Department

Crop Science Building, Room 107

Corvallis, OR 97331-3002

Phone _____ 541-737-2821

GRANTS AND FINANCIAL RESOURCES FOR PRODUCERS AND AGRIBUSINESS

Grants are highly competitive and require a well-planned and researched concept. Grants for purchasing land or paying general farm operating expenses are very rare. Most grants or financial programs provide incentives for specific types of production activities, such as field tests for new technologies or conservation related practices. Grants or tax credits may fund development of new products and markets, or employment of new technologies (energy conservation or renewable energy generation tax credits, for example). Many grants require matching funds.

Grants are cyclical; they come and go in funding cycles. The Oregon Department of Agriculture grant webpage lists resources on agriculture-related grants, loan information and business plan assistance.

Pay attention to the funding cycle of a grant. Grant notices may stay on the website even though the application period may be expired. This will allow you to learn of the grant, see the requirements and specific criteria, and prepare for the next round of competition if it is something that fits your situation. Please note that ODA does not administer most of these grants.

TECHNICAL ASSISTANCE

Information on grants and tax credits

Web _____ oregon.gov/ODA/grants.shtml

Business assistance

ODA Agricultural Development and Marketing Division

Phone _____ 503-872-6600

LEGAL SERVICES

A listing of Oregon attorneys who specialize in agricultural issues can be obtained from the Oregon State Bar, Agricultural Law Section, or from one of the websites listed below. The Oregon State Bar also has a Referral and Information Services Program. Referral and Information Services (RIS) comprise several public and member services that link people seeking legal assistance with lawyers and programs able to assist them. Legal Referral Service (LRS) clerks refer calls from members of the public to participating attorneys based on location, area of law, and special services offered. Approximately 1,500 attorneys in private practice participate in the LRS program.

The Oregon Farm Bureau offers a Farm Employer Education and Legal Defense Service (FEELDS). FEELDS assists members with farm labor law compliance and then provides legal representation should a legal proceeding be initiated against the member. For details on this member-service program call 503-399-1701, ext. 316, or visit <http://oregonfb.org/programs/feellds.shtml>.

TECHNICAL ASSISTANCE

OREGON STATE BAR

Referral and Information Services

Phone _____ 503-684-3763 or 800-452-7636

Web _____ lawyers.findlaw.com or osbar.org

NEW AND SMALL FARMS

Farms come in many sizes, shapes, and forms. The Oregon Department of Agriculture is a partner with the industry to expand and enhance the economic, environmental, and social success of each Oregon farm and ranch.

FREQUENTLY ASKED QUESTIONS

Key questions and answers to considering the options of starting a small farm. Many resources are summed up in this necessary first read (pdf document):
<http://oregon.gov/ODA/docs/pdf/SoYouWanttoBeaFarmer.pdf>

RESOURCES

Food Hub

Food-hub.org is an online marketplace that can help buyers and sellers, of all sizes, identify one another. Food Hub can be very valuable to small farmers lacking the resources make themselves known to a wide-variety of potential buyers.

OSU Small Farm Program resources and workshops

<http://smallfarms.oregonstate.edu/growing-farms-workshop-series>

<http://extension.oregonstate.edu/sorec/farms>

USDA Transition Incentives Program

The USDA Transition Incentives Program (TIP) provides up to two additional Conservation Reserve Program (CRP) annual rental payments to a retired or retiring owner or operator of land under an expiring CRP contract. The land

must be sold or leased to a non-family member beginning or socially disadvantaged farmer or rancher for the purpose of returning some or all of the land to production using sustainable grazing or crop production methods.

http://www.fsa.usda.gov/Internet/FSA_File/tipfactsheet.pdf

Oregon farmers' markets

<http://oregonfarmersmarkets.org>

Small plot intensive farming

<http://www.spinfarming.com>

GRANTS

Most grants available to growers are through the US Department of Agriculture. Some of those most fitting for new entrants or smaller growers include:

Western Region Sustainable Ag Research and Education Project Grants (SARE)

With a Farmer/Rancher Grant, one or more agricultural producer develops a proposal to conduct research or on-farm demonstrations and educational outreach in an area of sustainable agriculture with assistance from an agricultural or natural resource professional, who serves as a technical advisor. The goal is to achieve results that can be communicated to producers and professionals—information that can improve income, the environment, communities and quality of life for all citizens. Farmer/Rancher grant applications are due in December. Check the link for updates. <http://wsare.usu.edu/grants>

Value-added Producer Grant (VAPG)

This grant is intended to help independent agricultural producers enter into value-added activities. The grant can be used to fund one of the following two activities:

- Planning activities needed to establish a viable value-added marketing opportunity for an agricultural product (e.g. conduct a feasibility study, develop a business plan, develop a marketing plan, legal work).
- Working capital to operate a value-added business venture that will allow producers to better compete in domestic and international markets.

Renewable energy projects are also eligible for this funding (planning or working capital projects).

This grant is very competitive. For more information, please contact:

Martin Zone
 USDA Rural Development
 1201 NE Lloyd Blvd, Suite 801
 Portland OR 97204-3222
 Phone _____ 503-414-3361
 E-mail _____ martin.zone@or.usda.gov
 Web _____ <http://www.rurdev.usda.gov/or/vapg.htm>

LOAN PROGRAMS**Farm Credit Services Young and Beginning Farmer Program**

<http://www.farm-credit.com/Default.aspx?pageid=355>

Whole Foods Local Producer Loan Program

<http://www.wholefoodsmarket.com/values/local-producer-details.php>

USDA Farm Service Agency farm loans

http://www.fsa.usda.gov/Internet/FSA_File/loans11.pdf

Other agricultural lenders

http://oregon.gov/ODA/pub_credit.shtml

TECHNICAL ASSISTANCE

OREGON DEPARTMENT OF AGRICULTURE

Web _____ http://oregon.gov/ODA/new_small_farms.shtml

Marketing assistance

ODA Agricultural Development & Marketing Division

Phone _____ 503-872-6600

E-mail _____ agmarket@oda.state.or.us

Food safety assistance

ODA Food Safety Division

Phone _____ 503-986-4724

E-mail _____ jpostlew@oda.state.or.us

OREGON CENTURY FARM & RANCH PROGRAM

BACKGROUND

The Century Farm & Ranch Program started in 1958, on the eve of the Statehood Centennial Celebration, to honor farm and ranch families who have century-long connections to the land and to recognize Oregon's rich agricultural heritage.

The program is a project of the Oregon Agricultural Education Foundation and partially funded through a partnership with the Oregon Farm Bureau, the Oregon Department of Parks and Recreation, OSU Libraries' University Archives and the Oregon Historical Society, with additional support from the Oregon Department of Agriculture, various county farm bureaus, agricultural associations, agri-businesses, the Oregon Travel Information Council, and individuals. Successful applicants receive a special certificate, acknowledged by the governor and signed by the director of the Oregon Department of Agriculture. A colorful roadside sign, identifying the family century farm or century ranch is also available. In 2007, the program introduced a

sesquicentennial award to honor families who have sustained their family farms or ranches for 150 years or more. The first sesquicentennial awards were given to 14 families on Oregon's Statehood Day, February 14, 2008. For further information or to request an application for the sesquicentennial award, please contact the Century Farm & Ranch program at 503-400-7884.

QUALIFICATIONS FOR CENTURY FARM OR RANCH

1. Only the legal owner(s) of the property may apply for the Century Farm or Century Ranch honor.
2. Your farm or ranch must have been operated continuously in the same family for 100 years or more. A farm or ranch settled any time 100 years ago or earlier will be eligible if it meets other requirements.
3. The farm or ranch must have a gross income from farming or ranching activities of not less than \$1,000 per year for three out of the five years immediately preceding the application.

4. You must live on the farm or ranch, or if you live off the property, you must actively manage and direct the farming or ranching activity on the land. If the entire farm or ranch has ever been rented or leased, it may not qualify.
5. The line of ownership from the original settler or buyer may be through children, siblings, or nephews and nieces. Adopted children will be recognized equally with other descendants.
6. Applications must be submitted on official forms provided by the Century Farm & Ranch Program with all questions completed. Applicants may submit additional descriptive information on other family history details not specifically requested in the application (two or three pages of narrative). Copies of historical photographs are encouraged. All information, including photos, will be retained by the program for future reference or research.
7. Applications must include verification of continuous ownership for 100 years. Acceptable forms of proof include a document (either original or photocopy) showing date of earliest ownership. This may be provided through a donation land claim, deed of sale, or homestead certificate. Other records, subject to review, include family Bible, diary entry, or correspondence.
8. Applications must be signed and certified by a notary public.
9. Deadline for returning applications is June 1 of the current year. All applications postmarked by midnight of that date will be considered.

FEES FOR CENTURY FARM OR RANCH

A \$65 non-refundable fee is required with each application. This fee covers administrative costs and includes one certificate. Additional certificates may be ordered at the time of application @\$20 each. Make checks payable to Oregon Agricultural Education Foundation or OAEF.

TECHNICAL ASSISTANCE

CENTURY FARM & RANCH PROGRAM

Sharon Leighty, program coordinator

3415 Commercial St SE

Salem, OR 97302

Phone _____ 503-400-7884

E-mail _____ cfr@oregonfb.org

Web _____ www.oregonfb.org/programs/century-farm-ranch

OREGON AGRICULTURAL EDUCATION FOUNDATION

Janice Reed, Director

Phone _____ 503-399-1701

E-mail _____ janice@oregonfb.org

OREGON FARM DIRECT NUTRITION PROGRAM

The Oregon Farm Direct Nutrition Program (FDNP) is a state-administered federal nutrition program that offers WIC (Women Infants & Children) program clients and eligible low-income seniors the ability to purchase fresh fruits, vegetables and culinary herbs directly from participating Oregon farmers at farm stands and farmers' markets. These funds are available as vouchers.

TECHNICAL ASSISTANCE

OREGON DEPARTMENT OF AGRICULTURE

Agricultural Development & Marketing Division

1207 NW Naito Parkway, Suite 104

Portland, OR 97209-2832

Phone _____ 503-872-6600

Fax _____ 503-872-6601

E-mail _____ agmarket@oda.state.or.us

Web _____ oregon.gov/ODA/ADMD/farm_direct.shtml

OREGON'S RENEWABLE FUEL STANDARDS

In 2007, Oregon's Legislative Assembly passed House Bill (HB) 2210, which included a renewable fuel standard (RFS) requiring that ethanol and biodiesel be blended in Oregon's motor fuels. HB 2210 also required the Oregon Department of Agriculture (ODA) to study, monitor and implement the RFS. Oregon's RFS enables Oregon growers, processors, and fuel distributors to help power our economy with US-based renewable fuels, increase crop

production opportunities, and add jobs and income to Oregon's economy.

Currently, Oregon's ethanol standard requires gasoline sold in Oregon to be a 10 percent ethanol blend (E10). Oregon's biodiesel standard requires diesel sold in Oregon to be a minimum 5 percent biodiesel blend (B5).

Many fuel users will not notice a change in vehicle or equipment performance from using 10 percent ethanol

blended gasoline or a 5 percent biodiesel blend. Biofuel producers, fuel distributors, retailers and consumers can help avoid problems by using good management when storing and using fuel. Good storage practices include periodic cleaning of farm fuel tanks, removal of accumulated water, and using a fuel filter on the tank fuel dispenser. When using blended fuel, check the equipment owner's manual and follow any recommendations. Keep equipment properly maintained and winterized.

GASOLINE—ETHANOL BLENDS REQUIRED

All retail dealers, nonretail dealers, or wholesale dealers may only sell or offer for sale gasoline that contains 10 percent ethanol by volume, unless it meets exceptions in OAR 603-027-0420(3)(c).

ETHANOL DISPENSER LABELING

Legislation requires gasoline dispensers to be labeled if the fuel product contains ethanol. This label must be located on the upper 50 percent of the dispenser's front panels, in a position that is clear and conspicuous from the driver's position, in type at least 1/2 inch in height and 1/16 inch in width.

Due to the required use of 10 percent by volume ethanol, the label is required to state the specific amount in the gasoline blend, for example, "THIS PRODUCT CONTAINS 10% ETHANOL" or similar language. Prohibited terms and phrases include but are not limited to, "Contains up to 10% ethanol," "May contain ethanol," or any other similar language.

If a non-ethanol blended gasoline of less than 91 octane is used in compliance with the exceptions, the dispenser shall be labeled, "NON-ETHANOL BLENDED GASOLINE FOR EXEMPTED USE ONLY (ORS 646.913)," in capital letters and type at least 1/2 inch in height and 1/16 inch width of type on each face and upper 50 percent of the dispensers front panels in a position that is clear and conspicuous to the consumer.

Non-ethanol blended gasoline of 91 octane or higher does not require any special labeling.

EXCEPTIONS TO ETHANOL REQUIREMENTS FOR PREMIUM GASOLINE

The 2009 Legislature passed House Bill (HB) 3497 exempting premium gasoline of 91 octane or higher from the ethanol blend requirement. This became effective January 1, 2010.

Businesses are not required to offer a non-ethanol blended premium fuel, but they have the ability to make a business decision to provide it based upon customer demand.

Note to retailers:

- No additional dispenser labeling is required for non-ethanol gasoline.
- Delivery documentation must state that it is non-ethanol blended gasoline.
- Storage tanks must identify that it is non-ethanol blended gasoline.
- Important: If a *blending* dispenser is used, the mid-grade portion must be disabled and labeling removed. This is because a 10 percent ethanol regular blended with a 0 percent ethanol premium will yield approximately a 6 percent ethanol mid-grade which would not be legal. The mid-grade must still contain 10 percent ethanol.

EXCEPTIONS TO ETHANOL MANDATE FOR ALL GRADES OF GASOLINE

To address citizens' concerns about the mandate to blend all gasoline with 10 percent by volume ethanol, the 2008 Oregon Legislature passed Senate Bill (SB) 1079, which allows non-ethanol blended gasoline of any grade for the following applications only:

- aircraft
- antique vehicles
- all-terrain vehicles
- racing activity vehicles
- snowmobiles
- tools including but not limited to lawn mowers, leaf blowers, and chain saws
- watercraft.

The Oregon State Marine Board maintains a list of locations offering non-ethanol blended gasoline at <http://oregon.gov/OSMB/news/E10.shtml>

POSTING OF ETHANOL EXCEPTIONS

Pursuant to OAR 603-027-0430(1)(c), businesses that offer non-ethanol blended gasoline of less than 91 percent octane for sale shall post the exceptions in a position that is clear and conspicuous to the consumer. They must be in capital letters and type at least 1/4 inch in height and 1/32 inch in width.

ETHANOL DELIVERY DOCUMENTATION

- Gasoline blended with ethanol—Delivery documentation shall state that the gasoline is blended with ethanol and the volume percent of ethanol.
- Non-ethanol blended gasoline—Delivery documentation shall state that the gasoline is non-ethanol blended.

BIODIESEL REQUIREMENT

In February of 2011, the Oregon Department of Agriculture (ODA) determined that Oregon's in-state biodiesel production capacity had reached at least 15 million gallons on an annualized basis. In compliance with Oregon's RFS, (ORS 646.921 and ORS 646.922), effective April 1, 2011, all diesel fuel sold or offered for sale in Oregon had to contain a minimum of 5 percent by volume biodiesel, creating a B5 biodiesel blend.

EXCEPTIONS TO BIODIESEL MANDATE

Diesel fuel sold or offered for sale for use by railroad locomotives, marine engines, and home heating is exempt from the requirement to be blended with biodiesel.

WINTERIZING DIESEL

In the state of Oregon, the required minimum B5 biodiesel fuel may have substances added to enhance its cold weather operation from October 1, of one year, through February 28, of the following year. It is important to emphasize that the fuel must begin as at least a B5 blend and then the winterizing products may be added. For reference,

this allowance is found in Oregon Revised Statute (ORS) 646.922(3) and Oregon Administrative Rule (OAR) 603-027-0420(11)(e)(B).

BIODIESEL DISPENSER LABELING

If the fuel is a 5 percent or less biodiesel blend, then no additional dispenser ("pump") labeling is required. For information on labeling biodiesel blends please see our biodiesel and E85 fuel requirements webpage http://www.oregon.gov/ODA/MSD/biofuel_dispensers.shtml.

BIODIESEL DELIVERY DOCUMENTATION

Delivery documentation of biodiesel blends is required to identify the specific volume percent of biodiesel blended with the petroleum diesel. An example of a sufficient statement for a 5 percent biodiesel blend is, "B5 Biodiesel Blend." in addition to all of the other required information on the documentation. This is to certify the volume percent of biodiesel that is blended into the diesel fuel. During inspections the department will check delivery documentation for biodiesel blend requirements.

TECHNICAL ASSISTANCE

More information on Oregon's renewable fuel standards and a complete list of exemptions is available at http://oregon.gov/ODA/MSD/renewable_fuel_standard.shtml.

The City of Portland has also established its own renewable fuel standards for ethanol and biodiesel. More information about these standards is available at <http://portlandonline.com/BDS/INDEX.CFM?c=43886>

RIGHT-TO-FARM

OVERVIEW

Legislation in 1993, updated in 1995 and 2001, declares farm and forest practices as critical to the welfare of the Oregon economy, and establishes a right-to-farm law. This law protects growers from court decisions based on customary noises, smells, dust, or other nuisances associated with farming. It also limits local governments, and special districts from administratively declaring certain farm and forest products to be nuisances or trespasses (ORS 30.930).

PROTECTED LAND

No farming or forest practice on lands zoned for farm or forest use shall give rise to any private right of action,

suit, or claim for relief based upon nuisance or trespass. Pre-existing nonconforming (farm or forest) uses are also afforded this protection provided that the farming or forest use existed before the conflicting non-farm or non-forest use of the real property that gave rise to the claim, and provided that the pre-existing nonconforming farming or forest practice has not significantly increased in size or intensity from November 4, 1993.

Right-to-farm protection is not afforded if claims are based on

- damage to commercial agricultural products.
- death or serious injury.

PROTECTED PRACTICES

Protected practices include farming or forest practices that

- are or may be used on a farm or forestland of similar nature.
- are generally accepted, reasonable, and prudent methods for the operation to obtain profit in money (commercial).
- comply with applicable law.
- are performed in a reasonable manner.

The lawful and proper use of pesticides is considered a protected farming or forest practice.

The law also provides protection for the movement of farm vehicles and livestock on public roads.

Local government and special district ordinances and regulations now in effect or subsequently adopted which

are contrary to this law are invalid. In any legal action alleging nuisance or trespass arising from a practice alleged by either side as a farm or forest practice, the prevailing party is awarded attorney fees and costs at the trial and on appeal.

Complainants may want to consider the Oregon Department of Agriculture's Farm Mediation Program before filing any legal action. Call 503-986-4558 or 800-347-7028 for information about the mediation program. Parties are encouraged to talk with legal counsel on the interpretation of the statute.

TECHNICAL ASSISTANCE

OREGON DEPARTMENT OF AGRICULTURE

Land use

Jim Johnson _____ 503-986-4706

Farm Mediation Program

Brent Searle _____ 503-986-4558 or 800-347-7028

STATE OPERATOR LICENSE AND FARM VEHICLE REGISTRATION

WHO MUST COMPLY?

An operator license or driver license is required by anyone operating a motorized vehicle on a public highway. An operator license is not required to temporarily operate a farm tractor or an implement of husbandry.

LICENSE

Farmers who operate vehicles designed to carry 16 or more passengers, including the driver, must have a CDL. A commercial driver license (CDL) or farm endorsement (FE) is required for farmers driving vehicles that exceed 26,000 pounds or vehicles carrying hazardous materials. These requirements also apply to combinations of vehicles that exceed 26,000 pounds (Gross Combination Weight Rating), if the trailer has a Gross Vehicle Weight Rating over 10,000 pounds. An FE permits a person to drive a vehicle exceeding 26,000 pounds or to haul hazardous materials without a CDL, provided the vehicle

- is used to transport agricultural products, farm machinery, or farm supplies to or from a farm.
- is controlled or operated by the farmer.
- is operated in Oregon or Idaho and within 150 miles of the farm.
- is not used in the operation of a common carrier.

A driver of a farm vehicle must obtain a CDL and comply with all the requirements of the federal motor carrier safety

regulations as applicable to operate beyond 150 miles from his or her farming operation.

A safety certification course must be completed by minors between 16 and 18 years of age before operating farm machinery. (See the section on "Employing minors" for more information.)

Contact customer assistance, Oregon Department of Transportation, Driver and Motor Vehicle Services, 503-945-5000, regarding farm endorsements on driver licenses.

VEHICLE REGISTRATION

Farmers may choose to register vehicles over 10,000 pounds with truck registration, with farm registration, or register on a proportional basis, if the farm registered vehicle is going to be operated in more than one state. Farm registered vehicles are exempt from Oregon weight-mile tax when the vehicle is used for farm or personal purposes. Hauling for hire, with few exceptions, requires a 1A permit. For-hire operations over 26,000 pounds require payment of weight-mile tax. For more information regarding farm vehicle registration, contact the ODOT farm registration desk at 503-378-5203, or visit <http://oregon.gov/ODOT/MCT/FARM.shtml>.

INSPECTIONS

Farm vehicles up to 80,000 pounds are exempt from ODOT, MCTD safety requirements as long as they are not operating for hire or operating interstate. Farm trucks over 20,000 pounds are required to stop at weigh stations.

HAULING HAZARDOUS MATERIALS

Many farms use and transport hazardous materials. The federal hazardous materials table specifies which materials, and quantities of materials, are deemed hazardous.

Contact the US Department of Transportation, Federal Motor Carrier Safety Administration, 503-399-5775, for a listing of hazardous materials. Vehicles hauling hazardous materials, and operated by a farmer within 150 air miles of his or her farm, must be properly placarded with warning signs on the container labels and the vehicle. No endorsement is required. Vehicle operators hauling hazardous materials more than 150 air miles from the

farm of origin are required to have a CDL and proper endorsement.

The person who loads the vehicle must place the placards on the front, rear, and both sides of the vehicle. Hazardous materials drivers also must know which products they can load together and which products must be loaded separately.

TECHNICAL ASSISTANCE

OREGON DEPARTMENT OF TRANSPORTATION

Motor Carrier Transportation Division

550 Capitol St. NE

Salem OR 97301-2530

Phone _____ 503-378-5849

Web _____ oregon.gov/ODOT

Farm endorsements on driver licenses

Driver and Motor Vehicle Services

Phone _____ 503-945-5000

MANUFACTURING, MARKETING, AND CERTIFICATION

DAIRY PRODUCTION

WHO MUST COMPLY?

ORS Chapter 621 and OAR 603-24-605 to 603-24-651 require fluid milk production in Oregon to be grade A with one exception. The Oregon Department of Agriculture licenses and inspects all dairy farms and plants that do not qualify for the small-scale, on-farm exception (ORS 621.012) in order to ensure food safety and consumer protection.

PERMITS AND LICENSES

Prior to becoming licensed, all prospective licensees—dairy farms (those farms that are not subject to the small-scale, on-farm exception) and dairy plants—must submit a construction plan for the facility to: Oregon Department of Agriculture, Food Safety Division, 635 Capitol St NE, Salem OR 97301-2532. Every dairy facility must be approved before an ODA license can be issued. Additionally, a pre-operation inspection is required before production can begin.

INSPECTIONS

ODA inspectors, who are licensed Environmental Health Specialists, inspect dairy production and distribution facilities a minimum of two times per year. The inspections are typically unannounced, and consist of a visual inspection of facilities and may include sampling of the milk or water. Repeat violations discovered during an inspection may result in suspension of grade privileges. Adulterated products will be embargoed.

FEES

License fees relating to fluid milk are based on annual gross dollar volume of sales or services as follows:

Gross sales volume	Annual fee (2011-2012)
\$0-\$50,000	\$135
\$50,001-\$500,000	\$189
\$500,001-\$1,000,000	\$325
\$1,000,001-\$5,000,000	\$487
\$5,000,001-\$10,000,000	\$649
\$10,000,000+	\$812

TECHNICAL ASSISTANCE

For technical assistance relating to the dairy program, please contact:

OREGON DEPARTMENT OF AGRICULTURE

Food Safety Division

635 Capitol St NE

Salem, OR 97301-2532

Phone _____ 503-986-4720

Web _____ oregon.gov/ODA/FSD

OREGON STATE UNIVERSITY

Animal Science Department

Phone _____ 541-737-4926 or 541-737-3316

Food Science and Technology Department

Phone _____ 541-737-3463 or 541-737-6520

DIRECT MARKETING, ROADSIDE STANDS, AND FARMERS' MARKETS

Farmers' markets and roadside stands are a popular venue to shop for fresh and local foods from Oregon. As market numbers increase and the number of participants grow, market participants need to stay informed of guidelines and requirements regarding food safety and measurement standards at the market.

WHO MUST COMPLY?

The general rule is that vendors who do not hold a current, valid ODA license for a location other than the farmers' market must obtain a license from ODA to sell at a farmers' market. There are several exceptions to the general rule.

- An entity that administers and manages a group of vendors, "farmers' market management," is not currently required by ODA to be licensed as a "food establishment" under ORS 616.706.
- Farmers who bring their own fresh fruits and vegetables to a farmers' market are not required to be licensed. OAR 6003-025-0030.
- Vendors who hold a current, valid ODA license for a "bricks and mortar" food establishment are not required to obtain an additional license to sell at farmers' markets as long as all food processing and preparation (including sample preparation) is done at the licensed location, not at the market.

HB 2336 (FARM DIRECT BILL)

HB 2336 passed by the 2011 Legislature, exempts from licensing, agricultural producers (farmers) selling what they grow and process directly to retail customers; however, not all foods are eligible for an exemption. For example, the sale of meat, poultry, fish, and dairy in any form are not eligible for an exemption. Furthermore, there is a cap on unlicensed sales of \$20,000. For a complete list of the foods eligible for an exemption under the Farm Direct Bill, please refer to HB 2336, Enrolled. <http://www.leg.state.or.us/11reg/measpdf/hb2300.dir/hb2336.en.pdf>

Farm direct sales may include sales at farmers' markets, community supported agriculture drop sites, buying clubs, church bazaars and other venues. However, HB 2336 does not allow for commingling of agricultural products from more than one producer. Furthermore, HB 2336 does not change licensing requirements for selling through stores, restaurants and institutions.

SCALES

Vendors who operate scales used for commercial purposes (buying, selling or processing commodities by weight, and using those weights to determine charges or payments), in Oregon, must obtain an annual scale license for each device from the ODA's Measurement Standards Division, as provided in ORS 618.121.

PERMITS AND LICENSES

Any vendor needing a license to sell at a farmers' market must obtain his/her license prior to participating in a farmers' market. To obtain a license, a prospective licensee must apply for a license, meet and consult with a food safety inspector, and pay a license fee. Contact the ODA's Food Safety Division by calling: 503-986-4720 to begin the licensee application process.

Any vendor operating a scale for commercial purposes needs to license that scale prior to use. Contact ODA's Measurement Standards Division by calling 503-986-4670 to begin the licensing application process.

INSPECTIONS

Because most vendors at a farmers' market location are either exempt from licensing or have a license for a "bricks and mortar" establishment, farmers' markets are not generally inspected. However, to insure the safety and wholesomeness of the food being offered for sale at the markets, ODA inspectors, who are licensed environmental health specialists, periodically conduct audits at farmers' market locations, checking principally for cleanliness, cross contamination, and temperature abuse.

The Measurement Standards Division examines all licensed weighing and measuring devices in the state, usually within a 12-14 month time period. The examination includes making sure the device is NTEP approved, accurate and being used in the proper manner and application.

TECHNICAL ASSISTANCE

For current information related to farmer's markets, contact:

OREGON DEPARTMENT OF AGRICULTURE

Food Safety Division

635 Capitol St. NE
Salem, OR 97301-2532

Phone _____ 503-986-4720

Fax _____ 503-986-4729

Web _____ <http://oregon.gov/ODA/FSD>

For guidelines related to weighing and measuring, contact:

OREGON DEPARTMENT OF AGRICULTURE

Measurement Standards Division

635 Capitol St. NE

Salem, OR 97301-2532

Phone _____ 503-986-4670

Fax _____ 503-986-4784

Web _____ <http://oregon.gov/ODA/MSD>

For marketing or promotional assistance, contact:

OREGON DEPARTMENT OF AGRICULTURE

Agricultural Development and Marketing Division

1207 NW Naito Parkway, Suite 104

Portland, OR 97209-2832

Phone _____ 503-872-6600

Fax _____ 503-872-6601

Web _____ <http://oregon.gov/ODA/ADMD>

For questions about license requirements for temporary restaurants and food for immediate consumption at the market, contact:

LOCAL COUNTY HEALTH DEPARTMENT

Web _____ <http://oregon.gov/DHS/ph/lhd/lhd.shtml>

FIELD INSPECTIONS FOR EXPORT SEED CERTIFICATION

WHO MUST COMPLY?

Many states and foreign countries require a Phytosanitary Certificate for the importation of seed crops. Often, regulations require a growing season inspection by an official certifying agency in the country of origin, and the results of the inspection must be recorded on the Phytosanitary Certificate. Inspectors at the Oregon Department of Agriculture, Commodity Inspection Division, are qualified to carry out these inspections.

APPLICATION

Growers or companies producing seed for export who require Phytosanitary Certificates for their crops, should contact the Oregon Department of Agriculture, Commodity Inspection Division, 503-986-4620, to request an application for field inspection of seed for export or visit http://oregon.gov/ODA/CID/PLANT_HEALTH/applications.shtml. The application should be submitted as soon as possible after planting (in the case of bean seed in Malheur County, no later than May 20.)

FEES

Inspection charges are currently \$6.50 per acre with a \$50 per field minimum. Contact the Commodity Inspection Division to verify the fee schedule.

REPORTS

Inspection reports are currently issued at the request of the grower or company. Reports can generally be issued within 48 hours of request.

TECHNICAL ASSISTANCE

OREGON DEPARTMENT OF AGRICULTURE

Commodity Inspection Division

Seed Field Inspection Program

Dr. Shawn Meng 503-986-4661

Web _____ oregon.gov/ODA/CID/PLANT_HEALTH/applications.shtml

US DEPARTMENT OF AGRICULTURE

Federal Phytosanitary Certificates

Portland, OR

Phone _____ 503-326-2814

FOOD PROCESSING

DEFINITION

In Oregon, food processing includes: cooking, baking, heating, drying, mixing, grinding, churning, separating, extracting, cutting, freezing, or otherwise manufacturing a food or changing the physical characteristics of a food. Food processing also means the packaging, canning, or otherwise enclosing of such food in a container, but does not mean the sorting, cleaning, or water-rinsing of a food.

WHO MUST COMPLY?

If you are making a food product and offering it to others for consumption, then you must be licensed by the ODA, unless those consuming your product are limited to family members. Licenses are issued for bakeries, food processors, domestic kitchens, and any other place that makes food not intended for immediate consumption.

PERMITS AND LICENSES

Prior to becoming licensed, all prospective licensees (bakeries, food processors, domestic kitchens, and the like) must submit a facility plan for review to: Oregon Department of Agriculture, Food Safety Division, 635 Capitol St. NE, Salem OR 97301-2532. Additionally, a food safety inspector must inspect and approve every food

processing facility before an ODA license can be issued and production can begin.

INSPECTIONS

ODA inspectors working in the Food Safety Division are registered environmental health specialists. Food safety inspectors inspect food establishments as required, based on risk. Generally, inspections are conducted between the hours of 8:00 a.m. and 5:00 p.m. Monday through Friday. The inspections are typically unannounced, and consist of a visual inspection of facilities as well as an investigation into processing and employee practices. Violations discovered during an inspection may result in a range of regulatory actions, depending on the severity of the violation. Possible regulatory actions may include, but are not limited to: a warning letter, embargo, cease and desist order, and license suspension.

TECHNICAL ASSISTANCE

OREGON DEPARTMENT OF AGRICULTURE

Food Safety Division

635 Capitol St. NE

Salem, OR 97301-2532

Phone _____ 503-986-4720

Fax _____ 503-986-4729

Web _____ <http://oregon.gov/ODA/FSD>

GOOD AGRICULTURAL PRACTICES AND GOOD HANDLING PRACTICES (GAP/GHP)

USDA FEDERAL-STATE AUDIT PROGRAM

Oregon Department of Agriculture offers GAP/GHP audits under the USDA, Federal-State Audit Program. These audits, based on the Food and Drug Administration "Guidelines to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables," are part of a nationally recognized cooperative partnership between USDA, the state of Oregon and other federal-state inspection services. These auditing services are performed on a voluntary basis. This service gives the consumers of Oregon's produce confidence that they have not only purchased the best quality produce and tree nuts available, but they were cared for and handled in a manner to reduce the potential of contamination.

Producers and handlers that have completed the GAP/GHP program and pass an onsite audit are listed on the USDA Fresh Products Branch website for their customers and future customers to review. Producers or handlers wanting more information about the program should contact the Oregon Department of Agriculture.

TECHNICAL ASSISTANCE

OREGON DEPARTMENT OF AGRICULTURE

Commodity Inspection Division

635 Capitol St. NE

Salem, OR 97301-2532

Phone _____ 503-986-4620

Web _____ oregon.gov/ODA/CID/ghp_gap.shtml

GRAIN INSPECTION

WHO MUST COMPLY?

The US Grain Standards Act was passed by Congress on August 11, 1916 for the purpose of establishing a third-party, uniform inspection system for use in marketing grain. Although no actions are required of the farmer pertinent to the official inspection or weighing of farmers' grain under the Federal Grain Inspection Service (FGIS) standards, it is against the law to deliberately adulterate grain, e.g., add fumigant or insecticide for the purpose of masking musty or sour or commercially objectionable foreign odor.

Further, it is against the law to deceptively load a truck or trailer with inferior quality grain on the bottom so as to prevent the inferior grain from being included in the probe sample obtained by official inspection personnel. There are other prohibited grain handling practices too numerous to include, but which can be explained by FGIS or Oregon Department of Agriculture officials. Other Environmental Protection Agency (EPA), Food and Drug Administration (FDA), or Occupational Safety and Health Administration (OSHA) laws must be adhered to when pertinent. Offenses are subject to general penal statutes and could result in fines and/or imprisonment.

Some states are officially delegated to perform export inspection and weighing services, but at this time Oregon is not operating in this capacity. FGIS operates in export locations where state delegated agencies are absent. The US Grain Standards Act establishes and maintains official US standards for barley, wheat, corn, canola, flaxseed, oats, rye, sorghum, soybeans, sunflower seed, triticale, and mixed grain.

TECHNICAL ASSISTANCE

For information regarding the Grain Standards Act, regulations, and grading standards, contact FGIS, Portland Field Office, 503-326-7887. Groups of farmers, county elevator operators, and other interested parties may request grain grading seminars to be conducted by FGIS field office personnel at the Albers Mill location.

US DEPARTMENT OF AGRICULTURE, GIPSA

FGIS Portland Field Office

1100 NW Naito Pkwy.

Portland, OR 97209-2818

Phone _____ 503-326-7887

Fax _____ 503-326-7896

ORGANIC FOOD PRODUCTION

BACKGROUND

The US Department of Agriculture (USDA) National Organic Program (NOP) requires that all products labeled "organic" must be certified by a USDA accredited certifying agent. Producers whose organic gross sales are \$5,000 or less, are exempted from organic certification, but must still follow USDA NOP standards. The Oregon Department of Agriculture has been an accredited organic certifying agent since 2009.

ORGANIC COST SHARE REIMBURSEMENT PROGRAM

The Organic Cost Share Reimbursement Program was approved by Congress and funds were made available through the USDA to applicant states. The program provides reimbursement to growers, processors, and handlers who obtain organic certification from USDA

accredited certifiers. The Oregon Department of Agriculture administers these funds for qualified Oregon residents.

Growers, producers and handlers are eligible to receive reimbursement for 75 percent of certification fees, up to a maximum of \$750 per qualifying year.

TECHNICAL ASSISTANCE

Certification, standards, and general information

OREGON DEPARTMENT OF AGRICULTURE

Commodity Inspection Division

Phone _____ 503-986-4620

Web _____ oregon.gov/ODA/CID/organic.shtml

Find out how to have your operation certified organic to the National Organic Program (NOP) standards.

Cost share applications and information

OREGON DEPARTMENT OF AGRICULTURE

Agricultural Development & Marketing Division

1207 NW Naito Parkway, Suite 104

Portland, OR 97209-2832

Phone _____ 503-872-6600

Fax _____ 503-872-6601

E-mail _____ agmarket@oda.state.or.us

Web ___ oregon.gov/ODA/ADMD/organic_costshare.shtml

National Organic Program

US DEPARTMENT OF AGRICULTURE

1400 Independence Ave. SW, Rm. 4008-S, Ag Stop 0268

Washington DC 20250

Phone _____ 202-720-3252

Fax _____ 202-205-7808

Web _____ ams.usda.gov/nop

WEED-FREE FORAGE PROGRAM

There is increasing demand in Oregon, and throughout the West, for certified weed-free hay, straw, and mulch. This voluntary, fee based program provides industry the ability to certify products free from weeds listed on Oregon and North American Weed Management Association lists of noxious weeds. The certification standards are designed to limit or reduce the spread of noxious weeds.

All Region 6 (Pacific Northwest Region) US Forest Service lands require weed-free forage, mulch, and rehabilitation products.

“You must not possess, use, or store any hay, straw, or mulch that has not been certified as free of prohibited noxious vegetative parts and/or seeds at any time of the year. Certification must comply with the state, regional, or

federal Weed-Free Forage Certification Standards.” This is a requirement for hay, straw and mulch on Bureau of Land Management (BLM) property in Oregon, Washington and Idaho.

TECHNICAL ASSISTANCE

Growers wishing to participate in the program should contact the Oregon Department of Agriculture, Commodity Inspection Division.

Certification standards and general information

OREGON DEPARTMENT OF AGRICULTURE

Commodity Inspection Division

Phone _____ 503-986-4620

Web _____ oregon.gov/ODA/PLANT/WEEDS/weedfreeforageprogram.shtml

Growing Farms: Successful Whole Farm Management Planning Book

Think It! Write It!

EM 9043 • October 2011

Primary Authors: Dana Martin and Melissa Fery

Contributors: Nick Andrews, Sam Angima, Melissa Matthewson, Kristin Pool, and Garry Stephenson



Oregon State | Extension
UNIVERSITY | Service

Growing Farms: Successful Whole Farm Management is a product of the Oregon State University Extension Service Small Farms Program (<http://smallfarms.oregonstate.edu>)

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Introduction

Growing Farms: Successful Whole Farm Management is a workshop series that enhances the success of new farmers by helping participants think through biological, physical, financial, and family aspects of farm business. The workshops include classroom and field sessions, and topics follow a natural sequence, from planning through production to long-term management. As participants progress through the *Growing Farms* series, their ideas about farming and ranching as a lifestyle and business become more focused.

Growing Farms workshops cover six major topics:

- Dream It: Strategic Planning
- Grow It: Production
- Do It: Farm Operations
- Sell It: Marketing Strategies
- Manage It: Farm Finances
- Keep It: Managing Risk

Growing Farms Planning Book: *Think It! Write It!*

This planning book helps *Growing Farms* workshop participants process information and record ideas. It is a useful tool for exploring thoughts and stimulating conversations during both self-study and group discussion.

Through questions and activities, participants develop a better understanding of farming enterprises and gain the skills necessary to assess their resources and develop a whole-farm plan. Through documentation and reflection, participants become more definitive in their planning and are better able to discern dreams from reality.

This planning book can also be useful for those already established in farm and ranch businesses, particularly if they are considering major changes.

Photo credits:

Tractor: Jerre Kosta Dodson, used with permission.

Chicken, cattle, orchard, vegetables, barn:
Melissa Fery, © Oregon State University.

Sheep, farm (back cover):
Dana Martin, © Oregon State University.

Raspberries, cilantro, jam: Extension and Experiment Station
Communications, © Oregon State University.

Dream It: Strategic Planning

Farm name: (may describe what you do, reflect your personality, provide marketing opportunities, refer to your location, or be memorable)

Owner(s)/operator(s):

Members of farm team: (family members, key employees)

Mailing address:

Location address(es):

County:

Phone number(s):

Fax number:

E-mail address:

Website:

Goals and Mission

Values

A farm name, mission statement, and vision often include values. Values are core beliefs and philosophies that reflect your view on life. They often influence your goals and business decisions and help guide management of your farm. Values typically do not change with time and are reflected in everything you do.

List some of your values.

Mission Statement

A mission statement is a set of guiding principles based on your vision and values. It describes the overall purpose of your business and may include what you do, how and why do you do it, and who you want to serve. Heartfelt mission statements are often used as marketing tools. Periodically review your mission statement, and update it if necessary to keep your business dynamic.

Write your mission statement or some key points that you will include in your mission statement.

Your Ideal Farm

When you think about your current or future farm, what do you picture? Write a brief description of your ideal farm.



Part of the planning process is learning new information. Look for this symbol throughout the planning book. It reminds you to think about how what you are learning may affect your concept of your ideal farm.

Here's some room to record future revisions.

Vision

A vision statement describes the big picture of your business over time. It defines an ideal future and impacts on your local community or society in general. Your vision may include what you want your farm to look like in 10 years, what products you'd like produce, or how your farm will grow.

Write your vision statement.

Goals

Goals are short-, medium-, and long-term plans that align with your farm vision. Goals are more readily achievable if they are **SMART**: **S**pecific, **M**easurable, **A**ttainable, **R**elevant, and **T**imely.

List your short-term goals.

List your medium- and long-term goals.

Quality of Life

Owning and operating a farm offers a unique quality of life, some aspects of which may not be obvious during the early planning stages. As part of your whole-farm planning process, think about the answers to these questions. **Suggestion:** Have your farm partners answer these questions separately, and then discuss your answers.

Do you like to mix your personal life and work life or keep them separate? Why?

How valuable is having leisure time with friends and family?

How much do you like working with others, including employees, family members, and business partners? Would you rather work by yourself?

Do you enjoy marketing and having contact with customers? Why or why not?

What are your favorite tasks on the farm (e.g., handling animals, production, or marketing)?

(Quality of life questions continue on next page.)

Approximately how many hours a week are you willing and able to work? Consider both on-farm and off-farm work.

Are you a risk taker? Are you comfortable with uncertainty, or do you prefer to know what to expect in most situations? Why?

What does the phrase "financial security" mean to you?

What are your family members' goals and interests? How do they align with yours?

What other demands are made on your time? Consider family, health, hobbies, and other time commitments.

Would you prefer to have family members perform all farm labor, or are you interested in hiring outside help?

SWOT Analysis (Strengths, Weaknesses, Opportunities, and Threats)

A SWOT analysis can help you identify obstacles and advantages of your farm or potential farm venture. First, identify each pro and con as a strength, weakness, opportunity, or threat (see examples below). Then classify it as internal or external to your business.

This analysis helps you better understand what you can control, where your risks are, where improvement is necessary, and what direction is best for your business. This exercise is best completed with the entire farm team.

Strengths:

- Knowledge, communication, and prior experiences of your farm team
- Infrastructure
- Water rights
- Certification
- Equipment

Weaknesses:

- Limitations of your land (e.g., climate, soil type, and water access)
- Lacking or dilapidated infrastructure and equipment
- Lacking or negative characteristics of your farm team

Opportunities:

- Demand, market niches, and access to markets
- Grant opportunities
- Education programs and other resources

Threats:

- Rising input costs (out of your control and can threaten profitability)
- Lack of access to labor

Notes:

Example SWOT analysis:

<p style="text-align: center;">Strengths</p> <p>Internal</p> <ul style="list-style-type: none">• <i>Prior business experience</i>• <i>Good communication between partners</i>• <i>Land is organic certified</i>• <i>Water rights available for irrigation water</i>	<p style="text-align: center;">Weaknesses</p> <p>Internal</p> <ul style="list-style-type: none">• <i>Barn is beyond repair and needs to be rebuilt</i>• <i>Land is in a frost pocket</i>• <i>Partners have no mechanical experience</i>
<p style="text-align: center;">Opportunities</p> <p>Internal</p> <ul style="list-style-type: none">• <i>Have personal connections with two local chefs</i> <p>External</p> <ul style="list-style-type: none">• <i>Local demand for organic produce</i>• <i>New local-food-oriented supermarket being built in nearby town</i>	<p style="text-align: center;">Threats</p> <p>External</p> <ul style="list-style-type: none">• <i>Rising fuel costs</i>• <i>Lack of employable labor</i>• <i>Increased number of small farms in vicinity (competition?)</i>

Complete a SWOT analysis of your farm, considering internal and external factors.

<p style="text-align: center;">Strengths</p>	<p style="text-align: center;">Weaknesses</p>
<p style="text-align: center;">Opportunities</p>	<p style="text-align: center;">Threats</p>

Resource Inventory

Land

Legal description of farm:

Township: _____

Range: _____

Section: _____

Land	Acreage	Water rights	Comments
Tillable land			
Pasture			
Woodlot			
Other			

Do you own or rent your land? In some cases, renting land makes sense. What are the pros and cons of owning vs. renting?

Buildings and Machinery

What buildings and equipment exist, and how can they be used? Do they need to be modified or repaired?
What extra equipment and infrastructure are needed to achieve your goals?

Soil

An electronic soil survey is available at <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx> A step-by-step guide on how to use the soil survey is available at <http://smallfarms.oregonstate.edu/soil-surveys>

If you don't have Internet access, visit your local Soil and Water Conservation District or Extension office to look at a hard copy of your county's soil survey. If you don't have farmland yet, consider what types of soils and soil properties you'll need for your ideal farm.

Soil types:

Soil capability classes:

Soil drainage: (Do any fields have artificial, subsurface drainage? Is the land naturally subirrigated?)

Risk of erosion:

Other key characteristics of soils on your property:

Uses and limitations of these soils:

Soil should be analyzed periodically with laboratory soil tests. This allows you to make educated, economical decisions about nutrient management. Contact your local Extension office for a list of analytical soil testing laboratories.

Notes about current soil test results:

Water

If you have questions about your water rights or to learn if your property has water rights, contact your state water resources department. To identify health and food concerns, it is important to have irrigation and drinking water tested for bacteria, nitrate-nitrogen, arsenic, salts, pesticide residues, and other quality issues. List agricultural and domestic water sources available on your farm; the use and delivery system associated with each; and notes about quantity, quality, and limitations.

Source	Use	Delivery system	Quantity, quality, limitations
<i>Example: Surface water rights from Thomas Creek</i>	<i>Irrigation for 6.5 acres</i>	<i>Overhead sprinklers on moveable hand line</i>	<i>Junior water rights Water may be limited in drought years</i>

Are there state or county restrictions on the use of domestic well water for agricultural purposes?

Are there state, county, or local restrictions on the use of gray water or rainwater collection?

Farm Map

A farmstead map, no matter how simple, is helpful in the planning process. You can download an aerial map of your property from the Internet or simply sketch a map, including structures, fences, water bodies, and fields.

Here's some space to sketch.

Grow It: Production

Are you thinking about raising livestock? Do you like to grow plants? What production techniques are you considering? Agriculture provides a variety of opportunities, and the decisions you make should fit your family, lifestyle, and needs.

Livestock

Livestock systems include pork, lamb, goat, beef, dairy, broiler, and egg production. Value-added products include milk, cheese, and many processed meat products.

Livestock can be raised in a multispecies system to enhance production and marketing opportunities. Livestock also may be part of an integrated crop and livestock farm and a good option for land that isn't suited to grow crops. Livestock need care and attention year round. Animals require shelter, adequate nutrition and water, exercise, yearly vaccinations, parasite control, and safe fencing. Proper pasture management is an essential aspect of sustainable livestock production for many small farms.

State and local regulations and other legal parameters can affect what and how livestock can be raised on particular site. Investigate these issues before initiating a livestock enterprise.

Do you enjoy handling animals and doing daily chores?

Can you care for sick and injured animals? Are you capable of giving injections?

Are you willing to feed livestock on a regular schedule when pasture is not available? If you own dairy animals, are you willing to milk twice a day? If you get sick or are unavailable, can someone else fill in?

Are you willing and able to go out in freezing weather and break ice on the water trough or help deliver a newborn calf?

Are you aware of and able to perform routine management practices such as castration, dehorning, tail docking, feet trimming, and wing clipping?

What is the purpose of your livestock enterprise (e.g., meat, fiber, milk, or multipurpose)?

(Livestock questions continue on next page.)

Are you willing to send animals to slaughter?

Do you have a replacement livestock plan?

Do you own, rent, or have access to enough range or pasture for the number of animals you need to raise to be profitable? Is water available?

Do you have adequate shelter, fencing, and handling facilities?

Are you interested in commercial livestock production, breeding stock production, or both?

Where will you obtain foundation breeding stock?

Will you use natural mating or artificial insemination for breeding? What type of breeding program will you implement?

Do you have access to a knowledgeable veterinarian who will provide service to your farm?

How will you manage livestock manure? Manure is a resource, but it can also be a problem if not managed properly.

How will you dispose of dead animals?

Perennials

Perennial cropping systems include nut and fruit trees, caneberries, hops, grapes, and grass. These are often grown as primary cash crops or as part of an integrated farm. Perennial and annual cropping systems have different nutrient and pest management needs and require different cultural practices.

How big of an area and how many plants are necessary?

What is the initial investment?

How long will it take for the crop to produce yields suitable for commercial production? Can you financially sustain this period?

How long will the crop be productive?

Some perennial crops require annual pruning, which is often completed during winter. Are you willing to spend considerable time outside in cold weather, possibly climbing up and down a ladder?

Will you plant cover crops between rows or interplant another crop?

Rodents and birds are often pests in perennial cropping systems. What major pests do you have or expect to have? How will you control them?

Field or orchard sanitation helps control disease. How will you remove diseased plants, fallen leaves, or other sources of infection?

Are disease-resistant varieties available?

Are you willing to spray crops to protect them from pests?

Do you have any condition, such as hay fever, that might inhibit your success?

Annuals

Annual cropping systems include vegetables, grains, and some herbs and flowers. These are often grown as primary cash crops on a small farm or as part of an integrated farm. Challenges of annual cropping systems include pest, weather, and disease problems as well as labor and marketing. Annual crop production becomes especially labor intensive during spring and summer, the prime growing season. Most annual crops are marketed directly through farmers markets, farm stands, retail stores, restaurants, community-supported agriculture (CSA), and pick-your-own operations. Benefits of annual cropping systems include steady annual cash flow and high-value return.

Recognizing that annual cropping systems require a rigorous schedule during the growing season, how will you adjust?

Many annual crops are sold through direct marketing channels. Will you enjoy interacting with customers?

Selling wholesale usually brings a lower price. Can you grow enough to sustain a business at wholesale prices?

Some farmers concentrate on one or two annual crops; others operate diversified cropping systems. What type and how many varieties of crops do you want to grow?

Diversified vegetable production is complex, fast paced, and intense for much of the growing season. Does this fit with your personality, physical capabilities, and lifestyle?

Annual crops can be grown on rented ground. Is this an option that would help you get started or expand production?

Will your soil and water rights support annual crop production?

Production Techniques

Your choice of farming methods will affect establishment and operational costs, income from products grown, and how and where you market your products. These are some common terms used to define agricultural production methods:

- Conventional
- Sustainable
- Organic
- Biodynamic

What are your thoughts about using these production methods on your farm?

Integrated Pest Management

List the major crops on your farm.

Identify key insect, disease, and weed pests of these crops.

Prioritize two or three pests or types of pests whose management you would like to improve.

- 1.
- 2.
- 3.

Describe the basic biology of these pests.

Pest 1:

Pest 2:

Pest 3:

Identify *insect* management strategies you use or plan to use. What educational resources are available to help you improve these strategies?

Identify *disease* management strategies you use or plan to use. What educational resources are available to help you improve these strategies?

Identify *weed* management strategies you use or plan to use. What educational resources are available to help you improve these strategies?

Managing Soil Quality and Soil Fertility

What tillage equipment will you use? What precautions will you take to reduce heavy tillage and preserve soil structure?

What alternative management systems (e.g., strip till, reduced till, or no-till) or equipment could you consider to reduce soil compaction and runoff and improve soil structure?

What soil amendments (e.g., manure, compost, or crop residue) do you have access to?

How will you rotate annual or short-lived perennial cash crops to minimize weed, disease, and insect problems and maximize fertilizer efficiency?

How can you include perennial crops, soil-building cover crops, green manure crops, or fallow years in your rotation?

What fertilizer or nutrient management guides will you use to plan your fertilizer programs?



Consider what you've learned and decided about production. If needed, revise the description of your ideal farm on page 3.

Do It: Farm Operations

Once you decide what you want to do with your farm, determine what is necessary to accomplish those goals. Needs will vary depending on the type of operation.

Equipment

Choosing the right equipment can be confusing and expensive. Before purchasing, list the equipment you will need. Consider hand, power, and motorized tools. List tasks or functions for each piece of equipment and the features necessary for the equipment to perform the task.

Equipment	Task/Function	Features

Are there ways to adapt equipment to better meet your needs?

What are the pros and cons of buying, renting, and borrowing equipment?

Are custom services an option?

Are you mechanically inclined or willing to acquire skills to repair equipment?

What specialized crop or livestock equipment or facilities do you need? For example, livestock require fences and shelter. Tools such as chutes and corrals make it easier to manage large animals.

Energy Conservation

How can you be more energy efficient on your farm? Have you considered alternative energy sources, such as solar, wind, and bioenergy? Think about innovative practices, such as converting a gasoline engine to electric or creating a cooperative delivery system with another farmer in your area to save on fuel costs. What energy-related incentive programs are available to you?

Season Extenders

Row covers, cold frames, and greenhouses can help prevent frost damage and extend the growing season. Early and late-season crops can bring higher prices because there is less competition from other producers. For livestock producers, extending the grazing season by using rotational grazing or stockpiling forage may reduce feed costs. Will you need season extenders? What type of season extenders would you consider? Would it be profitable to invest in these?

Irrigation Efficiency

Applying the right amount of water at the right time keeps plants productive and healthy. Soil conditions and temperature determine when and how much water is needed. Irrigation is essential for some operations and less important for others.

Consider different types of irrigation systems, such as hand watering, flood, sprinklers, and drip. Which is the most efficient use of water for your production system? What are the associated labor demands? What are the maintenance needs? Will you use the same type of irrigation system throughout your farm? Where can you purchase irrigation materials?

Are there laws that govern your use of water for irrigation? Are irrigation energy costs lower at certain times of day? Will you need a generator in case of a power outage? How will a drought year affect your costs? How might the type of irrigation system (overhead sprinklers vs. drip) affect the incidence of plant diseases?

Labor

You will want to personally handle some responsibilities on your farm and delegate some tasks to others. Assess your skills, and decide what is needed for a successful operation. Also, think about areas of the business you want to develop but lack the skills, time, or interest to do. What tasks do you enjoy doing yourself? What chores would you want to assign to someone else? Are there parts of the operation that could be contracted out?

Employees

If your farm requires additional labor, will you need full-time, part-time, or seasonal help? Do you need skilled or specialized labor? What are your local sources of labor? What are the costs? What are the housing needs? What additional benefits can you provide? What are the pros and cons of each labor source?

Internships

Interns are a possible labor source. Internships are educational programs that offer skill development and work experience for the intern and create a role for you as a teacher. Internship programs require considerable time and effort. How could you use an intern? What responsibilities come with internship programs? What is the legality of offering internships?

Technology

Technology is advancing rapidly. What types of technology are important for your farm? What additional skills do you need to use technology effectively? Are you willing to develop skills, or should you hire out such projects? How can you use this knowledge to enhance your farm?

Farm Resources

What local suppliers, vendors, and professionals can best serve you? Ask other farmers or peers in your *Growing Farms* class if they have a preferred source.

Extension agents:

Agricultural consultants:

Seed and fertilizer companies/sources:

Equipment dealers:

General farm and ranch suppliers:

Veterinarian:

Farm organizations:

Other:



Consider what you've learned and decided about farm operations. If needed, revise the description of your ideal farm on page 3.

Sell It: Marketing Strategies

After you grow or raise a product, you need to sell it. To optimize income, small farms need to take advantage of niche markets and high-margin sales. Small farms are generally at a disadvantage when competing against large operations in wholesale markets, which deal in large-volume sales with smaller profit margins.

Direct sales to customers are one way to eliminate wholesale brokers' fees and possibly put more money your own pocket. Before engaging in direct marketing, evaluate what you enjoy, your comfort zone with direct sales, and the time you are willing to commit to this form of marketing. You also need to evaluate how your product fits in the market you plan to enter and analyze expenses and income potential to be sure you can make a profit.

Personal/Lifestyle Considerations

Are you a sociable person? Do you enjoy visiting with people and sharing your story, or would you rather grow and deliver your product without interacting with customers?

How well can you describe and sell your product? What is the story of your farm and your product?

Do you enjoy getting up early to harvest crops and then spending the rest of the day in town selling at a farmers market?

Do you like to work without interruption, or would you enjoy visiting with people who stop by your farm to make purchases?

Product/Market Considerations

Who will purchase your product? What is important to these customers? How can your product appeal to this audience? Consider product alterations (e.g., packaging) and marketing techniques (e.g., labeling).

What is your production capacity? What is a manageable market for this production level? If you establish a community-supported agriculture (CSA) operation, how many subscribers would be manageable to start with? How many farmers markets are feasible for you to attend?

How and when will you consider expansion?

Who is your competition? How can you increase your competitive advantage? What is your niche marketing strategy? How will you differentiate your product from the competition?

Marketing channels have advantages and disadvantages. Choose a couple of channels you are considering from the list of suggestions below, and write some brief notes about each.

Potential marketing channels:

- Wholesale
- Roadside stands
- Farmers markets
- Community-supported agriculture (CSA)
- Restaurants
- Public institutions (e.g., hospitals and group homes)
- Farmers cooperative
- Websites
- Other direct marketing opportunities
 - Value-added processing (e.g., jams, dried food, and culinary herbs)
 - Agritourism (e.g., farm stays, entertainment, and education)

Marketing channel	Advantages	Disadvantages

Pricing

What are standard prices for your product?

Competitor	Price

Are there markets that offer a better price?

Market	Price

Licenses and Special Permits

Are special licenses or permits needed to grow and sell your products? (Examples: Oregon Department of Agriculture egg handlers' license, plant materials permit, food handlers license, etc.)

Some food buyers require Good Agricultural Practices (GAP) certification. Does your marketing channel require GAP certification?

Meat products have special regulations. Are you selling or planning to sell live animals? Do you want to provide packaged products? Do you need to use a USDA-inspected slaughter facility?

Is there an advantage to marketing your products by using "certified organic," "sustainable," "locally grown," "natural," "grass fed," or other terms? Are there certifications that would be valuable for your farm or products? (Example: Animal Welfare Approved certification of humane livestock production practices for livestock producers)

Logo and Branding

Do you have a farm logo, or are you considering having a logo? Here's some space to sketch logo ideas.



Consider what you've learned and decided about marketing strategies. If needed, revise the description of your ideal farm on page 3.

Manage It: Farm Finances

Farming is risky, challenging, and not for the fainthearted. Farmers and ranchers deal with unpredictable situations, such as crop failures, animal losses, and market fluctuations. One year may produce a bountiful harvest, while another may bring total devastation and little or no income. This is all part of the business of agriculture.

Many farm and ranch businesses fail because the owner(s) failed to plan. You are beginning to organize your thoughts by working through this planning book. Learn more about developing a business plan at the U.S. Small Business Administration website: <http://www.sba.gov>

Business plans help you think strategically, manage effectively, and stay on track toward your goals. Another important reason to develop a business plan is to secure financing. Lenders and investors will need to see an organized, well-thought-out plan.

How do you handle risk? Can you and your family deal with the uncertainties and fluctuations of farm finances? What are your family's spending patterns?

Starting a new farm business or enterprise is a capital investment. Brainstorm the capital investments you will need for the business you are considering.

Funding Opportunities

Explore options when deciding how to finance your business. If family and friends want to invest, be sure the terms are clearly defined and all parties understand the conditions of the investment or financing agreement. Clear communication and written documentation may help minimize potential problems.

Many banks and lending institutions specialize in agricultural loans, and their loan officers have the knowledge and experience to help you succeed. Establish good relationships with these people so you can discuss your needs and concerns openly. If you have problems, be honest, and be prepared to consider options.

What are your plans for financing your business?

Financial Statements

Do you know how you stand financially? Two primary financial statements are a balance sheet and an income statement. A balance sheet reflects the financial position of your business at a specific point in time. An income statement, also known as a profit and loss statement, shows all income and expenses over a period of time and indicates whether a business is profitable.

Another important financial tool is a cash flow statement, which shows the flow of cash into and out of your business. Cash flow is usually measured during a specific time.

Enterprise budgets help you estimate the profitability of agricultural enterprises. These budgets list all estimated income and expenses associated with specific crops or livestock. Enterprise budgets are based on a set of assumptions and can be useful for performing break-even analyses as you consider different enterprises for your farm.

Preparing a personal financial statement may help you determine if you are financially able to invest in your business.

Balance Sheet

Assets (List what you own and whether these assets are paid off.)

Cash (checking accounts)	\$ _____
Cash (savings accounts)	\$ _____
Notes/contracts (owed to you)	\$ _____
Certificates of deposit	\$ _____
Life insurance (cash value)	\$ _____
Securities (stocks, bonds)	\$ _____
Real estate (market value)	\$ _____
Vehicles (market value)	\$ _____
Individual retirement plan(s)	\$ _____
Other assets (specify)	\$ _____
Total assets	\$ _____

Liabilities (List the money you owe.)

Current bills	\$ _____
Mortgages on real estate	\$ _____
Loans	\$ _____
Taxes	\$ _____
Other liabilities (specify)	\$ _____
Total liabilities	\$ _____

Net worth (total assets minus total liabilities) \$ _____

Additional Thoughts to Consider

- To minimize your investment, consider starting out on a small scale until you are certain that farming is for you.
- Income from farming can be very seasonal. Don't be tempted to spend all seasonal income without planning for the rest of the year.
- Prepare a budget, and stick to it. Control spending, and try to save for "rainy days," which may hit at unpredictable times.
- Keep current, accurate records. Pay attention to details. Know where your money is generated and spent. Storing receipts in a shoebox and waiting to post figures at the end of the year is not a recommended recordkeeping system.

Who will be in charge of keeping records for your farm? Why?

- Avoid unnecessary debt. Do you really need a new tractor, or can you repair an old one? Making wise decisions and investments as you go will pay off in the long term.
- Set financial goals, and review them often to be sure you are headed in the right direction.
- You need to eat and survive while establishing your business. Have you planned for a reasonable living allowance for you and your family? Do you have another source of income?

Write down your thoughts about these items.

- If you apply for a loan, be timely, plan ahead, and be prepared. Don't wait until the last minute when you are desperate.
- Establish a good credit history. Make proper loan payments, and do not be late.
- When creating a financial plan, be aware it may take years to realize an income from some crops.
- Seek out a mentor in the farm business, and learn all you can. This will result in a more positive experience than learning from your mistakes.

Who is your farm mentor?

Professional Services

Using the services of professionals who are familiar with agriculture can help you succeed in business. Interview these people to be sure they understand your goals and objectives and can help you work toward them.

If you don't currently have professionals working with you, ask other farmers or peers in your *Growing Farms* class to share their contacts.

Accountant:

Banker:

Attorney:

Insurance agent(s):

Real estate agent:

Other:



Consider what you've learned and decided about farm finances. If needed, revise the description of your ideal farm on page 3.

Keep It: Managing Risk

Farming is an inherently risky business. One bad hailstorm or freeze can wipe out a crop. Markets can fluctuate, and current prices may not support the cost of production. Agriculture is labor intensive, and you are the primarily labor force. What if you get sick or injured? What is your backup plan?

Risk management means doing everything you can to proactively deal with risks. Anticipate what might happen, and act to reduce the chances of it happening.

Example: Your primary cash crop has a growing season of May through October. You love to ski with your family, but if you break your leg, it will be hard for you to plant your crop in spring. Knowing that a broken leg might take 8 weeks to heal, one of your risk management strategies is to ski through the end of February and then focus on less-risky hobbies. If you are injured, you will have time to recover before the busy farming season.

Consider your lifestyle, and create appropriate risk management strategies for your business.

Insurance

Insurance is a tool to protect personal and business assets. What type of liabilities do you face as an employer? How about product liability and public liability? Have you explored insurance options to cover accidents and injuries on your farm? What happens if someone gets sick from your product?

Production

You have likely heard the expression “Don’t put all your eggs in one basket.” What does this mean to you? Would crop diversification be a good idea? How about crop insurance? What other strategies might you consider?

Marketing

Would product and market diversification be helpful or an added expense? What type of value-added products would benefit your business? Which markets are most profitable (consider income generated as well as labor and time expended)? Which markets are most consistent?

Financial

Do you have a backup plan for crop failure or animal death? How much debt are you willing to assume to keep farming?

Business Structure/Tax Liability

When starting your business, decide what form of business entity to establish (e.g., sole proprietorship, partnership, corporation, or limited liability company). Talk to a professional about your needs. Different business structures offer different opportunities and challenges. Family, legal, and tax considerations may affect which business structure you select.

Farm Succession

Succession planning allows for the transfer of property, leadership, and governance to succeeding generations. Is it important to you to know the operation will continue? Is it important that the land stay in farming? What will happen as you get older and require more help? Who may want to carry on the farm tradition? What are your plans to provide for this?



Consider what you've learned and decided about managing risk. If needed, revise the description of your ideal farm on page 3.

Whole Farm Planning Summary

Inspirations

Use the space below to record major inspirations, revelations, or aha! moments that took place as you worked through this planning book and the Growing Farms workshops.

Next Steps

Write a quick to-do list and notes about the next steps in your planning process.

Good luck!

Notes

For More Information

Oregon State University Extension Service Small Farms Program: <http://smallfarms.oregonstate.edu/>

About the Authors

Primary Authors

Dana Martin, Extension faculty, Deschutes County

Melissa Fery, Extension faculty, Benton County

Contributors

Nick Andrews, Extension faculty, Clackamas County

Sam Angima, Extension faculty, Lincoln County

Melissa Matthewson, Extension faculty, Jackson County

Kristin Pool, program assistant, Clackamas County

Garry Stephenson, Extension small farms specialist and coordinator of the OSU Extension Service Small Farms Program, Corvallis

All authors are of Oregon State University.

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Dream It. Grow It. Do It. Sell It. Manage It. Keep It.



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What Can I Do with My **Small Farm?**

Often, when people buy a small farm they simply want someone to tell them what they can “do” with it. As strange as it might seem, this isn’t an easy question to answer. When landowners begin to make important decisions related to the use of their property, they might not recognize the complicated web of details involved. Before making decisions, you should consider these major factors that interact with and influence each other (Figure 1, page 2):

- Goals for the farm
- Physical resources of the farm
- Family resources and skills
- Type of farm enterprise and crop produced

For instance, the type of soil on a farm influences what crops can and cannot be grown, which in turn influences the level of gross farm income. Also, the farm owner’s skills for (and enjoyment of) working directly with consumers might influence the farm’s marketing technique (direct marketing versus wholesale).

Small farms are like any small business. They often require long hours, long-term commitment, and stamina. And like many highly successful small businesses, they require a risk-taking, entrepreneurial spirit.

Goals for the farm

The owners of small farms vary in both resources and aspirations. Many people are interested in having a few animals, growing some fruits and vegetables, and providing a high-quality rural lifestyle for their families. Others seek to manage a small farm intensively to produce supplemental or total family income.

The goals you set for your small farm must realistically consider the feelings of family members, your financial situation, the farm or business-related talents family

Selecting an Enterprise for Small Acreages



The major components involved in a farm enterprise decision and how they interact with each other

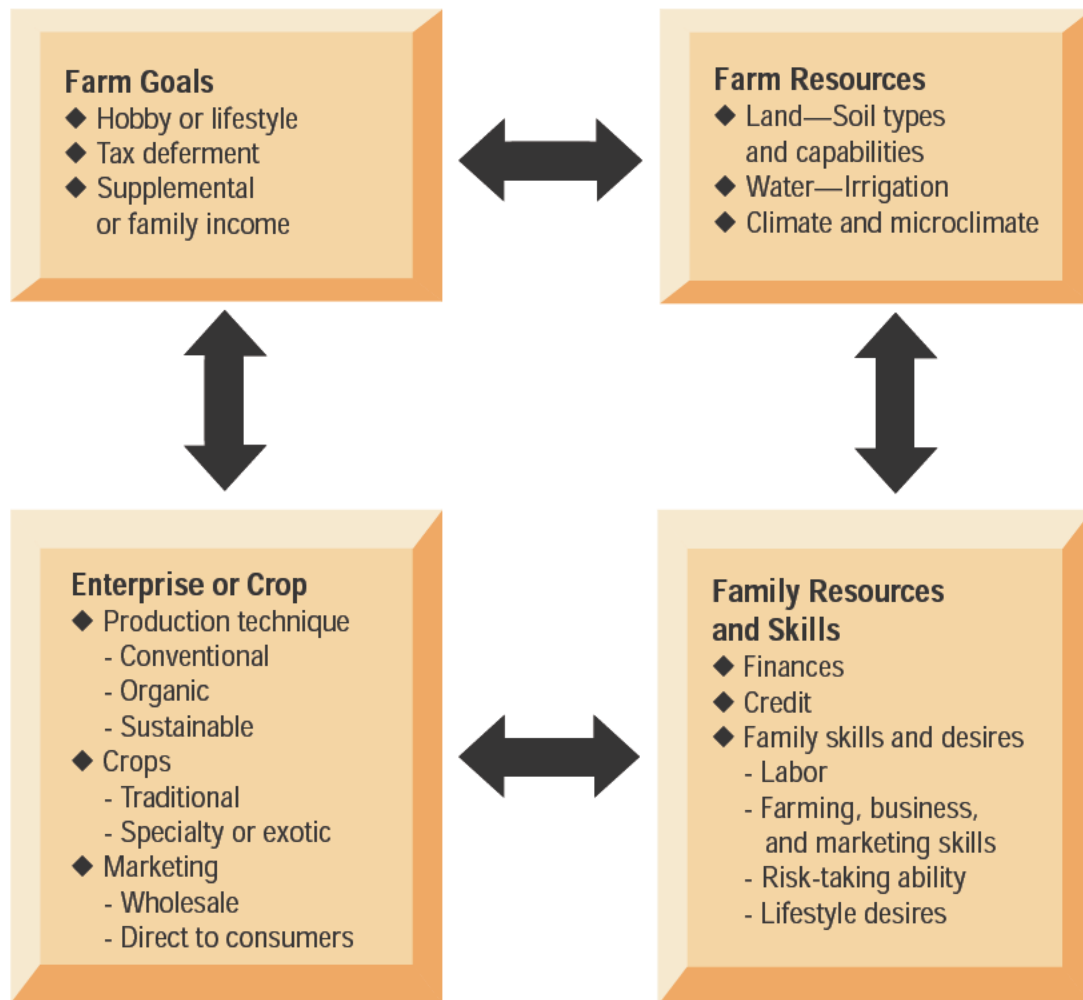


Figure 1. The major components involved in a farm enterprise decision and how these factors interact with each other.

members have (or don't have), and more. Consider these questions:

- Do you view the farm as a “hobby” and a way to achieve quality of life for the family?
- Are you simply trying to keep the agricultural tax deferral?
- Do you want the farm to produce a supplemental or even a full income for your family?

Small farms as a hobby

Rural areas are attractive places for families to live. A great deal of satisfaction can come from experiencing farm life without the pressure to make a profit. In this situation, money from off the farm supports the farm's activities.

In addition, many small-farm families wish to replace some of their purchased food with home-raised foods. This can be extremely satisfying and surprisingly easy. Two

acres will produce a year's supply of vegetables, ample fruits and berries, some meat, and possible opportunities for small cash sales. Another 2 acres of well-managed woodlot can heat a well-constructed house indefinitely. This path is different from a commercially focused farm, but is very appropriate for many families.



Two acres will produce a year's supply of vegetables, ample fruits and berries, some meat, and possible opportunities for small cash sales. Another 2 acres of well-managed woodlot can heat a well-constructed house indefinitely.

Agricultural deferral

Many small farms are located in areas that are not zoned exclusively for farming. These properties are subject to higher property taxes if they are not kept in farm use. The agricultural property-tax deferral lowers the property tax burden of farms that are **not** located in exclusive farm use areas but are producing income from farming.

In order to receive and maintain the deferral, these farms must meet certain income tests. For some property owners, this requirement results in the *ag deferral dilemma*. In this situation, people sometimes spend \$2,000 to save \$1,000 on their taxes. How do otherwise rational people get into this bind? Either they misunderstand how the system works, or they don't get good numbers.

To qualify for the agricultural property tax deferral, you must show the following annual income:

- 0–6 acres: \$650 minimum
- 6.1–29.9 acres: \$100/acre
- 30 or more acres: \$3,000 minimum

You must demonstrate the minimum income 3 out of 5 years. The assessor can request a copy of the "Farm Schedule F" from your federal income-tax filing to evaluate your claim for deferral.

Here is a hypothetical situation:

	No deferral	With deferral
Value of house:	\$125,000	\$125,000
Value of homesite:	70,000	70,000
Value of 10 acres:	<u>100,000</u>	<u>5,000</u>
Total:	\$305,000	\$200,000

Difference:+ \$95,000 in assessed or taxable value

Let's assume the tax rate is \$18/\$1,000. (Your assessor can tell you your specific tax rate.) What you actually would pay

each year in additional property taxes without the ag deferral is $\$18 \times 95 = \$1,710$. Note that the homesite, house, and any buildings are not affected by the ag deferral.

It's important to find out from your assessor what the assessed value of your land would be with and without the deferral. Then do the above calculation on your own property and decide where you come out.

Finally, if you convert all or part of the property to non-farm uses, you most likely will be liable for back taxes at the difference between the ag deferral value and market value for the previous 5 years, even if you just purchased the property. This consideration can be an important item to look at before you buy property.

The income tests for the ag deferral are not connected to the separate (and usually steeper) income test that a county might require before a dwelling can be built on agricultural land.

Timber land deferral has a similar impact on property taxes but doesn't require annual income proof after the stand is planted. Growing trees for timber could be considered for all or a portion of your rural acreage.

There might be tax incentives to manage your property as wildlife habitat. Under the "Wildlife Habitat Conservation and Management Program," landowners can retain their agricultural assessment when they enter into a management agreement with the Oregon Department of Fish and Wildlife.

This program is entirely voluntary, and counties are not required to accept applications for it. To qualify, the property must be zoned as agriculture or mixed farm and forest use and must be within a participating county. Contact your county assessor for more information.

With intelligence and persistence, it is possible to make money from a small farm.



Supplemental or family income from the farm

Farming in order to produce a supplemental or family income is serious business. It should be approached with thorough planning and realistic expectations. Consider these questions:

- Are you realistic about how much income you expect?
- Who will do the work?
- Do you have or can you obtain the necessary business skills to help the farm succeed?

On most small parcels, land prices are disconnected from the value of the land for use as a farm. Most small parcels sell for their real estate market value rather than for what a conventional farmer would consider a "fair farm" price. Compare the rental value (\$35–175/acre/year) with the actual cost of buying land, which probably is much higher.

Table 1.—Crop production costs and returns per acre.

	Establishment Costs	Annual Costs	Gross Returns/Year
Nursery stock**	\$3,000–20,000	\$3,000–10,000	\$10,000–30,000+
Flower bulbs	—	2,000–9,000	4,000–14,000
Fresh vegetables	—	1,500–5,000	2,000–7,000
Garlic (fresh)	—	1,800–4,500	3,500–9,000
Onions	—	2,500–3,000	1,600–5,000
Apples**	3,000–7,000	1,500–3,000	3,000–7,000
Wine grapes**	7,000	1,200–2,300	1,800–4,000
Strawberries (3-year life)	1,500–2,500	2,000–3,500	3,000–6,000
Raspberries (8-year life)*	3,000	1,700–2,800	2,000–6,000
Blueberries**	5,500	2,000–4,000	2,000–6,000
Christmas trees***	1,000–1,600	600–800	9,000–16,000
Wheat	—	200–300	200–400
Grass hay	—	70–150	100–180
Cow/calf	—	80–100	70–200
Sheep	—	100–500	275–650

*Might be 1–3 years before return.

**No return for 3–4 years after establishment. Costs vary with harvest requirements.

***No return until 6–8 years after planting. Most annual costs are concentrated in the last 3 years before harvest. “Annual costs” is an average per year over the production cycle. “Gross returns/year” is for the year of harvest.

Note: These figures represent a range of returns under normal conditions for commercial-quality crops. **They do not include expenditures for equipment except structures for nursery production.** They also don’t include weather-related crop loss or extreme price swings. These values are based on sales via wholesale markets and do not represent the higher gross receipts from direct marketing.

It therefore is challenging to expect such a parcel to pay for itself, much less the cost of the house or other nonfarm improvements.

However, with intelligence and persistence, it is possible to make money from a small farm. A lot of exciting small farms in the region are producing excellent crops and are marketing in creative ways. The potential definitely exists.

Let’s look at some of the options. Table 1 shows the gross income/acre of a variety of crops as reported from farms, both large and small, in Oregon. These values are for sales via wholesale markets and do not represent the higher gross receipts from direct marketing, a technique used by many

For more detailed information on crops and returns, visit the National Agricultural Statistics Service Web site at <http://www.nass.usda.gov/>. They have information for each state by commodity with some historical data. What you won't find easily is detailed information on very specialized crops.

In addition, enterprise budgets are available for many crops. They contain useful information on the costs of specific activities involved in producing and marketing a crop.

Contact your county Extension office for more information or visit the OSU Extension Publications and Videos catalog at <http://extension.oregonstate.edu/catalog>.

Before you invest any significant amount of money in a crop, you should know the crop's biology, production technology, and marketing options in some depth.



small farmers. These values offer excellent comparisons and are a good place to start.

If you are seriously considering a crop, you should know the equipment requirements and develop a cash-flow budget for each year in the production cycle. Pay particular attention to harvest and marketing costs. For example, blueberries usually cost 22–28 cents/pound to harvest and transport. A heavy crop requires more up-front cash for harvesting and delivering the crop to market than does a lighter crop.

What stands out from Table 1?

- Clearly, there are a lot of options to generate \$100/acre. As your expectations go up, the crop choices that will meet those expectations diminish, and the investment and skills needed increase. If you want to generate gross sales of \$1,000/acre, beef, hay, or grains are not viable options. Other crops **do** show significant income potential.
- Assume the direct operating expenses on most crops are 50–60 percent of gross sales. For example, how much will it take to raise an acre of nursery stock? You must include capital investment in facilities (such as greenhouses and winter houses) as well as all operating expenses (fertilizer, labor, crop protection products, and marketing costs). This is cash up front, and \$5,000 to \$9,000 is a bare minimum!

The profitability of any farming enterprise, large or small, is very difficult to predict. You must identify what you mean by profitability. Does it mean just *staying in the black* for a specific crop? Does it mean providing a small supplemental income? Does it mean providing a full family income? Small farms can provide all of the above, given good resources and skills.

The physical resources of the farm

Not all farms are created equal. They vary widely in the types of crops they can grow. A farm's capability to grow various crops is related to its physical resources: soils, access to irrigation water, and climate. These physical resources might seriously restrict the types of crops that can be grown or might provide nearly unlimited options. Successful farming includes the ability to match crop options to your farm's capability.

Land—types of soils

Soils are complex mixtures of sand, silt, and clay. The relative abundance of these soil components determines which soil type you have. The types of soils on your farm

are directly related to crop options. The better your soil, the more options you have. Poor soils can be improved by enhancing drainage and soil tilth but never will be as versatile as good soils.

West of the Cascades, a challenging soil type is one that is largely clay and, as a result, drains poorly. Such soils cannot be cultivated early in the spring and can contribute to root disease problems in many crops. Installing drain tile can partially correct poor drainage, but it adds \$800–\$1,000 per acre to the cost of the land. Very sandy soils drain excessively and present special problems, but you would much rather have a soil drain well and add water through irrigation than have it drain poorly.

East of the Cascades, saline or alkaline soils can limit crop options.

Soil maps are available that allow you to identify the exact soil types on any parcel. These maps are published in *soil surveys* for each county. Soil surveys include descriptions of each soil type that give some indication of the soil's strengths and weaknesses for agriculture and forestry. Contact your USDA Natural Resources Conservation Service office for the soil survey for your area. You can find their phone number under Department of Agriculture in the federal government section of the phone book.

You are far better off with 5 acres of great soil than 50 acres of mediocre soils. However, you might need a certain critical acreage to produce some crops economically. For example, growing grain on less than 200 acres would not support the purchase of even a used combine. While garlic can be produced on small plots ($\frac{3}{4}$ acre or less) using hand labor and a rototiller, 5 acres probably is needed to justify a fully mechanical operation.

In addition, your farm's location can have a large bearing on your marketing options. Does it have good road access? It must be appealing to the public if you are planning direct sales. If the crop you grow requires a semi-truck for transportation, is your farm able to handle it?

Water—potential for irrigation

Water is another critical resource that determines crop options for your farm. Most, although not all, high-value crops require irrigation. Nurseries are heavy users of irrigation, as are vegetable operations. Christmas trees, wine grapes, garlic, and in certain situations, raspberries and strawberries, can be grown without irrigation.

Various Extension publications detail crop water-use requirements at various locations in Oregon. The estimates take into account irrigation method, crop growth stage, and weather (see page 16).



East of the Cascades, saline or alkaline soils can limit crop options.

In Oregon, contact the Water Resources Department, 158 12th St. NE, Salem, Oregon 97310. Phone: 503-378-2496. Web: <http://www.wrd.state.or.us>



Growing a crop that you enjoy working with and believe in will get you through hard times and help you market it.

In Oregon, water resources are controlled by state authorities and are distributed to landowners based on historic use and the quantity available. This system prevents one landowner from damming a river that serves many other landowners. The recent regulations supporting salmon recovery often require higher minimum stream flows during certain seasons, further restricting water withdrawals for irrigation.

The ability to irrigate is based on your farm's *water rights*. Water rights determine whether your farm may access water—and how much—from wells, rivers, or other bodies of water.

If you do not have water rights, you might not be able to get them. Check with your local water rights authority about water rights attached to a particular parcel or about restrictions on the development of new water rights in your area. It is illegal to use a domestic well for irrigating a commercial agricultural crop.

Water-quality concerns such as salt content, pH, or specific minerals in the water can affect its suitability for irrigation. Ask for a detailed water analysis when purchasing a water right.

Climate and microclimate

Climate and microclimate are important to farming. An area's climate refers to the generally predictable patterns of temperature and rainfall across the seasons. Your climate zone limits the crops you can grow (such as bananas or apples). This limitation generally is based on the plant's ability to survive the area's temperature extremes and the potential for enough heat to mature the crop. Some crops require the accumulation of a certain number of heat units (the number of degrees over a critical minimum temperature, taken as the average high and low each day) to mature. Many crops require more heat units than are available in some locations (e.g., certain wine grape varieties cannot be grown in Oregon's cool coastal climate). For many crops, considerations such as sun exposure, rainfall amounts and pattern, air movement, and frost are critical to success.

The crops already grown in an area are a reasonable indication of climatic limitations. If your proposed crop is not grown locally, there might be some very good reasons for its absence. This does not necessarily mean it cannot be grown, but there might be some significant limitations to its production that you must discover and plan for.

Oregon has two major climatic areas and many variations on these. The mild, maritime climate on the west side of the state favors many crops. It is estimated that more than 800 crops have been grown in the Willamette Valley. Yet the dry summers require irrigation for most high-value crops.

The central and eastern parts of the state have more arid conditions and tend toward extremes of heat and cold.

There you might be limited to hardy, dryland types of farming. With irrigation, however, these areas have numerous crop options.

Be alert to microclimate variations on your property. A microclimate is a particular weather pattern in a small area. Is your property warmer than surrounding farms? Or wetter with poor air flow?

Microclimate is related to how air drains and collects on the land, how natural features such as small bodies of water moderate temperatures, and so on. The tendency for a farm, or an area on a farm, to have early or late frosts, or to avoid frost, is an example of a microclimate. In some instances, a microclimate can make it possible to grow a crop not normally grown in an area, or it can make it impossible to grow some crops that are grown on surrounding farms.

Type of farm enterprise and crop(s) produced

The crops you grow and any other services or processing offered by your farm are the products of your farm business. Choosing a production technique, specific crops to grow, and marketing channels requires some thought and planning.

Production technique

Currently, several farming methods are used to produce crops. The three most commonly used on small farms are:

- 1. Conventional**—utilizes synthetic pesticides and fertilizers and depends on mechanization for most farm practices.
- 2. Organic**—integrates farming practices, utilizes organic pest controls and fertilizers, and relies more on labor and low levels of mechanization for most farm practices.
- 3. Sustainable**—perhaps a hybrid of the two methods above, sustainable farming techniques minimize synthetic pesticide and fertilizer use and decrease fossil-fuel consumption.

Your choice of farming method will affect the costs associated with establishing and operating your farm, the amount of income from products grown, and how and where the products are marketed.

Type of crops—traditional or specialty?

The easiest crops to grow are those that have a long production history in your area. Standard or traditional crops or varieties provide some security. There are no surprises besides weather and prices. If a crop has been grown in your area for a long time, there will be equipment, custom

Growing a diversity of crops can spread the risk of changes in the growing environment or market price in a given year.



operators, and plenty of free advice. These products include familiar options such as tomatoes, corn, sheep, and so on.

Growing a diversity of crops can spread the risk of changes in the growing environment or market price in a given year. There is a risk, however, in trying to grow too many crops, particularly if they require very different skills and equipment.

When you begin to look into specialty or nontraditional crops, you must spend much more time on research. These crops might be new to your area or on the cutting edge for the nation. Such crops might include medicinal herbs, exotic livestock, or varieties of traditional crops new to your area. New crops might have little production information available. There will be a lot of on-the-job learning ahead of you. The consolation is that when you have perfected the production system, assuming the product appeals to the public, you will be ahead of your competition.

Some small farmers are able to grow specialty crops profitably. However, marketing is critical to their success. As with any enterprise, it is necessary to do a good job assessing wholesale and retail customer demand. You have to decide where to sell the product and how to maintain markets and customers. These crops always are difficult to identify and generally involve a higher level of risk than traditional crops that already are well known in the market.

Before you invest any significant amount of money in a crop, you should know the crop's biology, production technology, and marketing options in some depth. You should be able to put together a cash flow and enterprise budget for your particular farm for each crop. In many cases, it's possible to grow the crop on a small scale to give you a feel for production issues. However, difficulties tend to compound as the size of the cultivated area increases. Sometimes you can hire yourself out to a farm producing the crop and thereby gain invaluable experience. It's important to read everything you can get your hands on and to talk to all sorts of people about the enterprise you're considering. Understand thoroughly and use the traditional production system for growing a crop before making major changes.

Look for parts of the production system you can contract out while you learn the rest of the process. For example, you could learn to grow container nursery stock by buying rooted cuttings at first rather than building a greenhouse and propagating the cuttings yourself.

Look for enterprises that can grow incrementally (without major new investments in land or equipment) as your skills, finances, and marketing ability increase. Examples include container stock, Christmas trees, fresh vegetables, and beehives.

It's important to read everything you can get your hands on and to talk to all sorts of people about the enterprise you're considering.



Crop rotation (not growing the same crop on the same land each year) can be important in some crops for disease management and weed control. Rotation requirements can quadruple your acreage needs.

Marketing

Small farmers generally are at a disadvantage competing against large farmers in the wholesale market. Large farms usually are able to produce greater volumes of product over a longer time period at a lower cost to the wholesale buyer. Therefore, most successful small farmers choose to market their product directly to consumers via one or more of the following methods:

- Roadside stands
- Farmers' markets
- Community supported agriculture (CSA) or subscription farming
- Restaurants and public institutions
- Websites
- Other direct-marketing techniques

There are many exciting examples of small farms that profitably produce nursery stock, high-quality small fruits, culinary and medicinal herbs, specialty livestock, tree fruits, vegetables, and numerous other crops. Often, there is a value-added component to the enterprise, such as jam production from fruit. Farms might include nontraditional services such as farm-based bed and breakfast operations. A small farm with a high-quality product mix and a good plan for getting those products into the hands of consumers can do exceedingly well.



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Family resources and skills

When committing to a hobby or for-profit farm, a number of financial resources and skills are necessary for success.

Finances

Farming, like any business, involves financial risk. All crops require you to spend money in advance to establish the crop. What is returned when the crop is harvested is determined by the skills of the farmer, the weather, and what happens in the market. Some crops, such as tree fruits, might require several years before any income is realized. Knowing in advance where you stand financially and your capacity for risk taking will influence the types of choices that best fit your situation. Consider the following questions.



For most small farmers, financing is available only after they can show several years of successful experience. If you are a new farmer, expect to finance your enterprise from other resources for several years.

- What can you invest in startup and operating costs without putting your family at financial risk?
- How long can you wait for the crop to begin to create some cash flow? How long can you wait for the crop to generate some profit?
- How much can you afford to risk financially to fluctuations in the market? If the market price is high when you plant but low when you harvest, what will happen?
- How much time and money can you allocate toward “selling” your crop? Most farmers will not plant a crop that does not have a reasonably predictable market.
- What financial obligations are you taking on with the farm? Make up cash flow and enterprise budgets and evaluate them against your experience often.

Credit

Many people think there is money waiting to be given to “exciting” new farm ideas. Nothing could be farther from the truth. The farm credit crisis of the early 1980s took some banks totally out of agricultural lending and made the remaining banks much more selective. The federal government sometimes is a lender of last resort, but that role has diminished greatly.

For most small farmers, financing is available only after they can show several years of successful experience. If you are a new farmer, expect to finance your enterprise from other resources for several years. If you have a good track record with one or more crops, you might be able to get a loan to try a new crop.

When you do decide to seek financing, what are some of the issues you face?

- Many small farmers are terrible record-keepers and simply cannot back their claim to creditworthiness on their production capabilities. Lenders want tangible evidence that you can produce and sell at a profit.
- Experience is the hardest quality to prove and the most difficult one for a lender to assess. A documented 3-year progressively successful personal track record for the crop in question is the best information you can bring to the table. Learn to keep meticulous records and analyze them from a business perspective.
- Small farmers represent a large part of the potential credit market in terms of numbers but not in loan volume.
- From a bank’s perspective, the earning potential from a large loan is much greater than that from a small one. (The same time and paperwork are needed for both.)
- It probably takes a farm loan of at least \$50,000 to be profitable for a bank if it isn’t secured as a personal loan

(since a farm loan requires asset appraisal and significant financial analysis). On the other hand, personal loans of any size are hard to get without a strong credit history and a stable nonfarm income flow.

- Many small farms lack “bankable” equity. A small farm might be well capitalized with two incomes but have little hard collateral or loan history.
- If the first mortgage on a property is large relative to a conservative estimate of liquidation value, it might be tough to get operating capital as well.
- Lenders look for a capacity to weather mistakes, market changes, etc.

It is not impossible, by any means, to secure credit, but it takes a lot of planning, no fiction, and a solid record. As a practical matter, many small farms expand into new crops on personal credit cards. This method is risky and expensive, but often the only path available.

When you obtain money, make it work productively for you in the business. Analyze every decision. Don't buy a tractor because you like to smell diesel. Any asset (time, money, skills, or equipment) needs to be employed for the greatest benefit of the business.

Family skills and desires

Whether your enterprise fits your family's goals and abilities is a big factor in its success. For example, families often take on a farming enterprise based solely on financial factors. They might discover they really do not enjoy the crop they grow, and the work becomes drudgery. Here are some things to consider:

Use your strengths

- What do you love to do? Growing a crop that you enjoy working with and believe in will get you through hard times and help you market it. Don't force yourself into a type of farming based solely on external factors. If your real love is working with animals, you might not be happy owning a nursery.
- What do you know how to do? Farming is made up of many important skills—mechanical, bookkeeping, management, and so on. Involve yourself and other family members in farming tasks for which they have some related training.
- What do you do well? People have a variety of abilities—for example, a knack for nurturing calves or growing bedding plants.

Christmas trees, wine grapes, garlic, and in certain situations, raspberries and strawberries, can be grown without irrigation.



Be aware of how you and your family want to live

- Check into the production calendar for the crop you are considering. How do you feel about the schedule? Does it fit with off-farm work schedules? Does your family like to take a long vacation during the summer? How important are holidays? For example, if you plant Christmas trees, harvest is likely to interfere with some winter holidays.
- How many hours and what months of the year do you want to work on the farm? It's easy to work incredibly long hours on a farm. What about the social activities your family likes?
- What is your comfort level with risk? Do you thrive on a bit of it or does it scare you? Some crops pose little financial risk but promise little income. Other crops have the potential for high profits but pose very high levels of risk.
- Direct marketing usually involves a lot of contact with people. Do you like dealing with people?
- Is the whole family excited about farming? Moving to a rural environment can cause stress to family members that prefer a more urban lifestyle.

Some other factors to consider

Farm community. An active farm community promotes group learning, innovation, and cooperation. Quality suppliers of equipment, services, and information are more available where there is a “critical mass” of farmers. Nevertheless, isolated farmers can join commodity organizations and take other steps to improve their technical and marketing skills.

Isolation. If you are isolated, you must carry larger parts and supply inventories, and, most significantly, you probably cannot contract as easily for custom farm work. Thus, you must have the ability and equipment to do all of the work yourself. This requires a much higher up-front investment in capital, time, and skills. In addition, it will be more difficult to attract buyers for the crop.

Labor pool. Many horticultural crops are very perishable and must be harvested and marketed in a timely fashion. Access to reliable and productive labor can mean the difference between success and failure. Are you comfortable managing labor? Are you willing/able to supervise and do the additional paperwork involved with having employees? Can you pay for labor before you are paid for your crop?

Access to markets. This factor is crucial for the small farmer who must get a high percentage of the crop dollar to survive.

Many horticultural crops are very perishable and must be harvested and marketed in a timely fashion.



Summary

Small-farm operators develop economic vitality by:

- Having a passion for what they do
- Watching their cash-flow cycle
- Producing crops for small but well-paying markets
- Utilizing diverse marketing outlets but understanding the costs of low-volume locations
- Marketing aggressively and creatively
- Searching out and using information to reduce production and marketing risks
- Understanding that there is a learning curve to new enterprises and not expecting to make any money for several years
- Investing in good soils and water
- Locating near a major population center on a paved road
- Employing used (versus new) equipment and being able to do at least preventive maintenance on the farm
- Using contractors to carry out some capital-intensive parts of the enterprise in the beginning
- Matching work to the family's time, desires, and abilities
- Diversifying sources of earnings, including off-farm income, to produce a solid, year-round cash flow

Small farms can be a springboard to significant business opportunities. They can be an incubator for skills and creativity. Many large enterprises started from very modest bases. However, there are significant risks associated with a commercial farm. Successful enterprises are exceedingly well managed and focused on a profitable marketing niche.



Successful enterprises are exceedingly well managed and focused on a profitable marketing niche.

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Enterprise budgets are available for a variety of crop and livestock operations. They are available from county offices of the OSU Extension Service, the OSU Department of Agricultural & Resource Economics (541-737-1399), and the Web (<http://extension.oregonstate.edu/catalog/>).

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Using Enterprise Budgets To Make Decisions about Your Farm

Richard Carkner

A Pacific Northwest Extension Publication
Washington • Oregon • Idaho

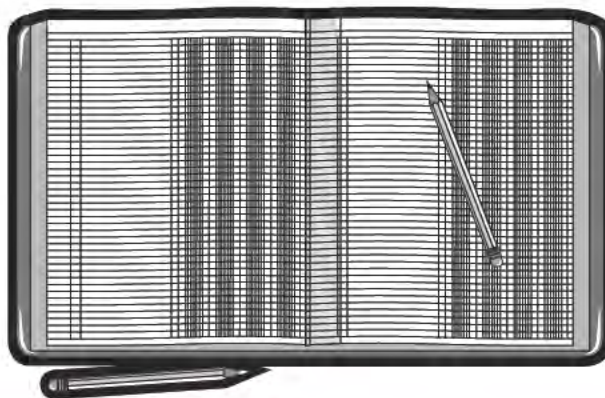
Enterprise budgets are important decision making tools. They can help individual producers determine the most profitable crops to grow, develop marketing strategies, obtain financing necessary to implement production plans, and make other farm business decisions.

The purpose of this publication is to describe how to develop and use an enterprise budget. The information herein defines the enterprise budget, outlines basic cost concepts, and presents a sample budget to illustrate the concepts. Instructions for adjusting costs in published budgets, doing a break-even analysis, and making decisions with enterprise budgets are also explained.

Enterprise Budgets and Related Concepts

An enterprise budget is a physical and financial plan for raising and selling a particular crop or livestock commodity. It is a physical plan because it indicates the type and quantity of production inputs and the output, or yield, per unit. It is also a financial plan, because it assigns costs to all the inputs used in producing the commodity.

Budgets are calculated in units of one acre to facilitate budgeting for different enterprise sizes and to simplify calculations. For planning purposes, costs are divided into **variable**, **fixed**, and **joint costs**. The following section





describes these costs and related enterprise budget concepts.

Variable Costs

Variable costs are the out-of-pocket costs for inputs such as seed, fertilizer, fuel, and repairs; they are always included in a budget. Variable costs

change directly with business volume (e.g., number of acres planted, number of animals or plants raised).

Fixed Costs

Fixed costs are the costs associated with building and equipment investment; they are prorated over a number of years. Fixed costs occur regardless of the crops or livestock produced or the volume of production in a given year. For instance, ownership costs are fixed costs that include interest, hazard insurance, property taxes, housing, and depreciation. Depreciation is the decrease in an asset's value due to wear, obsolescence, or deterioration.

Annual depreciation is calculated by subtracting the salvage value (the value remaining at the end of the depreciation period) from the initial investment and dividing by the number of years of useful life. For example, if you invested \$5,000 in a piece of machinery with a useful life of 10 years, assuming a salvage value of \$500, the machinery would have an annual depreciation of \$450:

$$\begin{array}{rcl} \$5,000 & - & \$500 & = & \$4,500 \\ \text{investment} & - & \text{salvage value} & = & \text{total depreciation} \end{array}$$

$$\begin{array}{rcl} \$4,500 & \div & 10 \text{ years} & = & \$450/\text{year} \\ \text{total} & \div & \text{years of} & = & \text{annual depreciation} \\ \text{depreciation} & & \text{useful life} & & \end{array}$$

If this piece of machinery were used over 10 acres, the per-acre-depreciation would be \$45 per acre:

$$\begin{array}{rcl} \$450 & \div & 10 \text{ acres} & = & \$45/\text{acre} \\ \text{annual depreciation} & \div & \text{area in acres} & = & \text{per-acre depreciation} \end{array}$$

This depreciation is the straight-line method and is suitable for developing budgets. Other depreciation methods may be more appropriate for tax management.

Interest is another major component of annual ownership costs; it is calculated by determining the average investment and multiplying by an appropriate rate of interest. The average investment is simply the initial investment plus an estimated salvage value, divided by 2. The annual interest for a \$5,000 investment with a \$500 salvage value at 10 percent interest would be \$275:

$$\begin{array}{rcl} (\$5,000 & + & \$500) & \div & 2 & \times & 0.10 & = & \$275 \\ (\text{investment} & + & \text{salvage value}) & \div & 2 & \times & \text{interest} & = & \text{annual} \\ & & & & & & & & \text{interest} \end{array}$$

Using the 10-acre example, the per-acre interest component of the annual ownership costs would be \$27.50:

$$\begin{array}{rcl} \$275 & \div & 10 \text{ acres} & = & \$27.50/\text{acre} \\ \text{annual interest} & \div & \text{area in acres} & = & \text{per-acre interest} \end{array}$$

Interest is an ownership charge, whether or not debt-financing is used. If equipment is not debt-financed, there is still an opportunity cost associated with having the money tied up in machinery. In other words, the money could be earning interest elsewhere if it were not invested in machinery or equipment. If machinery is debt-financed, interest is a cash expense rather than an opportunity cost.

Joint Costs

A *joint cost*, usually a fixed cost, is common to more than one crop or enterprise. Examples include depreciation for equipment used on more than one crop or property taxes that cannot be assigned to an individual enterprise.

Total Costs

Total costs are the summations of fixed, variable, and joint costs. It is sometimes difficult to allocate joint costs to an individual enterprise and determine total costs for a particular crop or product. In these cases, estimates for allocating costs need to be made; the point is to account for all costs.

A Hypothetical Budget

To illustrate the concepts of fixed and variable costs, I have developed a hypothetical budget for a crop I'll call "tribbles." Tribbles is an annual vegetable crop especially suited for Washington's climate—a highly nutritious vegetable that yields about 3,000 pounds per acre. Table 1 presents the production costs for tribbles.

Variable Costs for Tribbles

Typical out-of-pocket, or variable, costs include fertilizer, seed, compost, hired labor, and tractor fuel and oil. To facilitate budget revisions for when you adopt published budgets to your situation, both price and quantity are included for each input.

Notice that interest on operating capital is included under variable costs. It is included as a cost even if all operating costs are financed by the grower for the same reason that interest on machinery investments is included as a fixed cost—because of opportunity cost. If the money was not tied up in machinery or crop production costs, it could be earning interest in the bank or elsewhere.

In calculating interest on operating capital, all pre-harvest cash costs are totaled, multiplied by the fraction of a year they are outstanding, and multiplied by the cost of money. For example, if the period between planting and harvest was six months, cash production costs would be tied up in the crop for 6/12, or 1/2, of the year. Multiplying the preharvest variable costs by 1/2 and then multiplying that amount by the cost of money (interest rate) would yield the charge for interest on operating capital.



Fixed Costs for Tribbles

Fixed costs in the budget include interest and depreciation on machinery, equipment, and utility costs used to produce tribbles. To simplify our discussion, the tribbles' budget assumes that the entire farm is devoted to tribbles production. In practice, one farm usually produces several commodities with the same set of machinery, and budget construction requires an allocation of machinery use to each crop.

Land rent, or land charge, can be calculated in a number of ways. In this budget, an interest charge is assigned to the approximate market value of the land. With a \$4,000 market value for the land and an 8 percent interest rate, the land charge would be \$320 for each acre of tribbles produced:

$$\begin{array}{rcl} \$4,000 & \times & 0.08 & = & \$320 \\ \text{market value of land} & \times & \text{interest rate} & = & \text{land charge} \end{array}$$

A refinement to the land charge estimate would be estimated market value less sale costs and any capital gains tax due. The resulting amount would be the residual amount that could be earning interest if the land was sold.

If you are a part-time farmer who has no alternative uses for owned land, it may not be appropriate to assign a land charge to an enterprise. However, if you want an estimate of the total costs of production, a land charge is necessary.

Adjusting Costs in Published Budgets

Why use a hypothetical budget to talk about production costs? The primary reason is to focus on concepts that apply to all crop and livestock production. Washington State University Cooperative Extension has developed a number of budgets for fruit, vegetable, grain, and livestock production. Some producers choose to start with these published budgets and adjust them for their own enterprises.

Please remember, budgets are only as good as their assumptions. With the geographical differences and the wide variation in possible cultural and manage-

ment practices, it is very important to adjust published budgets to make them relevant for individual farm decisions. For this purpose, all WSU budgets have a space for individual farm adjustments.

Assume for a moment you need to decide whether or not to produce tribbles and you have obtained a budget from your county extension office. Is this tribbles' budget appropriate for your farm? Start with the variable costs in Table 1. As you go down the list, notice that both units and the price per unit are specified for each item. Can you buy nitrogen for 18¢ per pound? If not, how much can you buy it for? Enter that amount in the last column. Line by line, the variable costs are relatively easy to evaluate for appropriateness.

The largest variable cost for tribbles' production is preharvest labor. Thirty hours per acre are required, and labor is priced at \$7.50 per hour. If you're unfamiliar with tribbles' production, you may have no basis for changing labor hours, but the wage rate can be evaluated. Is unskilled harvest labor available for \$7.50 per hour? If family labor is available, the \$225 labor charge could be an opportunity to retain some production costs within the family unit. It also might mean that family payments could be deferred until after harvest, reducing cash flow problems.

Fixed costs are a little more difficult to evaluate from the information in the tribbles' budget (Table 1). Interest and depreciation for machinery and equipment are listed. However, the equipment complement and the replacement cost for each item are not included. The number of acres over which the machinery is used is also unknown. Is it used only for tribble production, or is it also used to produce other commodities? These assumptions, usually supplied with the budget in a narrative, need to be analyzed to determine whether machinery costs are appropriate and whether you will need to invest more in machinery.

Break-even Analysis

A break-even analysis identifies the price or production level necessary to cover all identified costs. If

you already own all the machinery and equipment, and if you have decision making authority over the land, what budget information will help you determine whether or not to raise tribbles?

What if tribbles could be sold for 80¢ per pound and the average yield of an established producer was 3,000 pounds per acre (Table 1)? Notice that the break-even price to cover variable costs is 38¢ per pound. This value results from dividing total variable costs, \$1,155, by 3,000 pounds. The difference between 38¢ and the market price of 80¢, or 42¢, is money available to cover fixed costs and provide a return to management and unpaid family labor. Notice that the break-even price to cover total costs is 54¢ per pound; again, this value is calculated by dividing total costs by production units per acre:

$$\begin{array}{rcl} \$1,613 & \times & 3,000 \text{ pounds per acre} = 54¢/\text{lb/acre} \\ \text{total costs} \times \text{yield per acre} & & = \text{break-even point} \\ & & \text{for total costs} \end{array}$$

The difference between total costs and total revenue (production units multiplied by market price) is net profit. Net profit is the return for risk and management. In our example, total costs per pound are 54¢ and total revenue is 80¢; the difference, 26¢, is the net profit per pound.

Decision Making with Enterprise Budgets

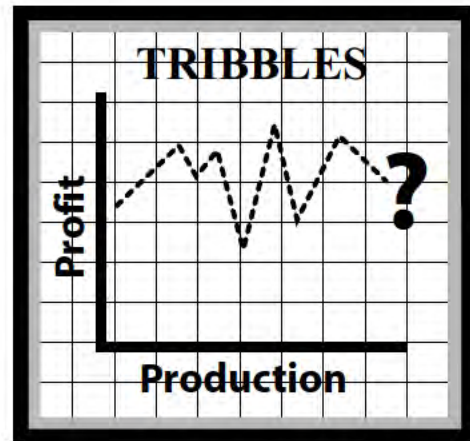
Enterprise budgets can be used as decision making aids. What would you do if, at harvest, the highest price you could receive for your tribbles crop was 35¢ per pound? Would you plow down the crop, or would you harvest it? In order to make the best decision, you need to evaluate the appropriate costs. The rule is, if expected returns exceed additional variable costs, proceed with production (harvest, in this case). All fixed costs may not be covered, but as long as variable costs are more than covered, some contribution toward fixed costs will result.

At harvest, all production costs committed up to that point are fixed. The seed, compost, and the preharvest labor have become just as fixed as land rent and machin-

ery ownership costs. The relevant costs at this point are the variable costs of harvesting. By dividing the estimated hand-labor harvest plus container costs by 3,000 pounds, you calculate the harvest cost at approximately 6¢ per pound. When comparing this value with the crop price of 35¢ per pound, you decide you will be better off by 29¢ per pound if you harvest. Even though this 35¢ price will not cover even the variable costs, it does cover the additional harvest costs and contributes something toward what has already been spent.

Enterprise budgets can also be used to support other decisions. Selecting the most profitable crop mix is one such use. You can use variable production costs and market prices to array crop alternatives in order of their contributions to overhead or contribution toward covering fixed costs. The process is called gross margins analysis. Another use for budget information is developing market strategies. Budget information is necessary to establish market prices that will cover all production costs plus provide a

return to management and capital (profit). Lenders also rely on enterprise budgets to evaluate the relative credit worthiness of various enterprises. For more information on farm records, an important source of budget information, please see another Farming West of the Cascades publication, *Farm Business Records: An Introduction*.



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Table 1. Enterprise Budget for Tribbles

Item	Unit	Price or Cost Per Unit (\$)	Quantity	Value or Cost (\$)	Your Farm
Variable Costs					
Bacillus thuringensis	lb	0.75	13.33	10.00	
Compost	yd	12.00	15	180.00	
Containers	ea	2.00	50	100.00	
Custom hire (tilling, compost spreading)	acre	350.00	10	350.00	
Fuel and lubrication	acre	25.00	1.0	25.00	
Harvest labor	hr	7.50	10	75.00	
Insecticidal soap	qt	13.00	3	39.00	
Interest on operating capital	\$	10%	550.00*	55.00	
Lime	ton	120.00	0.5	60.00	
Pre-harvest hand labor	hr	7.50	30	225.00	
Seed	lb	18.00	2	36.00	
Total Variable Costs				1,155.00	
Break-even variable cost				0.38	
*Total variable costs ÷ 2 at 10% (assumed costs outstanding for 6 months)					
Fixed Costs					
Equipment interest and depreciation	acre	20.00	1.0	20.00	
Land rent	acre	320.00	1.0	320.00	
Machinery interest and depreciation	acre	25.00	1.0	18.00	
Utilities	acre	1.00	1.0	100.00	
Total Fixed Costs				458.00	
Break-even total cost				0.54	
Total Cost				1,613.00	

About the Author

Richard Carkner, Ph.D., is an agricultural economist at WSU-Puyallup. He specializes in farm management and applied research on the economic dimensions of agricultural industries. He is interested in alternative agriculture methods, practices and profitability, and the food system models that directly connect consumers and farmers.

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Business Planning and Management

For more publications concerning business planning and management in the Pacific Northwest, see on-line resources listed below.

1. Understanding the Link Between Farmer's Market Size and Management Organization 2007 *Special Report No. - 1082-E*
2. Farm Safety Series 1998 - *PNW 512*
3. A Brief Introduction to Agricultural Cooperatives 2003 - *EM 8665*
4. Permits and Licenses Required for Start-up of Artisan cheese plants in Oregon 2009 - *EM8986-E*
5. Financial Management 2009 - *PNW206-E*
6. A Guide for New Manufacturers: Food Distribution Channel Overview 2006 □ *EM8921*
7. Simulating a Manufacturing System: An Introduction 2003 - *EM 8837-E*