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Oregon 4-H Outdoor Project

Leader Guide

Dear 4-H Outdoor Leader—Does this describe you: you're interested in working with a group of boys and girls; you'd like to learn more about the outdoors; you'd like to help children learn more about how to enjoy and take care of the outdoors?

If this describes you, this leader guide will help you understand how to provide fun and educational outdoor learning experiences for children; understand basic outdoor leadership skills; provide ideas for field trips, tours, and resources; and enjoy your role as a 4-H outdoor leader.

This leader guide is *not* an absolute blueprint for the project, nor will it be an exclusive source for ideas.

As an outdoor project leader you'll need to find the tools that work best for you and your group. A 4-H leader is a "people grower." You'll learn member interests, needs, and desires; you'll help members meet these in a positive, informal, learning environment. You'll also help the young people you work with develop four special skills: how to learn, how to get along with others, how to use new knowledge, and how to feel good about themselves.

The Pacific Northwest is well known for its natural beauty. Northwesterners are proud of their natural heritage. We wish to pass these natural resource and conservation ethics to our children so they will enjoy and take care of this legacy.

Your role as a 4-H Outdoor Project Leader is to work with children and their parents to help cusure that future.

Learning in an Outdoor Environment

You may recall what it was like when you took natural science classes in school—long lists of plant, tree, and animal names you had to identify and memorize. However, natural science teaching has changed considerably. In some ways it is easier and more fun because information is applied to real-life situations.

Today's children gain first-hand experience and take more responsibility for their learning. Emphasis is directed at thinking instead of rote memorization, and children are freer to make discoveries instead of listening to someone else's answers.

Your role is to help 4-H members experience the natural world, discover what it is like, and think about its meaning. You'll take what kids like to do and tie it to an understanding of nature.

Most children like to:

- · collect objects from nature
- hike and backpack
- · wade in streams and ponds
- · fish and hunt

- observe wildlife
- · camp out
- · cook their own meals outside
- figure out weights, measurements, and distances
- sing songs
- make crafts from nature
- dig in the soil and sand
- · watch the stars
- · learn about the pioneers and Indians
- make up stories.

You can do these things with your 4-H members while learning about the natural environment. To accomplish this, provide the kinds of experiences where members:

- observe details that can be directly detected (color, smell, taste, size, and surface characteristics)
 - usc numbers (count and determine percents)
- use measures (determine length, weight, or volume in a specific unit)
- assume (reach a logical conclusion based on observed evidence)
- classify (arrange things into groups according to similarities and differences)
- communicate (give complete and concise summaries describing what was observed)
- hypothesize (develop an educated guess to explain a variety of observations related to a phenomenon based on relevant data)
- experiment (test one or more variables in a controlled situation and record data for later interpretation)
- put together models (arrange or group information, data, or principles to describe a phenomenon, e.g., diagram one type of community showing a food chain)
- research (search for answers to a question by reading about it, talking to experts, and making observations of a particular phenomenon).

January 1984 Oregon State University Extension Service 4-H 301L

How to Use This Guide

The 4-H Outdoor Project is an introduction to learning and living in the outdoors. As a leader you choose the information to fit the interests, abilities, and experience levels of club members.

You may first wish to review this leader guide to see what and how the information is presented. This will give you background to draw from when you plan your activities with your members. (You can find more information in the 200-page master copy of the 4-H Outdoor Project, 4-H 301A, which is available at your county Extension office.)

Project Units

The Outdoor Project is divided into five units, each with separate activities, learning objectives, activity descriptions, necessary materials and resources, and procedures and considerations.

You can work from each unit all year depending on age, interests, season, resources, and the number of meetings held, or you may want to concentrate entirely in one area. Since this is an introduction, you will be able to branch into more advanced opportunities as learning progresses. You can repeat the Outdoor Project as long as a member is in 4-H.

You may find this guide to be a good first reference as you think about leading an Outdoor Project. This guide will help stimulate ideas for you to use with your club and also give you basic tools to consider. Much of this guide was written by experienced outdoor 4-H leaders who have developed successful programs.

Make Your 4-H Experience Successful

Establish yearly club and individual goals with members. Use basic skills and understanding as starting points to build the project for your interests, the members' interests, and available resources.

Involve members in planning activities and meetings, and in sharing accomplishments. Members will be more interested if they help plan and share. Each section of this leader guide gives hints to involve members.

Plan challenging and new things for 4-H'ers to stretch their skills and understanding of the outdoors. This gives members self-confidence.

Plan activities that allow members to talk with each other and with you.

Keep indoor planning and organizational meetings short. It's the field trips, day hikes, and overnight trips that hold member interest. Be flexible; allow plans to be changed and modified. Plan alternate activities in case of bad weather.

Help family members work with their children on the project and join with you in leading activities. Help members apply what they learn to daily living.

Planning the Project

Organizational meetings usually take about 90 minutes. Be sure to involve officers in conducting the club business and recording the minutes. Allow for reports on special projects and be sure to make plans for field trips, hikes, and overnight campouts.

These meetings give members time to review the club's experiences; provide leader, member, or outside resource-led activities; and provide recreation and refreshments.

Field trips, day hikes, and overnight camp-outs place members in an extended learning experience and provide for exploration and outdoor discovery. These trips utilize a specific outdoor natural resource as a learning laboratory (pond, stream, lake, forest, hiking trail, meadow, arboretum, weather station, natural history museum, fish hatchery, zoo, tree farm, geological area, marine tide pool, desert).

Members will have an opportunity to learn outdoor living skills such as food planning, preparation, and outdoor cookery; proper hiking procedures; conservation practices; first aid and safety; map and compass; outdoor camping; backpacking; fishing; hunting; wildlife observation; weather observation; astronomy; edible plants; knots; canoeing; rafting; mountain climbing; and cross-country skiing.

Be sure to utilize outside resource people. They provide an opportunity for the members to learn from expert outdoor and natural resource professionals (foresters, naturalists, soil conservationists, botanists, fish and wildlife managers/biologists, geologists, hunters, fishermen, mountain climbers, outdoor equipment sellers, tree farm operators, taxidermists, outdoor recreation specialists, and science teachers).

Recognition Through Presentations and Awards

Reports and presentations allow individuals or teams to report to other members on a specific area of interest. This can be part of a regular organizational meeting. Presentations are a formal method of presenting an idea, complete with illustrations. They can be an outgrowth of a member's interest in a subject. Presentations can also be publicly presented at County Presentation Days or at the county fair.

County or multicounty special events are usually held with the county 4-H annual events calendar. These offer enrichment opportunities for natural science clubs and usually involve an educational tour, competitive events, or overnight campouts.

County and state fair exhibits and contests give members opportunities to show what they have learned by making an educational exhibit or display, participating in contests, or exhibiting specimens collected. Check with your county Extension office if you are interested.

Club and individual member records traces the accomplishments of the year for you and the member. These records also help set goals for the future. Record sheets are available through your county Extension office.

The 4-H Outdoor Project provides many opportunities for awards, recognition, and scholarships. Members may achieve personal satisfaction and achievement in the varied club activities of the year. You can also build "fun awards" into your club through imaginative planning.

There are county, state, and national awards, recognition, and scholarships for outstanding member achievement and leadership. Awards and recognition vary. Check with your county Extension office for specific details.

The community service project is an important learning tool in the Outdoor Project. Each year members should plan and conduct a community service project to benefit public or private natural resource users.

Examples of projects include: developing interpretive nature trails (including one for handicapped); restoring streams for salmon and steelhead runs; planting trees and shrubs; cleaning parks, trails, and camping areas; planting food and cover for wildlife habitat; collecting data to help with wildlife or land use conservation; and helping with a bird census.

You may want your club to give presentations on how to do or make something related to the Outdoor Project. Presentations may be before the club, school class, family, friends, at the fair, or on 4-H Presentation Day. Presentations require knowledge of the subject, planning, and practice. A presentation usually shows how to do something. It can be an ongoing part of your club program.

How to give a good presentation

- Select something that you like to do.
- Tell your audience who you are, what you are going to do, and why.
- Give your presentation by showing and telling what you are doing.
 - · Go slowly.
 - Be sure that everyone can see and hear you.
 - Do one step at a time; explain each step as you do it.
- Show what you have done or made and tell why it is important after you've finished.
 - · Review what you have done.
 - Ask if there are any questions.

Suggested presentations

Once members learn about presentations, they will have ideas for their own. Be sure to include ideas in a presentation planning session:

- How to tie one or more useful knots.
- How to build and put out a campfire.
- How to plant a tree.
- How to read a map and use a compass.
- How to pace distances.
- How to sharpen a knife or axe.
- How to make a terrarium.
- How to make a small animal trap.
- How to identify three trees.
- How to mount a pressed leaf specimen.
- How to make plaster casts of animal tracks.
- How to give first aid for injuries.
- How to select a campsite.
- How to backpack for an overnight hike.
- How to practice no-trace camping.
- How to select and care for suitable outdoor shoes and clothing.
 - · How to build a bird feeder.
 - How to tell the age of a tree.

Exhibits

Members can make educational exhibits to display at your county fair. (Check your local fair book rules for specific criteria.) The State 4-H Fair offers the following categories and guidelines for exhibits.

Outdoor

An educational exhibit relating to the outdoors. May not exceed 30 inches wide, 24 inches deep (front and back), and 30 inches high. This is available to junior, intermediate, and senior members.

Scoring

*Educational value	50
Attractive, holds interest	25
Total -	100

*Includes explanations of how to use exhibit, how made, where found, identify parts, etc., if appropriate. Example: a bird house exhibit could include plans for making it, where it would be used, for what birds, and a picture of where it will be used.

Conservation

An educational exhibit relating to conservation of soil, energy, water, forests, marine life, range, or wildlife. May not exceed 30 inches wide, 24 inches deep (front and back), and 30 inches high. This is available to junior, intermediate, and senior members.

Scoring

	Total	100
Practical (teaches approved practices)	•••••	25
Educational value (tells a story)		
Quality of work, arrangement, neatness		25
Attracts attention, holds interest		
•		

Fishing

(See project manual for guidelines.)

General ideas

Nests, insects, birds. Label all specimens with common name, where found, date found, and name of collector. Add any other information you like. It is a good idea to spray nests to kill mites or lice.

Animal trap. An animal trap you made. Tell what you trapped, when, and where you trapped the animal.

First aid kit. An example of a camper's first aid kit. Tell how to use it.

Dish garden of native plants and rocks. Label with common name, where found, date found, and name of collector.

Collection of rocks or remains of animals found in one place. Have labels or short story explain your specimens.

Collection of "old skins." Examples are snake skin, May fly, dragon fly, caddis fly, or other insect pupa cases. Label with common name, where found, date found, and name of collector.

Notebook of mounted plant specimens native to Oregon.

Mounting sheets are available from your county Extension office.

Seed collection identifying varieties of seed and how they're spread. Be sure the specimens are fastened to a mounting material. A shallow box with clear plastic top will protect and keep the exhibit clean.

Project Goals

We strive for goals to create a better world for ourselves and other people. Youth need to feel good about who they are. You are in a position to help build a positive self-image in all the children you work with. Use the outdoors and the interaction of your club to achieve this. This can be your most important, demanding, and rewarding goal in 4-H.

Goals that will help you get there:

• Awareness and appreciation for the outdoors and the natural environment. Help individual 4-H'ers and the group acquire strong feelings of care, respect, and concern for the environment; develop motivation to actively participate in the protection and improvement of the environment.

- Knowledge. Help 4-H'ers acquire a basic understanding of how things work in the natural environment.
- Attitudes and values. Help 4-H'ers acquire social values and the ability to make sound choices while developing a sensitivity to the environment.
- Skills. Help 4-H'ers acquire the skills for solving environmental problems and properly use the outdoors for recreational pursuits.

Project Unit I: Conducting Hikes and Field Trips

Activity: Information about hikes and field trips

This activity's learning objectives are to provide fun and adventure, to practice group safety and cooperation, to teach responsibility to members, and to observe wildlife, trees, plants, and rocks.

Hiking with 4-H'ers can be challenging and rewarding. This section can help you think of the variables to consider for a safe, enjoyable experience.

Before you leave

- 1. Try to prehike the area to determine its features, whether the group can handle it, and what kinds of things to explore while on the hike.
- 2. Consider your budget, transportation, time, weather, terrain, altitude, scenery, available water, and need for map and compass.
- 3. Obtain information on the area from local park and recreation districts, National Wildlife Refuges, private landowners, national forests, state parks, or the Bureau of Land Management. Obtain U.S. Geological Survey maps from local outdoor equipment stores.
- 4. Select a hiking site based on your group. If the group is young, you should have something specific in mind. If you have an experienced group, you may wish to have alternatives. Let a committee make the decision. Make sure you have a planned destination. A previously set goal is an important motivation and allows everyone to feel successful.
- 5. Notify parents of your destination. If the hike is in a National Forest Service District, notify the service personnel.
 - 6. Obtain insurance by calling your county Extension office.

Clothing

Dress for the season, changing weather conditions, and elevation. Urge the group to use a layering system, i.e., T-shirt, long-sleeved shirt, sweater, windbreaker, and hat. Use raingear, if necessary. Remove and add layers according to need. Clothing should be loose and comfortable. In winter, wool is the best material for warmth even when wet.

Footwear

Feet are your transportation, so footwear is an important item. If the hike is no more than eight miles and the terrain is smooth, sneakers in good condition are acceptable. If the hike is in rough terrain or the 4-H'ers are wearing backpacks, they should wear hiking boots to support the ankles. These boots should be broken-in before the hike. Be sure members wear tube-type socks with boots and sneakers.

Suggested equipment

What equipment you carry depends on the terrain, length of hike, and weather conditions. It is best to be prepared for the unexpected.

- Map (if trails are not well marked)
- Compass
- One canteen of water per person
- Food
- Knife
- Toilet paper, small plastic shovel
- Matches (in a match safe)
- · Small flashlight
- First aid kit
- Safety pins for a variety of uses
- Field notebook (other nature books)
- · Change for an emergency phone call
- Daypack (to store extra clothing and lunches)
- · Optional items including camera and binoculars.

Hiking foods

Food should be light, easy to carry, and not require cooking. It is best to eat a series of high energy snacks and a light lunch.

Snacks include dried fruit, gorp (dried fruit, granola, candy, nuts), carrots, fruit, beef jerky, candy and cookies.

Lunch suggestions include peanut butter and jelly or honey, cheese, sausage, and crackers. Hot soup, hot chocolate, hot tea, and honey are good, if the weather is cold.

Remember that rigorous activities require more carbohydrates. Let a committee work on the menus while you assist them. Be sure to carry out all trash.

Hiking procedures

Front and back leaders. Select a front and back leader. Vary these during the trip. The front leader is responsible for finding the way, observing dangers and changes in the trail, setting the pace, and finding rest areas. The front leader should set a pace that is as fast as the slowest person in the group. The slowest person should be immediately behind the leader. The back leader follows the ranks, makes sure the group stays together, and stops if there are problems.

Pacing. The pace should vary with the altitude, condition of the group, terrain, slope, and trail. Both leaders should watch for fatigue, hot spots leading to blisters on feet, and use of clothing required for body heat generated while hiking. (It is better to be cool on the trail than overdressed and perspiring.)

Rest stops are important in the success of a hike. A good method is to set a steady pace for up to 50 minutes and then rest for 5 minutes. If the group is exploring along the way, shorten the hike so muscles do not tighten.

Stragglers. Children who have problems keeping up with the group are a special consideration. Place them in front and talk to them while hiking.

Activity: Outdoor manners

Members are able to identify and practice appropriate manners while enjoying the outdoors. Think about how you can help members develop their own code of outdoor manners. Discuss the effects human actions can have on the outdoors by showing a film or reading a story about behavior in the forest or public parks. Make a chart and have members list their ideas on recommended practices. The club may want to adopt a code of outdoor manners like the one below.

Our Code of Outdoor Manners

4-H Club

- 1. Be careful not to litter. Pick up litter left by others.
- 2. Use trash cans.
- 3. Respect wildlife.
- 4. Be careful with fire.
- 5. Stay on trails.
- 6. Avoid cutting green trees.
- 7. Dispose of body wastes.

Think about how you can help members minimize their impact. When you're hiking, remind members not to litter, use no-trace campfires, respect wildlife homes, use only seasoned wood, and dispose of body wastes. Be sure they do not harass animals, take shortcuts off trails, or throw rocks in streams. They should always close fences behind them.

Outdoor safety

Safety is the most important concern. As a 4-H leader you are responsible for the safety of everyone in your group.

What you should know:

- 1. Each member's physical capabilities, judgment, and ability to cooperate and follow directions.
- 2. Basic principles of first aid and its application; carry a first aid kit with you.
- 3. The hiking area.
- 4. Approximate group pace, hiking distance, and time.
- 5. What to do in an emergency.
- Basic principles for use of outdoor clothing in various weather conditions.
- How to recognize and safely avoid or negotiate physical/ climatic hazards.
- 8. How to control and pace a group.
- 9. How to read a map and use a compass.
- What to do if you have a lost member or the group gets lost.

What will help:

- 1. Initiate games.
- Take an American Red Cross first aid course; know contents of field first aid kit.
- 3. Scout area ahead of time.
- 4. Start with short hikes until you know more about the group.
- Discuss an emergency plan with your group. Test by role playing an accident where group must use the emergency plan.
- 6. Visit an outdoor equipment store with your group. Examine appropriate clothing and remove for weather and terrain conditions. What is climate control while hiking? What are ways to dress for hiking without expensive clothing?
- Check out local weather and snow conditions prior to outing. Read about procedures on taking groups across steep slopes. Have a plan for dealing with lightning storms.
- Place slowest individual at front; develop a small group "buddy system."
- 9. Practice with a game or pretest before the hike.
- 10. Have group make up a lost hiker exercise, role playing what could be done.

Activity: Keep a field notebook

A 4-H Outdoor Project field notebook records observations, notes your feelings as you interact with groups and nature, and itemizes what you learn for use in talks, presentations, and exhibits during the year.

The outdoor investigation techniques of this leader guide lists examples of collected and recorded data. You may want your members to include these in notebooks. Keep the notebooks simple, using material that strikes interest during field trips. The book should be small enough to carry in a pocket and have an attached pen or pencil.

How to take notes in the field

- 1. Take all notes on the spot. It is difficult to recall details later.
 - 2. Use pictures and sketches.
- 3. Cultivate the practice of observation. Learn to see things not ordinarily noticed. Write what you see, avoiding interpretations based on inadequate information.
- 4. Be sure all observations are accurate. Identify all species carefully. If necessary, collect specimens for later identification.
- 5. After you complete the field trip, review what you have recorded. You might wish to share this with the group.

Activity: Things to do on hikes

Rain Drops. Place everyone in a different spot and tell them they are raindrops. Have each person follow the course they think they would go. Talk about infiltration and run-off, how humans affect the process, and steps to improve damaging run-off. Do this in various habitats: forest, field, meadow, hilltop.

Follow A Sunbeam. If you are in a woods, follow a beam of light to where it hits the ground. What grows there? Talk about the effects of shading, competition, rainfall, coolness of the forest, and soil moisture. Stand in the sunbeam and note the temperature difference there and in other places. Is there a difference between the ground and five feet up? If possible, move into a meadow and notice the changes.

Colors and Frame a Picture. Have the group count (to themselves) all the colors they see in one minute. What color is predominant? Why? Talk about colors and their causes. Have them frame a picture with their fingers as an artist might paint it or a photographer would snap it.

Space People. A variation of "Discover and Describe" offers a different perspective. Explain that the group is a team of scientists from another planet. They have just landed and are preparing to leave their ship. Have them explore the region for life and to determine whether they would like to set up residency on the planet Earth. If so, how would they manage the area for the future? What style of government would they have? How will they eat? What dangers do they need to consider? (Temperature, weather, animals, people.)

Trust Hike. Blindfold the entire club and have them hold on to one another. A leader will take them on a walk through various places (from sunshine to shade, under a fallen tree, across a shallow stream, in grass, on a path). It is best to have several unblindfolded leaders at different points along the line to watch for any trouble. Instruct the group that they must all help one another.

For variation, pretend you are all trappers as you follow the tracks.

Watch the sunrise. Get up before dawn and hike to a good place to see a sunrise. Be quiet and watch, listen, and smell. Walk quietly back to camp and try to observe wildlife. Celebrate the sunrise with a big breakfast.

Do the same at SUNSET.

Insect Search. The small, plastic containers in which restaurant taco sauce or catsup are sometimes served are the best "bug boxes" if the top is still usable. Give each hiker a clear box of some sort (baby food jars also work well) and set them loose on the hike to search for bugs of all varieties. Observe the bugs as a group in the boxes and then let them go free.

Singing Hike. If the path is wide and everyone can join in close, have a silly songs contest. One person begins by singing a song and ends anywhere. Whatever word was last must be sung in another song, again ending with some particular word. Whoever can think of a song with the needed word sings it. Have everyone join in—the louder and noisier, the better!

That-A-Way. Allow each person in the group to be the leader for about 10 to 15 minutes. The leader gets to decide which direction to head. He or she yells, "That-a-way!" and treks off. After everyone has been a leader, get out the compass and find out how to get back.

Rain Hike. Put on the ponchos and raincoats and become a part of the outdoors when it rains. You will be amazed at how enjoyable this is.

Moonlight Hike. Turn out the flashlights and watch and listen for wildlife. How is the outdoors different at night? This activity can provide new perspectives and reduce fear of the dark. This is fun to do on the night of a full moon to celebrate the moon's glow.

Star Hike. Walk to the top of an open hill on a clear evening to study the stars and their legends. Take your sleeping bags and spend the night.

Sealed Orders Search. The group must find their way from clues. A new clue is found or given to them when they reach the previously designated spot. Use riddles, poems, or a code to heighten the excitement. It is best to do this in small groups. If you have a large number of players, stagger teams or send search groups in different directions.

Anthropologists. Explain to the groups that they are anthropologists from the year 2100. They have come to learn what they can about the civilization which inhabited the area in the year ____ (present year). Have them examine litter, marking on trees and rocks, etc. to learn what they can about the environment and the people who lived there. This is a good adventure to do in public areas where people litter. Collect the litter.

What Is It? Rotate leaders and have them stop every time they see anything pretty, interesting, or unusual. Talk about the object and learn about how it functions and why. Then give the object a name that seems appropriate. If it is edible, let everyone sample a bite. (Bring the edible plants book along if you intend to do this!) This game can add diversity to a long hike.

Signs of Animals. Have the group see how many signs of animals, birds, and insects they can find. Go slow and be observant of: tracks, scat, gnaw marks on trees, brushpiles, alternations on leaves, possible homes, dead animals or birds, broken branches.

Gone Birdin'. Get out the binoculars and bird books and go on a bird hunt. Early morning is best, but any time of the day will do.

Exploration. Hike to an area and explore it.

Photography Hike. Work on photography skills and understanding as you hike a trail or journey cross-country.

Discover and Describe. Give each child an egg carton to find one dozen discoveries for sections of the carton. Explain the importance of living things and why we don't injure or kill anything. Tell them that what they find is a secret and to not let the others see. When they are done, pair them up and have partners sit back to back. One holds an object and with closed eyes describes it to the other, without saying the name. Example: "It smells like...," "It feels like...," "It is eaten by ...," "It came from ...," "It is shaped like...." When the game is over, return the objects.

Winter Hike. Bundle up to explore a winter wonderland. Look for signs of animals or birds. Listen to winter sounds. Go while the snow is falling if you can! End with a snowball fight and hot chocolate.

Other Sources for Ideas and Information

Now you should have a few ideas on what you can do with your group in the outdoors. For more suggestions and information, remember to check the large outdoor manual at your county Extension office. Also, don't forget that your library contains a wealth of materials you can use to plan outdoor activities. Look in the subject index guides under Birds, Trees, Plants, Wilderness, or whatever topic you're interested in. Also check the periodicals section for relevant magazine articles.

For planning field trips, localized publications are frequently more helpful than nationally distributed books in giving you the specifics you need about routes and weather conditions. Outdoor stores usually have a good supply of regional publications on hand if you can't find the information you need at your library.

The Oregon State University Extension Service provides education and information based on timely research to help Oregonians solve problems and develop skills related to youth, family, community, farm, forest, energy, and marine resources.

Extension's 4-H youth program assists young people, their families, and adult volunteers to become productive and self-directing by developing their practical skills and knowledge. Professionals and volunteers together provide educational projects and activities in animal science, plant science, home economics, communications, cultural and performing arts, natural science, and mechanical science.

This publication was coordinated by John R. Abell, former Extension specialist, 4-H and youth, Oregon State University. The material was developed through the major contributions of Oregon 4-H Natural Science leaders, the U.S. Forest Service, and the Oregon 4-H Natural Sciences Development Committee.

Extension Service, Oregon State University, Corvallis, O. E. Smith, acting director. This publication was produced and distributed in furtherance of the Acts of Congress of May 8 and June 30, 1914. Extension work is a cooperative program of Oregon State University, the U. S. Department of Agriculture, and Oregon counties.

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