

Oregon State University Extension Service

The Prompter/Rancher Review

A Baker, Wallowa and Union County Farm and Ranch Newsletter



OCTOBER 2004



CALENDAR OF EVENTS

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OSU
Oregon State
UNIVERSITY
Extension Service

(** Pesticide Applicator Re-Certification and/or CCA credits requested and/or available.)

- Oct. 11 OSCS seedling grass seed field inspections begin. Union County OSCS Sampling & Tagging work schedule changes to 3 days/week (M-W-F).
- Oct. 19-20 **Oregon Society of Weed Science Annual Meeting. Hood River, OR.
- Oct. 20-22 **OR Vegetation Management Annual Conference. PCC. Pendleton OR
Contact : 541-506-2650
- Oct. 25 OR Farm Worker Housing Development Grant/Loan applications due date.
- Oct. 26 Union Co. Farmer-Merchant Banquet. La Grande Elks. Contact: Union County Chamber of Commerce at 963-8588 for tickets.
- Nov. 2 **OACFA Pesticide Safety and Stewardship Seminar. Red Lion Hotel, Pendleton, OR. Contact: OACFA at 503-370-7024.
- Nov. 3-5 **Washington State Annual Weed Conference. Yakima Convention Center.
- Nov. 4-6 Oregon Cattlemen's Association State Meeting. Redmond at Eagle Crest.
- Nov. 13 Farm Direct Marketing Workshop. La Grande, OR.
- Nov. 18 Union County Annual Farm Bureau Meeting. Guest Speaker: Kelvin Koong, Interim Dean and Director of OSU Extension Service. Contact: Gene Hardy.
- Nov. 18 **Grass Seed Cropping Systems for a Sustainable Agriculture Annual Meeting. Moscow, ID. Call Kathy Szabo 509-335-4563 or Tom Chastain 541-737-5889.
- Nov. 30 **CORE Private Pesticide Applicator Video Training – Union Co. Fee: free.
- Dec. 1-3 **Hermiston Farm Fair. Hermiston, OR.
- Dec. 2 **CORE Private Pesticide Applicator Video Training – Baker Co. Fee: free.
- Dec. 7 **CORE Private Pesticide Applicator Video Training – Wallowa Co. Fee: free.
- Dec. 5-8 **Oregon Wheat Industry Annual Conference. Portland, OR. (Embassy Suites)
- Dec. 6-7 **Oregon Seed Growers League Annual Meeting. Portland, OR. (Jantzen Beach)
- Dec. 7-9 Oregon Farm Bureau State Meeting. Eugene.
- Jan. 11-13 Spokane Ag Show. Spokane, WA.
- Jan. 13-14 PNW Direct Seed and Cropping Systems Conference. Spokane, WA.

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CALENDAR OF EVENTS, continued.....

Jan. 21	**OSU Field Crops Winter Weed Workshop – NE Oregon. Ag Service Center Conference Room, Island City.
Feb. 1-2	**Integrated Pest and Nutrient Management Options: Practices and Tools to Protect Water Quality Workshop. Boise, ID. Contact: 541-737-2683.
Feb. 14	**Private Pesticide Applicator Training and Examination Preparation – Union Co. Open to any licensed pesticide applicators. Fee: free.
Feb. 15	**Private Pesticide Applicator Training and Examination Preparation – Baker Co. Open to any licensed pesticide applicators. Fee: free.
Feb. 16	**Private Pesticide Applicator Training and Examination Preparation – Wallowa Co. Open to any licensed pesticide applicators. Fee: free.
Feb. 18	Pesticide Applicator Exam Session – Ag. Service Center Conf. Room, Island City.
Feb. 15-16	**Integrated Pest and Nutrient Management Options: Practices and Tools to Protect Water Quality Workshop. Pasco, WA.
May 16-20	Columbia Basin Soil Quality Tours with Dr. Jill Clapperton. More details to follow, however, start planning now to attend this event!

WORKSHOPS/SEMINARS

Farm Direct Marketing Workshop

Oregon State University Extension Service and Oregon Rural Action are hosting a one day workshop for producers, community members, vendors, market managers, and anyone interested in marketing of fruit, produce, meat, and prepared foods. The event will be held **Saturday, November 13th** in La Grande at the Riveria Activities Center, 2609 Second, and will run from 9 a.m. until 4:30 p.m. Lunch will be included in the \$15 registration fee. Josh Slotnick, University of Montana, is the keynote speaker who has experience with small-scale sustainable agriculture systems.

Separate workshops targeted for market managers and producer/vendors will be held throughout the day. Sessions for **producers/vendors** will cover topics such as: introduction to farm direct marketing, overview of farmer's markets/subscription farms/restaurant-direct sales, extending the market season and product diversification, plain talk about soil chemistry, and produce/meat marketing opportunities for small-scale producers. Sessions for **market managers** will cover topics such as: market management issues, market assessment and participant data collection techniques, regulation of ready-to-eat food sales in markets, and others.

Pre-registration is not required, however, paid registrations postmarked by 11/5/04 will receive a copy of *Western Profiles of Innovative Agricultural Marketing: Examples from Direct Farm Marketing and Agri-Tourism Enterprises*, a \$10 value. Make checks payable to Oregon Rural Action. Registration fees may be sent to Oregon Rural Action, Box 1231, La Grande, OR 97850. For more information, contact Linda Brewer, OSU Extension Service-Corvallis, at 541-737-1408 or Jane Sabin-Davis, O.R.A., at 541-975-2411.

WORKSHOPS/SEMINARS, Con't.....

2005 OSU Field Crops Winter Weed Workshop



The OSU Weed Science Research and Extension Program will hold an interactive, hands-on workshop geared towards weed management in field crops on January 21, 2005. Growers, consultants, and ag-chemical professionals in Union, Baker, and Wallowa Co. are encouraged to attend. Seating will be limited to 40 participants and a small fee will be charged. *Pre-registration and workshop details will be posted in the*

Nov/Dec issue of the Prompter-Rancher newsletter. Please note that pre-registration will be required by mid-January. Oregon pesticide applicator recertification and CCA credits will be available. Mark your calendars and plan on registering for this workshop!



Need General Applicator or CORE Private Pesticide Applicator Training?

Private pesticide applicators in Union, Baker, and Wallowa Counties who need CORE re-certification credit have an opportunity to participate in the following video training sessions:

- **November 30 - Union County Extension Service** office (Ag Service Center Conference Room) at 10507 North McAlister Road, Island City. 10:00 a.m. to 2:00 p.m. Call 963-1010 to pre-register.
- **December 2 - Baker County Extension Service** office at 2610 Grove Street, Baker City. 10:00 a.m. to 2:00 p.m. Call 523-6418 to pre-register.
- **December 7 - Wallowa County Extension Service** office (Clover Leaf Hall) at 668 NW 1st, Enterprise. 10:00 a.m. to 2:00 p.m. Call 426-3143 to pre-register.

Participants will receive four (4) CORE re-certification credits. General re-certification credits (4) will be awarded to individuals who have not previously participated in this video training event more than once during their 5-year re-certification period. Licensed private applicators may view the video presentation once for CORE credit (4 hours) and once for general re-certification credit (4 hours). *Any pesticide applicator license holder may attend this video presentation for general credit.*

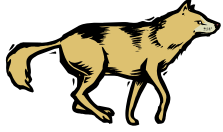
Classes Offered at Chemeketa Community College, Salem:

If interested in any of the following classes, call CCC at 503-399-5139 for more information.

- Agriculture Worker Safety. October 29. 4 OR pesticide applicator CORE/ other credits. Also qualifies for small farm exemption OAR 437-001-0057. Fee: \$22
- Ornamental Turf: Herbicide Training. October 25-26. 9 OR pesticide applicator recertification credits. Fee: \$54.
- Ornamental Turf: Insecticide/Fungicide Training. October 27-28. 9 OR pesticide applicator recertification credits. Fee: \$54.
- Forestry Pesticide Review for Forestry Category Exam. November 4. Fee: \$93.
- Forestry Vegetation Management. December 2. Fee: \$22.



NEWS AND OTHER INFORMATION



Wolf Plan Update

Oregon is moving forward developing a Wolf Conservation and Management Plan. A 14-member committee has been advising the Oregon Department of Fish and Wildlife (ODFW) on development of the draft plan. In September the wolf committee and ODFW staff presented a draft plan to the ODFW Commission. Both the draft plan and minority reports will be submitted to the Commission at their October 15th meeting. Following that meeting it is expected that the Commission will publish a draft Wolf Conservation and Management Plan. The Commission will offer a public comment period before finalizing a plan in January 2005.

What is in this plan should be of interest to all livestock producers, hunters and anyone who utilizes the outdoors. The draft plan covers the history of the wolf; biology, ecology; legal status; expected wolf distribution; wolf/livestock interactions; wolf/ungulate interactions; wolf/human interactions; management phases and the proposed allowable actions under each phase. For more info, you can contact Craig Ely at 541/963-2138.

Bull Trout Critical Habitat Update

The U.S. Fish and Wildlife Service has designated critical habitat for the Klamath River and Columbia River populations of bull trout pursuant to the Endangered Species Act. This critical habitat designation includes approximately 1,748 miles (mi) of streams and 61,235 acres (ac) of lakes and marshes.

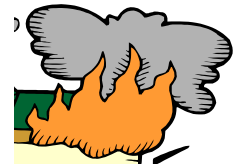
For the northeast Oregon area the miles of stream designated include: Grande Ronde River Basin 300 mi; Hells Canyon Complex 125 mi; Imnaha-Snake River Basins 87 mi; Umatilla-Walla Walla River Basins 241 mi.

Originally the US Fish and Wildlife Service proposed designating approximately 18,450 stream miles and approximately 532,700 acres of lakes and reservoirs as critical habitat for the bull trout in November 2002. The new rule on final designation provides credit for ongoing conservation and management efforts for bull trout that remove the need to designate as much area. If you would like to read the final rule you can find it on the web at http://pacific.fws.gov/bulltrout/final_colkla/pdf/btfinalrule.pdf or contact the USFWS John Young, Bull Trout Coordinator, at phone 503-231-6194.

Tool for Burning in the Fall and Spring

Need to burn a pile of leaves, ditch bank, field, etc. this fall or next spring? If so, place a quick call to the Union County Smoke Management Call-In Center to access important information prior to conducting the burn. The number is **963-4040** and easy to remember. The automated system will provide you with access to:

- General Burn Weather Information: daily weather data is used to determine burn/no-burn days (posted early each day by the La Grande Fire District).
- Direct access to your local fire district office for permits and additional burning regulations.
- Union County Field Burn Program (July 15 through September 30)
- La Grande Wood Stove Program
- Forest Slash-pile Burning
- Complaint registration



The call-in center is designed for use by all Union County residents, local fire district officials, smoke management officials, land- and woodland-owners, and others during the fall, winter, and spring seasons when the field burn season is not in effect. Bottom-line, dial **963-4040** to make sure weather conditions facilitate a day to burn (in addition to local fire district permit requirements). Doing so will help mitigate the potential for smoke impact on your neighbor or nearby communities. The goal is to avoid conducting burn events on days with poor weather conditions which prevent adequate smoke dispersal. Additional smoke management information can be accessed on-line at <http://www.union-county.org/>.

NEWS AND OTHER INFORMATION, Con't.....

Need to Get Rid of Grass Seed or Cereal Grain Straw?

During the summer and fall, the Union County Extension office receives several inquiries from individuals (landowners, contractors, agency representatives, etc.) wanting to know where they can obtain weed-free straw. The most common request is for certified weed-free straw. If you have any weed-free straw (either certified weed-free or straw from certified seed production fields) please call our office and your information will be posted on the "Straw Board". The "Straw Board" is a public listing of straw suppliers in the area and posts the following information: name, contact information, amount/type of straw available,, bale size and whether or not the straw is certified weed free or from certified seed production fields. At this time, Wallowa County runs the only weed-free certification program in Eastern OR.

Century Farm and Ranch Additions Announced

Oregon families from 18 farms and ranches received formal status of Oregon Century Farm or Oregon Century Ranch during an awards ceremony held in early September in the Jackman-Long Building on the Oregon State Fairgrounds in Salem. New Century Ranch honorees include: Tom and Dorothy Craig's Ranch, Union Co.; and Defrees Ranch, Baker Co. New Century Farm honorees include: Speckhart Farm, Union Co.; Parsons Family Farm, Union Co.; and the Lorena Koopman Farm, Baker Co. Information about the Century Farm and Ranch program can be obtained on-line at <http://www.ohs.org>.



USFS Weed Environmental Impact Statement available for review

The USFS has been working on an Environmental Impact Statement (EIS) that will give the Forest Service more tools to control weeds. This project is for the Pacific Northwest Region of the Forest Service (includes all of OR & WA.).

The preferred alternative is characterized in the EIS by the following statements:

- Adaptive management, with increased emphasis on prevention, updated treatment tools, restoration and long-term site management goals.
- Emphasizes early detection and requires inventories be consistent with nationally accepted data structures.
- Requires the use of a suite of invasive plant prevention standards.
- Treatment methods include ten herbicides, but not 2,4-D.
- Favors the use of native plants for restoration, allows use of non-invasive non-native plants in certain situations.

This programmatic EIS includes an expanded list of herbicides (10) that can be used and an expanded list of application methods including aerial spraying. The public comment period is open through November 24, 2004.

This is a very important action by the USFS to be able to adequately fight invasive weeds. To learn more about the proposed action contact Eugene Skrine at 503-808-2685 or electronically at r6_IPEIS@fs.fed.us. It can also be found on the web @ <http://www.fs.fed.us/r6/invasiveplant-eis/>.

NEWS AND OTHER INFORMATION, Con't.....

Release of 'ORCF-102', A Clearfield Soft White Winter Wheat

The Oregon Agricultural Experiment Station announces the release of 'ORCF-102', a new CLEARFIELD herbicide tolerant soft white winter wheat. ORCF-102 was developed by Jim Peterson, OSU Department of Crop and Soil Science Wheat Breeding Program. The variety name was chosen to recognize the Oregon origin (OR), the CLEARFIELD tolerance (CF), and that it is the second in a possible series of varieties that carry a single gene for tolerance to the herbicide Beyond™. ORCF-102 was tested under the experimental line designation OR2010007 (see attached 2004 WEYT data).

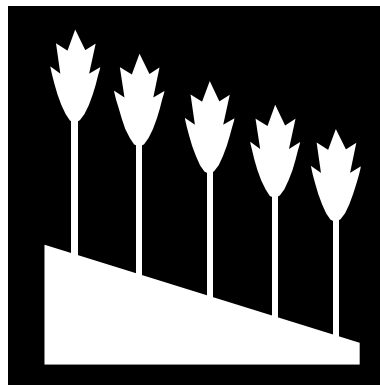
ORCF-102 is being released due to its utility for grassy weed control, adaptation to wheat growing areas of the Pacific Northwest, improved disease resistance relative to available CLEARFIELD varieties, and acceptable quality for the soft white market class. When used in combination with Beyond™ at the labeled rate, the CLEARFIELD technology provides growers with an effective new tool for control or suppression of grassy weeds such as goatgrass, wild rye, downy brome, Italian ryegrass, wild oat, and volunteer cereals.

ORCF-102 is derived from the three-way cross 'Madsen'/'CV9804'/'Weatherford'. The primary advantage of ORCF-102, as compared with currently released CLEARFIELD varieties ORCF-101 and ID 587 is improved disease tolerance. In inoculated trials conducted in 2002 and 2003, ORCF-102 has been shown to carry the VPM resistance to Strawbreaker footrot, with disease response similar to its parents Madsen and Weatherford. In contrast, ORCF-101 and ID 587 have been found susceptible to Strawbreaker footrot. ORCF-102 has shown tolerance to Cephalosporium stripe similar to that of Weatherford, with disease severity ratings significantly lower than those for Stephens, Tubbs, or ORCF-101. Response to crown rot has been less clear.

Tested with ORCF-101 and ID 587 in 19 site by

years of trials, ORCF-102 had an average yield of 95.8 bu/a compared with 90.8 bu/a for ORCF-101 and 90.4 for ID 587. In the 2003 Oregon breeding trials, noted for late-season heat stress and drought that affected many test sites, ORCF-102 had grain yields that were superior to Stephens, Madsen and the CLEARFIELD varieties Idaho 587, Clearfirst, and ORCF-101. ORCF-102 also had superior average grain test weight under the stress conditions that impacted the 2002 and 2003 crop years. In the 2004 Oregon Winter Elite Yield Trial, ORCF-102 had yields comparable to Tubbs and again higher than ORCF-101, ID 587, and Clearfirst. Averaged over 26 site by years of field trials, test weight of ORCF-102 was 58.8 lb/bu compared with 58.0 lb/bu for Stephens and 58.4 for Madsen. In 2003, ORCF-102 has test weights that averaged more than 1 lb/bu higher than those for Stephens, Madsen, ORCF-101, and Idaho 587. ORCF-102 is approximately 2 days later in heading date than Stephens, and 0.5 to 1 day earlier heading as compared Madsen. More complete data from 2004 and previous years can be accessed at <http://cropandsoil.oregonstate.edu/wheat/>.

Limited amounts (approximately 32,000 lbs) of foundation seed were distributed to 14 licensed OSU CLEARFIELD Seed Associates this fall. Commercial planting stocks should be available next fall. Growers will need to have read and signed a BASF Stewardship Agreement prior to purchase or planting of any CLEARFIELD wheat variety.



NEWS AND OTHER INFORMATION, Con't.....

Growing CLEARFIELD* Wheat This Year?

Pacific Northwest wheat growers have a new tool for weed control in the form of CLEARFIELD wheat varieties that are resistant to the herbicide Beyond™ (active ingredient imazamox). When used in combination, the CLEARFIELD production system will control several weeds that have been difficult to manage in wheat. However, producers must remember the following key points:

Beyond does not control all major weeds.

Beyond is effective on jointed goatgrass and provides control of many other grasses and some broadleaf weeds. However, many situations will require an additional herbicide to achieve satisfactory weed control.

Use Beyond only on CLEARFIELD wheat varieties.

Non-CLEARFIELD wheat varieties will be severely injured or killed. Avoid drift, as even small amounts of herbicide can cause injury to non-resistant varieties.

CLEARFIELD wheat varieties are resistant to Beyond, not immune.

Apply Beyond only to a healthy, actively growing wheat crop. While CLEARFIELD varieties carry the herbicide resistance gene, crop injury can occur if the crop is stressed or unable to actively metabolize the herbicide due to cold, cloudy conditions. Minimize spray overlaps.

Use the recommended rate of Beyond.

Application of herbicide at rates higher than recommended can severely injure CLEARFIELD wheat varieties. Herbicide rates or water carrier rates lower than those recommended can result in poor weed control and select for herbicide resistant weeds.

Do not use the CLEARFIELD system more frequently than two out of every four wheat crops.

A more cautious approach of use once every third wheat crop may further contribute to the goal of preventing or delaying the development of herbicide resistant weeds. Use of herbicides with different modes of action over crops and years is a critical part of an effective resistance management strategy.

Be aware of cropping restrictions after use of Beyond.

Some rotational crops, including barley and oats, are very sensitive to Beyond or imidazolinone herbicide residues.

Read and understand the BASF Grower Stewardship Agreement.

You must read and sign the Stewardship Agreement prior to purchase or planting of any CLEARFIELD wheat variety.

It is illegal to save your own seed of any CLEARFIELD wheat variety.

You must purchase certified seed stocks each year to use the CLEARFIELD technology or purchase Beyond herbicide.

Beyond must be applied to CLEARFIELD varieties being grown for seed.

The Beyond application will select for CLEARFIELD resistant plants and reduces the risk of contamination from volunteer or non-resistant wheat.

CLEARFIELD wheat varieties are not GMOs.

No foreign DNA was inserted into the wheat plant during development of CLEARFIELD wheat varieties. CLEARFIELD varieties are not genetically modified organisms (GMOs). There are no restrictions on production or marketing of grain from any CLEARFIELD wheat variety.

CLEARFIELD is a registered trademark of BASF. Beyond is a trademark of BASF.

Prepared by Oregon State University scientists Russ Karow, Dan Ball, Jed Colquhoun, Carol Mallory-Smith and Jim Peterson – September 2004

NEWS AND OTHER INFORMATION, Con't.....



Funds Now Available for Farm Worker Housing

Oregon Housing and Community Services (OHCS) announce a new funding opportunity for farm worker housing. The agency's Farm Worker Housing Development Account (FWhDA) currently has \$150,000 available to provide grants or loans to construct, acquire, and/or rehabilitate on-the-farm housing for low- or very low-income farm workers.

Eligible applicants include for-profit businesses, local government entities, housing authorities, non-profit agencies/corporations, and private individuals/corporations, including agricultural growers or farm labor contractors. Applications will be accepted until October 25, 2004. For more info on application requirements and conditions of funding, contact Lynn Partin, OHCS representative, at (503) 963-2281 or visit the web site <http://www.ohcs.oregon.gov>.

2004 OACFA Annual Safety and Stewardship Seminar

Seminar will be held at the Pendleton Red Lion Hotel on November 2 from 8 a.m. until 5 p.m (registration starts at 7 a.m.). Pre-registration is recommended. Registration fees are \$60 for OACFA members and \$85 for non-OACFA members. 8 Oregon pesticide applicator recertification credits (4 CORE and 4 other or if you don't need CORE credits, you receive 8 other credits) are available. For more information, contact OACFA at (503) 370-7024. Topics will include:

- Pesticide Toxicology & Environmental Stewardship-Allan Hovis, Bayer Crop Science.
- IPM and New Pests-Glenn Fisher, OSU Extension Entomology Specialist.
- Factors that affect Herbicide Persistence-Jed Colquhoun, OSU Extension Weed Specialist.
- Pesticide Use and Groundwater Protection-Gail Glick Andrews, OSU Bioengineering Dept.
- Insect Resistance Management & Technical Aspects of Regulation-Martin Lemon, Monsanto Ag Products.
- Sprayer Calibration & Drift Control-Susan Aldrich-Markham, OSU Ext., and Tony Chadwick, TeeJet Mid-Tech.
- How to Enjoy Laws and Regulations-Janet Fults, Oregon Dept. of Ag.
- Pesticide Container Management-Bob Schroeder, Western Farm Service
- Invader Pests and Proper Control-Wes Lydell, Guaranteed Pest Control.
- Pesticide Information Web Resources-Terry Miller, National Pesticide Information Center

Web Sites of Interest

WeedMapper – A web-based spatially-referenced database of noxious weeds that anyone may query and helps users easily locate weeds that are proximate to their land. The database includes locations of noxious weeds throughout Oregon as collected by responsible federal, state, and local agencies.

Electronic maps are viewable at the state, county, township, or section level. <http://www.weedmapper.org>.

West Nile Virus – The Oregon Dept. of Human Services has established a web site for the most current West Nile Virus information. <http://www.dhs.state.or.us/publichealth/acd/w Nile/index.cfm>.

Wildfire in Oregon – The Oregon State University Extension Service has developed a new website, "Wildfire in Oregon", to provide up-to-date information about wildfire prevention, news about current fires, and suggestions for recovery after fire. <http://extension.oregonstate.edu/emergency/wildfire.php>

NEWS AND OTHER INFORMATION, Con't.....

Household Hazardous Waste Disposal

The Confederated Tribes of the Umatilla operates a fee-based, year round household hazardous waste collection program which is open to the public. The list of acceptable materials is complex but the program will accept, for example, materials such as household chemicals, paint, batteries, solvents, aerosols, etc. For detailed information and fees, contact Teddi Bronson at (541)276-4040.

Pesticide Container Recycle Day



Tuesday, October 26, 2004

9 AM to 1 PM

Location: Pendleton Grain Growers
McKennon Station, Pendleton

The Recycle Day will accept plastic containers that held pesticides, micro-nutrients, adjuvants and cleaners. **Container recycling is provided at no charge.**

- Rinse containers until no residue remains
- Drain so that they are dry inside and out
- Remove slip-on labels and label booklets
- Remove hard plastic lids, place in separate container for recycling
- Remove most of the foil seal

Questions: Call OSU Extension Service 541-278-5403 or 1-800-871-1313

Sponsored by: OSU Extension Service & Pendleton Grain Growers in cooperation with Northwest Ag Plastics, Inc.

NEWS AND OTHER INFORMATION, Con't.....

USFS Forest Plan Update

The Malheur, Umatilla, and Wallowa-Whitman National Forests are combining efforts to revise their Forest Plans. The current forest plans are near the end of their intended 15-year life and will be revised to address the substantial resource and social changes on the three forests as well as new scientific information. The three national forests have appointed a planning team to lead this effort. They have completed the first round of public meetings and are beginning a second round.

This second round of meetings will cover:

- An overview of current resource conditions and trends on the three forests.
- Review and discussion of the consolidated draft vision that participants created in the Round One workshops.
- Discussion of aspects of resource management in the current forest plans that needs to change.

If you are involved in any way with the national forests you should become engaged in this process. The process is expected to take 4 years to complete, however, if you have ever been involved in a process like this, if you want to be heard get involved early.

For more information on the planning process you can make contact at one of the following locations:

Blue Mountains Forest Plan Revision Team
1550 Dewey Avenue
P.O. Box 907
Baker City, Oregon 97814

Tami Paulsen, Public Affairs Specialist
541-523-1332
Dave Schmitt, Team Leader
541-523-1248

Website: www.fs.fed.us/r6/uma/blue_mtn_planrevision/
E-mail: blue_mtn_planrevision@fs.fed.us

Community meeting dates:

Enterprise, OR
October 19, 6:00-9:00 p.m.

La Grande, OR
October 20, 6:00-9:00 p.m.

Baker City, OR
October 21, 6:00-9:00 p.m.



2004 Oregon Society of Weed Science Annual Meeting

The annual OSWS meeting will be held at the Hood River Inn, Hood River, OR on October 19-20, 2004. Pre-registration fees are \$75 (includes membership dues) due on October 14. Registration at the meeting is \$90. Ten Oregon pesticide applicator recertification credits. CCA-CEU available. Pre-registration forms are available at the Union Co. Extension office. Topics include:

- Rattail and Alkali grass Biology, Modeling Potential Weed Distribution, and Escaped Ornamentals and Other Newcomers
- Factors that affect Herbicide Soil Persistence, Visual Symptoms of Herbicide Injury, and Glyphosate Resistant Weeds.
- Seed Drift in Soil, Mechanical Weed Control Options, and Weed Seed Identification
- Agriculture and the Environment: Lawsuit Updates, Aquatic Weed Control Update, and Forestry Weed Control Update, and Forestry Weed Control Update

DRIFT MANAGEMENT: PRACTICAL METHODS TO INCREASE SPRAY PARTICLE SIZE

Jed Colquhoun, Extension Weed Specialist

INTRODUCTION

Herbicide spray drift is the movement of herbicide from the target area to areas where the herbicide application was not intended. Herbicide drift is caused by the movement of spray droplets.

Several factors contribute to the potential for the drift of herbicide spray droplets. Drift management strategies often focus on weather conditions as the primary culprit in herbicide movement. However, the influence of weather conditions, such as wind, temperature, and humidity, is based on spray droplet size. The larger the spray droplet, the lower the risk of herbicide drift.

HOW DOES SPRAY PARTICLE SIZE RELATE TO DRIFT RISK?

Spray particle size is measured in microns (μm). One micron is 1/25,000 inch. In more relative terms, a toothbrush bristle diameter is about 300 microns.

<i>sizes items.</i>	Droplet size	
	850 μm	Paper clip
	420 μm	Staple
	300 μm	Toothbrush bristle
	150 μm	Sewing thread
	100 μm	Human hair

Table 1. Droplet relative to common

The goal is to include spray particles that are small

Droplet size		Time required to fall 10 feet	Lateral movement in 3 mph wind
5 μm	Fog	66 minutes	3 miles
20	Very fine	4.2 minutes	1,100 feet
240	Medium	6 seconds	28 feet
400	Coarse	2 seconds	8.5 feet
1,000	Very coarse	1 second	4.7 feet

Source: Akesson and Yates, 1964.

enough to result in adequate coverage and good pest control, but large enough that the risk of drift is reduced. Small particles have less mass than large particles, and therefore are more prone to travel long distances (Table 2).

Table 2. Lateral particle movement relative to spray droplet size.

NEWS AND OTHER INFORMATION, Con't.....

Classification	Size (µm)	Application
Very fine	<119	Insecticide +
Fine	119-126	Fungicide
Medium	217-353	Contact herbicides
Coarse	354-464	Translocated herbicides
Very Coarse	>464	Soil-applied herbicides

WHAT SIZE DROPLET DO I WANT TO SPRAY?

Pesticide type

The desired spray droplet size is dependent on the type of pesticide (Table 3). In general, insecticides and fungicides require thorough coverage for maximum effectiveness, and therefore require fine or very fine droplets. Soil-applied pre-emergence herbicides are often dispersed in soil by mechanical incorporation or precipitation, so coarse droplets (greater than 450 microns) can reduce drift risk while insuring uniform control. Spray droplet size has the greatest influence on the control effectiveness of post-emergence herbicides.

Table 3. Droplet size classification.

Contact vs. translocated postemergence herbicides

Translocated herbicides that are readily moved throughout the plant can be applied with larger droplet size, around 350-450 microns. Examples of such herbicides include Roundup, 2,4-D, Stinger, and Tordon. The contact herbicides, however, are not translocated well through the plant and require thorough coverage for effective control. Examples include Gramoxone Extra, Buctril, and Rely. Droplet size for contact herbicides should range from 200-350 microns. As a general rule for herbicides, spray droplet size should be greater than 200 microns.

HOW CAN I CHANGE PARTICLE SIZE?

Spray application pressure

Spray particle size increases as spray pressure decreases. The spray solution emerges from the nozzle in a sheet, and droplets form at the edge of the sheet. As spray pressure increases, the sheet becomes thinner, and breaks into smaller droplets than from a sheet produced at lower pressure. Recommended spray pressures vary by nozzle type. Use of a nozzle outside of the recommended range can distort the pattern, resulting in poor coverage and pest control.

Spray nozzle orifice size

Larger orifice nozzles with high delivery rates produce a thicker sheet of spray solution and larger droplets than smaller nozzles.

Drift reduction additives

Several drift reduction additives have hit the market in recent years, such as Target and Border Xtra. However, additional research should be conducted to validate their potential to reduce drift.

Orchard Monitoring Manual for Pests. Natural Enemies, and Diseases of Apple, Pear, and Cherry: An Illustrated Guide for Washington State. The manual is available in Spanish or English from <http://www.agcenter.org/progpest.html>

EM 8876 Vegetative Filter Strips Near Surface Water in the PNW. \$1.50

EM 8835 The Organic Farmer's Guide to OSU. Revised June 2004. \$2.50.

SR 1055 Malheur Experiment Station Annual Report – 2003. No charge. Available on-line and MFS (541-889-2174).

SR 1054 2004 Columbia Basin Agricultural Research Center Annual Report. No charge. Available on-line, Union County Extension Office, and CBARC (541-278-4186).

SR 1053 Central Oregon Agricultural Research Center 2003 Annual Report. No charge. Available on-line and at COARC (541-475-7107).

SR 1052 Range Field Day Report 2004: Current Forage and Livestock Production Research. No charge. Available on-line and at Eastern Oregon Agricultural Research Center, Union.

PNW 572 Management Strategies for Preventing Herbicide-Resistant Grass Weeds in Clearfield Wheat Systems. \$2.00.

(available via the internet at <http://esc.oregonstate.edu>, your local OSU Extension office, or as indicated below.)

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