Tractor Safety Training for Youth

The OSU/Jefferson County Extension Service is taking reservations for its Central Oregon Farm and Tractor Safety Training and Certification Course, to be conducted in Madras at the Madras High School Vo/Ag Classroom on June 16, 17, and 18, 2008, from 8:00 a.m. to 5:00 p.m. Class size is limited to 20 students and only for minors who will be 14 to 17 years of age during the coming agricultural season. Students need to be registered and paid up by June 13th. Cost is $50.00.

For further information call the Jefferson County Extension office at (541) 475-3808. Rich Affeldt, Barbi Riggs, Mylen Bohle and Candi Bothum

Increasing Calf Value with Age and Source Verification Program

Oregon State University will be holding an educational program at the Mid-Year Oregon Cattlemen’s Association meeting June 19th, 2008, Madras Oregon. Age and Source Verification (ASV) is a phrase we hear frequently. As foreign markets continue to reopen, there has been an increasing demand for ASV cattle. Learn how these cattle play an important role for US beef exports and how they may play a role as Country of Origin Labeling (COOL) is implemented. This program will address the premiums offered to cow-calf operators and the basic requirements of ASV to help you decide if ASV is right for your ranch. The program is presented by Oregon State University. Breakfast is at 6:30 a.m., with the program to begin at 7:00 a.m. Pre-Registration is $10.00 or $15.00 at the door. You can register at http://orcattle.com or contact Barbi Riggs at (541) 447-6228 (barbi.riggs@oregonstate.edu). Barbi Riggs

2008 Range Field Day

You are invited to attend the 2008 Range Field Day being held June 24, 2008 in Jordan Valley, Oregon. The Field Day will focus on several subjects important for managing the Intermountain regions rangelands productively and ecologically. The main topics being presented are fire and livestock grazing management, medusa head ecology and management, and western juniper ecology and management.

The Field Day is presented by the Eastern Oregon Agricultural Research Center, Department of Rangeland Ecology and Management, Oregon State University, and the Agricultural Research Service, U.S. Department of Agriculture.

Questions about agenda, overnight accommodations, and meeting location should be directed to the Eastern Oregon Agricultural Research Center (541-573-8900) or the OSU Department of Rangeland Ecology and Management (541-737-3341). Mike Borman, Dept. Head, Rangeland Ecology & Management
Livestock —

Pondering Sustainability and Production Practices

The term sustainability has lately become a buzzword that is often misunderstood, as if it is something we can achieve by going all natural or organic but often fail to understand that sustainability requires understanding and incorporation of the basic husbandry, environmental or natural resource health, economics and social acceptance. You can not have sustainability if any one of the links does not work. Conventional systems in many cases are practicing sustainable agriculture, even if they choose to use pesticides, herbicides, hormones (other livestock such as cattle), and other USDA approved practices that have been deemed safe for the environment and consumers.

I am supportive of natural and organic practices as alternative management practices, but am against saying they are better for the environment or human and animal health than conventional production systems either on a commercial scale or for backyard production.

Wikipedia: Sustainable agriculture refers to the ability of a farm to produce food indefinitely, without causing irreversible damage to ecosystem health. Two key issues are biophysical (the long-term effects of various practices on soil properties and processes essential for crop productivity) and socio-economic (the long-term ability of farmers to obtain inputs and manage resources such as labor).

Sustainable agriculture was also addressed by the 1990 farm bill [Food, Agriculture, Conservation, and Trade Act of 1990 (FACTA), Public Law 101-624, Title XVI, Subtitle A, Section 1603]. Stated by: “the term sustainable agriculture means an integrated system of plant and animal production practices having a site-specific application that will, over the long term:

- satisfy human food and fiber needs”.
- enhance environmental quality and the natural resource base upon which the agricultural economy depends.”
- make the most efficient use of nonrenewable resources and on-farm resources and integrate, where appropriate, natural biological cycles and controls.”
- sustain the economic viability of farm operations.”
- enhance the quality of life for farmers and society as a whole.”

Unfortunately there is also a perception out there that conventional products are less healthy for consumers and the environment than natural or organic. This same outlook on natural and organic production does not recognize social impact if these two management practices were fully embraced by agriculture.

See LIVESTOCK: Production Practices, Page 2
LIVESTOCK: Production Practices

Continued from Page 2

Think about the following:

Over the next 40 years global food demand will need to increase by 2-3 times. World grain demand has exceeded production over 6 of the last 7 years. In regards to beef production, if we were to go back to using the technologies of 1955 (organic production), it would require an additional 450 Million acres of land and 183 million additional head of cows to produce the same amount of beef we do today.

Conventional beef production (grain finished) with growth enhancing technologies uses 300 percent less land than organic, grass finishing systems. Since 1960, total acres for meat and poultry production has decreased by over 320 million acres.

Hormones

In regards to hormone use in dairy, there is NO difference in milk produced using BST. NO DIFFERENCE as can be detected in the lab. NO Scientific difference. When we advertise BST vs. Non-BST milk, total milk consumption decreased. This resulted in an overall increase in milk prices and the most affected are underprivileged families with small food budgets.

Estrogen Content/100 Grams

(nanogram = 1 part/billion)

Untreated Steer 1.1 nanograms
Implanted Steer 1.4 nanograms
Untreated Heifer 1.3 nanograms
Pregnant Heifer 21.9 – 55.6 nanograms
Intact Bull 22 nanograms
Peas 400 nanograms
Wheatgerm 1,013 nanograms
Soybean oil 189,133 nanograms
Milk 13.6 nanograms

Human Estradiol Production

Estradiol Produced /day
Boys 41,000 nanograms
Girls 43,000 – 54,000 nanograms
Adult Male 168,000 nanograms
Non-Pregnant Female 20,000,000 nanograms
Pregnant Female 4,000,000 – 64,300,000 nanograms

One Birth Control Pill contains the same amount of estrogen as 125,000 lbs of beef from implanted steers.

Antibiotics

Colorado State University found that comparing conventional systems that feed antibiotics vs. non, there was no difference in microbial antibiotic resistance.

Without Pharmaceutical Technologies

♦ 14% smaller calf crop
♦ 18% reduction in beef production
♦ 180% increase in net beef imports
♦ 8.5% reduction in per capita consumption
♦ 13% increase in retail beef prices

Resource: Sides, G. Global and Local Impact of Science and Technology. 2008 MSU Nutrition Conference

Barbi Riggs

Cereals —

Cereal Leaf Beetle Biocontrol Project

The cereal leaf beetle is again expected to be causing damage in Oregon grain fields. June is the time when damage caused by cereal leaf beetle larva becomes most evident in grain fields. When threshold levels are reached growers spray to control damage. An alternative, which has proven effective in other areas of the US, is the use biological control. USDA, APHIS in cooperation with Oregon Department of Agriculture and Oregon State University have been releasing natural enemies of the grain destroying beetles since it was first found in Oregon in 1999. These natural enemies are now established in several counties in both eastern and western Oregon.

Field insectaries for growing the larval parasitoid, Tetrastichus julis, have been set up at the Union, Madras, and Hyslop OSU Experiment Stations. Insectaries for rearing the egg parasitoid, Anaphes flavipes, are established on private land in Washington County, and the OSU Station in Union County.

We encourage growers in these areas to watch the thresholds levels carefully and use insecticides only when warranted. Also, when using insecticides, leaving un-sprayed buffer areas within or around the edge of sprayed fields will allow the parasitic wasps a chance to survive and prosper (if the wasps are in the vicinity). The parasitic wasps should be pretty wide spread now but are probably in low numbers.

In 2007, ODA sampled some fields in Central Oregon and it appears that some of the fields in the Prineville area are parasitized at 4-18 percent! That is great news and means that we are well on our way to establishing the parasitic wasp!

There will be parasitic wasps available (parasitized CLB larvae) this year which can be released into un sprayed strips (one non sprayed pass around the outside of the field 60 feet wide or so) or into a corner of an infested cereal field (5 acres minimum ideally). After the release into Crook and Jefferson counties, it is now important to leave an unsprayed area in each field so that we do not knock out the parasitic wasp population. Any grain grower wishing to participate in this biocontrol project is encouraged to contact USDA, APHIS, (503) 326-2814, or ODA (503) 986-4636, or contact Mylen Bohle at 541-447-6228. Give us some heads up time to make arrangements for collection, travel and release.

Gary Brown and Mylen Bohle
Renewable Energy

Biofuels, Part II

This is the second installment of a series on biofuels, with emphasis on their relevance to central Oregon. This month, “which crops could we grow for biodiesel?” Last month we mentioned that biodiesel could be made from any vegetable oil and how different oils make different qualities of biodiesel. What could we grow in central Oregon that could be used for biodiesel?

Canola - Winter canola grows well under irrigation in central Oregon but as the three counties are in a specialty seed growing area, it can not be grown here for grain. This is due to the possibility that flowering canola crops could attract bees away from flowering specialty seed crops like carrots and that it could cross pollinate with vegetable brassica seed crops, such as mustard greens, broccoli and cauliflower. In field trials conducted at COARC, winter canola has produced around 4,000lb/ac, which would be the equivalent of 224 gallons of biodiesel/ac. Canola is approximately 40% oil and 60% meal, which is around 34% protein. The current canola price is around 30¢/lb. The Oregon government is paying an additional 5¢/lb bounty on canola, as well as for any other oilseed that is to be used for biodiesel. Canola meal is worth around $280/ton.

Camelina - Camelina is a new crop to North America but has been grown for centuries in eastern Europe as an oilseed crop. Like canola it is a member of the brassicacea family. It produces a small, brown seed that is around 37% oil. No field trials have been conducted on camelina in central Oregon, but dry land trials in Moro county in 2007 yielded around 2000lb/ac. Several companies have expressed interest in growing it in central Oregon, but only as a dry land crop. The prices being offered for camelina vary depending on the company, but are somewhere between 10 and 15¢/lb in addition to the 5¢/lb government bounty.

Soybeans - Soybeans are not commonly grown in central Oregon, but as they are so common in the Midwest they are the major oilseed used for the production of biodiesel in the US. They are around 18% oil and yields in central Oregon could be expected to be around 3000lb/ac. Soybeans are worth around $12.50/bushel ($479/ton) and the meal is worth around $355/ton.

Other Oilseeds - Other species that can be grown in central Oregon include safflower (estimated irrigated yield of around 2000lb/ac, 37% oil), flax (2000lb/ac, 36% oil) and sunflower (2000lb/ac, 50% oil). While many of these crops might appear attractive propositions, there are currently many other crops, such as wheat, that at current prices are more profitable. It is also worth considering that the oils produced by these crops are more valuable as vegetable oils than as biodiesel and so converting them to biodiesel would be decreasing their value.

Canola oil, for example, retails at over $15/gallon and many other oils such as safflower and flax are worth considerably more.

What happens if the prices of wheat goes down, but fuel keeps going up?

If this occurs, the prices of oilseeds will come down too. There are many areas of the world where canola competes with wheat and other cereals for acreage such as the Canadian and Australian wheat belts. If the price of wheat falls, those areas will quickly switch to producing more canola and the price of canola will go down. Just as wheat has risen from $4/bushel to somewhere between $8 and $10 last year canola was trading at between 10 and 15¢/lb and is now around 30¢/lb. In that situation where wheat price falls, but fuel stays high, it may make sense for growers in Canada, Australia or even dry land wheat growing areas of the US to produce canola for the production of biodiesel but without a large and sustained difference in the profitability of canola, or any other oilseed, over many of the crops currently grown in central Oregon, it seems unlikely that growing any oilseed for biodiesel would make economic sense here.

For questions contract Brian at (541) 475-7107 or email at brian.duggan@oregonstate.edu.

Next month, Ethanol.

On Farm Renewable Energy Opportunities

It is estimated that 15% of agricultural production costs are energy related. As energy prices increase, the costs will become prohibitive. As an alternative, many agricultural producers are turning to on-farm renewable energy generation. At first glance these systems may seem expensive, but there are many state and federal incentives that will help to cover costs. All this may seem overwhelming but we are here to help!

The Central Oregon Intergovernmental Council assists partners with pre-feasibility and feasibility studies, project development and project financing. We work directly with agricultural producers to find alternatives that work for them. If you are interested in pursuing renewable energy (solar, wind, biofuel or biomass) projects we can help in the following ways:

- Assist in finding an energy auditor.
- Assess renewable energy alternatives.
- Connect you with local installers.
- Find and apply for tax incentives and grants.

For more information visit our website at www.coic.org/cd/renewableenergy or contact: Katy Van Dis, kvandis@coic.org, (541) 504-3307 or Phil Chang, pchang@coic.org, (541) 548-9534.

Katy Van Dis, COIC
Small Farm News

Fruit Trees in Central Oregon

Friday, July 25; 6-9pm, Deschutes County Fairgrounds, Redmond, North Sister Building, Registration deadline: July 11, 2008 - $25.00 per person. Dr. Clive Kaiser will return to present a 3 hour session where you will learn how to be successful with growing fruit in Central Oregon. Varieties, pruning techniques and other hints will be shared to make your experience a good one. Registration forms available at: http://extension.oregonstate.edu/deschutes/index.php

Small Farm Producers Networking

Opportunity

Are you interested in sharing your ideas or learning from others? Would you be interested in joining a Small Farm cooperative? Do you want to be part of a Small Farm community?

An OSU Mailing List “Central Oregon Local Foods” has been created and people are sharing some great ideas via email. If you would like to have your name added to this list, please contact Dana, (541) 548-6088 x 7957 or dana.martin@oregonstate.edu.

Grow Your Own Gardening Series

June 10th & 17th, July 1, OSU Cascades Hall at COCC in Bend, Room 117, 6:00 - 8:00 p.m., cost is Free!

Tuesday, June 10th—The basics of growing vegetables in the High Desert.

Tuesday, June 17th—This class will go into more detail on the more popular types of vegetables to grow in Central Oregon.

Tuesday, July 1st—Pruning in the Landscape.

For a more detailed class description call the OSU/Deschutes County Extension office at (541) 548-6088.

Dana Martin

Alfalfa Weevil

Be on the look out for Alfalfa weevil populations in many alfalfa fields around Central Oregon. In talking with many of the fieldmen, there seems to be an abundance of alfalfa weevil this year. Because of the cooler weather, many may have to spray for weevil control this year. The crop is shorter at this time and harvest will be delayed.

Sampling and thresholds: Experience with this insect has shown that treatment should be applied when necessary and not as a preventative practice. Treat when:

♦ Thirty percent of the terminal buds begin to show feeding damage. Either cut and treat stubble or treat the standing crop depending upon stage of alfalfa.

♦ Damage is noticeable 1 week or more prior to estimated cutting time, and more than 10 larvae per sweep (90 degree) are collected in the insect net.

♦ Populations of larvae reach 20 or more per sweep (90 degree) are collected in the insect net.

It should be understood that 10-20 larvae per sweep is a simple general index to assist producers in determining when to treat. Weather conditions, plant vigor, irrigation schedules, cutting date, previous history of weevils, in the area, and a complex of factors may determine if treatment is necessary or justified.

There are a number of very effective treatments for the alfalfa weevil.

With the increased value of alfalfa hay, are these recommendations still valid? It has been many years since these numbers were “determined” and the price of alfalfa hay is up dramatically. Something to think about.

Source: 2008 PNW Insect Control Handbook

Mylene Bohle

Forage —

Clover Mite & Banks Grass Mite “Update”

Another insecticide trial to control Clover mites in an orchardgrass field near the Tumalo area is out again this spring. Treatments were applied on May 6th and we have been sampling weekly to track the population and efficacy of treatments.

The bad news is: there was no large knock down of the population from any of the 5 treatments compared to the check (6 days after treatment 150 to 335 mites per 2.5-inch crown area). The population dropped significantly from May 12 to May 20, including the untreated check, but two treatments showed a trend for an increased drop in population, but not significantly so (43 to 118 mites per 2.5-inch crown area).

On the next sampling, 21 days after application, two of the treatments showed a “statistically significant” reduced population compared to the other treatments and the check, but the population had dropped dramatically and ranged only from 0.4 to 5.3 mites per 2.5 inch crown area. (Sample size is 2.5 inch diameter core of an orchardgrass crown). We sampled again on June 2nd, but do not have numbers at press time to share. We may or may not sample on June 9th, depending upon what our last sampling population count reveals. We will try and rate the treatments for visual damage and see if that reveals anything to us as well.

On June 4th, 2007, one of the local fieldmen found another mite in an orchardgrass field in the Terrebonne area – the Banks grass mite. It appeared to be doing a little damage to the field. While our Winter grain mites and Clover mite numbers are rapidly decreasing (the weather is warming), the Banks grass mite is probably in the process of increasing it’s numbers. Banks grass mites likes warmer weather. The Banks grass mite looks similar to the two-spotted spider mite.

Mylene Bohle and Glenn Fisher

Mylen Bohle
Forage —

June 21 - Important Date for Grass Roots?

After June 21st, perennial grass plants will be growing for the rest of the growing season with decreasing day lengths. Sometimes right around that date, is approximately when our grasses begin their summer slump - slower growth that we talk about. Cool season grasses do not care much for growing in hot temperatures and therefore do not provide as much forage as we would like them to produce at that time. So if we plant a legume with cool season grasses, like alfalfa or clover, legumes grow best when the temperature is around 86 degrees F vs. around 63-65 degrees F average daily temperature for cool season grasses. But I digress…

So what is also happening with the cool season grasses below the soil around or after June 21, the longest day of the year? The roots of cool season grasses begin to shed them-selves. They will have been white up to that time period and actively growing, but from that point on, they will appear to be tan to brown, and in decline. So the summer slump that we talk about would appear to be due to root shedding – it sure would have an effect on grass growth if the root is not actively regenerating itself during this time.

The roots will continue that way until around the end of August or the first to mid part of September when the plant will be growing new roots going into the fall. During that Fall root growth period, next years spring forage growth will also be set; the spring tillers are formed in the Fall. If you graze your pasture down, like a table top, in the Fall, you will have grazed a lot of next years spring forage growth. You will dramatically reduce your yield of harvestable forage by your animals. That 4 inches of stubble or regrowth you need to leave behind belongs to the plant, not the animal grazing it. Think of it as your grass bank account (and when you over draw (over-graze), there is a penalty!

Fall grazing management is extremely important as you might imagine, but so is spring grazing management, and summer grazing management, if you want to optimize your forage production. Be careful with those grazing and clipping heights on your grass plants. All of your forage production comes from the regrowth of your pasture or hay fields. If you graze or clip to the ground, the plant has to regenerate itself from the root system, which does not contain nearly as much non-structural carbohydrates and sugars as the crown area does, which is needed to regrow. And the green leaves (think of them as solar panels) left as stubble, allow the plant to photosynthesize immediately, and regrow and regenerate it’s root system. This needs to happen in the Fall, when the plant is regenerating it’s root system to go into the winter.

Low Carb/Sugar Forage

It has been a challenging spring for forage producers, especially those growing grass for pasture. One needs to be careful and not overgraze the pasture early on, or for that matter, ever… For those who are grazing horses on pasture, I find it interesting as I drive around central Oregon and see all of the overgrazed pastures, and I marvel at the lengths that some horse owners are going to in order to produce, manipulate, modify, sell and/or buy low-carb or low-sugar hay to feed their animals. Why?

We manage horse diets in the late Fall to early Spring with hay (low-carb hay for those prone to laminitis), but then in the Spring, Summer and Fall, many horse owners allow their horses to graze their pastures “tight” (less than an inch in height). If you are grazing your pasture tight, then you are allowing those animals to increase their intake of higher carb/sugar forage. How?

The closer the animal grazes to the soil and into the crown of the plant, the higher levels of non-structural carbohydrates and sugars the animals will consume; because that is where those nutrients are stored in higher concentrations in the plant. Not good for the animal, and not good for the plant!

Horse owners (and other livestock owners) also spend a lot of money on parasite programs, but then allow their animals to graze tight. The tighter a producer allows their animals to graze, there is an increased chance of the animal picking up parasites.

There are many, very good reasons for keeping your grazing height up on your pasture, for both the health of the animal, and the health of the plant.

Blackgrass Bug

Klamath Falls Basin has reported some problems with the Blackgrass bug this spring. The Blackgrass bug (Labops hesperius) has been around central Oregon and doing damage from time to time. I have not heard of it doing any damage yet this year. In the past the heavier infestations have been around the Tumalo/Bend/Cloverdale area, and minor problems in a few other areas, infesting some dryland, as well as irrigated pastures and hay fields. Two years ago, damage was experienced in the north-central Oregon wheat fields, and there were some infested fields in the Culver area in Jefferson county.

The insect is grayish black, about ¼ inch long, and “somewhat” pear shaped. Feeding causes pale spots on the leaves of cereals and grasses, and when severe, leaves have a general yellowish, stippled appearance.

Most years the damage will not be severe enough to require treatment, and after a few years, the insects will run their course and will comparatively disappear for years. Usually in range situations, the cost of applying treatments exceeds the benefit. That may or may not be true for irrigated grasses and cereals.

Be on the lookout this year. As stated previously, there sometimes has been economic damage in cereal crops and has required treatment.
Forage — N Fertilization for 2nd Cutting Grass

First cutting grass hay is a done deal in terms of how, when and what rate of N fertilizer we applied. First cutting is the most efficient for fertilizer and water use, and the reward is the highest yield we will achieve of the usual 3 cuttings we harvest in central Oregon. Nitrogen prices (all fertilizer prices for that matter) have been steadily climbing all spring and may change again by the time one has to apply N fertilizer for 2nd cutting.

After we harvest first cutting grass hay, we will be faced with: “how much N fertilizer do we apply for 2nd cutting – economically”. Everyone’s situation can be different, so the following table shows yield responses to N fertilizer on 2nd cutting grass hay at 6 different sites in Crook and Deschutes counties in 1992 and 1993. Hopefully this will be of help in trying to figure out an economical rate of N to apply. The trick is to apply to the point that the last lb/ac N applied gives you back a positive return based on cost of N, application cost, and value of hay – it is a partial budget exercise – return to N fertilizer.

As you keep adding N, each pound of N applied needs to provide a positive return, when the last pound of N provides no return, then you should have stopped at the previous pound applied – not always easy to pinpoint. Of course there are other production costs to determine as well.

Table. Yield response of different grass hay fields to different N rates in Crook and Deschutes counties in 1992 and 1993.

<table>
<thead>
<tr>
<th>N Rate (lb/ac)</th>
<th>Bluegrass (older stand) (t/ac)</th>
<th>Orchardgrass (older stand) (t/ac)</th>
<th>Timothy (newer stand) (t/ac)</th>
<th>Orchard/Blue (older stand) (t/ac)</th>
<th>Orchardgrass (new stand) (t/ac)</th>
<th>Orchard/Legume (newer stand) (t/ac)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1992</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>0.30</td>
<td>--</td>
<td>0.13</td>
<td>1.55 (85)</td>
<td>0.99</td>
<td>1.58</td>
</tr>
<tr>
<td>50</td>
<td>1.27</td>
<td>--</td>
<td>1.03</td>
<td>1.89 (135)</td>
<td>1.96</td>
<td>1.89</td>
</tr>
<tr>
<td>100</td>
<td>1.73</td>
<td>--</td>
<td>1.58</td>
<td>2.12 (185)</td>
<td>2.38</td>
<td>2.04</td>
</tr>
<tr>
<td>150</td>
<td>1.56</td>
<td>--</td>
<td>1.72</td>
<td>2.44 (235)</td>
<td>2.78</td>
<td>1.91</td>
</tr>
<tr>
<td>1993</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>0.97</td>
<td>0.66</td>
<td>0.22</td>
<td>0.98</td>
<td>0.85</td>
<td>1.73</td>
</tr>
<tr>
<td>50</td>
<td>1.21</td>
<td>1.93</td>
<td>1.87</td>
<td>1.29</td>
<td>1.65</td>
<td>2.40</td>
</tr>
<tr>
<td>100</td>
<td>1.47</td>
<td>2.21</td>
<td>2.22</td>
<td>1.45</td>
<td>1.98</td>
<td>2.71</td>
</tr>
<tr>
<td>150</td>
<td>1.85</td>
<td>2.30</td>
<td>2.37</td>
<td>1.58</td>
<td>2.30</td>
<td>2.50</td>
</tr>
</tbody>
</table>

( ) After plots were fertilized, the field was fertilized with 85 lb/ac N, and the trial was fertilized again by mistake.

Horticulture —

Mushrooms, Mushrooms, Everywhere! 🍄

When I think of mushrooms, I often think of a woodland area, shady cool, and moist. So why are they showing up in lawns in the High Desert? Mushrooms generally show up in areas where dead organic matter has accumulated in combination with long periods of wet weather (hence the spring we are having here). Mediums such as old stumps, roots, or home construction debris (sawdust) will encourage their growth. How do you get rid them? The easiest and safest way to remove mushrooms from the lawn is to mow them off or remove them with a rake. The use of fungicides is unnecessary for mushroom control. If you continue to have mushrooms in the lawn throughout the summer, this is generally a sign of overwatering. Scale back on your watering and they should disappear. Remember, never to eat unidentified mushrooms as they may be poisonous!

Would you like more information on weeds, insects, disease problems, etc.? Then check out OSU/Deschutes County Horticulture website at: http://extension.oregonstate.edu/deschutes/Horticulture/index.php.
Forage —
Growing Degrees Update

The T-Sum (temperature summing) is calculated by summing the daily average between the daily maximum and minimum temperature in degrees F, and subtract 32 degrees (base temperature for T-Sum gdd’s for grass fertilization). If the average is less than 0, discard the number, if the number is positive, it is accumulated, from January 1st as a growing degree-day (GDD).

Table 1 shows the dates of selected T-Sum’s for numerous sites around central Oregon, which represent sites with varying elevation differences. One web site address you can track the thermal time is at: http://pnwpest.org/wea.

Table 1. T-Sum dates for the present year(s) for 180, 360, 540, 720, and 900 accumulated T-Sum growing-degree days (T-Sum GDD’s) from January 1st for selected Oregon locations. (Fertilize at 360 for pasture and 720 for hay) (T-Sum GDD’s using 32 degrees base temperature as of June 3, 2008)

<table>
<thead>
<tr>
<th>Location</th>
<th>Elevation</th>
<th>Year</th>
<th>180 GDD’s</th>
<th>360 GDD’s Fertilize Pasture</th>
<th>540 GDD’s</th>
<th>720 GDD’s Fertilize Grass Hay</th>
<th>900 GDD’s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Madras</td>
<td>2340’</td>
<td>2007</td>
<td>Feb 15</td>
<td>Mar 9</td>
<td>Mar 19</td>
<td>Apr 5</td>
<td>Apr 19</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2008</td>
<td>Feb 16</td>
<td>Mar 10</td>
<td>Apr 6</td>
<td>Apr 23</td>
<td>May 6</td>
</tr>
<tr>
<td>Prineville</td>
<td>4 NW</td>
<td>2007</td>
<td>Feb 12</td>
<td>Mar 9</td>
<td>Mar 20</td>
<td>Apr 6</td>
<td>Apr 22</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2008</td>
<td>Feb 23</td>
<td>Mar 14</td>
<td>Apr 14</td>
<td>May 3</td>
<td>May 14</td>
</tr>
<tr>
<td>John Day</td>
<td></td>
<td>2007</td>
<td>Feb 16</td>
<td>Mar 11</td>
<td>Mar 22</td>
<td>Apr 5</td>
<td>Apr 20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2008</td>
<td>Mar 1</td>
<td>Mar 25</td>
<td>Apr 17</td>
<td>May 3</td>
<td>May 13</td>
</tr>
<tr>
<td>Redmond</td>
<td></td>
<td>2007</td>
<td>Feb 15</td>
<td>Mar 11</td>
<td>Mar 23</td>
<td>Apr 10</td>
<td>Apr 28</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2008</td>
<td>Feb 24</td>
<td>Mar 18</td>
<td>Apr 22</td>
<td>May 9</td>
<td>May 16</td>
</tr>
<tr>
<td>Powell Butte</td>
<td></td>
<td>2007</td>
<td>Feb 9</td>
<td>Mar 9</td>
<td>Mar 19</td>
<td>Apr 7</td>
<td>Apr 25</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2008</td>
<td>Feb 20</td>
<td>Mar 10</td>
<td>Apr 13</td>
<td>May 2</td>
<td>May 13</td>
</tr>
<tr>
<td>Mitchell</td>
<td></td>
<td>2007</td>
<td>Feb 12</td>
<td>Mar 10</td>
<td>Mar 22</td>
<td>Apr 8</td>
<td>Apr 25</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2008</td>
<td>Feb 26</td>
<td>Mar 10</td>
<td>Apr 11</td>
<td>Apr 29</td>
<td>May 13</td>
</tr>
<tr>
<td>Bend (Agrimet)</td>
<td></td>
<td>2007</td>
<td>Feb 12</td>
<td>Mar 11</td>
<td>Mar 27</td>
<td>Apr 7</td>
<td>Apr 24</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2008</td>
<td>Feb 24</td>
<td>Mar 18</td>
<td>Apr 14</td>
<td>May 3</td>
<td>May 14</td>
</tr>
<tr>
<td>Shaniko (ODT34)</td>
<td></td>
<td>2007</td>
<td>Feb 17</td>
<td>Mar 16</td>
<td>Apr 4</td>
<td>Apr 23</td>
<td>May 6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2008</td>
<td>Mar 2</td>
<td>Apr 10</td>
<td>Apr 30</td>
<td>May 14</td>
<td>May 20</td>
</tr>
<tr>
<td>Paulina (3688’)</td>
<td></td>
<td>2007</td>
<td>Mar 7</td>
<td>Mar 22</td>
<td>Apr 10</td>
<td>Apr 28</td>
<td>May 5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2008</td>
<td>Mar 18</td>
<td>Apr 22</td>
<td>May 6</td>
<td>May 16</td>
<td>May 24</td>
</tr>
<tr>
<td>Klamath Falls</td>
<td></td>
<td>2007</td>
<td>Mar 10</td>
<td>Mar 23</td>
<td>Apr 7</td>
<td>Apr 27</td>
<td>May 8</td>
</tr>
<tr>
<td>(Agri) 4100’</td>
<td></td>
<td>2008</td>
<td>Mar 26</td>
<td>Apr 24</td>
<td>May 7</td>
<td>May 16</td>
<td>May 23</td>
</tr>
<tr>
<td>Burns (4E COOP)</td>
<td></td>
<td>2007</td>
<td>Mar 12</td>
<td>Mar 27</td>
<td>Apr 14</td>
<td>May 1</td>
<td>May 6</td>
</tr>
<tr>
<td>(4144’)</td>
<td></td>
<td>2008</td>
<td>Apr 4</td>
<td>Apr 25</td>
<td>May 17</td>
<td>May 25</td>
<td>Jun 2</td>
</tr>
<tr>
<td>LaPine (4275’)</td>
<td></td>
<td>2007</td>
<td>Mar 8</td>
<td>Mar 29</td>
<td>Apr 22</td>
<td>May 6</td>
<td>May 14</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2008</td>
<td>Missing Data</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Christmas Valley</td>
<td></td>
<td>2007</td>
<td>Mar 11</td>
<td>Mar 25</td>
<td>Apr 18</td>
<td>May 5</td>
<td>May 14</td>
</tr>
<tr>
<td>(4360’)</td>
<td></td>
<td>2008</td>
<td>Mar 12</td>
<td>Apr 24</td>
<td>May 8</td>
<td>May 17</td>
<td>May 27</td>
</tr>
<tr>
<td>Fort Rock (raws)</td>
<td></td>
<td>2007</td>
<td>Mar 6</td>
<td>Mar 20</td>
<td>Apr 7</td>
<td>Apr 27</td>
<td>May 9</td>
</tr>
<tr>
<td>(4430’)</td>
<td></td>
<td>2008</td>
<td>Mar 13</td>
<td>Apr 24</td>
<td>May 8</td>
<td>May 17</td>
<td>May 26</td>
</tr>
<tr>
<td>Seneca (4665’)</td>
<td></td>
<td>2007</td>
<td>Mar 16</td>
<td>Apr 7</td>
<td>Apr 29</td>
<td>May 11</td>
<td>May 19</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2008</td>
<td>Apr 30</td>
<td>May 7</td>
<td>May 17</td>
<td>May 27</td>
<td>Jun 11 (?)</td>
</tr>
<tr>
<td>Lakeview (Agri)</td>
<td></td>
<td>2007</td>
<td>Mar 13</td>
<td>Mar 30</td>
<td>Apr 17</td>
<td>May 4</td>
<td>May 14</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2008</td>
<td>Apr 18</td>
<td>May 7</td>
<td>May 17</td>
<td>May 27</td>
<td>Jun 7 (?)</td>
</tr>
</tbody>
</table>
IRRIGATION —  

Root Zone Depths

The following table presents the effective rooting depth and allowable depletion (%) of soil water for some of the crops grown in central Oregon. The root zone can be limited by soil depth, hard pans, etc. The crops depend upon 90% of their water needs within these listed root depths. The allowable depletion (%) is the amount of total available moisture that these crops can withdraw from the total soil water holding capacity without suffering yield loss.

Root Zone Depths for selected crops grown in central Oregon.

<table>
<thead>
<tr>
<th>Crop</th>
<th>Root Zone (ft)</th>
<th>Allowable Depletion (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alfalfa</td>
<td>4.0</td>
<td>60</td>
</tr>
<tr>
<td>Beans</td>
<td>2.5</td>
<td>50</td>
</tr>
<tr>
<td>Chickpeas</td>
<td>4.0</td>
<td>60 (?)</td>
</tr>
<tr>
<td>Corn</td>
<td>3.0</td>
<td>50</td>
</tr>
<tr>
<td>Grapes</td>
<td>3.0</td>
<td>65</td>
</tr>
<tr>
<td>Mint</td>
<td>1.0</td>
<td>40</td>
</tr>
<tr>
<td>Orchard</td>
<td>6.0</td>
<td>50-65</td>
</tr>
<tr>
<td>Potatoes</td>
<td>2.0</td>
<td>30-40</td>
</tr>
<tr>
<td>Pasture</td>
<td>2.0</td>
<td>60</td>
</tr>
<tr>
<td>Small Grains</td>
<td>3.0</td>
<td>50</td>
</tr>
</tbody>
</table>

Information edited from various BPA publications.

Crop Water Use Program

The following table summarizes the crop water use (evapo-transpiration (ET)) to date (June 3, 2008) for some of the irrigated crops grown in Central Oregon. For much more detailed information, one can log on to the Agrimet weather site at: http://www.usbr.gov/pn/agrimet/. There is general information about the program, weather data, crop water use information, graphs, maps, news, relevant links, and other information. You can follow the crop water use for these sites and other locations. The green up date or emergence date, canopy closing date, daily water use (ET), 7 day predicted use, and 14 day predicted use, are just some of the information you will find. Start-up dates may be different for each site for each crop, but this year in particular, they are very similar for some of these sites (one is obviously not…). New start-up dates for some of the crops have been designated and some have been changed. We will be adding new crops to the web site this week and next week.

Table. Accumulation summary of 2008 Crop Water Use or evapo-transpiration (ET) to date (June 3, 2008) for Madras, Powell Butte, Bend, and Christmas Valley, OR Agrimet weather stations.

<table>
<thead>
<tr>
<th>Crop</th>
<th>Madras 2340 ft. (in)</th>
<th>Powell Butte 3180 ft. (in)</th>
<th>Bend 3650’ (in)</th>
<th>Christmas Valley 4360 ft. (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETr</td>
<td>14.6</td>
<td>13.7</td>
<td>11.9</td>
<td>10.9</td>
</tr>
<tr>
<td>Alfalfa Peak</td>
<td>11.1</td>
<td>10.5</td>
<td>8.9</td>
<td>7.0</td>
</tr>
<tr>
<td>Alfalfa Mean</td>
<td>9.8</td>
<td>9.2</td>
<td>7.9</td>
<td>6.6</td>
</tr>
<tr>
<td>Pasture</td>
<td>7.9</td>
<td>7.5</td>
<td>6.4</td>
<td>5.9</td>
</tr>
<tr>
<td>Grass Hay Mean</td>
<td>11.9</td>
<td>11.1</td>
<td>9.5</td>
<td>9.3</td>
</tr>
<tr>
<td>Grass Hay Peak</td>
<td>11.6</td>
<td>11.0</td>
<td>9.4</td>
<td>9.2</td>
</tr>
<tr>
<td>Lawn</td>
<td>9.6</td>
<td>9.1</td>
<td>7.8</td>
<td>7.4</td>
</tr>
<tr>
<td>Bluegrass Seed</td>
<td>12.1</td>
<td>11.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Winter Grain</td>
<td>13.4</td>
<td>12.0</td>
<td>10.8</td>
<td>8.9</td>
</tr>
<tr>
<td>Spring Grain April 1</td>
<td>7.6</td>
<td>7.5</td>
<td>6.5</td>
<td>4.1</td>
</tr>
<tr>
<td>Spring Grain April 15</td>
<td>5.3</td>
<td>5.2</td>
<td>4.6</td>
<td>1.7</td>
</tr>
<tr>
<td>Spring Grain May 1</td>
<td>2.9</td>
<td>2.8</td>
<td>2.5</td>
<td>0.3</td>
</tr>
<tr>
<td>Field Corn</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Garlic</td>
<td>8.0</td>
<td>7.3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Central Oregon Agriculture Calendar

June —
10  CBARC Field Day, Pendleton, OR.  Call (541) 278-4186.
10  Grow Your Own Gardening Series - Growing Vegetables in the High Desert.  Call (541) 548-6088.
11  CBARC Field Day, Moro, OR.  Call (541) 278-4186.
16-18 Central Oregon Tractor Safety Training (see article front Page).
17  Grow Your Own Gardening Series - Popular Types of Vegetables to Grow in Central Oregon (see article Page 5)
18  Union County Crops & Conservation Tour, 7:30 a.m. at Western Farm Service, Booth Lane, LaGrande, OR., Darrin Walenta at (541) 963-1010.
19  Age and Source Verification Program (see article front Page).
20  High Desert Garden Tour presented by the OSU Extension Service and OSU Master Gardeners. For more information call (541) 548-6088.
24  2008 Range Field Day (see article Front Page).
26  Planting Techniques That Give Trees a Healthy Start, The Why, When and How of Proper Pruning Techniques, (see article Page 5)

JULY —
1  Grow Your Own Gardening Series - Pruning in the Landscape. Call (541) 548-6088.
9  Malheur Experiment Station Annual Field Day.  Contact Janet Jones at (541) 889-2174.
9  Fruit Trees in Central Oregon (see article Page 5).
12  C.O. Grape Growers Field Day. Doug Maragas at (541) 546-5464.
23-26 Annual Gardener’s Mini-College in Corvallis at OSU. Three days of classes and evening events. For class descriptions and registration information go to http://extension.oregonstate.edu/mg/home.

√ For a Listing of Bend, Madras, Prineville, Redmond and Sisters upcoming Farmers’ Markets, go to:  http://www.oregonfarmersmarkets.org

Extension Service & Experiment Station Web Sites
Crook County -
http://extension.oregonstate.edu/crook

Deschutes County -
http://extension.oregonstate.edu/deschutes

Jefferson County -
http://extension.oregonstate.edu/jefferson

Warm Springs -
http://extension.warmsprings.edu/index.php

Central Oregon Agricultural Research Centers, Madras & Powell Butte -
http://oregonstate.edu/dept/coarc/index.php

Central Oregon Agriculture