Dear Small Farmer and Landowner;

Welcome to the November/December issue of the Mid-Columbia Small Farms & Acreage Newsletter. As you will see in the Calendar of Events and Workshops and Seminars Sections there are a host of workshops, seminars and tours coming up over the next three months covering such topics as Farming the Wind (windpower generation in the Mid-Columbia), Horticultural Farming Alternatives, Small Acreage Management and Farm Tax Planning to name a few. We hope that you will have the opportunity to attend some of these excellent educational programs that are available.

We would also like to make note that even with the beginning of the fall rains, the effects of the drought are going to be of concern for several months to come. The current forecast indicates a more normal weather pattern for this fall and winter which is very positive. Even with the beginning of the fall rains, you need to keep in mind that soil conditions are very dry in the Mid-Columbia. Examples of crop year precipitation totals for various sites include Dufur 65% of normal, Hood River 58% of normal, Parkdale 74% of normal, and Moro 57% of normal, which are all very low. What this means is that pastures, trees and other non-irrigated crops need to be treated with care and good management practices this fall and next spring. Plants, which have been drought stressed are more susceptible to disease and insect pests, winter kill and pastures to invasion by noxious weeds. Using good grazing practices on your pastures, controlling diseases and insects in trees, shrubs and pastures, monitoring weed problems and the addition of fertilizer where appropriate all help plants to withstand problems.

Also of concern is animal nutrition this winter. Using high quality hay is a must for good animal health. In this issue is an excellent article by Susan Kerr, Klickitat County Agent looking at ration formulation. This is a good primer to help livestock producers to determine animal needs. Also, keep in mind there is the potential for high levels of nitrates in dryland produced hay grown in areas effected by the drought. OSU and WSU Extension Offices have a list of laboratories that can test for nitrates. This all means that prices may be higher for hay this fall and winter. Washington has a good site listing those with hay for sale and the site can be accessed at www.wa-hay.org. Capital Press also has hay listings as well.

As you review this issue should you have any questions concerning any of the information found in this newsletter, please contact your local OSU or WSU Extension Office.

Sincerely,

Mid-Columbia Extension Agents
Calendar of Events

2002

January

8-9  Mid Columbia Farm Forum and Ag Show, at TRAC, Pasco. Sponsored by Greater Pasco Area Chamber of Commerce. Information: Phone: (509) 547-5538; fax: (509) 547-5563.

12  "Fiber Frenzy" Pygora Goat Show, Washington County Fair Complex, Hillsboro, 10 a.m.-4 p.m. vendors, demonstrations. Free admission and parking. Information: Lisa Roskopf, (503) 985-3331, e-mail: sa@hmrpygoras.com.


15  Oregon Blueberry Growers and Processors Annual Research and Public Relations Roundup, North Willamette Research and Extension Center, Aurora, 8:30 a.m. Information: (503) 364-2944.

20-23  "Putting the Pieces Together," 88th Annual NW Food Manufacturing and Packaging Expo, Oregon Convention Center, Portland. Information: (503) 639-7676; e-mail nwfpa@nwfpa.org, or on the internet: www.nwfpa.org.

29-30  Northwest Ag Show and OAN Seminars, Portland Exposition Center and Doubletree Hotel, Columbia River. See the latest in ag equipment and learn about some of the industry's top issues. For more information on the Ag Show, contact Jim or Shirley Heater at (503) 769-7120 or e-mail silver.mtn@juno.com. For additional information concerning the OAN seminars, contact Oregon Association of Nurserymen at 503-653-8733.

31  Oregon Horticulture Society Blueberry Day, Columbia River DoubleTree, Portland, 8:30 a.m.-1 p.m. Discussion of frozen market, world production. Program held in conjunction with Northwest Ag Show. Information: (503) 364-2944.

February

5  Why Does Soil Biology Matter and How Do We Affect It? Workshop and Forum on Soil Biology, Lake Washington Technical College, Kirkland WA., 9 am to 5 pm. For further information contact Andy Bary at 253-445-4588 or bary@wsu.edu or see their web site at www.puyallup.wsu.edu/soilmgmt/Events.htm


8-10  An introduction to Permaculture: A Design Workshop for Women on Self-Reliant Living, Lost Valley Educational Center, Dexter, OR. For further information, contact Jude Hobbs, 541-342-1160 or hobbsj@efn.org

22-24  Yard, Garden and Patio Show, Oregon Convention Center, Portland. Information: (503) 653-8733 or (800) 342-6401 or at the OAN web site http://www.ypgshow.com/

April

6  Tree School 2002, Clackamas Community College, 8:00 am to 5:30 pm. Program provides numerous workshops on woodland management as well as an extensive vendor display. Cost for the workshop is $35/person. For further information and to register contact Clackamas County Extension Office at 503-655-8631.

Brian, I can’t believe you don’t have anything for March 2002!
Area Workshops and Seminars

Mid Columbia Small Farms Programs

Tree Fruit Pruning Workshop, Maryhill, WA. Jan. 26 or Feb 2 (need to confirm): Call 509-773-5817 or e-mail kerrs@wsu.edu for more information. Participants should bring their own lunch and dress warmly!

Sheep and Goat Management Skills Workshop Part 1, Fernandez Ranch, Centerville, WA. 9 AM-4 PM, March 16. The focus of this workshop will be on proper vaccination administration, deworming techniques and foot trimming. Call 509-773-5817 or e-mail kerrs@wsu.edu for more information and to pre-register. Please bring your own lunch. Sanitation procedures will be required. Please wear clean coveralls and CLEAN RUBBER BOOTS. Come prepared for cold and/or wet weather.

Sheep and Goat Management Skills Workshop Part 2, Fernandez Ranch, Centerville, WA, 9 AM-4 PM, April 19 and 20 (same program offered twice) The focus of these workshops will be handling sheep, neonatal lamb management skills, and other lambing-time management issues. Call 509-773-5817 or e-mail kerrs@wsu.edu for more information and to pre-register. Refreshments will be provided; please bring your own lunch. Sanitation procedures will be required. Please wear clean coveralls and CLEAN RUBBER BOOTS. Come prepared for cold and/or wet weather.

Clackamas Community College Special Programs

For additional information on any of the following programs, please contact one of the following persons: Elizabeth Howley at 503-657-6958 ext. 2389 Bob Nelson 503-657-6958 ext. 2236 Bruce Nelson 503-657-6958 ext. 2786

Green House Growers Conference, January 16, 2002, 8:00 am to 4:00 pm. This conference sponsored by the Oregon Association of Nurserymen – Greenhouse Chapter is designed for growers producing bedding plants and herbaceous perennials. A variety of speakers will present technical information associated with media and cropping systems. For further information and to register, please contact Carol Coley at 503-651-2558

Vegetable Gardening Symposium, February 5, 2002, 8:00 am to 4:00 pm. Topics to be discussed include seed saving, developing soil, farming with horsepower, and winter vegetables. For further information and registration, please contact Michelle at 503-657-6958 ext. 2246

Growing Fruit in The Northwest, February 23, 2002, 8:30 am to 4:30 pm. Topics fruit growing, medicinal qualities of fruit, and new, unusual fruits available to grow in the Northwest. For further information and registration, please contact Bruce Nelson at 503-657-6958 ext. 2786

Fruit Tree Pruning, March 2, 2002, 8:00 am to 12:00 pm. Demonstration and practice of pruning methods appropriate for a variety of fruit trees. There is a $5.00 workshop fee and the workshop will be at the Arboretum at the Clackamas Community College. The fee includes admission to the scion exchange in the afternoon of March 9th. For further information and registration, please contact Bruce Nelson at 503-657-6958 ext. 2786

Fruit Tree Grafting, March 9, 2002, 8:00 am to 12:00 pm. Hands-on explanation and practice in grafting fruit trees. There is a workshop fee of $15.00 and the workshop will be in Randall Gymnasium at Clackamas Community College. Admission also includes a scion exchange in the afternoon. For further information and registration, please contact Bruce Nelson at 503-657-6958 ext. 2786

Wasco County Tree & Shrub Sale

Wasco Co. SWCD is conducting their annual tree and shrub sale. The trees and shrubs are nursery grown bare root seedlings. The majority of the trees offered are suitable for our semi-arid conditions and chosen for their tolerance. Details concerning size, cost, zone and particulars can be found on their tree and shrub sale list posted at www.netcnct.net/community/conserve. You can also contact them at 296-6178 ext 3 for a copy of the list. Orders need to be placed by January 31, 2002. Trees and shrubs will arrive the first week in March.
Small Diameter Timber: Resource Management, Manufacturing and Markets

The symposium is scheduled for February 25-27, 2002 at the West Coast Grand Hotel at the Park in Spokane WA. Nearly 50 speakers from 13 states and Canada will present results of completed and ongoing activities related to management and utilization of small diameter trees. There will also be poster presentations and vendor exhibits. Details and registration information can be found on the symposium web site at http://ext.nrs.wsu.edu/small-diameter

Winter Livestock School

The 2002 Winter Livestock School is set for March 2, 2002 to be held at the Portland Community College’s Rock Creek Campus. This all day workshop will include sessions on pasture management, composting, marketing, and beef, sheep, goats and poultry production. Contact the Clackamas County Extension Office at 503-655-8631 for further information.

Silvicultural Options for Sustainable Management of Pacific Northwest Forests

The symposium is scheduled for March 5-6, 2002 at the Oregon State University CH2M Hill Alumni Center in Corvallis. The symposium will focus on interactions between major influences of forest management decisions and silvicultural applications of early results of current experiments focused on managing for diversity. Note, this workshop is a part of a four-part program that will include additional workshops to be presented in 2002. For additional information about this symposium and the follow up workshops please contact the OSU College of Forestry at 541-737-4966 or by e-mail at outreach@for.orst.edu or you can obtain a copy of the complete program brochure on their web page at http://outreach.cof.orst.edu

Resources

Web Pages

foodfarm.wsu.edu This is a web site that WSU has been developing over this last year and has now grown to be a really good source of information for the small acreage landowner with articles on subjects ranging from pastures, livestock, organic and commercial crop production, calendar of events and soil and water conservation, marketing to name a few of the resources.

groundwater.orst.edu This is a site established by OSU Extension Service to provide a link to the latest ground water issues. The site includes information on such topics as permits, wells, septic systems, and fuel storage tanks, ground water geology and impact that our development activities have on groundwater.

Infobasket.gov.bc.ca This is a new site that has been developed by the British Columbia Ministry of Agriculture, Food and Fisheries to provide a very extensive data base on a wide variety of agricultural enterprises using information from sources worldwide. Primary enterprise topics at this time include, agroforestry, organics, ornamentals, specialty crops and bison. It should be noted that this is a new site and will continue to grow over time.

www.wafarmersmarkets.com/ This is a new web site that has just been developed by the Washington State Farmers Market Association.

www.nurseryguide.com/oan This is the web site for the Oregon Association of Nurserymen and provides an excellent resource concerning upcoming programs and resources concerning nursery production.

eesc.orst.edu This is Oregon State University’s web site to obtain garden information.

Publications

Profitable Pork: Strategies for Hog Production. This is a new USDA publication that provides an excellent resource for those interested in hog production. This publication can be obtained through the USDA SARE web site at the following address www.sare.org/bulletin/hogs/

Food Safety Begins on the Farm: A Growers Guide. This is a good summary of issues related to food safety and includes specific recommended practices for fruit and vegetable growers. It is available from the Cornell Good Agricultural Practices Program at http://www.gaps.cornell.edu or by calling 607-254-5383.

From Growing to Processing: A Guide for Food Processors. This publication provides food and seafood processors with basic information on applicable rules, business responsibilities and marketing options.

The Oregon Direct Marketing Handbook provides direct farm and seafood marketers with basic information on regulations that apply to various marketing options. Both of these publications are available free from the Agricultural Development and Marketing Division of the Oregon Department of Agriculture at 503-872-6600 or by e-mail at agmar-
Horticultural Farming Alternatives Workshop

A Horticultural Farming Alternatives Workshop will be held at Clackamas Community College (OR) on November 10 and 17.

This program, co-sponsored by OSU Extension, WSU Extension and the Horticulture Department at CCC, will provide two days of sessions on a variety of topics of interest to beginning small acreage farmers and other small acreage landowners who are thinking about agricultural options for their land. Registration information is available on the Metro Small Farms Web Site which is found at http://osu.orst.edu/extension/clackamas/farms or call Judy at the Clackamas County Extension Office at (503) 655-8631 if you have any questions or would like a registration form.

The cost of the workshop is $75/person which covers lunches and snacks on both days, and venue and materials costs. Pre-registration is required to insure that we have adequate food and materials for all attendees. Please register by November 5.

Future of the Mid-Columbia Tree Fruit Industry

The Wasco County Fruit & Produce League along with the Hood River Growers Shippers and Oregon State University Extension Service are organizing the “Future of the Mid-Columbia Tree Fruit Industry” conference and planning session for November 13, 2001, 9:00 A.M. to 5:00 P.M. at the Pine Grove Grange in Hood River. The purpose of the conference is to identify possible solutions and community strategies to overcome industry problems for the next five to ten years.

Facilitating the conference will be Mr. Ed Barlow, Jr. Mr. Barlow is one of America’s foremost visionaries. His organized, thought-provoking and dynamic presentations, along with his ability to deliver meaningful information on future trends in a dynamic and entertaining manner, have earned him the reputation as a top motivational futurist.

Groups invited to participate include growers, agri-business people, county commissioners, port commissioners, chamber of commerce members, national and state elected officials, and anyone else who has a stake in the future of the tree fruit industry. With such a broad base of participants, the outcome of the conference will include solutions to problems in every aspect of fruit production, marketing, and transportation. Specifically, it will generate directions that can unify the industry with community leaders, help industry leaders make more informed business and political decisions, and

Resources
New small farms page in the Capital Press. Capital Press is launching a weekly Small Acreage page to serve owners and operators of smaller-acreage farms and ranches. Columnists will discuss topics ranging from weed control to direct marketing, and from fruits and vegetables to cattle. In news articles, readers will find information about individual farms and about industry trends. And the page will offer a resource list of programs and publications that can help small acreage operators meet their goals.

Feature Articles

Grape Production in the Mid-Columbia

By Steve Castagnoli
Hood River Extension Horticulture Faculty

The Mid-Columbia region is known around the world for producing high quality tree fruits, particularly winter pears, apples, and cherries. Through the 1980’s and 90’s, Oregon garnered a reputation as a producer of world-class wines. Credit for this accomplishment largely goes to Willamette Valley vineyards and wineries. Several other winegrowing regions, however, are developing in the state. Perhaps overshadowed by its notoriety for world-class tree fruit production, the Mid-Columbia area is not well known as a wine growing region. Nonetheless, several award winning wines have been produced by local wineries and vineyard-designated wines are made with fruit grown in Mid-Columbia vineyards.

Trends in wine consumption in the U.S. and abroad have created strong domestic and export markets for high quality U.S. wines. Total wine consumption in the U.S. increased 18% from 1991 to 1999. The market for premium varietal and higher grades of wine has increased at a faster rate. From 1986 to 1999, the value of U.S. wine exports increased from $35 million to $548 million. It seems like there may be opportunities for those interested in growing wine grapes in the Mid-Columbia. So what is the potential for wine grape production in the region?

When considering the potential for any kind of crop production, several factors come into play. The regional climate and weather are major considerations. The climatic conditions that favor this area for tree fruit production, relatively mild temperatures in both winter and summer, with rainfall concentrated in the autumn through spring months, are also favorable for the production of high quality wine grapes.

Because of these conditions, the Mid-Columbia is considered to be part of a cool climate viticulture or wine-growing region. Wines produced in cool climate areas are often considered to have the greatest potential for achieving high quality. During fruit maturation, warm days and cool nights contribute to the development of intense varietal fruit aromas and flavors, the raw materials for making fine wines. On the down side, there are years when early fall rains may lead to delayed fruit maturity problems with fruit rot and less than optimal quality.

In cool climate areas, the regional climate (macroclimate) may be well suited to the production of high quality fruit. Many potential vineyard sites, however, may be unsuitable for the successful production of high quality fruit on a consistent basis due to limitations of the site climate (mesoclimatic). Because the vineyard mesoclimatic is affected by several factors, careful attention to vineyard site selection becomes critical in cool climate areas.
Moderately productive, well-drained soils are often favored over deep, fertile, highly productive soils in order to balance vegetative growth and fruit production and quality. On more productive sites, growers must carefully manage this balance to avoid overly vegetative vines that may produce lower quality fruit.

Sloping ground with southern or southwestern exposure contributes to good air drainage for frost avoidance and high interception of solar radiation for photosynthetic activity critical for production of sugar and other fruit constituents. Low to moderate elevation sites are chosen over high elevation sites because the latter may result in insufficient heat units for fruit maturation. Careful attention to these details should be used when identifying suitable sites.

One critical factor in successful wine grape production is the choice of variety. Grape varieties have different requirements for accumulated heat units during the growing season. The variety choice must match the site potential for heat units over the course of the growing season.

When compared to tree fruits, wine grapes require relatively little irrigation water. Although some form of irrigation is usually necessary in the early life of a vineyard, many Oregon vineyards are not irrigated beyond the establishment phase. Additionally, relatively few diseases or insects require regular treatment in Mid-Columbia vineyards.

All things considered, the Mid-Columbia region certainly has untapped potential for producing high quality wine grapes. The economics of vineyard establishment and fruit production may, however, limit the extent of local vineyard expansion. Clark Seavert, OSU Extension Service Agricultural Economist, recently analyzed the cost of establishing vineyards in the area. Preliminary findings suggest that the returns on investment are low as compared to the financial risk involved.

According to Seavert, the cash costs during the five-year establishment phase are approximately $9,400 per acre. Surprisingly, 40% of that cost is hired labor, while planting stock and trellis and irrigation system costs are only 25% of that total. The grower can expect a payback for all cash costs in year eleven assuming a 6% return on investment. These findings demonstrate the need for careful evaluation of vineyard site and variety selection criteria.

As with many agricultural products, a value added component often increases profitability to the producer. If grape growers are able to share in the value-added process of making fruit into wine through association with a winery, they may be more likely to profit financially.

Oregon Forest Sustainability

By Ole Helgerson
Skamania County Forestry Agent

Last week I attended OSU’s “Landmark Assessment Of Oregon’s Forest Sustainability” colloquium in Corvallis. Although most the focus was on the Oregon Coast Range, there were many comments made that Columbia Gorge area woodland and farm owners might find useful. Overall, it was thoroughly outstanding with presentations by OSU’s College of Forestry Dean Hal Salwasser, Oregon Department of Forestry State Forester Jim Brown and Governor Dr. John Kitzhaber. The latter’s 40 minute speech demonstrated an extensive and clear grasp of forest ecosystem function, east-side forest health and related social and political issues; he offered thoughts on what has gone wrong with state and federal management and how the log jam might be opened.

Specific highlights included:

- Regarding public concerns and forestry, Governor Kitzhaber’s main message and that of the later public survey presentation was that in a word it’s water that provides the overarching public concern with respect to forest management. The Governor suggested that legislation and management of state forest lands will be driven first by water quality concerns. The public survey speaker suggested that this is the door for engaging the general public in forestry discussion.
- On timber supply in Oregon, models indicate that both woodland owners and industrial Coastal lands have a bulge in sub-merchantable age classes, thus supply looks good for the next few decades.
- On the east-side, wood availability will decline due to about 30% of the standing volume of east side forests being lost to disease and insects, though lots of trees are in smaller size classes; about 60% of east-side forests are at risk of catastrophic fire outside normal limits.
The timber job multiplier is now 12 jobs per million board-feet of harvest, up from 8 due to increased use of engineered wood products.

On the Oregon coast, old growth acreage is expected to increase due to lack of harvest on federal land; it’s at about 5 to 10% compared to a normal range of 25 to 75; the only endangered forest type is interior oak woodlands largely due to their proximity to the Willamette Valley and urban development.

Land use laws have slowed urban development into forest lands, even during the prosperous 1990’s.

All speakers except the public survey presenter prefaced their remarks by linking them to specific points in the Montreal sustainable Forestry Protocol.

### What’s for Dinner? Part 1

*By Susan Kerr*  
*Klickitat County Extension Agent*

Most livestock owners can learn how to formulate basic livestock rations. Tools required include nutrition reference books, paper, pencil (with an eraser!), calculator and one brain in reasonable condition. Actually, there are only two steps involved in formulating a ration:

1. Determine an animal’s nutritional requirements.
2. Determine what feeds are needed to meet these requirements.

An animal’s nutritional requirements depend on several things: species, mature size, age, weight, physiologic status (pregnancy, lactation, etc.), level of production (rate of gain, amount of milk produced, etc.), general health, weather, and amount of work. For example, every animal will require more energy just for maintenance in cold weather. Also, working animals have higher requirements than animals at rest. Lactating animals have the highest nutritional requirements of all.

How can you figure out what your animal’s needs are? The National Research Council (NRC) publishes booklets on the average nutritional requirements of the major species. These NRC booklets are available to many Extension offices or you may order or browse them on-line at http://www.nap.edu/browse.html. Go to this site and click on “Agriculture”.

A long list of agriculture-related publications pop up, including the NRC’s nutritional requirements for various species. Find the species you are interested in and look for the requirements based on your animal’s body weight and performance level. These nutritional requirement tables are also included in the reference sections of many livestock feeding textbooks.

The major nutrients are water, protein, energy (fats and carbohydrates), vitamins and minerals. The main nutritional requirements to balance for are dry matter, protein, energy, calcium and phosphorus. Protein requirements are reported as grams or pounds of crude protein (CP), total protein (TP) and/or digestible protein (DP). Energy requirements can be reported as pounds of Total Digestible Nutrients (TDN) or megacalories of Digestible Energy (DE), Metabolize Energy (ME) or Net Energy (NE). The diagram below helps explain this “alphabet soup”:

- **Gross Energy** of a Feed  
  - energy lost in feces
- **Digestible Energy**  
  - energy lost in urine and gases
- **Metabolizable Energy**  
  - (available for lactation, growth, work, pregnancy, other production)  
  - energy lost as the heat produced by digestive processes.
- **Net Energy**  
  - (available for lactation, growth, work, pregnancy, other production)

Most small-scale producers could use CP and either TDN or ME values to calculate a balanced diet for their animals.

The limiting factor in determining an animal’s ration is the amount of dry matter the animal can consume in one day — all the required nutrients must be included in this daily dry matter intake or the animal will be undernourished. Dry matter intake (DMI) is reported as a percent of body weight and depends on an animal’s species, physiologic status and stage of maturity. For example: young growing animals and lactating animals...
need and can consume more dry matter in a day than can a mature animal at rest. On a percent-of-body-weight basis. DMI requirements range from 1.5% of body weight for a mature horse up to 6% of body weight for a heavily lactating doe or ewe. Because there is an inverse relationship between mature body size and dry matter intake, a heavily-lactating mouse probably has the highest mammalian DMI requirement on a percent-of-body-weight basis!

The way to create the most economical balanced ration is to use roughage as the major feed component. “Roughage” is the term that describes high-fiber feedstuffs such as hay, pasture, cubes or pelleted fiber sources. Roughage (especially pasture) is usually the least expensive feedstuff. “Concentrate” is the term that describes a feedstuff high in a certain nutrient such as protein or energy. Soybean meal is an example of a protein or energy. Soybean meal is an example of a protein concentrate; corn is an example of an energy concentrate. After using roughages as the major portion of the diet, use concentrates to make up any nutritional deficiencies. It is important to realize that the nutritional requirements for many classes of animals can be met with just good quality hay and a mineral mix; this is usually the most economical ration too.

Reference texts can provide estimates of the nutritional analysis of most feeds. These book values are only estimates, however; much more accurate information is produced by analysis of individual batches of feeds. For example, the “book value” for crude protein in early bloom, second cutting orchard grass hay is 11.4%. However, the orchard grass you actually grow or purchase could have a much lower protein level for a variety of reasons; if you used the book value, your animals would be fed a ration that is deficient in protein. Contact your Extension agent for information about how to submit feeds for analysis. Commercially available feeds such as concentrates have a feed analysis tag provided so there is no need to run an analysis on them.

Just like with people, there is a great deal of individual variation between animals when it comes to metabolic rates and efficiencies of digesions, the impact of any ration you formulate and feed must be monitored closely and adjusted as needed. Monitor an animals' nutritional status by regularly assessing its body condition, weight, performance (rate of gain, amount of milk produced, speed, etc.), and general health (bright eyes, ability to heal quickly, pink mucous membranes, good hoof and coat quality, good conception rate). Is the animal gaining too much weight? If so, reduce some of the concentrate you are feeding. Is the animal getting thin? Add more concentrate. It is important that you make any changes to an animal’s diet slowly so that intestinal bacteria have time to adjust and help with the digestion.

In the next issue we will run through a couple of ration balancing exercises. Sharpen those pencils!