

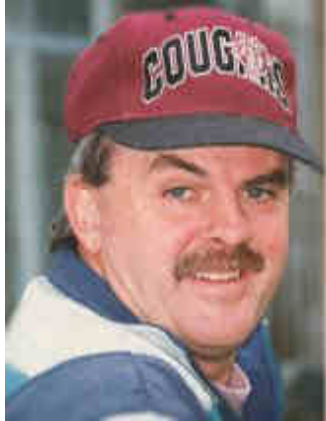


WEST NORTHWEST

A bi-monthly newsletter to faculty/staff/retirees of WSU Long Beach, Mt. Vernon, Puyallup & Vancouver

FEATURE PROFILE – New, Alternative Fruit Evaluations Give Growers Variety and Profitability.

One of the greatest challenges all agricultural producers face is to remain economically viable in today's marketplace. With low wholesale prices and increasing foreign competition, developing new crop offerings and product diversity helps Washington growers compete in a global market.



(Gary Moulton)

Over the past twenty years, the Fruit Horticulture Program at the WSU Mount Vernon Northwestern Washington Research and Extension Center (WSU-NWREC) has tested a number of alternative fruit crops. Evaluations have focused on varieties that can grow in cool maritime climates and are less susceptible to disease.

New crops have a particular impact for small farms. "Small farms are getting more important all the time," says **Gary Moulton**, Senior Scientific Assistant at the NWREC. "We have a lot of small farms and family owned farms here. "

A WSU study done in 2000 examined what growers in northwest Washington wanted. Alternative and new crops were at the top of the list. "New alternative fruit crops service a lot of new people coming into agriculture," explains

Moulton. "The established growers are looking for new things and they are looking for crops that make economic sense and are profitable."

Moulton started his educational path at Cal Poly San Luis Obispo. He got his Master's degree from WSU in 1977 in Plant Pathology, working first in Pullman and at the Tree Fruit Research Center in Wenatchee. In the early 1980's,

he was hired as a research technician to work with Dr. Bob Norton.

At this time, he also worked with commercial apple growers and a few smaller growers. When Norton retired in the early 1990's, Moulton continued to work with growers. Funding was needed to carry out this work. A group soon organized into the Western Washington Fruit Research Foundation to fund fruit research and support Moulton's ongoing evaluations.

Applied research at the NWREC has helped forest, nursery and ornamental growers change stock. Moulton's work currently focuses on three things: fruit cultivars, cultural practices, and wine grape research. Cultivar evaluations identify promising varieties. Using the right root varieties helps enhance that variety when grafted onto the right rootstocks. Cultural research looks at practices such as canopy management, pest control programs and soil fertility to maximize the quality of a particular variety.



(Taylor's Gold alternative fruit crop)



(An *Agria* vine)

The Mount Vernon NWREC started conducting wine grape trials in the 1980's until funding ceased. Moulton took over the program in the 1990's and started to work again with the wine growers' community. He has conducted a variety of tests on new promising cultivars and rootstocks and focused tests on well known varieties such as Pinot Noir, Pinot Gris, and Chardonnay. He has identified several promising clones of each. Wine grapes are very popular in western Washington. "I get so many calls now about wine grapes," said Moulton. "Before there were only about seven growers and now there are close to 50."

Interest in wine-making led to two courses offered last year at the WSU learning center at Skagit Valley College: one on Wine Sensory Evaluation <http://learningcenters.wsu.edu/skagit/wineworkshops.html> and one on Hard Cider making. For information on the Fruit Horticulture Research Program see http://mtvernon.wsu.edu/frt_hort/fruit_horticulture.htm. To read more on the new alternative fruit crops see <http://cru84.cahe.wsu.edu/cgi-bin/pubs/EB2002.html>. For information on growing winegrapes see <http://cru84.cahe.wsu.edu/cgi-bin/pubs/EB2001.html>

MESSAGE FROM THE DIRECTOR

R&E Centers Are Vital to Our Constituents

Recently, I again was reminded of the vital role that R&E Centers play in their constituent's livelihoods. The reminder centered around WSU-NWREC and the vegetable seed industry, but similar cases can be made for all of WSU's R&E Centers.

New legislative funding in support of bio-fuel crops and the immediate prospect that canola could be planted this season in Skagit County, outside of normal brassica field crop assignment rules, created a potential crisis for the area's brassica seed crops already in the ground. Fast action by WSU-NWREC research and extension scientists, local seed companies, and WSDA officials resulted in an emergency meeting at the Center on very short notice.

All aspects of the problem (regulatory, environmental, production) were discussed, and measured responses were considered. Discussions in the future will focus on the (i) conflicts created by planting crucifer crops for biodiesel in or near crucifer seed production areas, (ii) potential legislation which could protect selected vegetable seed production areas in the state from the oil seed production threat, but also support the emerging biodiesel crop industry, and (iii) need for large-scale WSU field demonstration trials at appropriate locations to provide research-based information and outreach on biodiesel/oilseed crops.

I'm confident that only an R&E Center directly situated in a production region has the capacity to provide such a forum: scientific and outreach expertise, knowledge of production practices, and appropriate industry and governmental contacts. In this instance, WSU-NWREC has all of the necessary elements to protect a vital crop as well as an important new one.

–Debbie Inglis, Interim Director/Assistant Dean

(For more information about this topic, contact Dr. Tim Miller, twmiller@wsu.edu or Dr. Lindsey du Toit, dutoit@wsu.edu . Be sure to visit WSU-NWREC's new website that Kathy Gleissner is designing; you can see progress on construction of the new Agricultural Research & Technology building! <http://mtvernon.wsu.edu/>

PRESENTATIONS/MEETINGS/TRAININGS/INVITATIONS

Art Antonelli participated in the following activities in November: Structural Pest Inspector Workshop to 10 novice inspectors (with Carrie Foss and Dan Suomi (USDA)); presented “Dangerous Arthropods” seminar to 20 pest control consultants, Yakima; gave a “Wood Destroying Organisms” lecture to 275 pest control professionals and structural pest inspectors, Renton; did a diagnosis workshop for 35 nurserymen, Silverton, OR. In January, he did pesticide re-certification lectures to 173 attendees at Carrie Foss’ workshop, WSU- Vancouver and to 213 attendees at PLU, Tacoma; provided all-day training to 150 Master Gardener students in Seattle, 34 students in Coupeville and 12 students in Mount Vernon.



Dean Glawe gave the following talks: “The Pacific Northwest Fungi Project and the new Online Journal *Pacific Northwest Fungi*: developing a collaborative model for inventorying biodiversity on a regional basis,” Pacific Forestry Centre, Canadian Forest Service, Victoria, December. “Biology, Identification and Control of Powdery Mildews,” Washington State Nursery & Landscape Association, Vancouver, January.

(At Left: Powdery Mildew on American Sycamore)

Linda Chalker-Scott lectured on “Urban warfare: Will your landscape survive?” Inland Northwest Turf, Tree & Landscape Conference, Coeur d’Alene; “Interpreting information: science, soapbox, or scam?” King County Master Gardeners, Seattle; “Compost tea - examining the science behind the claims.” Washington Turf and Landscape Association Annual Conference, Bellevue; and “Effective mulches for weed control in urban landscapes. WSWA Weed Conference, Yakima.

Lindsey du Toit gave the following presentations: “Efficacy of bactericides for management of bacterial blight in carrots,” and “IYSV in Washington: Current Status and Future Prospects,” Annual meeting of the Pacific Northwest Vegetable Association, Pasco, November; “Iris yellow spot of onion.” <http://www.glexpo.com/abstracts/2005abstracts/onion.pdf> and “Seedborne diseases of carrot.” <http://www.glexpo.com/abstracts/2005abstracts/carrot.pdf>, Great Lakes Expo: Fruit, Vegetable and Farm Market, Grand Rapids, December; “Disease management in vegetable seed crops: 2005 research report.” (Pages 17-22 in the proceedings), “Crucifer quarantine issues for western Washington: What are the issues?,” and “Fresh vegetable disease diagnosis,” Western Washington Horticulture Association, Puget Sound Seed Growers' Association, and Northwest Bulb Growers' Association, SeaTac, WA , January; “Principles of disease management,” Skagit Co. Men’s Garden Club, Mount Vernon, January; “2005 Research on diseases of vegetable seed crops in Washington,” Western Vegetable Disease Conference, Portland, January; “Seedborne diseases: An overview” (pages 37-47 in the proceedings), Organic Seed Growers' Conference, Troutdale, OR, January 2006; “Iris yellow spot virus in onion bulb and seed crops,” and “Bactericides in seed carrots,” Annual Conference of the Columbia Basin Vegetable Seed Association, Moses Lake, January.



(Above: Seed pathology lab at Mount Vernon NWREC)



Patrick Moore made these presentations: "Fresh Market Cultivars of Small Fruit," Western Washington Horticulture Association, SeaTac, WA, January; "Frozen strawberry and raspberry fruit display," Northwest Food Processors Food Manufacturing and Packaging Expo, January; "Development of New Raspberry Cultivars for the Pacific Northwest," Oregon Horticultural Society, Vancouver, WA, January; "Development of New Strawberry Cultivars for the Pacific Northwest, Oregon Horticultural Society, Vancouver, WA, January.

(At Left: *Cascade Bounty*, 2005)

The **Puyallup staff from the Center for Distance and Professional Education (CDPE)** facilitated the successful Western Washington Horticultural Convention and Trade Show, held January 4-5 at the Seattle Marriott in SeaTac, WA. In its 96th year, the convention has long been a venue for growers, agriculture industry personnel, and researchers to share ideas, trends and learning. Over 200 growers, researchers, students and exhibitors interacted at this two-day event that included the members of the Western Washington Horticulture Association, the Northwest Bulb Growers Association, the Puget Sound Seed Growers, and for the first time, the Puget Sound Wine Growers. Linda Sanford from CDPE reported that a number of the sessions were led by various Puyallup, Mt. Vernon and Vancouver researchers and staff. **Gary Chastagner, Jenny Glass and Pat Moore** from Puyallup, **Lindsey du Toit, Tim Miller, Gary Moulton, and Tom Walters** from Mt. Vernon and **Lynell Tanigoshi** from Vancouver led the contingent from WSU.

Tim Miller gave the following presentations in November: "Lost in the Leftovers? An Identification Workshop for Minor Weed Families," and "Weed Control Research in Ornamental Bulbs," Washington State Weed Conference; "Studies on the Biology and Control of Japanese and Other Knotweeds", WSU Crop Science Departmental Seminar; "Weed Control Case Studies", WSU Recertification and Pesticide Safety Education at Mill Creek; "Weed control research in Western Washington", guest lecture, WSU CropSci. 305, Pullman. He was a panel member for "Biofuels: Is this a practical new crop for our farmlands?," Focus on Farming Conference II, Snohomish County, Monroe and gave the following presentations at the WWHA annual convention in SeaTac: "Weed management in spinach, beets and Swiss chard seed crops," "Post-bloom weed control in tulip (2004-05)," "Weed control in vegetables: Research progress in 2005," and "Weed control in small fruit: Research progress in 2005."

INTERNATIONAL

Lindsey Du Toit spent two weeks in New Zealand in December, at the invitation of A S Wilcox & Sons Ltd and Seminis Vegetable Seeds, to consult with vegetable & seed growers, company reps, breeders, & consultants in New Zealand. Lindsey presented seminars on onion production in Washington, and neck rot and *iris yellow spot virus* of onion, to onion growers in Pukekohe and to the Southern Packers in Ashburton. Lindsey participated in disease management discussions and field tours of onion and vegetable seed crops. In addition, Lindsey gave a seminar titled "Vegetable seed crop disease research in Washington State" to researchers, breeders, and growers at New Zealand Crop & Food in Lincoln, New Zealand.

Patrick Moore, Penelope Perkins-Veazie, Courtney A. Weber and **Luke Howard** spoke in December on the "Environmental Effect on Antioxidant Content of Ten Raspberry Cultivars" at the Ninth International Rubus and Ribes Symposium, Pucon, Chile. Patrick and Robert R. Martin also gave a poster presentation on "Screening for Resistance to Raspberry Bushy Dwarf Virus via Pollen Transmission."

PUBLICATIONS

- A. Antonelli, J. Stark, G. Chastagner.** 2006. An unknown twig borer in Grand Fir Christmas trees. *Christmas Tree Outlook*. 18.
- D.A. Glawe,** F.M. Dugan, Y. Liu, J.D. Rogers. 2005. First record and characterization of a powdery mildew (Erysiphales) on a member of the Juncaginaceae: *Leveillula taurica* on *Triglochin maritima*. *Mycological Progress* 4: 291
- L. Chalker-Scott.** 2005. Growing healthier trees. *Organic Gardening* Oct/Nov: 14
- L. Chalker-Scott.** 2006. The myth of rubber mulch. *WSNLA B&B* 58(1): 10
- L.J. du Toit, T.W. Miller, C.R. Libbey, M.L. Derie, R.K. Peterson.** 2006. Evaluation of mustard cover/biofumigant crops for management of Fusarium wilt in spinach seed crops, 2004-2005. *Biological & Cultural Tests* 21:V001.
- L.J. du Toit,** M.L. Derie. 2006. Evaluation of Actigard, bactericides, and compost teas for control of bacterial blight in carrot seed crops, 2005. *Fungicide & Nematicide Tests* 61:V042.
- L.J. du Toit,** M.L. Derie, L.M. Brissey, N. Lloyd. 2006. Evaluation of yield loss caused by leaf spot fungi in spinach seed crops, 2005. *Fungicide & Nematicide Tests* 61:V044.
- L.J. du Toit,** M.L. Derie, R.H. Morrison, P.R. Brown. 2006. Evaluation of Endura EG and Rovral 4F as seed treatments for control of black leg of cauliflower, 2004. *Fungicide & Nematicide Tests* 61:V043.
- L.J. du Toit,** M.L. Derie, L.M. Brissey. 2006. Evaluation of fungicide seed treatments for control of black leg of cabbage, 2005. *Fungicide & Nematicide Tests* 61:V041.

Web publications:

- D.A. Glawe,** G.G. Grove, M. Nelson. 2006. First Report of Powdery Mildew of *Gaillardia* Caused by *Leveillula taurica* in North America. Online. *Plant Health Progress* doi:10.1094/PHP-2006-0112-01-BR.
- D.A. Glawe,** R.W. Stack, J.A. Walla. 2006. First Report of Powdery Mildew on *Caragana arborescens* in Minnesota and North Dakota caused by *Microsphaera (Erysiphe) palczewskii*. *Plant Health Progress* doi:10.1094/PHP-2006-0117-01-BR .
- S. Hartney, **D.A. Glawe,** F. Dugan, and J. Ammirati. 2005. First Report of Powdery Mildew on *Corylus avellana* caused by *Phyllactinia guttata* in Washington State. Online. *Plant Health Progress* doi:10.1094/PHP-2005-1121-01-BR.

GRANTS

- \$1,000** to Lindsay du Toit from the Pacific Northwest Vegetable Association for research on onion bulb and seed crop diseases.
- \$8,000** to Lindsay du Toit for each of 3 years from the Robert MacDonald Vegetable Seed Memorial Fund, in support of a PhD student to work on a project titled 'Fusarium wilt of spinach seed crops in western Washington.
- \$16,000** to Patrick Moore and Tom Walters. Washington Strawberry Commission. Genetic Improvement of Strawberry.
- \$16,000** to Patrick Moore. Washington Red Raspberry Commission. Red Raspberry Breeding, Genetics and Clone Evaluation

The following projects were funded by the Washington State Commission for Pesticide Registration (WSCPR):

\$6,000 to Lindsey du Toit, Phillip Brown (Alf Christianson Seed Co.), and Naidu Rayapati (WSU Prosser IAREC) to investigate "*Cucumber mosaic virus* in spinach seed crops in western Washington", with a match of \$3,000 from the Puget Sound Seed Growers' Association (PSSGA) via NARF + \$1,000 from seed companies.

\$9,300 from WSCPR for "Effect of powdery mildew on carrot seed production in Washington", with a match of \$5,000 from the Columbia Basin Vegetable Seed Association (CBVSA) via NARF.

\$10,895 from WSCPR for "Development of a soil bioassay & evaluation of liming for control of *Fusarium* wilt in spinach seed crops in western Washington", with a match of \$7,895 from the PSSGA via NARF.

PEOPLE

Andy Bary and **Dave Muehleisen** received their Organic Food Producer Certificate for Crops and Livestock.

Congratulations to **Carla Ferguson**, WSU Puyallup Classified Employee of the Year. Carla



has been at WSU for almost eight years, first as a Fiscal Tech III and now as a Grant and Contract Specialist.

Dean Glawe has joined the steering committee of the International Powdery Mildew Project. The steering committee is comprised of eight fungal systematists in Asia, Australia, Europe, North and South America, and is overseeing the development of an international effort to inventory the powdery mildew fungi of the world. Glawe is the North American representative on the committee.

Debra Inglis received the WWA Distinguished Service Award at the annual convention. This award is given to individuals who have made an outstanding contribution to the WWA and to the horticultural industry of western Washington.

Gail Clowers, Operations Manager, retired on December, 31, 2005.

Welcome to **Jean Canonica**, Fiscal Technician



III, who joined the WSU Puyallup Business Office on December 13, 2005. Jean comes to us from Tacoma Community

College where she had worked for eight years.

Frank Dugan, USDA ARS, Pullman, spent part of the week of January 9 at the **Puyallup Research and Extension Center** doing research on powdery mildew fungi with **Dean Glawe**.

FIELD DAYS AND EVENTS

In December, the WSU Small Farms Team co-sponsored two listening sessions on the legal risks of farm direct marketing and agritourism. The sessions brought 20 agricultural producers to WSU Spokane County Extension and WSU Puyallup to share their ideas. Participants identified the most critical liability issues they face when marketing directly to consumers or hosting the public on their farms or ranches. Follow-up workshops were scheduled for March 14 (Spokane) and March 22 (Puyallup) to present risk management tools and best practices that address these issues. More information is available through WSU Stevens County Extension, a workshop co-sponsor: (509) 684-2588 or akowitz@wsu.edu. This program is funded by the USDA Risk Management Agency.

UNSCHEDULED EVENTS

In March, WSU Puyallup lost power at 9:30 AM when two things happened almost at the same time. First the outside power was lost and then, within seconds, the large Ponderosa Pine nearest to the 4-H offices went down taking power lines with it. The FMO crew plus a number of



other Puyallup staff, went to work clearing the tree so that the contractor could get in and repair the damage. It was a great team effort clearing the tree. The power lines were fixed by 2:30 PM and full power restored at 3PM, only to go back out at 5:30 PM when power in the entire Puyallup area went out. Thanks to all who pitched in!!!!!!!

INSIDE CHANGES

Extended University Services is now just a memory. No, they have not been eliminated; they just have a new name! As of February 1, 2006, Extended University Services became the Center for Distance and Professional Education.

The new name was selected as a result of considerable research and discussion conducted over the past two years. The name Extended University Services, for a unit that included both Distance Degree Programs and Conferences and Professional Programs, did not identify the depth and scope of all the services and programs offered. Also, as a group worked to better align with WSU's goals and strategic focus, they wanted a name that reflected the mission of the unit, associated with the services and programs they deliver:

- high quality programs and services
- high academic expectations for students
- academically strong programs distinguishable from programs of lesser quality and reputation
- wide range of programs from credit degrees through noncredit professional education

They reviewed names of units with similar missions at other institutions, brainstormed terms and titles that seemed to reflect their goals, and discussed alternatives with colleagues both internal and external to WSU. The term “center” was chosen to emphasize CDPE’s central role in administering WSU’s distance degree, professional, and continuing education programs.

In case you missed it: WSU PUYALLUP WEEKLY HIGHLIGHTS FOR THE SEASON

- *Chris Feise Co-Chairs Ag Session at Climate Change Conference
- *WSU 4-H Youth Development Hosts 1270 in Seattle from Around the Globe
- *Living Well with Diabetes, Diabetes Awareness and Education in Washington State
- *Testing, Teaching, and Research Provide Knowledge on Avian Health and Food Safety
- *Christmas Tree Research that supports Economic Development:
- *New brochure tells retailers it’s not the cutting, it’s the water.
- *Joe Harrison’s Work is Recognized for Best Available, Cost-Effective Science
- *Urban Pest Management Grows with Programs and a New Building to Meet Urban Needs

Permission to reprint the *West by Northwest Newsletter* is granted provided the intended meaning is not changed and explicit credit is given to the author(s) and publication source. If the original article is adapted, paraphrased, or changed in any way, please send a fax (253.445.4571) of the new version for verification of meaning and approval. To share *West by Northwest* with anyone who might be interested in our research and extension efforts, please direct them to the on-line edition at: <http://www.puyallup.wsu.edu/periodicals.htm>

Please send news items for the Spring edition of *West by Northwest* to Tanyalee Erwin at Washington State University Puyallup, 7612 Pioneer Way E, Puyallup, WA 98371-4998 or e-mail: terwin@puyallup.wsu.edu. **Deadline for the Spring edition is May 31st.**