



WEST NORTHWEST

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

FEATURE PROFILE – Vegetable Seed Pathology Program

Did you know that farmers in the PNW produce a significant percentage of the US and world supply of seed for more than 35 vegetable crops? Although these high value seed crops total less than 15,000 acres annually in WA, they play an important role in the global vegetable industry. In general, one acre of hybrid cabbage seed crop produces 2,000 lbs of seed, which will plant 12,000 acres of cabbage. About 90 countries import vegetable seed from the PNW as few regions of the world have the specific climatic conditions necessary for production of high quality seed.

The competitive nature of the vegetable seed industry means that PNW growers must produce high quality seed that is also pathogen-free. To help address this prerogative, the Vegetable Seed Pathology program was initiated in August 2000 by **Lindsey du Toit** at the WSU-NWREC in Mount Vernon, as part of the WSU Safe Food Initiative. This statewide research and extension program has trials located in the Columbia Basin of central WA and the Skagit Valley of northwestern WA. The goal of the Vegetable Seed Pathology program is to contribute to a sustainable and secure food supply by providing research-based plant pathology support to the regional, national, and international vegetable seed industry. This is accomplished through investigating the biology and epidemiology of vegetable diseases, developing effective integrated approaches to managing the pathogens, and delivering research-based information to growers. Research projects cover an array of fungal, viral, and bacterial diseases, with a number of new diseases reported in WA and the USA by the program. Extension activities are accomplished through workshops, conferences, publications, regional and state advisory committees, and the WSU Vegetable Pathology Team (http://mtvernon.wsu.edu/path_team/vegpath_team.htm).



Vegetable Seed Pathology support staff. FRONT (L-R): Louise Brissey (Ag. Research Tech. II), Barbara Holmes (Research Assistant), & Jaime Cummings (MS student). BACK: Nathan Lloyd (Mount Vernon High School graduate) and Blair Baber (Western Washington University senior intern).

The program team also includes two skilled agricultural research technologists, **Mike Derie** and **Louise Brissey**. Mike has over 15 years of experience in seed pathology. Louise focuses on

greenhouse trials and seed assays. **Barbara Holmes** and several other temporary personnel also provide capable research assistance. **Pablo Hernandez-Perez** completed his MS program in the WSU Department of Plant Pathology in May 2005. Pablo's thesis research on seedborne aspects of leaf spot diseases in spinach seed crops was carried out in the Vegetable Seed Pathology program. In July 2005, **Jaime Cummings** started an MS in this program through the Department of Plant Pathology. Jaime will be investigating the potential efficacy of organic seed treatments for vegetables. **Martin Chilvers** recently completed a one-year post-doctorate position in the Vegetable Seed Pathology program, investigating development of a molecular seed assay for *Botrytis* spp. causing neck rot of onion. This program has also housed two undergraduate interns, **Michael Picha** (from WSU) and **Blair Baber** (from WWU). **Nathan Lloyd** and **Samuel Sampson** each worked in the program for three years while at high school (full-time in the summer and part-time during the school year).



Mike Derie (Ag. Research Tech. III), Martin Chilvers (Postdoctorate), and Lindsey du Toit (Assistant Professor and Extension Specialist).

The Vegetable Seed Pathology program is supported by seed growers (Columbia Basin Vegetable Seed Association and Puget Sound Seed Growers' Association), various state and federal grants, the WA State Commission on Pesticide Registration, the Alfred Christianson Endowed Professorship, and the Robert MacDonald Vegetable Seed Memorial Fund.

MESSAGE FROM THE DIRECTOR

Recently, staff members and I were assembling historical materials to exhibit at the June 1st ground-breaking ceremony for the new Agricultural Research and Technology Building at WSU Mount Vernon NWREC. It was quite enjoyable to see photographs and read news clippings and field day notices dating back to the late 1940's. Accomplishments of faculty at WSU Puyallup were evident in articles among these collections.

It was interesting to examine our Center's past fund-raising brochures, building blueprints, site designs, and strategic plans. In many ways, the current revitalization effort here is a rendition of what has gone on before. (I was even somewhat chagrined to find that what I thought was a "new" product I was testing for pea root rot control actually had already been tested here 50 years ago!) The commitment of all WSU faculty and staff, the enthusiasm and support of local families to WSU, and the general excitement about a unique opportunity to improve WSU facilities, programs and outreach, resonated then, as I think they do today. In spite of the changes that our center has experienced over the years, especially right now, these things remain constant. I believe I can speak for all of the faculty and staff at Mount Vernon in saying we recognize that one of our most important challenges during this "revitalization" is to retain our strengths and build on them for the future.

*--Debbie Inglis, Interim Director/Interim Assistant Dean
WSU Mount Vernon NWREC*

PRESENTATIONS/MEETINGS/TRAININGS/INVITATIONS

Art Antonelli participated in the following activities: Gave a class on "Diagnosis of plant problems", UW, May; Provided instruction at **Carrie Foss's** Structural Pest Inspector Workshop, WSU Puyallup, June; Presented "Christmas tree insect and mite pest management update", PNW Christmas Tree Association Summer meeting, Tacoma, WA, June; Gave field presentations on "Spider mite and Adelgid trials" at Christmas tree growers farm tour, WSU Puyallup, June.

Cindy Armstrong attended an intensive immersion course co-taught through WSU/UI and Rural Roots. The course, Soils 445/545: *Field Analysis of Sustainable Food Systems*, emphasized field analyses of several different agricultural businesses with a focus on understanding systems and the concept of sustainability. Participants spent their days visiting farms, processing facilities, and marketing venues with evening discussions and activities. Instructors included Cathy Perillo, WSU Pullman, **Marcy Ostrom**, WSU Puyallup, and Theresa Beaver, Rural Roots located in Moscow, ID, August.

Craig Cogger gave a research seminar on organic nutrient management and organic farming systems research at the University of Puget Sound and led a farm walk on soil management for farmers from the Hmong community in King and Snohomish counties, May.

Linda Chalker-Scott gave an invited presentation, "Exploding the myths: Horticultural practices for healthy landscapes," at the 10th annual International Master Gardener Conference, University of Saskatchewan, Saskatoon, SK, July.

Lindsey du Toit gave the following presentations: "Disease-free carrot seed. Is it a concern? Is it possible?" and "Neck rot of onion: What's the story?" Fifty-fourth Annual Muck Vegetable Growers' Conference in Bradford, Ontario, Canada, April; "Diseases of Vegetable Seed Crops: Biology and Management," Organic Spinach Seed Field Day, Sequim, organized by the Organic Seed Alliance, April.

Dean Glawe was co-organizer of the

Pacific Northwest Fungi Project spring 2005 meeting and e-publishing workshop. The main topic of the meeting was the project's new online journal Pacific Northwest Fungi. Tim Murray, Chair of the Department of Plant Pathology at WSU, gave a talk on electronic publishing based on his experience as the founding Editor-in-Chief of the American Phytopathological Society's online journal, Plant Health Progress, Seattle, WA, May.

Dean Glawe gave the following talks: "Erysiphales of extreme environments: Subarctic powdery mildews in interior Alaska", Mycological Society of America, University of Hawaii, July (co-author G. A. Laursen); "*Leveillula taurica* in Washington state: a case history," Pacific Division of the American Phytopathology Society, Portland, July (co-authors F. M. Dugan, **L. J. du Toit**, Y. Liu, and J. D. Rogers)

Debbie Inglis gave the presentation "Revitalization efforts under way at WSU Mount Vernon NWREC," Kiwanis Club of Mount Vernon, WA, April.

Tim Miller gave the following presentations: "Poisonous plants of northwest pastures," WSU Skagit County Livestock Advisor Training in Mount Vernon, WA, April; "Weed control research in ornamental bulbs," WSU Bulb Growers Field Day in Puyallup, WA, May; "The management of noxious and invasive weeds in wetlands," Natural Resources Conservation Service National Wetland Restoration Conference, Bow, WA, May; "Herbicide movement and toxicity," Weed Management Training, Mount Rainier National Park, June; "Identification of some common weeds," Island County Advanced Master Gardener Training, Coupeville, WA, June.

Marcy Ostrom, Small Farms Program Director, made a presentation to the directors of the WSU Learning Centers on the Cultivating Success courses, July.

Gwen Stahnke presented a paper on "Cranefly management," Tenth International Turf Research Conference, Wales, UK, July (co-authored by **A. Antonelli**, **E. Miltner**, **M. Johns**, **P. Cruz**, and **N. Aviles**).

PUBLICATIONS

- Bary, AI, Cogger, CG, Sullivan, DM, and Myhre, EA**, 2005. Characterization of fresh yard trimmings for agricultural use. *Bioresource Technology* 96:1499-1504.
- Chalker-Scott, L**, 2005. The myth of companion plantings. Washington State Nursery and Landscape Association (WSNLA) B&B 57(7): 10-11.
- Chalker-Scott, L**, 2005. The myth of protected preservatives. WSNLA B&B 57(6): 10-11.
- Chalker-Scott, L**, 2005. The myth of folklore gardening. WSNLA B&B 57(5): 12-13.
- du Toit, LJ, Crowe, FJ, Derie, ML, Simmons, RB, and Pelter, GQ**, 2005. Bacterial blight of carrot seed crops in the Pacific Northwest. *Plant Disease* 89: 896-907.
- du Toit, LJ and Derie, ML**, 2005. Evaluation of Actigard, bactericides, and compost teas for control of bacterial blight in carrot seed crops, 2004. *Fungicide & Nematicide Tests* No. 60:V046.
- du Toit, LJ, Derie, ML, and Morrison, RH**, 2005. Evaluation of fungicide seed treatments for control of black leg of cauliflower, 2004. *Fungicide & Nematicide Tests* No. 60:STO11
- du Toit, LJ, and Derie, ML**, 2005. Evaluation of fungicides and compost teas for control of Botrytis scape and umbel blight in onion seed crops, 2004. *Fungicide & Nematicide Tests* No. 60:V045.
- du Toit, LJ, Derie, ML, and Hernandez-Perez, P**, 2005. Evaluation of fungicides for control of leaf spot in spinach seed crops, 2004. *Fungicide & Nematicide Tests* No. 60:V044.
- du Toit, LJ, Derie, ML, and Hernandez-Perez, P**, 2005. Evaluation of yield loss caused by leaf spot fungi in spinach seed crops, 2004. *Fungicide & Nematicide Tests* No.60:V047.
- du Toit, LJ, and Hernandez-Perez, P**, 2005. Efficacy of hot water and chlorine for eradication of *Cladosporium variabile*, *Stemphylium botryosum*, and *Verticillium dahliae* from spinach seed. *Plant Disease* 89: *in press*.
- Eastwell, KC, **du Toit, LJ**, and Pike, KS, 2006. Etiology of 'black death', a new disease of Helleborus species in North America. Appendix in: *Helleborus*. Timber Press, Portland, OR. *To be published in 2006*.
- Glawe, DA, and Grove, GG**, 2005. Powdery mildew diseases. Pscheidt, J. W. and C. M. Ocamb *Pacific Northwest Plant Disease Management Handbook*. Oregon State Univ. Corvallis, pp. 24-26
- Gundersen, B and Inglis, DA**, 2005. Evaluation of seed, in-furrow and foliar treatments for control of pink rot on potato, 2004. *Fungicide and Nematicide Tests* No. 60:V063.
- Inglis, DA and Gundersen, B**, 2005. Evaluation of seed, in-furrow and foliar treatments for control of root rot on peas, 2004. *Fungicide and Nematicide Tests* No. 60:V063.
- Miller, TW and Peterson, RK**, 2005. Herbicides for weed control in cabbage seed crops. *Western Society of Weed Science Research Progress Report*, pp. 28-30.
- Miller, TW and Peterson, RK**, 2005. Post-bloom herbicide applications in tulip. *Western Society of Weed Science Research Progress Report*, pp. 50-51.

Bulletins

Gary Moulton submitted two bulletins for review, "Growing Grapes in Western Washington" and "New Alternative Fruit Crops for Western Washington." These bulletins summarize the results of research and observations over the last five years of variety and cultural trials by the Fruit Horticulture department at NWREC.

Abstracts and Proceedings

- Libbey, CR, and Miller, TW**, 2005 Effect of mesotrione on Pacific Northwest sweet corn varieties. *Proceedings, Western Society of Weed Science Annual Meeting*, *in press*.
- Miller, TW and Libbey, CR**, 2005. Effect of reducing herbicide rates on the vegetative and reproductive growth of green pea and weeds. *Weed Science Society of America Abstract* no. 278 [CD-ROM computer file]. WSSA, Lawrence, KS. February.

Novy, RG, Love, SL, Corsini, DL, Pavek, JJ, Whitworth, JL, Mosely, AR, James, SR, Hane, DC, Shock, CC, Rykbost, KA, Brown, CR, Thornton, RE, Knowles, NR, Pavek, MJ, Olsen, N, and **Inglis, DA**, 2005.

Defender: A high-yielding, processing cultivar with foliar and tuber resistance to late blight. Annual Meeting, Potato Association America.

Peterson, RK, Miller, TW, and Libbey, CR, 2005. Herbicide testing in Apiaceae seed crops. Proceedings, Western Society of Weed Science Annual Meeting, Vancouver, BC, Canada, *in press*.

Technical Reports

Chilvers, MI, du Toit, LJ, and Peever, TL, 2005. The following gene sequences were determined and submitted to a national database for chitin synthase sequence of *Botrytis allii* (accession AY927693), *B. aclada* (accession AY927694), *B. byssoidea* (accession AY927695), *Botryotinia fuckeliana* (accession AY927696), and *Botryotinia squamosa* (accession AY927697). Released March 9, 2005.

<http://www.ncbi.nlm.nih.gov/Genbank/>

Ostrom, M, 2005. Small Farms: the Heart of Washington Agriculture. CSANR Technical Report Series 2005-01-06, CSANR, WSU. <http://www.csanr.wsu.edu/InfoSources/#tech>.

Ostrom, M, 2005. Washington Farmer Views on Environmental Policy. CSANR Research Brief Series 2005-02-09, CSANR, WSU. <http://www.csanr.wsu.edu/InfoSources/#briefs>.

Ostrom, M, 2005. The Importance of Direct Markets for Washington Farmers. CSANR Research Brief Series 2005-03-08, CSANR, WSU. <http://www.csanr.wsu.edu/InfoSources/#briefs>.

Ostrom, M, 2005. Consumer Food Purchasing: Interest in Local and Direct Markets. CSANR Research Brief Series 2005-02-07, CSANR, WSU. <http://www.csanr.wsu.edu/InfoSources/#briefs>.

Ostrom, M, Hines, R, and Warren, R, 2004. The King County Food System Atlas. CSANR Technical Report Series 2005-05-10. CSANR, WSU. <http://www.csanr.wsu.edu/InfoSources/#tech>.

Ostrom, M; Garrett, S, Qazi, J, and Hines, R, 2004. The Chelan County Food System Atlas. CSANR Technical Report Series 2005-06-11. CSANR, WSU. <http://www.csanr.wsu.edu/InfoSources/#tech>

GRANTS

0.25 FTE from WSU ARC Graduate Research Fellowship Award to **Craig Cogger**, 2005-07.

\$1,000 from Northwest Agricultural Research Foundation (NARF) to **Lindsey du Toit** for "Mustard Biofumigants."

\$2,500 from Washington State Department of Agriculture to **Tim Miller** for "Testing Herbicides for Controlling Yellow Flag Iris."

\$3,000 from Washington State Seed Potato Commission to **Debbie Inglis** for overseeing a project on monitoring for potato tuber moth in Skagit and Whatcom counties.

\$4,000 from the IR-4 National Pilot Performance Project to **Tim Miller** for

testing several herbicides in leafy green vegetables.

\$4,900 from NARF to **Tim Miller** for "Weed Control in Vegetable Seed Crops."

\$5,000 from NARF to **Pat Moore** and **Gary Moulton** for "Evaluation of Small Fruits at WSU-Mount Vernon NWREC."

\$5,570 from NARF to **Tim Miller** for "Weed Control in Peas."

\$6,200 from Washington State Potato Commission to **Debbie Inglis** for "Verticillium Wilt on Potatoes."

\$9,810 from NARF to **Tim Miller** for "Weed Control in Cucumbers."

\$13,346 from NARF to **Gary Moulton** for "Alternative Fruit Crops."

\$27,494 from Pierce County Public Works and Utilities to **Eric Miltner, Craig Cogger**,

and **Andy Bary** for Pierce County Golf Turf Species/Variety Evaluation and Dry Fertilizer Product Evaluation, 2005-06. \$58,660 from Northwest Biosolids

Management Association, King County to **Craig Cogger, Andy Bary, and Rita Hummel** for Biosolids Research and Education, 2005-06.

PEOPLE

Farewell to **Susan Calhoun** who resigned in July after accepting a position with the City of Tacoma. She worked for the accounting department at WSU Puyallup for nine years and will be missed.

Welcome back to **Norm Dart** who has accepted the position of WSU Extension Sudden Oak Death Education and Diagnostic Coordinator. Norm, who joins us on August 16th, was previously at WSU Puyallup as a graduate student working with **Gary Chastagner**.

WSU-NWREC welcomes **Dr. Tom Walters**, the new small fruits horticulturist scientist in Mount Vernon, beginning August 1st.

The Center for Sustaining Agriculture and Natural Resources (CSANR) has just completed a search to permanently fill the Extension Coordinator Specialist position (shared with the Small Farms Program). They are happy to announce that **Richard Hines** has accepted the position. As of July 18th he is a permanent member of the CSANR.



Rebecca White, PhD candidate in the Department of Animal Sciences, joined the WSU Livestock Nutrient Management Program at WSU Puyallup in July where she will be working

with **Joe Harrison, Debbie Davidson** and the rest of the Nutrient Management Team. Rebecca is from Maine and is currently completing her Masters work at the University of New Hampshire where she studied the

effects of feeding lactoferrin to pre-weaned calves on immunity and intestinal function. She completed her undergraduate degree at the University of Massachusetts where she gained experience with sheep, goats, beef cattle, and dairy. While at the University of Massachusetts she was a member of the Cooperative Real Education in Agriculture Management (C.R.E.A.M.), a program similar to the WSU CUDS program. Rebecca chose to come to WSU because of her interest in nutrient management and nutrition. Rebecca will focus on various aspects of phosphorus management for her PhD program as well as other emerging nutrient management issues facing the dairy industry.

Congratulations to WSU-NWREC Graduate Students!!!

Jaime Cummings, was recently accepted into the WSU Dept. of Plant Pathology. Jaime's master's thesis project is on evaluation of organic seed treatments for vegetable crops, under the supervision of **Lindsey du Toit, Debra Inglis, Carol Miles**, and Frank Dugan. Jaime will complete her thesis work at WSU-NWREC.

Jessica Gigot is the recipient of a WSU Graduate School Travel Grant to attend the Annual Meeting of the American Phytopathological Society, and present a poster on "Sporulation of *Phytophthora infestans* on whole potato tubers." The meeting is being held in Austin, TX. Jessica is working towards her master's degree in plant pathology under **Debra Inglis**.

Pablo Hernandez recently completed all of the requirements for his master's degree in plant pathology. Pablo's major advisor was **Lindsey du Toit**.

Renee Priya-Prasad is the recipient of the WSU Association for Faculty Women’s Harriet B. Rigas Award. Renee’s major advisor was Bill Snyder, Entomology, WSU-Pullman. Renee

recently completed her PhD. degree, and is now doing post-doctoral work at WSU-NWREC.

FIELD DAYS AND EVENTS

| DATE | EVENT TITLE | LOCATION | TIME | CONTACT |
|---------------|------------------------------------|-----------------------------|--------------------|---------------------------------|
| August 26 | Onion Field Day | L & L Farms, Connell, WA | 9:00 AM – 12:00 PM | Lindsey du Toit 360-848-6140 |
| September 10 | WWFRF Harvest Sample Day | WSU-Mount Vernon NWREC | 11:00 AM – 2:00 PM | Gary Moulton 360-848-6131 |
| October 1 | 2005 HarvestFest | Area farms and WSU Puyallup | Call for details | Rich Hines 253-445-4549 |
| October 8 | Fall Field Day and Open House | WSU-Mount Vernon NWREC | 8:30 AM – 3:00 PM | Gary Moulton 360-848-6131 |
| October 10-14 | Compost Facility Operator Training | WSU Puyallup | All Day | Andy Bary 253-445-4588 |

The WSU Vegetable Seed Field Day on June 16th was well attended by growers, field reps, consultants, students, and extension personnel. Results of field, lab, and greenhouse research trials were presented by **Debra Inglis** (organic pea seed treatments), **Renee Priya-Prasad** (biocontrol of cabbage maggot), **Tim Miller** (herbicide screening in beet and spinach; ultra-low herbicide rates in beet, chard, and spinach; organic weed control programs in spinach, broccoli, cucumbers, and potatoes; mustard cover crop biofumigation on spinach ground for Fusarium wilt & weed control) and **Lindsey du Toit** (carrot bacterial blight; seed transmission, seed treatment, fungicide efficacy, and epidemiology of leaf spot of spinach).

A Wine Sensory Evaluation Workshop, jointly sponsored by WSU-NWREC fruit horticulture department and WSU Skagit County Learning Center, was held June 16-17. The workshop featured Dr. Ann Noble, an internationally known expert in wine sensory evaluation at U.C. Davis. Classes included “Introduction to Wine Aroma Wheel”, and “Sensory Analysis of White and Red Wine”. The highlight of the workshop was a six-course banquet showcasing local food producers, vineyards and wineries, plus local culinary artists and the work of chef Peter Belknap of Oyster Creek Inn. The workshop was presented in McIntyre Hall of Skagit Valley College in Mount Vernon.

On July 12th, **Debra Inglis**, **Tim Miller**, and **Lindsey du Toit** gave a field tour of WSU-NWREC research trials to legislators and representatives from Olympia, WA.

On July 19th, Debra Inglis and Lindsey du Toit gave a field tour of WSU-NWREC field research trials as part of the three-day Washington Pest Control Tour.

A harvest day was held on July 16th for members of the Western Washington Fruit Research Foundation (WWFRF) at WSU-NWREC. It was conducted jointly by WWFRF and the Fruit Horticulture department. Approximately 80 people, including families and children, toured part of the fruit orchard to sample several varieties of early plums and peaches, as well as blueberries and black, red, and white currants.



The Small Fruit Breeding Program organized several Field Days/Open Houses in the spring. There was a Strawberry Field Day and a Raspberry Field day at WSU Puyallup, where growers and researchers were able to see and taste new cultivars and selections. **Gwen Windom** talked about root rot research involving solarization plots at Puyallup and Emerson, WA.

There was a Small Fruit Open House at WSU-NWREC, where participants learned about on-going blueberry, raspberry, strawberry and grape research. **Tim Miller** talked about his small fruit weed research, **Gary Moulton** talked about his grape research, Chad Finn (USDA/ARS Corvallis) talked about blueberry breeding and **Pat Moore** talked about small fruit research associated with the breeding program being done in Mount Vernon.



During two Raspberry Machine Harvesting Field Days in Burlington and in Lynden, growers and researchers were able to see raspberry selections from the WSU and BC breeding program. The fruit was machine harvested and then set out for growers to evaluate. Participants gave valuable input on selections.



At the WSU Puyallup Small Farms Field Day in August, around 50 attendees learned about small farms research on pastured poultry, soil physical quality and soil biology in organic systems, interseeded cover crops, habitat enhancement for beneficial insects, and movable fencing options.



GENERAL ANNOUNCEMENTS

WSU Puyallup welcomed our visiting international scholars and their families at a catered lunch event on June 29th. Approximately 40 staff members and guests joined in to enjoy the lively conversation and wonderful food.



Thank you to everyone who turned out June 7th to help with the Adopt-A-Road Cleanup at WSU Puyallup. Twenty-three enthusiastic volunteers showed up to help. It was our biggest group in 11

years. Over 20 bags of trash (and two abandoned car seats) were picked up and disposed of in less than an hour. Special thanks to **Jenny Glass** for organizing this event and **Jon Newkirk** for providing pizza! Others involved include: **Jeri Ayala, Betty Barstow, Mickey Bean, Richard Bembenek, Ann Brelsford, Sue Butkus, Emmott Fisher, Diane Fogle, Donna Gardner, Becky Hines, Andy Jackson, Mary Kohli, Anne Meyer, Eric Miltner, Greg Pernu, Kathy Poole, Linda Sanford, Vernene Scheurer, Heather Schriver, Marcia Senter, Gary Smith, Gwen Stahnke, Rod Tinnemore, Gwen Windom, and Kevin Wright.**

Book Launch Event: *Renewing the Countryside - Washington*. In June, WSU's Center for Sustaining Agriculture and Natural Resources celebrated the launch of a new book profiling 43 Washington farmers, ranchers and rural citizens who are keeping Washington livable. Individuals were chosen based on their contributions to the economic, environmental and social well-being of their communities. The beautiful coffee table book makes an excellent gift. More details and ordering information are available at www.sustainablenorthwest.org.

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 Autumn edition of *West by Northwest* to Heather Schriver at Washington State University Puyallup, 7612 Pioneer Way E, Puyallup, WA 98371-4998 or e-mail: schrive@puyallup.wsu.edu. **Deadline for the Autumn edition is October 31st.** Co-editors: Heather Schriver and Tanyalee Erwin.