

INTRODUCTION

Staffs of the Columbia Basin Agricultural Research Center (CBARC-Oregon State University, Pendleton and Sherman Stations) and the Columbia Plateau Conservation Research Center (USDA-Agricultural Research Service, Pendleton) are proud to present results of their research. This bulletin contains a representative sample of the work in progress at these Centers. A collection of bulletins over a three-year period will give a more complete assessment of the productivity and applicability of research and education. Changes in staffing, programming, and facilities at these Centers during the past year are summarized below.

Promotions and Awards

Oregon State University promoted Darrin Walenta and Lisa Patterson from the rank of Faculty Research Assistant to Senior Faculty Research Assistant, Karen Morrow from Biological Research Technician 2 to Biological Research Technician 3, Erling Jacobsen from Biological Research Technician 2 to Trades/Maintenance Worker 2, and Gloria Eidam from Office Coordinator to Grants and Contracts Technician. Erling Jacobsen received the Classified Employee of the Year Award for the OSU College of Agricultural Sciences. The high level of activity for promotions, position reclassifications, and awards achieved by the small OSU staff at Pendleton and Moro was a pleasing tribute to the contributions that they and other staff make to the research and education programs being offered.

Within the USDA staff, Patricia Frank received a merit promotion from Office Automation Assistant to Secretary in

September 1997. Pat Frank and Katherine Skirvin received certificates in recognition on 10 and 20 years of Federal service, respectively. Certificates of merit with cash awards for outstanding work were given to Paul Rasmussen, Roger Goller, Chris Roager, and Dale Wilkins.

Staff Changes

Many changes occurred in OSU staff during 1997-1998. Ms. Lisa Patterson resigned full-time employment in the Plant Pathology Program to allow herself greater opportunity for a higher level of devotion to her family. She continues to reside in Pendleton and to provide critical contributions as a Contract Plant Pathologist. Dr. Rolando Descalzo was hired as Research Associate to fill the "full-time" vacancy in the Plant Pathology Program. Dr. Descalzo is a native of The Philippines and is a Canadian citizen. He earned the M.S. and Ph.D. degrees at Simon Fraser University in Burnaby (Vancouver), British Columbia. He has a balance of experiences with traditional and molecular methods in the public and private sectors and will introduce modern, molecular-disease, diagnostic procedures into the OSU laboratory at Pendleton. The Descalzo-Patterson "team" in the laboratory, greenhouse, and field will add strength to the traditional program conducted over the past decade. Dr. Chengci Chen joined the OSU staff as a Faculty Research Assistant in the Cropping Systems Program directed by Dr. Bill Payne. Dr. Chen is a native of Peoples Republic of China and earned the Ph.D. at Oregon State University. He has strong credentials in plant-water relations and will strengthen the new Cropping Systems Program that has operated without technical support since Dr. Payne arrived at Pendleton in December 1996. In May, Ms.

Connie Beery joined the OSU staff as a Faculty Research Assistant in the Dryland Cropping Systems Agronomy Program directed by Dr. Don Wysocki. Ms. Beery filled the position previously occupied by Sandra Ott (see the 1997 edition of this Report). Ms. Beery earned the M.S. Degree in Agronomy at Louisiana State University and most recently worked in New Mexico as an Environmental Scientist with the Office of Environmental Protection for the All-Indian Pueblo Council. Mr. Robert Correa terminated employment as the OSU Facilities and Equipment Manager at Pendleton. Mr. John Muth filled this vacancy (Trades Maintenance Worker 2) as Mr. Correa moved into a similar position with the USDA-ARS, also at the Pendleton Station. Mr. Muth was previous employed for 22 years in a comparable position with the University of Alaska, near Fairbanks. Temporary employees in OSU programs included Sandra Alderman, Brian Arvidson, Alec Bailey, Julie Bain, Brian Currin, Mark Easley, Tara Foltz, Jada Frank, Jared Frank, Rebecca Holowecky, Jay Justus, Jodi Justus, Lacey Lemmon, Staci Loiland, Keely Moon, Samantha Morrow, Julie Rickman, Bryan Rodriguez, Nick Sirovatka, Kari Snyder, Bill Thurman, Amy Wasson, and Lori Wasson.

Dr. Stewart Wuest accepted a 2-year post-doctoral appointment and joined the research team in July 1997. Larry Baarstad, Agricultural Research Technician, resigned after 13 years of service to start his own business. Bob Correa filled this position in July 1997. Phil Dailey was promoted to GS-11, transferred to Corvallis, and now is the Administrative Officer for Corvallis, Pendleton, and Burns, Oregon sites. Jane Dailey, Secretary, resigned in August 1997 and Pat Frank was selected to fill that secretarial position. Eric Nicita accepted a

180-day Hydrologic Technician position in January 1998 to work with Dr. John Williams in hydrology research. Leslie Pollard, Sarah Heidt, Erin Bailey, Jennifer Kirby, Aaron Arvidson, Andy Weidert, Sarah Fife, Melissa Hedman, Kimberly Miller, Michelle Parry, and Shelle Freston worked as temporary employees during the summer and school vacations. Sue Waldman, mathematician, retired 10 September 1997. Craig Cameron, Engineering Technician, resigned in August after four years with ARS to begin graduate studies. Becky Jones and Julie Singh served as temporary office automation clerks.

New Projects

Many new projects were established by OSU faculty during the previous year (see the 1997 edition of this Report). Only one new project was initiated during the current period. Modern procedures for the diagnosis of plant pathogens and diseases are being introduced into the Plant Pathology Laboratory. Equipment purchased by the Oregon Wheat Commission is being installed to increase the precision and speed of identifying pathogens involved in root disease complexes and to bolster wheat-seedling screening procedures that identify sources of genetic resistance to Fusarium foot rot. This activity will be used to create further links between the pathology and wheat breeding programs.

Dr. Clyde Douglas, Jr., Paul Rasmussen, Dr. Stewart Wuest, and Dr. Steve Albrecht started new projects to determine the time required to attain equilibrium for transition from intensive tillage to no-till. Dr. Wuest started a project to measure the germination requirements of wheat and the effect of seed-soil contact as

well as their implications for the design and performance of drills. Stewart is leading a project to measure large pores developed under long-term no-till. Understanding the types and quantity of pores will give clues to characteristics of water infiltration, root growth, and root diseases, as well as the potential for active soil fauna such as earthworms.

Facilities

Several improvements were made to OSU facilities and equipment and vehicle inventories, although these activities received much less emphasis than in the previous reporting period (1996-1997). The new cropping systems project, led by Bill Payne, installed an automated weather recording system at the Sherman Station. The system collects data on more weather parameters than older equipment at that site and also allows Dr. Payne to instantaneously download real-time and historical data into his computer at Pendleton, thereby greatly improving the linkage of experiments at the two locations. Renovation of the OSU Office Building continued at the Pendleton Station with the addition of cabinets, counters, desks, and computers for the agronomy and soils programs. Major repairs were made to several trucks and tractors, and one OSU pickup was replaced during the current reporting period.

A new automated telephone phone system that has direct-dial capabilities and automated answering was installed in January 1998. This change helped reduce the receptionist's labor demand and consequently reduced ARS secretarial positions from two to one full-time and one half time. Roof coverings were replaced on the annex building and mechanical room. The exterior of the office building was

painted, and a rest room in the annex was retrofitted to meet with ADA standards. The metal shop bay was insulated.

Training

OSU staff continued to maintain training requirements for pesticide application licenses, first aid, and cardio-pulmonary resuscitation. Gloria Eidam traveled to Corvallis for training with the OSU financial information system.

All USDA staff licensed to apply pesticides completed rectification training. All staff received updates on cardio-pulmonary resuscitation, drivers, and ethics training. Dr. Steve Albrecht attended Radiation Safety Training at Texas A & M. Dr. Steve Albrecht, Roger Goller, Daryl Haasch, and Dr. John Williams received a one-day training session on the safety and operation of nuclear soil moisture-gauge from Troxler Electronic Laboratories. Dr. Dale Wilkins and Dr. Clyde Douglas attended a NRCS digital soil-mapping seminar. Dr. John Williams attended a course on "Time Management." Chris Roager completed a course on "Basic Hazardous Waste, Record Keeping, and New Regulations." Pat Frank attended an agency travel training course titled, "Travel Management." Bob Correa completed training on "Mobile and Overhead Crane Safety." Katherine Skirvin and Patricia Frank attended a one-day refresher course entitled "The Grammar Game." Sue Waldman, Jane Dailey, Tami Johlke, Pat Frank, and Katherine Skirvin took a one-day session on "Windows 95." Daryl Haasch attended courses on "Windows 95" and "Excel." Pat Frank participated in a three-day course on "Civil Rights Facilitator Training." Dale Wilkins completed an American Society of Agricultural Engineers

continuing education course, “Yield Maps : What can we do with them?”

Visitors

The Center hosted many additional events, including the following: public hearing on the proposed Smoke Management Ordinance for Umatilla County, OSU Cereal Research Review, NRCS Research Review, staff enrichment training sessions (first aid, CPR, driver skills, radiation safety), Long-Term Experiments Oversight Committee, OSU President’s promotional team for the Pendleton Roundup, temporary employee orientation, “Brown Bag” seminars by temporary employees with overseas experiences, individual coordinating meetings for PNW Agricultural Economist’s, Director’s of the three PNW State Agricultural Experiment Stations and Pacific-West Area of the USDA-ARS, and the “Fields of Tomorrow” cropping systems demonstration.

Distinguished visitors hosted by the staff at the center included:

Ceval Tosunoglu, Section Manager, Mustafa Yanar, Agricultural Engineer, Ankara, Turkey
Ali Eyol, Extension Section Manager, Ibrahim Gur, Agricultural Engineer, Malatya, Turkey
Alper Kocaturk, Agricultural Engineer, Hasan Savas, Agricultural Engineer, Cornal Sahinkaya, Agricultural Engineer, Adiyaman, Turkey
Abdilmecit Yasa, Supports Section Manager, Scmsi Bilici, Agricultural Engineer, M. Nuri Yilmaz, Agricultural Engineer, Elazig, Turkey, Ministry of Agriculture and Rural Affairs (MARA)
Gene Stubbs, Smith Frozen Foods, Athena, Oregon
Gao Huenwen, China Ag University,

Beijing, China
Jim Kelly, OSWC, Pendleton, Oregon
Bruce Hammon, DEQ Pendleton, Pendleton, Oregon
Ivan Ortiz, Monasterio, Mexico
Lucy Gilchrist, Reynaldo Villareal, Iva`nortiz Monasterio, Sanjaya Rajaram, Cimmyt, Mexico
Lloyd Elliott, Research Leader USDA-ARS, Corvallis, Oregon
Tatjana, Dishnica, Ilir Sallaku, Irfan Tarelli, Ministry of Agriculture & Food, Albania, Tirane
Shigenori, Morita, University of Tokyo, Bunkyo-Ku, Tokyo, Japan
Pyushpeki Victor, Ciba, Moscow, Russia
Esikov Vitalij, Kedd of Farm, Orenburg, Russia
Musatou Sergei, Warehouse, Omsk, Russia
Miro Jiranek, University of Idaho, Willoughby, Ohio
Josef Parizek, University of Idaho
Pie Stany, Slovakia
Gyuia Zalabai, University of Idaho
Dun Streda, Slovakia
Mike Purser, Kate Ely, CTUIR, Pendleton, Oregon
Sharon Walker, C.B. Clement, NRCS, Walla Walla, Washington
Debbie Fortner, Greg Schlenz, NRCS, Dayton, Washington
Loren Vrih, NRCS, Heppner, Oregon
Agribusiness Club, University Idaho, Agricultural Sciences, Moscow, Idaho
Chris Pannkuk, Research Associates Ag Engineering Department Washington State, Moscow, Idaho
Ochiryn Dashdendev, General Director “Youth” Company Forms, Dr. Gochoogin Davaadorj, Chairman, Agriculture Department, Ministry of Agriculture, Mongolia

J. Byambadorj, Director Mongolia Consulting Services, Ulaanbaatur, Mongolia

Lelank H. Kelly, Wildhorse Gaming Resort, Pendleton, Oregon

Dr. Prem Pal Singn, G.B. Pantnagar University of Agriculture & Technology, Pantnagar, India

Paul Webster, Amanda Webster, Wye College University of London, London, England

Professor J.P. Zhong, Xinjiang Agricultural University Department of Agronomy, Xinjiara, China

Sevim Dihici, University of Agriculture Rural Affairs, Ankara, Turkey

Cevit To Sunoglu, Ministry of Agriculture Ankara, Turkey

Pervin Altincinar, Ministry of Agriculture, Malatya, Turkey

Cemar Sahinkaya, Mujoffer Cetin, Ministry of Agriculture, Admaman, Turkey

John Canull, CTUIR, Mission, Oregon

Sandra Evans, Assistant Director, World Affairs Counsel of Oregon, Portland, Oregon

Philippe Lucas, INRA, LeRheu, France

Thayne Dutson, Dean, College of Agricultural Science, Oregon State University

Mike Burke, Associate Dean, College of Agricultural Science, Oregon State University

President & Mrs. Risser, Oregon State University

Forrest Rodgers, Oregon State University Director of Corporate Relations

Sally Sederstrom, Oregon Tourism Commission, Salem, Oregon

Kevin McCann, Oregon State University Director of Community and Government Relations

Chuck Norris (former State Representative), Hermiston, Oregon

Greg Walden (Candidate for US House of Representatives) Hood River, Oregon

Bill Hansell, Emile Holeman, and Dennis Doherty, Umatilla County Commissioners, Bill Jones, Umatilla County Council

Group of 15 wheat farmers and Farm Credit Officers from The Republic of Georgia (former USSR)

Seminars

The 1997 OSU/ARS Seminar Series at the Center was coordinated by Dr. John Williams. Seminars included the following speakers and subjects:

Conservation Tillage Activities; Dennis Roe, NRCS, Team Leader, Tri-State Natural Resources, Technology Team, Colfax, WA; 18 March.

Small Grain Canopy Cover Effects on Water Erosion; Dr. Chris Pannkuk, Research Associate, Agricultural Engineering Department, Washington State University, Pullman, WA; 15 April.

Cyanobacteria as a Source of Nitrogen for Cereal Plants; Dr. Steve Albrecht, Microbiologist, USDA-ARS, Pendleton, OR; 27 May.

Roughness and Soil Porosity Changes following Summer Rain; Dr. Ron Rickman, Soil Physicist, USDA-ARS, Pendleton; 17 June.

Effects of Winter Cover Crops Following Potato on Soil Nitrate and Soil Fertility in the Columbia Basin; Dr. Jeffrey P. McMorran, Agronomist, Hermiston Agricultural Research and Extension Center, Hermiston, OR; 15 July.

Problems in the Management of Sedimentation in Tropical Watersheds: The Use of Cesium-137 in Soil Erosion Studies; Dr. Greg Nagle, Ecologist, USDA - Forest Service, Corvallis, OR; 12 August.

Agricultural Riparian Areas in Western Oregon; Dr. Steve Griffith, Research Plant Physiologist, USDA-ARS, Corvallis, OR; 30 September.

Wind Erosion and Air Quality; Mr. Brian Finneran, Oregon Department of Environmental Quality, Portland, OR; 25 November.

Glyphosate Synergistic Interaction with Pythium, and DNA-Based Identification of Pythium Species; Dr. Rolando Descalzo, Director of Research, IG MicroMed Environmental Inc., Richmond, British Columbia; 23 January.

Wheat and Barley Breeding in Maryland; Dr. José Costa, Small Grains Geneticist and Breeder, University of Maryland, College Park, MD; 3 March.

Overview of the South Texas Wheat Program; Dr. Allan Fritz, Wheat Geneticist and Breeder, Texas A&M University, College Station, TX; 5 March.

Montana Winter Wheat Breeding: Competitive Cultivars for a Global Market; Dr. Philip Bruckner, Small Grain Breeder and Geneticist, Montana State University, Bozeman, MT; 6 March.

Liaison Committees

The Pendleton and Sherman Station Liaison Committees have region-wide representation and provide guidance in decisions on improvements of the staffing,

programming, facilities and equipment at the Stations. Membership is by appointment by the Director of the Oregon Agricultural Experiment Station and also, at Pendleton, by the Director of the Pacific West Area, USDA-ARS. These committees provide a primary communication link among growers, industry and the research staff and their parent institutions. The Committee Chairs and OSU and USDA administrators encourage and welcome your concerns and suggestions for improvements needed in any aspect of the research centers or their staffs.

The Pendleton Station Liaison Committee is coordinated by Chairman Kay Simpson (Pendleton: 541-276-3507) and the Sherman Station Liaison Committee is coordinated by Chairman Ernie Moore (Moro: 541-565-3202).

Aknowlegements

The staff wishes to express their appreciation to individuals, associations, and corporations who have given special assistance for the operation of experimental plots on or associated with the Center during 1994-95. The Oregon Wheat Commission continued to provide the critical support upon which the Center's OSU projects are founded. Thanks are also given to those who donated additional equipment, funds, seed, or chemicals (*American Cyanamid Co., Bayer Corp., Novartis, E.I. duPont de Nemours, FMC Corp., Rhône-Poulenc Ag Co., Zeneca, Western Plant Breeders, Tomco Seed Co., Pro-Mar Select Seed Cooperative, United Agricultural Products*) or loaned equipment, services, or facilities (*Lieualen Ranches, Double M Ranch, Mid-Columbia Producers, Earl Brown & Sons, Inc.*).

We express our appreciation and thanks to those who donated labor, supplies, equipment or funding for the Pendleton Station Field Day: *American Cyanamid Co., BASF Corp., Bayer Corp., Cargill Inc., Carroll Adams Tractor, E.I. du Pont de Nemours & Co., Farm Credit Services, Farm Equipment Headquarters, FMC Corp., Gustafson Inc., Huntington-Price, Inland Chemical Service, Inland Empire Bank, Novartis, Pendleton Main Street Cowboys, Monsanto Co., Pendleton Bus Co., Pendleton Flour Mills, Pendleton Grain Growers, Rohm and Haas Co., Smith Frozen Foods, The McGregor Co., UAP Northwest, Umatilla County Wheat Growers League, Walla Walla Farmers Coop., Western Farm Service, Wheatland Insurance, Wilbur-Ellis Co., and Zeneca Agricultural Products.*

We also appreciate and thank donors who provided buses, meals, and other services for the Sherman Station Field Day at Moro: *Ag-West Supply, BASF Corp., Cargill Inc., Cascade Ranchers, Columbia River Bank, Gustafson Inc., Klamath First Federal Bank, Klickitat Valley Grain Growers, Mid-Columbia Bus Co., Monsanto Co., Morrow County Grain Growers, Northwest Chemical Corp., Richelderfer Air Service, Sherman Aviation, Sherman County High School, Sherman Farm Chemicals, The Halton Co., U.S. Bank, Western Tillage Equipment Co., and Wilbur-Ellis Co.*

Cooperative research plots at the Center were operated by Warren Kronstad, Patrick Hayes, Chris Mundt, Dan Sullivan, and Russ Karow. Additionally, we are very thankful for the ever-present assistance from the Extension Service personnel in all counties of the region, and especially from the following counties: Umatilla (*Mike Stoltz, Tom Darnell, and Jeff McMorran*), Union/Baker/Wallowa (*Gordon Cook*),

Morrow (*Kathryn Kettel*), Sherman and Wasco (*Sandy Macnab*), and Gilliam (*Mike Spengler*) counties in Oregon, and Columbia (*Roland Schirman*), Adams/Lincoln (*Bill Schillinger*), Walla Walla (*Walt Gary*), and Whitman (*John Burns*) counties in Washington.

We also wish to thank the 30 farmers who have allowed us to work on their property during the past year. They have performed field operations, loaned equipment, donated chemicals, forfeited yield, and adjusted their practices to accommodate our experiments. The locations of these off-station plot sites are shown on the map that follows.

We truly appreciate the support and encouragement of growers, organizations, and businesses with a mission common to ours: to serve in the best manner possible the crop production and resource conservation needs of our region. We welcome your suggestions on how we may continue to improve our attempts to reach this goal.

Richard Smiley
Superintendent
OSU-CBARC

Dale Wilkins
Research Leader
USDA-ARS-CPCRC