

People & Places

# Seeking innovations in irrigation

R. Troy Peters combines interests in irrigation, engineering

By DIANNA TROYER  
For the Capital Press

Irrigation engineer R. Troy Peters credits his summer job as a teen-ager in arid south-eastern Idaho for guiding his career path.

"I grew up irrigating for my uncle every summer in the Magic Valley in Idaho and loved it," said Peters, professor of irrigation engineering at Washington State University.

"I saw first-hand the value of it. I loved agriculture and I loved engineering, so irrigation engineering was a great meld of those."

Based at the Irrigated Agriculture Research and Extension Center in Prosser since 2006, Peters has researched innovative irrigation projects dealing with deficit irrigation, water hydraulics, scheduling and management, automation, water quality, and crop water use estimation.

In some cases, crops flourish with a little less water, not more.

To help orchard owners, farmers, and ranchers decide when and how much to irrigate, he developed a free smartphone application, called the Irrigation Scheduler Mobile, in 2012.

The online irrigation scheduling tool also operates



Courtesy of R. Troy Peters

R. Troy Peters researches Low Elevation Spray Application — called LESA — at Washington State University's Irrigated Agriculture Research and Extension Center in Prosser.

as a web page and is integrated with AgWeatherNet and AgriMet, providing daily crop water use estimates and rainfall data.

"Along with farmers, some lawn and garden businesses have started using it," he said. "A lot of people have learned it's OK to turn off the water once in a while, especially in spring and fall, with the reassurance their crops will be fine."

One crop that can withstand deficit irrigation is native spearmint.

"Up to a 60 percent irrigation deficit, no matter the timing, can save water while still maintaining oil yields and quality similar to fully irrigat-

ed plants," he said.

Peters has also been in the forefront of research concerning the reduction of water usage through adjusting the height of sprinklers on crops.

"When sprinklers interact with crops more, you get better yields," he said of two application types.

Low Energy Precision Application — known by the acronym LEPA — is a modification of the sprinkler configuration on center pivots that dribbles water onto the soil from a low elevation, about 12-18 inches from the soil surface, at low pressure.

Low Elevation Spray Application — known as LESA — uses suspended sprinkler

heads, which spread the water out a little more and reduces runoff compared to LEPA.

"It's more versatile than LEPA with a variety of crops, row orientations and tillage systems."

Other innovations include using drone imagery to identify water stress areas in fields and automatically adjusting water flows.

Based on the imagery, adjustments can be made with automatic prescription rate generation software to control movement of pivots and provide uniform water coverage.

"Pumps with variable frequency drives are gaining popularity, too, because flows

**Western Innovator**

**R. Troy Peters**  
Age: 46

**Education:** B.A. in manufacturing engineering, 1997 Brigham Young University; Ph.D. in irrigation engineering, 2003 Utah State University

**Author:** Authored or co-authored more than 40 peer-reviewed articles

**Family:** Wife and six children ages 9 to 23

**Hobbies:** At his small hobby farm, he says he loves "to read and mess with various technologies in my basement."

are automatically adjusted," he said. "They save energy and make life easier for farmers because they no longer have to go to a field to make adjustments to the pump."

In some areas, cost sharing to convert to innovative irrigation systems is available.

Peters suggested farmers contact organizations including local electric utilities, the Natural Resources Conservation Service and Bonneville Power Administration to learn about potential cost-sharing programs.

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We want to publish corrections to set the record straight.

# National FFA honors state legislator

SUNNYSIDE, Wash. — State Sen. Jim Honeyford, R-Sunnyside, will receive the Honorary American FFA Degree at the 91st FFA Convention and Expo in Indianapolis next month.

The award is given to individuals who have provided exceptional service to agriculture, ag education or FFA.

Honeyford said he's proud of FFA youth in Washington and that it's been a privilege to support their efforts and commitment to ag education and public service.

"Working on our state's



Courtesy Photo

State Sen. Jim Honeyford, R-Sunnyside, speaks on the floor of the Washington State Senate.

farm, ranch and agricultural issues is one of my highest priorities, so it's

truly rewarding to receive this recognition from both the state and nation-

al FFA," said Honeyford. He owned and operated a small family farm for 25 years, serves on the Senate Agriculture, Water, Natural Resources and Parks Committee and is a leading voice on water and ag issues.

The National FFA Organization, formerly known as Future Farmers of America, has more than 523,000 student members preparing for leadership and careers in science, business and technology of agriculture.

Honeyford led the fight for a solution to the state Supreme Court Hirst deci-

sion that restricted access to well water and crippled rural economic development.

The Senate passed a six four times but the Democrat-controlled House refused to act.

Honeyford held firm against passing a state capital budget until Hirst was addressed. He prevailed.

In addition to state and national FFA awards, Honeyford has been endorsed by the Washington State Farm Bureau and named its legislator of the year in 2003, 2007 and 2013.

— Dan Wheat

## Calendar

To submit an event go to the Community Events calendar on the home page of our website at www.capitalpress.com and click on "Submit an Event." Calendar items can also be mailed to Capital Press, 1400 Broadway St. NE, Salem, OR 97301 or emailed to newsroom@capitalpress.com. Include "Calendar" in the subject line.

**Through Sunday Sept. 23**

Washington State Fair. 110 Ninth Ave. SW, Puyallup, Wash. Website: www.thefair.com/

**Tuesday, Sept. 18**

Oregon Farm Bureau Classic Golf Tourney. 1 p.m. Stone Creek Golf Club, 14603 S. Stoneridge Drive, Oregon City, Ore. Contact: tiffany@oregonfb.org

Meat School 2018. 5:30-9 p.m. OSU Southern Oregon Research & Extension Center, Auditorium, 569 Hanley Road, Central Point, Ore. The fifth session of a five-evening class series on producing and marketing grass-fed and grass-finished meat animals. Details: https://bit.ly/2N5Ymxg

**Tuesday-Wednesday Sept. 18-19**

Safety and Health in the Cannabis Industry. Riverhouse, 3075 N. Highway 97, Bend, Ore. Topics for growers include OLCC requirements, grow operations, extraction methods, fire regulations, worker protection and Oregon OSHA consultation services. Website: osha.oregon.gov/conferences

**Saturday, Sept. 22**

Goat Education Day — Get Yer Goat. 8:30 a.m.-4 p.m. OSU Southern Oregon Research & Extension Center Auditorium, 569 Hanley Road, Central Point, Ore. A day of education attended by beginner and experienced goat owners. This year, in addition to dairy goats, a beginning class on meat goats will be offered. A taco salad lunch is included with the event fee (both

vegetarian and meat options). Read more about Goat Day, the scheduled classes and the link to online registration:https://extension.oregonstate.edu/smallfarms/events. Choose two classes in the morning and two in the afternoon. Optional: choose two classes in the morning and goat cheesemaking in the afternoon. Cost: Adults, \$35; Youth, \$20; Cheesemaking \$50 Website: https://extension.oregonstate.edu/smallfarms

Yamhill-Carlton FFA Alumni Benefit Dinner and Auction. 5-9 p.m. Carlton American Legion Hall, 158 East Main St., Carlton, Ore. Social hour and silent auction are at 5 p.m., followed by the dinner and live auction at 7 p.m. All proceeds from this event directly benefit the Yamhill-Carlton FFA Chapter through the funding of scholarships, student leadership training, travel to events, and more. For more info, contact David Van De Walle, alumni president, at 503-434-1810. Email: yocfa.alumni@gmail.com

Hood River Hops Fest. Noon-8 p.m. Columbia Lot, Fifth and Columbia, Hood River, Ore. The Hood River Hops Fest is an annual celebration of beer's bitter friend, freshly harvested hops. Hood River County is surrounded by world-renowned hop-growing regions, and since 2003 brewers have gathered each September in downtown Hood River to share their fresh-hop beer creations. The family-friendly event features more than 50 breweries with more than 60 fresh-hop beers, plus a variety of food vendors, live music, and an awesome collectible mug. Website: http://hoodriver.org/hops-fest/

**Saturday, Sept. 29**

Oregon Ag in the Classroom Fall Harvest Dinner and Auction. 5-9 p.m. CH2M Hill Alumni Center, Oregon State University. The silent auction starts at 5 p.m., followed by dinner featuring food produced by Oregon farms and ranches. The oral

auction is at 7:45 p.m. All proceeds from the dinner and auction will support the Oregon Ag in the Classroom mission: to help students grow in their knowledge of agriculture, the environment, and natural resources. Registration due by Sept. 14. Website: https://oregonaitc.org/events/fall-harvest-dinner-2/

Free Washington Hemp Info Class. 1-3 p.m. Elk Plain Grange, 21817 Mountain Highway E, Spanaway, Wash. Join the Industrial Hemp Association of Washington and the Washington State Department of Agriculture as we present the in's and out's of the Washington IHRP program, Farm Act of 2018, basics of growing hemp and current industry statutes. There will be a question-and-answer session and assistance available with applications after the class. Space is limited to 75 people. RSVP for classes at www.ihempawa.com. Cost: Free.

**Wednesday-Thursday Oct. 3-4**

Oregon Water Resources Congress Golf Tournament and Technical Seminar. Eagle Crest Resort, 1522 Cline Falls Road, Redmond, Ore. The technical seminar will be Oct. 4 and provide district staff, board members and consultants will innovative strategies, tools and solutions to meet water management challenges. The golf tournament is Oct. 3. Website: www.owrc.org

**Friday-Sunday Oct. 12-14**

Hood River Valley Harvest Fest. 1-6 p.m. Friday, 10 a.m.-6 p.m. Saturday, 10 a.m.-5 p.m. Sunday. Hood River Event Site, North of Exit 63 off Interstate 84, Hood River, Ore. Celebrate Hood River's harvest season. Presented by Pacific Power and produced by the Hood River County Chamber of Commerce. This old-fashioned fall festival brings together more than 120 vendors of local produce and food prod-

ucts, plus arts and crafts, wine, cider and beer tastings. Held along the scenic Hood River waterfront, this is the Columbia River Gorge's biggest celebration of the region's incredible fall bounty. Website: http://hoodriver.org/harvest-fest/

**Thursday, Oct. 18**

Balancing Profitability and Access in Local Food Systems. 8:30 a.m.-4 p.m. The Riverside Hotel, 2900 W. Chinden Blvd., Boise, Idaho. In a state that comprises big ag, small ag and highly motivated food system stakeholders, how can we bring more locally produced foods into mainstream markets and strengthen the economics of small- to mid-sized farms? This one-day conference will explore, through an economic lens, ways to cultivate a local food economy to create jobs, invigorate small farms and businesses and keep precious dollars in our Idaho communities. Hosted by the University of Idaho Extension, the conference is made possible with a Western Sustainable Agriculture Research & Education (WSARE) grant. Cost: \$45 Website: https://idahofood2018.eventbrite.com

**Tuesday-Wednesday Oct. 23-24**

Nutrient Management Conference. 8 a.m.-5 p.m. Embassy Suites, 1441 Canyon Del Rey, Seaside, Calif. The agenda will focus on the latest FREP-funded research results and practical applications of fertilizing materials for agricultural production in the state of California. Grower, CCA, and PCA credits will be requested. Website: https://www.cdca.ca.gov/ls/ffdrs/frep/FREPConference.html

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**Wednesday-Saturday Oct. 24-27**

91st National FFA Convention and Expo. Indianapolis, Ind. This is the culmination of the year's work for FFA members from around the nation. Website: https://convention.ffa.org/schedule/