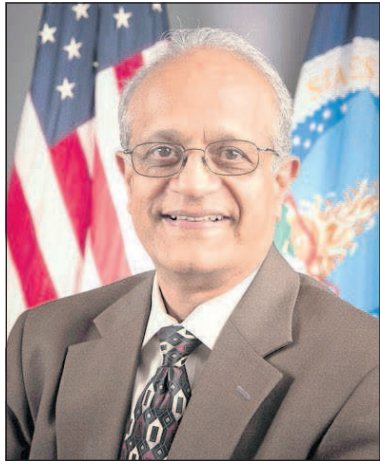


Ramaswamy sees ‘incredible advancement’ in ag tech

By ERIC MORTENSON
Capital Press

Sonny Ramaswamy has never been accused of thinking small. The former dean of Oregon State University’s College of Agricultural Sciences sees and speaks in big sweeps of ideas and possibilities. And now, in his third year as director of the USDA’s National Institute of Food and Agriculture, he oversees a grant-dispensing agency that can make things happen.

In an interview with the Capital Press, Ramaswamy explained his particular interest in what he calls the “internet of agricultural things.” Essentially, Ramaswamy sees the farm of the near future as a place where soil sensors, ground-based robots, overhead drones and plants themselves monitor crops, check conditions, collect data and even apply inputs. The information flows to a farmer’s hand-held device or among the machines themselves. A robot patrolling a crop might have the ability to recognize weeds and zap them with an onboard laser. Data would follow food to the grain silo, grocery store and even the home refrigerator, all of which communicate



Courtesy of USDA

Sonny Ramaswamy, former dean of OSU’s College of Agricultural Sciences, is director of the National Institute of Food and Agriculture.

among themselves and with the producer and consumer. The fridge, for example, might read the milk jug’s RFID tag and warn you when it has reached its pull date. “It is the interconnection of all aspects of food and agricultural systems, from the farm all the way to the dinner table,” Ramaswamy said in a phone interview from his office in Washington, D.C.

He said the prospects for agriculture are “mind boggling.” A picture of a Norman Rockwell scene of a farmer in bib overalls, rolling hills and a couple cows. “Fast-forward to the 21st century,” he said. “You’ve still got a guy in bib overalls, but he’s got a hand-held device and he’s a data manager, is what he is now. Oh, by the way, sensors are telling him how much nitrogen is in the soil, if insects are out there and if pollination is needed.”

His agency is backing the development of such technology. In December, NIFA granted \$3 million to four universities involved in various forms of robotics. Georgia Tech will develop robots that collect leaves and soil samples as part of integrated pest management systems. The University of Illinois will develop “cooperative networks” of human operators and mobile robotic platforms that work well on variable terrain and with interchangeable tools and crops. Carnegie Mellon will work on the safe integration of robotic equipment and human workers.

The biggest slice, \$1 million, went to Washington State University to work on robotic bin management systems in fruit orchards. “We are on the cusp of seeing incredible advancement in the use of robotics and sensors supporting agriculture in this country,” Ramaswamy said in a news release announcement of the grants. Also in December, NIFA announced it’s making \$15 million available for fellowships to train the next generation of agricultural researchers. Earlier in 2014, NIFA granted \$1.3 million for a University of Florida researcher’s continued development of a monitor that detects fruit rot diseases in strawberry plants and alerts growers when to spray. Previously, growers sprayed once a week from November to March as a preventative; the technology allows them to spray only when conditions warrant. Ramaswamy said some of the most unusual work funded by NIFA is at Colorado State University, which is developing genetically engineered “sentinel” plants that can detect pathogens and turn color to alert producers.

Colorado State’s description of the research says it is a new technology, with “plants serving as detectors for agriculture.” The work allows the public to “see GMO applications other than those focused on foods.”

Oregon State has been on the receiving end of NIFA grants as well, including a \$4 million grant in 2010 to prevent childhood obesity in rural Oregon and a \$2.9 million grant in 2014 to manage nursery plant diseases.

Dan Arp, the current dean of OSU’s College of Agricultural Sciences, said Ramaswamy — a friend — has opened more NIFA grants to competitive applications.

“That’s always a benefit for us,” he said. “Studies have shown our scientists are very effective at competing for grants. As long as the process is open, our scientists do well.”

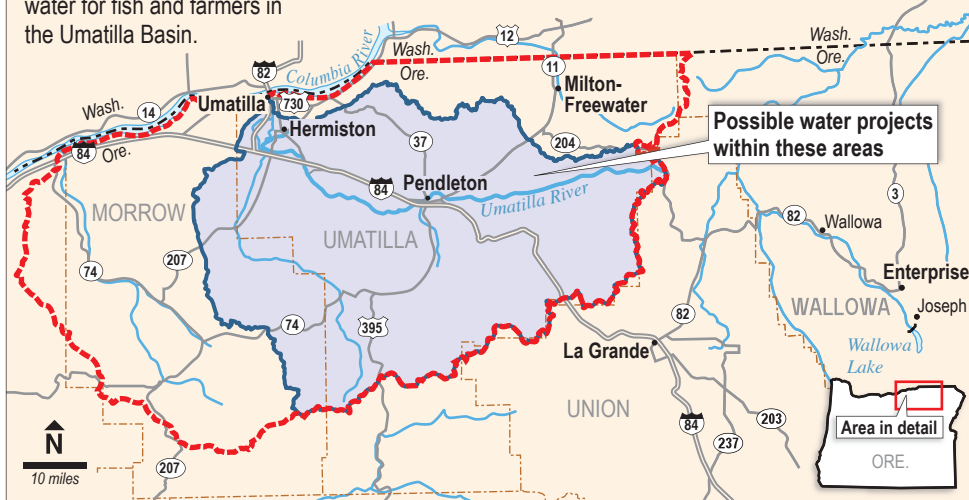
Ramaswamy, who was picked for the NIFA job in 2012, said he misses Oregon but is having fun and is excited about agriculture’s prospects.

“Yet I lament that this incredible enterprise — we don’t tell our stories,” he said. “We’re still not able to connect back to the average person on the street.”

State could fund water projects in 2015

Farmers, conservationists and state officials are negotiating a possible deal to free up more water for fish and farmers in the Umatilla Basin.

Umatilla Basin Administrative Boundary
Umatilla River Basin



Source: Confederated Tribes of the Umatilla Indian Reservation

Hillary Borrud and Alan Kenaga/Capital Press

Lawmakers will continue to push water development

Hansell, Smith will work to educate new Gov. Brown

By GEORGE PLAVEN
EO Media Group

PENDLETON, Ore. — Local lawmakers remain confident they can continue to develop new irrigation water supplies in northeast Oregon, despite losing an important ally in former Gov. John Kitzhaber.

Kitzhaber, who announced his resignation Friday amid mounting political scandal, was instrumental in convening the Columbia River-Umatilla Solutions Task Force in 2012, and his staff has been working diligently on negotiating additional water rights proposed by the Northeast Oregon Water Association for the region’s agricultural economy.

If successful, the NOWA plan could put up to 200,000 acres of farmland back into full production between Hermiston and Boardman, growing high-value crops and vegetables. That would equal billions of dollars in potential economic benefit.

In his resignation statement, Kitzhaber, a Democrat, said Oregon is poised to reach an agreement expanding irrigated agriculture in the Umatilla Basin. The job now falls to Kate Brown, who succeeded Kitzhaber as governor on Wednesday.

Rep. Greg Smith, R-Hepner, said it is his job — along with Sen. Bill Hansell, R-Athens, and Rep. Greg Barreto, R-Cove — to help educate Brown on the importance of sound water policy in their rural, mostly farming districts.

“I think we have to help

our colleagues understand that water equals economic development and prosperity for the state of Oregon,” Smith said.

As Brown assumed the governorship, Kitzhaber’s proposed budget already includes \$51.6 million in a water development fund meant to help irrigators and conservationists reach a deal. NOWA has developed a three-phase plan that would allow farmers to pump up to 500 cubic feet per second of additional water from the Columbia River, in return for funding upstream projects that would boost flows for native fish runs.

The new water supplies would also allow badly stressed underground aquifers the chance to recharge. Negotiations are ongoing between NOWA and environmental groups to find common ground, with Kitzhaber’s top natural resources advisor, Richard Whitman, leading the talks.

As co-chair of the legislature’s General Government Subcommittee on Ways and Means, Smith said he has already developed a close working relationship with Brown through previous budget talks. He also spoke to Whitman just a few days ago about advancing economic development.

“I saw no sign on letting up to advance these issues,” Smith said.

Echoing Smith, Hansell said legislators will be switching into education mode to bring Brown up to speed on measures affecting rural Oregon, in particular the water issue.

“I have no reason to doubt she would not be supportive of what has been several decades of work now in the basin to get where we are today,” Hansell said. “If we do our job, which

good on rusts, Flowers said.

“We’re also whittling away our efficacy of the triazole class of chemistry on septoria,” he said. “What we would really like to see is guys who don’t need to treat (their crops) not treating. Those guys that are, need to make sure they’re using an appropriate product.”

Another class of chemicals, called SDHIs, is effective on septoria, but Flowers cautions



Oregon Gov. Kate Brown.

we are prepared to do, we would be in a position I think to win the day.”

What’s not certain, Hansell said, is whether Brown will retain the same budget and staff throughout the session. He said retaining Whitman is especially critical, given the knowledge and expertise he already has about region’s water needs.

“Should he leave, that would be a huge loss in this whole series of events,” Hansell said.

Whitman did not return calls to the *East Oregonian* seeking comment.

Gary Neal, general manager at the Port of Morrow, said they have hosted Brown on tours before and said she has taken an interest in the region’s potential for growth and production.

Neal, who also serves on the NOWA Board of Directors, said he hopes Brown will continue the same kind of approach in the coming months.

“I think she understands how important water is to this region, and the benefits the citizens of this state derive from that,” Neal said. “We would ask her to seriously commit to carrying that forward as it’s originally been proposed in front of the legislature now.”

that the disease could build up a resistance to it as well.

Farmers going after rust early can use strobilurins or triazoles, but should avoid products with SDHIs except at the time of flag-leaf application, the best timing for septoria control, he said.

“We don’t want to see them put that class of chemistry on early or late,” he said. “The more we use it, the quicker we’re going to lose that chemistry.”

President Obama’s budget could cut funding at Pendleton research center

Scientists, programs face termination

By GEORGE PLAVEN
EO Media Group

PENDLETON, Ore. — The Columbia Plateau Conservation Research Center in Pendleton stands to lose nearly half its funding from the federal Agricultural Research Service in President Barack Obama’s proposed 2016 budget.

Such deep cuts would force the center to end some research programs, lay off three of five scientists and reduce their overall support staff, said center director and research leader Dan Long.

Though the final budget must first be approved by Congress, Long said it puts a dark cloud over station operations. CPCRC serves approximately 3 million acres of dryland crop

production in northeast Oregon and southeast Washington, with projects aimed at improving farming practices, techniques and equipment.

Since 2010, the station has helped local wheat farmers improve their soil management practices to conserve water and provided scientific proof that reduced tillage fallow systems can outperform conventional tillage systems — both in retaining moisture and controlling erosion.

The tilled summer fallow program is one of 15 projects from across the country that would be cut back or eliminated in the President’s budget in order to shift money to what the administration has identified as higher priority initiatives within the ARS.

CPCRC could lose up to \$911,000 out of its annual operating budget, Long said, which

is currently funded at \$1.91 million. The station would lose its soil chemist, hydrologist and soil physicist with the loss of programs.

“That important research is going to come to a dead halt, if this budget is passed,” Long said.

Established in 1970, CPCRC offices and laboratories are located on Tubbs Ranch Road just north of Pendleton. The building is shared with Oregon State University’s Columbia Basin Agricultural Research Center, which also focuses on experiments to benefit farmers.

Funding woes actually started a year ago, Long said, in the wake of the federal government’s budget sequestration. When a budget was finally passed, the ARS experienced an 8 percent cut across the board, which dropped \$152,000 out of CPCRC’s discretionary funds.

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