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State seeks funds for methyl bromide study

By JOHN O'CONNELL Capital Press

BOISE — The Idaho State Department of Agriculture has requested \$250,000 in state funding to assess how different crops respond to methyl bromide residue in Eastern Idaho fields treated under a federal pale cyst nematode eradication program.

The money would also pay for the disposal of 2,000 tons of hay that absorbed traces of the powerful fumigant.

The research has already commenced. ISDA Director Celia Gould made the request Jan. 25 before the Legislature's Joint Finance-Appropriations Committee to bridge the gap while the state awaits news on its application for \$350,000 in USDA funds.

USDA's Animal Plant Health Inspection Service, working in collaboration with ISDA, has spent more than \$66 million to eradicate the microscopic worm since it was first discovered in Eastern Idaho in 2006.

In the U.S., the pest, which can survive in soil without a host for at least 30 years and can devastate potato yields, is found only within a 7.5-mile radius of Bonneville and Bingham counties, and industry officials fear disruptions to trade



Courtesy of USDA-APHIS

Methyl bromide is applied to an Eastern Idaho field in 2007 to rid the soil of a quarantined pest called pale cyst nematode. The Idaho State Department of Agriculture has requested state and federal funding to evaluate how the fumigant may affect crops raised on treated fields, and to dispose of hay tainted with the product.

markets if PCN spreads any farther. Currently, 2,897 acres are under quarantine, due to confirmed PCN, and 7,102 acres face special sanitation and testing requirements for known associations with infested fields.

Methyl bromide was once the PCN program's most effective tool, but APHIS suspended use of the product after alfalfa raised on treated land made cattle sick.

ISDA Plant Industries Administration Division Administrator Lloyd Knight said \$120,000 of the state funding would be used to cover landfill expenses for disposing of unmarketable hay. He said \$25,000 would go toward water testing and sampling for methyl bromide leaching, \$50,000 would cover a review of existing methyl bromide re-

search and literature, \$10,000 would cover soil sampling and preparations for field trials and \$45,000 would go toward blood testing of cattle that have already consumed the suspect

Knight said lethargic cattle, calves with abscesses or difficulty nursing and even a few livestock fatalities were reported from a small beef herd.

"They really bounced back

quite well from the extreme sickness they experienced,' Knight said. "There is no food safety hazard now from commodities we're dealing with, or the cattle.'

Knight said the program's officials applied methyl bromide on bare, fallow ground and followed label instructions, which make no prohibitions on crops to plant following applications. ISDA plans to conduct strip trials within a 2-acre plot of a treated field that produced some of the questionable hay. Knight explained the field was in the program due to the discovery of a suspected cyst, which was never confirmed as PCN, but was treated with methyl bromide anyway in 2014.

The strip trials will evaluate inorganic bromide uptake in alfalfa, wheat, barley, potatoes, corn and possibly litchi tomato — a plant program officials have raised simply to stimulate cysts to hatch and die in the absence of a viable host.

'We're hoping when this is done we'll have some kind of menu to allow growers to know their options," Knight said, adding the funding would cover the first year of research and additional funding requests would have to be made for subsequent years of research.

The research team will be led by Cynthia Curl, an assistant

professor in Boise State University's Department of Community and Environmental Health, and will also include University of Idaho soil biochemist Matt Mora. UI Extension researchers Juliet Marshall and Glenn Shewmaker will assist in taking soil samples, setting up the trials and tending to the experimental

Curl said some treated fields including the field encompassing the strip trials - will remain in alfalfa production in order to rid soil of the fumigant, and more may have to be discarded. In the coming season, Curl plans to take soil samples at varying depths from that alfalfa field and hopes to quantify how much methyl bromide can be removed from soil with each hay cutting. Curl said statistical experts assisted in determining protocols for effectively sampling soil and crops.

Curl and her associates have a late February deadline to submit their report on the available literature on methyl bromide toxicity.

She said the fumigant is still used extensively in strawberries but is being phased out for its impacts on the ozone layer, rather than any soil or residue concerns. Curl said the project will evaluate if Idaho's unique growing conditions have contributed to the problem.

Farm Bureau drone policy change proves controversial

By MATEUSZ PERKOWSKI Capital Press

ORLANDO, Fla. — A disagreement over regulations for unmanned aerial vehicles, commonly known as drones, arose during a policy vote during the American Farm Bureau Federation's convention on Jan. 12.

Each year, delegates representing state Farm Bureau organizations vote to revise the national group's policies regarding a variety of subjects, with most changes approved with a simple voice vote of "yay" or "nay."

The AFBF's existing policy recommendation calls for the Federal Aviation Administration to allow commercial use of unmanned aerial vehicles subject to reasonable safety requirements, among other provisions.

A proposed modification to the policy, which called for allowing drones to be flown beyond the operator's line of sight as long as they're equipped with "sense and avoid" technology, exposed a rift in the organization's thinking about them.

Several delegates said they disagree with the policy due to "near misses" experienced by traditional aerial applicators who fear for their safety.

After a voice vote on the issue failed to yield a clear result, officials called for an electronic vote on the revision.

Delegates ended up approving the recommendation allowing specially equipped drones to fly beyond the operator's line of sight by a margin of 60 percent to 40 percent.

Drone research nets results in Idaho spud fields

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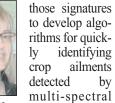
ailments

By JOHN O'CONNELL Capital Press

POCATELLO, Idaho -Idaho State University researchers have found high-tech cameras mounted on drones flying 60 meters above potato fields can effectively detect individual diseased and stressed plants.

Furthermore, greenhouse testing by University of Idaho plant pathologist Louise-Marie Dandurand, using the same advanced sensors to assess diseased plants, has confirmed specific crop ailments, such as nematode feeding or potato virus Y infection, can be differentiated by studying a plant's "spectral signature."

The researchers, led by ISU assistant geosciences professor Donna Delparte, intend to use



Delparte

tral cameras.

"We are teasing out new algorithms to automate detection so we can quickly pick out sick plants in the field," Delparte said. "Initial results are showing great promise to build out the algorithms and potentially could lead to commercialization opportunities and getting it to growers."

Delparte's project started during the 2014 season, with \$150,000 in USDA funding. The Idaho Global Entrepreneurial Mission — an Idaho Department of Commerce initiative to commercialize technology developed through partnerships between private industry and public universities — awarded another \$179,000 toward the multi-year project. J.R. Simplot Co. has assisted Delparte with soil analysis, crop expertise and grower recruitment. In 2015, the researchers used drones to gather images of about a half dozen potato and sugar beet fields from American Falls to Idaho Falls.

"There's so much new technology coming into the marketplace," said Simplot technology director Allan Fetters. "This is a good opportunity to work with ISU and understand how we might use this technology to bring value to farmers of Idaho."

Mike Griffel, a Simplot agronomy manager who is assisting Delparte for his ISU master's project in geosciences, said future analysis will delve based on visual symptoms.

into better quantifying infection levels, determining how much earlier sensors can detect infection than the naked eye and identifying specific causes of crop problems from the sky. Griffel has worked from the ground using a device called a spectrometer to record a broad spectrum of electromagnetic energy reflected from crops. The researchers have identified sick plants in fields, tested leaves to determine the causes of stress and compared data from the ground with the aerial images.

"Happy plants have a consistent pattern, or signature," Griffel said.

Griffel said much of the research has focused on analyzing potato virus Y infection in Russet Norkotah, a variety known to mask symptoms of the disease, thereby causing headaches for farmers who seek to remove intected plants



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Governor seeks additional \$1.8M for agricultural research, extension

By SEAN ELLIS Capital Press

BOISE - Gov. Butch Otter's proposed fiscal year 2017 budget seeks an additional \$1.78 million in agricultural research and extension funding for University of Idaho's College of Agricultural and Life Sciences.

Virtually all of that money, which represents a 6.2 percent increase over CALS' fiscal 2016 budget, would go to cover costs associated with payroll.

The governor's request doesn't include any new operating dollars for the college, Rich Garber, CALS director of industry and government relations, told Food Producers of Idaho members Jan. 27.

"We aren't asking for any additional enhancements this year," he said.

\$30.5M for CALS research, extension

Otter's proposed budget seeks a total of \$30.5 million in general fund money for ag research and extension, which would be an increase of \$1.78 million over CALS' current \$28.7 million budget.

The governor's request does seek \$27,000 to cover occupancy costs for a new onion storage facility at UI's Parma research station.

But "the majority of that is for people," CALS Dean John Foltz said about the additional

\$1.78 million. Foltz told members of the Idaho Legislature's Joint Finance-Appropriations Committee, which sets funding levels, that the college does good things for Idaho agri-

culture and the state with the

general fund revenue it re-

ceives. He pointed out that UI studies have shown agriculture directly and indirectly ac-

counts for about 20 percent of

the state's economy. He said CALS researchers are assisting Idaho's farming industry in a wide variety of ways, including helping develop new irrigation methods that save water and energy and continuing to look at new ways to help them adapt new technology.

CALS employees are also helping the industry understand and meet the new Food Safety Modernization Act requirements and assisting with efforts to eradicate pale cyst nematode in a small federal quarantine area in East Idaho.

"We're proud to be part of the \$8 billion ag industry in the state (and) we're proud to be part of the research and development (process) that helps move that part of the economy forward," Foltz said. "I think we do great things with (the money you give us)."

\$8.48M for state ag department

Otter's budget seeks \$8.48 million in general fund revenue for the Idaho State Department of Agriculture, which would be a 5.5 percent increase over the department's current budget. That additional money

would help fund two new positions for the ISDA's fast-growing organic program, ISDA Director Celia Gould told FPI members.

"We have had so much growth in that arena," she