

APPLIED RESEARCH—University economists help Idaho refine revenue predictions

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UNIVERSITY OF IDAHO agricultural economist Stephen Cooke believes refining the method Idaho officials use to predict general fund revenues will help smooth out rough spots in state budgeting. Cooke's new approach to presenting the general fund revenue forecast involves separating the revenue stream into its trend and cyclic components. The previous approach's weaknesses meant that Idaho legislators could not accurately set a state budget because some revenues were temporarily higher or lower than average depending on the business cycle.

Cooke's work is a collaboration with Idaho's state economist Mike Ferguson, who is also working to find a better reporting method, and with Boise State University's Don Holley and Idaho State University's C. Scott Benson, Jr. The university economists presented their work to Legislature's Joint Committee on Economic Outlook and Revenue Assessment on January 8.

The economists are working to better distinguish between temporary, business-cycle highs and lows on the one hand and the permanent, trend growth in revenue over time on the other.

Parallel forecasting models: Like the twin rails of a railroad track, refinements in the state's general fund forecasting model and Cooke's are running parallel. If the models' results diverge or cross, that could signal trouble ahead. "We both find it reassuring that we're getting similar numbers on the level of long-run growth in revenues," Cooke said.

Past budget forecasts may have contributed to cyclical deficits by suggesting that all of the total revenue is "on trend" when it is not. This hampered the state's long-term performance.

State officials recognize the perils of revenue swings and established a rainy day fund to soften hard times. "Idaho has pretty much done everything right by building up a big rainy day fund. This work can suggest to officials how much to spend and when to spend it," Cooke said.

Business cycle swings in revenue in the past have contributed to both structural deficits and reduced investments in public schools, health care, and other critical infrastructure.

Cooke said the method makes predictions that account for business cycles by paying more attention to long-run growth in personal income independent of short term changes such as the influence of capital gains, which rise and fall with the general economy's performance.

New sugarbeet crops need fewer herbicides

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IDAHO GROWERS transitioned to herbicide-resistant sugarbeets in 2008, reducing the number of times farmers had to apply herbicides or hire field labor to control weeds.

UI Extension weed scientist Don Morishita at Kimberly is working to ensure that three common weeds, lambsquarters, redroot pigweed, and kochia, do not develop their own herbicide resistance. The turning point for sugarbeet growers' decisions to use Monsanto's Roundup Ready technology in their fields was encouragement from the Amalgamated Sugar Co., Morishita said.

His work now focuses on refining weed control recommendations, which typically

involve two or more herbicides to ensure weeds do not survive and begin to develop herbicide resistance. The main strategy will use glyphosate, the active ingredient in Roundup, to control emerged weeds with another herbicide with soil activity for control.

The approach may require growers to apply herbicides only once or twice a season rather than four or five times as they did with conventional beets, he said.

Southern Idaho growers have not faced problems with glyphosate-resistant weeds, Morishita said. In the Midwest, where Roundup Ready soybeans and corn are planted extensively, glyphosate resistance is a problem.

An end to plague? Studies promising

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IDAHO SCIENTISTS have discovered a way to counteract pneumonic plague bacteria's success in dampening the immune system's normal response to infection. "We found an intranasal therapy that stimulates the innate immune response and protects against pneumonic plague," said UI microbiology professor Scott A. Minnich.

Pneumonic plague is a frequently fatal plague that spreads through the air. "What is exciting is that these studies provide insight into bacterial/host interactions in the disease process and promise new strategies to combat a variety of infectious agents," he added.

Minnich and fellow senior scientists Carolyn Hovde Bohach and Greg Bohach conducted vaccine research as part of a \$50 million collaborative grant with the University of Washington. The team made significant advances in understanding how the body's immune system can be stimulated to repel pathogens.

Their work gained cover status on two international scientific journals. *Scientific American* noted the team's accomplishments after the team published study results in July's *Microbiology*.

DID YOU KNOW?

\$17.6 MILLION

DOLLAR AMOUNT OF GRANTS AWARDED FOR RESEARCH AND PROGRAM IMPLEMENTATION IN IDAHO BY UI COLLEGE OF AGRICULTURAL AND LIFE SCIENCES FACULTY AND STAFF DURING FY 2008.

Source: CALS Administration