# Grant partners seek to help flood irrigation projects receive funding

By JOHN O'CONNELL
Capital Press

IDAHO FALLS — Partners who received a $5.18 million USDA grant to benefit the Eastern Snake Plain Aquifer say they want to make certain a chunk of their funding goes toward projects that retain flood irrigation.

The Idaho Eastern Snake River Plain Aquifer Stabilization Project was one of three Idaho efforts USDA's Natural Resources Conservation Service supported with Regional Conservation Partnership Program funds in late 2016.

The Idaho Department of Water Resources, Idaho Ground Water Appropriators Inc., the Idaho Department of Fish and Game, the Nature Conservancy, Ducks Unlimited and Wood River Land Trust have all agreed to contribute funding or in-kind matches in support of grant projects.

IGWA Executive Director Lynn Tominaga said grant partners hosted a planning meeting in late November.

The programs will roll out next May.

Tominaga said the partners have asked NRCS to establish separate funding pools for individual practices so that similar applications compete against one another and a diversity of projects are ultimately approved.

Idaho Department of Fish and Game

White-faced ibises feed in flood-irrigated pasture in the Mud Lake area of southeast Idaho. Recipients of a grant from USDA's Natural Resources Conservation Service have asked to establish a separate funding pool for projects from applicants for their funding seeking help with upgrades to retain flood irrigation, for wildlife and aquifer benefits.

Tominaga said the partners would like $1 million to be set aside for sharing costs of infrastructure upgrades with irrigators who keep flood irrigation in place, thereby allowing surface water to seep into the aquifer and providing marshy habitat for wildlife. Another $1 million would help irrigators who use groundwater switch to alternate surface water sources, and $2.5 million would go toward removing pivot end-guns and planting the dried field corners in vegetation benefiting wildlife. Remaining funds would support additional water conservation efforts — such as fallowing fields.

Tominaga said all of the practices provide ways to help IGWA members meet mandatory groundwater irrigation cutbacks required under a 2015 water call settlement with the Surface Water Coalition. Collectively, irrigators must reduce their groundwater use by 240,000 acre-feet per year, which averages to about a 12 percent reduction per user.

Tominaga said flood irrigation has been replaced throughout much of the plain by more efficient sprinkler irrigation throughout the years, but it remains a common practice in the Mud Lake area and surrounding the Upper Snake River.

"We want to see the practices of incidental recharge from flood irrigation kept in place because that helps build the aquifer," Tominaga said. "It will help the wildlife habitat at the same time."

Sal Palazzolo, IDFG farm bill coordinator, said retention of flood irrigation was included as a practice in a previous NRCS grant. Though several flood irrigators applied, none of their projects were funded because the scoring system gave preference to end-gun removal. Establishing funding pools should ensure that the partners get "a really good start" on retaining flood irrigation.

"If 10 people apply for flood irrigation, they should be competing against each other," Palazzolo said, adding funding can be shifted to other pools if there are an insufficient number of applications.

# Promising irrigation method succeeds in spuds

By JOHN O'CONNELL
Capital Press

KIMBERLY, Idaho — A University of Idaho researcher says a water-efficient irrigation method he helped devise was effective in potatoes during 2017 trials and is poised for significant expansion in the coming season.

UI Extension irrigation specialist Howard Neibling and his Washington State University counterpart, Troy Peters, worked in conjunction with the Bonneville Power Administration to develop the first pivot using low-elevation sprinkler application in 2013.

Called LESA, the system sprays water in a flat pattern from low-pressure nozzles dangling about a foot above the ground — low enough to pass beneath the crop canopy and eliminate drift without excessive runoff.

Their prototype system, tested in Nevada, included a single pivot span fitted with LESA hoses. They tested another LESA pivot span the following summer in an Arco, Idaho, grain field, finding it delivered roughly double the water to the soil on especially hot and windy days, compared to the conventional spans. The technology has rapidly spread since then, with several farmers in Eastern Idaho using it to meet groundwater consumption reductions mandated under a recent water call settlement.

During the summer, Neibling worked with two potato farmers on the Rexburg Bench and one in Osgood who agreed to convert a single pivot span irrigating potatoes to LESA.

"The objective was to make sure we could make it work in potatoes, and if there were problems, figure out what they were and if we could solve them," Neibling said.

Through his trials, Neibling discovered LESA spans should be 3 feet apart in potatoes for full coverage, compared to 5 feet apart for rotational crops. In fields with small hills, he said dragging nozzles sometimes dug into the soil and exposed tubers, causing a small volume to turn green.

But Neibling's worries that nozzles would become entangled with potato vines didn't come to fruition. Furthermore, one of the spud growers made changes in configuring towers that significantly reduced the depth of pivot wheel tracks compared to his conventional pivots — something Neibling plans to study more.

Neibling said the potato trials demonstrated spud growers can reduce irrigation by at least 10 percent under LESA without hurting yield or quality. One of the growers plans to upgrade to a full LESA pivot in his potato rotation next season, and the other two plan to continue evaluating a single span.

Neibling still advises potato growers to use zip-ties to raise LESA hoses above their spud canopy, thereby preventing dragging nozzles from exposing tubers, or from spreading pathogens.

Next summer, Neibling plans to study how much of the usual LESA water savings growers might sacrifice by raising hoses just above crop canopies.

Growers in Rupert and the Idaho Falls area installed more than 20 full LESA pivots last winter for use during the summer, with funding assistance from USDA's Natural Resources Conservation Service.

Josh Miller, district conservationist with the NRCS field office in Idaho Falls, said about 15 growers within his area alone submitted LESA funding applications for next season, before an Oct. 13 deadline. Miller said it costs $5,000 to $7,000 to retrofit a pivot to LESA, but buying a new pivot already configured LESA costs about $2,000 extra.