

IRRIGATION ADVANCES

Conserving water, energy and labor



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– Pedro Nickelsen Dessy

“BEET”ING THE ODDS



Chilean farm adds pivot irrigation and watches sugar beet yields grow

The Summer 2010 issue of *Irrigation Advances* explored the benefits of pivot irrigation on sugar beets in the United States. Nebraska grower Kevin Hall found that Zimmatic pivots help his sugar beets germinate properly, while also saving labor costs and conserving water. Not surprisingly, growers in the southern hemisphere are finding success with pivot irrigation on sugar beets too.

Pedro Nickelsen Dessy, CEO of Agricola La Selva Ltd., a family-owned farm 373 miles (600 km) south of Santiago, Chile, has seen the benefits firsthand – through improved water efficiency, increased yield and ease of operation. Nine Zimmatic pivots are used to irrigate. Water comes from a channel matrix and is supplied by a river that crosses the field.



Agricola La Selva's Pedro Nickelsen Dessy (left) and Gerardo Jequier (right).

“This irrigation system is enabling us to continue to cultivate beets,” Nickelsen Dessy says. “Our water needs are 7.87 inches (20 cm) per month, which is entirely feasible with this equipment.”

Agricola La Selva's pivots also water some of the farm's other crops, in a strict crop rotation. After the beets, the pivots irrigate oats, wheat and canola. The farm uses pivots on potatoes and corn as well, totaling about 6,178

acres (2,500 ha). The rest of the operation features 395 acres (160 ha) of fruit, including blueberries, apples and cherries.

Growers at Agricola La Selva have seen yields increase significantly with the introduction of pivot irrigation.

“In 10 years, between 1994 and 2004, our average beet yield was 26.75 tons per acre (60 MT/ha). When we installed the pivots, performance rose to 44.6 tons per acre (100 MT/ha),” Nickelsen Dessy says. “This 40-ton difference corresponds to 20 tons due to the irrigation system, and another 20 tons due to improved seed technology, nutrition and soil structure.”

Each one of Agricola La Selva's pivots is monitored using the FieldNET™ web-based irrigation management and control system. FieldNET saves the farm water by pausing irrigation in the large gaps between crops, and it saves labor when other tasks require the growers' attention.

“FieldNET is very helpful for the efficient management of our pivots, especially when we are very busy with the rest of the tasks of harvesting fruits and cereals,” Nickelsen Dessy says. “It has allowed us to have a statistical background on the irrigation operation; without this, we would have no telemetry. We have power outages quite often. With FieldNET, we know what has been watered.”

FAST FACTS

Agricola La Selva Ltd.

- Family-owned
- Located 373 miles (600 km) south of Santiago, Chile
- 6,178 acres (2,500 ha) of pivot-irrigated land
- Water requirements total 7.87 inches (20 cm) per month
- Pivots irrigate sugar beets, potatoes and corn. Operation also grows blueberries, apples and cherries.



Ignacio del Campo, product manager for Zimmatic dealership Agroriego Ltd. in Talagante, Chile, has seen other clients experience similar success, leading to a rise in the popularity of pivot irrigation.

“Pivot irrigation was introduced to Chile by our company 22 years ago, and it has become very popular in the past 10 years, especially for sugar beet production,” del Campo says. “The three principal reasons for its popularity are increased yields of about 15 to 20 percent, reduced labor costs and requirements, and the ability to irrigate areas where it's impossible to do so by flood irrigation.”

As for Nickelsen Dessy, he couldn't be happier with the decision to add pivot irrigation to Agricola La Selva.

“For us, the pivots have been a great tool,” he says. “They're efficient, economical and easy to operate.” 

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