

Taking the lead

Krueger's Tree Farms partners with NRCS on irrigation efficiency, erosion control projects

Dick Krueger, owner of Krueger's Tree Farm, chats with Dean Moberg, Natural Resources Conservation Service (NRCS) district conservationist for Washington County, Oregon.

By Whitney Rideout

Dick Krueger began his career in agriculture early.

He ran the family farm at 12, founded a landscaping company at 17, and shortly thereafter started growing trees to use in his landscaping business.

His innovation and energy have built Krueger's Tree Farms, in Boring, Ore., into a 40-acre, pot-in-pot, shade tree operation.

Krueger's was one of the first nursery operations in Oregon to work with the Natural Resources Conservation

Service (NRCS) on an irrigation efficiency and soil erosion control project. The partnership has been very beneficial for Krueger's — as it could be for other nurseries who tap into the available incentives.

"I began the project because I was seeing crop damage with overhead irrigation, and I wanted to reduce water and fertilizer use," Krueger said. "Also, I have a lot of wildlife on my property. I saw soil erosion control as a way to protect some of those species."

Water efficiency

Irrigation efficiency measures were the backbone of the project. They included an electronic spray-stake irrigation system with variable drive pump. This system delivers water to the root zone, with the option to vary the number of zones being watered at any given time.

The electronically controlled variable system allows Krueger's to manage watering activities remotely, to vary the intensity, and to use fewer resources. It also allows Krueger's to combine fertilizer application with irrigation. This reduces nutrient use, runoff, and costs associated with material and labor.

In addition to irrigation measures, Krueger's took steps to reduce soil erosion and pesticide runoff by planting deep-rooting fescue between rows. The nursery also implemented an integrated pest management plan and a nutrient management plan.

The four-year project has resulted in several benefits:

- improved operational efficiencies through the reduction of water, energy and fertilizer;

Working with NRCS

The following are tips for working with the Natural Resources Conservation Service to do a conservation project:

- Understand local funding strategies, both current and future.
- Familiarize yourself with the scoring process and be flexible.
- Technical service providers can help create the required written designs.



USDA Natural Resources Conservation Service

www.or.nrcs.usda.gov

The USDA Natural Resources Conservation Service (NRCS) provides technical and financial support to assist landowners in developing conservation plans, and offering advice on the design, layout, construction, management, operation, maintenance and evaluation of voluntary conservation practices. Activities that Oregon NRCS has worked with nurseries to implement include nutrient management, irrigation water management, improvement of water quality and soil erosion reduction, soil improvement, and pest management.

Funds are made available to nurseries through Farm Bill programs. Participation is voluntary. If you are interested in learning more, contact your county USDA Service Center.

- increased flexibility to water and fertilize when needed (even when out of town), and

- better protection of salmon living in the nearby East Fork Dairy Creek.

The cost savings resulting from the project, plus the NRCS incentives, meant that Krueger's was able to repay the cost of investment in five years.

"NRCS shared 50 percent of the cost of the project because the work we did was in direct line with their conservation goals," said Krueger.

Funding requirements

Receiving NRCS funds to help implement projects is not easy, but Dean Moberg, Washington County district conservationist, outlined several tips for nursery owners who want to utilize their programs and services.

"The first thing nursery owners need to understand is that funding for NRCS county programs is aligned with strategies, and those strategies drive funding pools," Moberg said. "For example, currently in Washington County (Oregon), our funds are dedicated to reducing greenhouse gas emissions and improving riparian habitat in high-priority areas. Conservation strategies change as work is accomplished, so nurseries should contact their county representative to understand current and future funding."

Moberg went on to explain that the NRCS program most nurseries would likely be interested in pursuing is the Environmental Quality Incentives Program (EQIP), which is driven by a ranking process. The district conservationist and their staff rank projects once a year, and then fund applications moving down the ranked list until funds are exhausted.

"We are working to maximize both the environmental benefit and the operational benefits for the grower," he said. "For example, nurseries willing to implement irrigation efficiency projects, combined with fertilizer reduction (a priority for the NRCS), would rank higher in the funding process.

The final important tip is that a written design is required for every practice the nursery wants to implement, and this design must be approved by the NRCS. "Technical service providers (TSPs) are listed on our website and can provide this service," Moberg said. "They have NRCS training as an added benefit."

Krueger advised interested participants to do their research before getting started.

"Projects like this are very complex, expensive, and they span years," he said. "The more you educate yourself in the beginning, talk to other growers who have implemented similar projects, and involve NRCS (from the beginning), the better the results will be."

Setting a trend

Though the project is complete, NRCS and Krueger continue to interact and help one-another. Recently the Banks, Ore. Future Farmers of America chapter measured irrigation uniformity as part of their training project at Krueger's.

"This exercise provided training for the students, and also identified some emitter errors that can be rectified to keep the system running at top efficiency," Moberg said.

Dick Krueger's innovation and long-term dedication to resource management (land, energy, water, and wildlife) is inspiring. Krueger's Tree Farms saw the sense and the profit in sustainability before the broader market did, and is reaping benefits for that foresight.

Now, in these times of increasing resource costs and rising penalties for resource mismanagement, the market is seeing the sense and profit in following his lead. ☺

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