

## **Krueger's Tree Farms**

### ***Partnering with NRCS on Irrigation Efficiency and Soil Erosion Control***

*By Whitney Rideout*

Dick Krueger began his 'ag' career 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, into a 40 acre 'pot-in-pot' shade tree operation.

Krueger's is 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. This story highlights that partnership, the resulting benefits, and information all nursery owners can use when pursuing NRCS incentives.

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

Irrigation efficiency measures were the backbone of the project and included an electronic spray-stake irrigation system with variable drive pump. It 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

***Krueger's used the Environmental Quality Incentives Program to cost share 50 percent of their irrigation and soil erosion control project.***

with irrigation; thus reducing nutrient use, material and labor cost, and runoff. In addition to irrigation measures, Krueger's took steps to reduce soil erosion and pesticide runoff by planting between-row deep rooting fescue, and by creating and implementing Integrated Pest Management and nutrient management plans.

The benefit of the four year project includes improved operational efficiencies through the reduction of water, energy and fertilizer, 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. Resource reductions partnered with NRCS incentives provided a 5 year ROI. [Krueger]: "NRCS shared 50 percent of the cost of the project because the work we did was in direct line with their conservation goals."

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.

[Moberg]: "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. 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."

Dean 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. [Moberg]: “We are working to maximize both the environmental benefit and the operational benefits for the grower. 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. [Moberg]: “Technical Service Providers (TSPs) are listed on our website and can provide this service. They have NRCS training – as an added benefit.”

[Krueger]: “Projects like this are very complex, expensive, and they span years. 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.”

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. [Moberg]: “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.”

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 rising resource costs and rising penalties for resource mismanagement, the market is seeing the sense and profit in following his lead.

#### **Working with NRCS:**

- 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.