

Pine Creek Conservation District

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State Legislative District #9
Congressional District #5

2014 Feature Accomplishment: Variable Rate Application Technology (VRT) for crop nutrients

RESOURCE CHALLENGE

The common practice in crop production is to apply crop inputs (substances used for soil fertility and/or pest control) as uniformly as possible. There is often variability within fields. Variable Rate Application Technology (VRT) is an effort to vary the rate of application across the landscape according to spatially variable factors that affect the optimum application rate. Efficient application can help increase profitability, reduce negative impacts to water caused by over application, and globally reduce the energy and petroleum inputs used to manufacture commercial fertilizer.



A custom operator using precision agriculture with VRT capabilities



Producer-owned VRT applicator showing close-up of custom control valves that allow the operator to change the rate of application.

PROJECT SUMMARY AND RESULTS

An 8,000 acre farm in Northern Whitman County asked the Pine Creek Conservation District for assistance in their effort to start a VRT program. The District provided soils maps and assisted with field mapping to begin the program. Recently the farm used VRT to vary the rate of nitrogen in one field. Their plan is to expand VRT application of nitrogen to all fields and to extend VRT to applications of other nutrients, the rate of seeding, and eventually changing the variety of seed planted according to spatial variables. The district will be working closely with the producers to provide the assistance needed to make this project a success.

Other Accomplishments



Grass seeding in critical areas



Precision Agriculture equipment cost-shared by district

More Work to Do!

- Expansion of the District's assistance with VRT to producers.
- Continued improvement in the District's water quality through the promotion and implementation of more direct seeded acres, grass buffer areas, and filter strips.
- Development of quality riparian areas.
- Continue to build partnerships with other districts and entities.