

Ag Concepts® Circular



Success Stories: AgZyme® on Corn

We hear many stories from our dealers and growers about the success Ag Concepts® products have in the field. We enjoy hearing about the positive effects of our products on the different crops in locations all over the country and would like to share them with you. The following story comes from Michigan, about the effects observed after applying **AgZyme®** on corn.

The grower in this success story was using **AgZyme®** for the first time. He had to leave town during planting so he asked one of his employees to run his 12 row planter. The planter was set up to apply the **AgZyme®** in-furrow. During planting the initiation switch for the **AgZyme®** tank was mistakenly flipped late leaving a strip of corn twelve rows wide that did not receive the **AgZyme®** application.

Several weeks after planting it became visually evident where the **AgZyme®** had been applied. As seen in the photos below, the rows where the **AgZyme®** was applied showed better emergence and the plants were much healthier than the plants in the rows that were missing **AgZyme®**. After seeing the differences between the **AgZyme®** treated corn and the untreated corn the grower decided to use **AgZyme®** on all of his fields.



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“The BMP Nutrient challenge offers them a chance to test the university recommendations on their own fields without losing income if yields are lower.”

Mel “Says”



“If you only do what you’ve always done, you’ll only get what you’ve always got.”

Program Encourages Growers to Fine Tune Nutrient Management

By Cindy Snyder, Ag Weekly correspondent

TWIN FALLS, Idaho - Crop producers can find themselves facing a conundrum when it comes to nutrient management. On one hand, reducing nutrient inputs can have economic and environmental benefits but carries the risk of lower yields. And lower yields can make a big dent in a producer’s bottom line, especially at a time when commodity prices are trending lower.

That’s why the Natural Resources Conservation Service supports the Best Management Practices (BMP) Nutrient challenge which encourages producers to follow university recommended fertilizer application rates.

“Many cooperators we work with are leery about following university-recommended fertilizer application rates because these rates are often lower than rates that have been recommended in the past,” said Steve Schuyler, district conservationist for Twin Falls County. “The BMP Nutrient challenge offers them a chance to test the university recommendations on their own fields without losing income if yields are lower.”

University-recommended BMP fertilizer rates for N, P and/or K are applied to the balance of the field. Corn or silage growers in selected states, including Idaho, are eligible for the 2009 BMP Nutrient challenge. Producers must enroll in the program before any nutrients are applied.

Here’s how it works:

Producers apply normal fertilizer rates to a check, or comparison strip, located by a crop advisor in each field enrolled (maximum of 160 acres total) and return the check-strip information form to the challenge.

Producers work with their crop advisor to assess yield at harvest and return the completed assessment form to the challenge.

Producers who experience a net income gain are asked to contribute a third of your fertilizer cost-savings to the challenge program, up to a maximum of \$6 per acre. This contribution ensures other farmers are able to join the challenge.

In return, producers who experience yield loss due to nutrient insufficiency are compensated at the rate of \$4 per bu. or \$32 per ton for silage minus the fertilizer savings. Yield loss is determined by comparing the check strip yield to the yield immediately adjacent to the check strip.

Although the challenge is not an NRCS program, it fits with the agency’s goal of helping land owners and operators protect soil and water resources through conservation practices.

Producers who have received cost-share assistance through the NRCS Environmental Quality Incentives Program often have nutrient-management or irrigation-management practices included in their conservation plans.

The challenge is funded in part by an NRCS conservation innovation grant. Several agriculture-related organizations collaborated to form the challenge: the American Farmland Trust, the Integrated Pest Management Institute of North America, Agflex, and Agren. The goal of the BMP Nutrient challenge is to get producers who have been leery about trying university-recommended nutrients rates to try them risk-free.

Nitrate Leaching and Water Use Efficiency

In 2008 Arise Research & Discovery, of Martinsville, Illinois, began an ongoing study to measure the effects of Ag Concepts® products **Pervaide®** and **Super Hume** on the levels of nitrate leaching in field corn. This **Pervaide®** and **Super Hume** study is a natural extension of a recently concluded study into **AgZyme®** and nitrate leaching. Initiated in 2003 by Arise Research the five year study was designed to measure the effects that **AgZyme®** had on Nitrate leaching. The study was run by head researcher Dr. Roy Stephen. After reviewing the results of the first year Dr. Stephen noticed that the **AgZyme®** treatment not only reduced nitrate leaching but may have increased water use efficiency as well. Dr. Stephen then added a protocol to track well water volumes for the remaining four years of the study to determine the effect **AgZyme®** has on water use efficiency. Over the five year study **AgZyme®** reduced Nitrate Leaching by an average of 42.5%. Additionally, **AgZyme®** increased water use efficiency by an average of 26.5% over the final four years of the study.

An integral part of the nitrate leaching and water use efficiency studies is the unique ability of Arise Research and Discovery to collect and sample water in hydraulically isolated test plots (Lysimeter Well). Each plot consists of a growth area flanked by bay walls extending 42 inches into the soil. A four inch wide tile, located at the center of the plot below the growing area drains into a collection and sampling well located at the bottom of the plot. Water and other chemicals that are applied to the crop eventually drain to the well.

Nitrate Leaching has been brought to the forefront due to the increased attention and regulations imposed by governmental agencies. Nitrates in concentrations greater than the EPA limit have been found in drinking water in residential areas that are near agricultural areas. Additionally, zones of nitrate contamination in ocean waters lead to hypoxia in fish, these zones can be found downstream from agricultural areas. Tools, such as **AgZyme®**, can help limit problems caused by Nitrate Leaching.

After finishing the study in 2007 Arise Research & Discovery and Ag Concepts® decided to begin studying the effects of **Pervaide®** and **Super Hume** on Nitrate Leaching and water use efficiency. The study consist of three applications, first, **Pervaide®** alone, second, **Pervaide®** and **Super Hume**, and finally an untreated application. All three applications included the same standard fertility treatment. At the end of the year **Pervaide®** showed a reduction in Nitrate Leaching by 39.9% and reduced water loss by 28.3%. The **Pervaide®** combined with **Super Hume** treatment reduced Nitrate Leaching by 46.9% and reduced water loss by 24.8%.

“Most Nitrate fluxes occur following the first 30-45 days following application in the spring when soil temperature is above 55 degrees Fahrenheit. It is during this time frame AgZyme® is most effective in Nitrate flux reduction.”

Dr. Roy Stephen- Arise Research and Discovery

Fast Facts:

- Five year study showed an average of 42.5% reduced Nitrate Leaching when using **AgZyme®**.
- Four year study showed an average of 26.4% reduction in water loss when using **AgZyme®**.
- Tests indicate an increase in fertilizer efficiency and water usage efficiency when using **AgZyme®**.
- 2008 Test showed a 39.9% reduction in Nitrate Leaching and a 28.3% reduction in water loss with the use of **Pervaide®**.
- 2008 Test showed a 46.9% reduction in Nitrate Leaching and a 24.8% reduction in water loss with the use of **Pervaide®** with **Super Hume**.

Potato/Vegetable Casserole Supreme

Ingredients:

- 6 oz Margarine, melted
- 12 oz Onions, chopped
- 6 lbs Frozen diced hash browns, defrosted
- 1 can (50 oz) Condensed cream of chicken or potato soup
- 1 1/2 lbs Yellow cheddar cheese, grated
- 1 qt Sour cream
- 2 tsp Salt
- 2 tsp Pepper
- 2 cups Mixed vegetables, cooked (carrots, green beans, peas, broccoli)
- 2 oz Margarine, melted

Directions:

1. Sauté onions in 2 ounces of margarine until translucent. Place remaining margarine into a 20" X 12" X 4" pan Add potatoes and toss lightly to coat with margarine.
2. Add sautéed onions, condensed soup, grated cheese, sour cream, salt, pepper and cooked vegetables. Mix all ingredients until blended and evenly distribute mixture in pan.
3. Mix bread crumbs and margarine; sprinkle evenly over potatoes
4. Bake at 350°F. 1 hour 15 minutes or until cooked thoroughly; serve hot.

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Get to Know the Ag Concepts® Team!

We would like to take this opportunity to share a little bit about a member of the Ag Concepts® team. This month we are featuring one of our Outside Sales Representatives, Steve Ostrander. Steve came to us with 25 years of experience in the agriculture industry.



Most recently he spent 18 of those years with Simplot Soil builders in the Magic Valley area where he became familiar with Ag Concepts® products. Steve's formal education includes a Bachelor's degree in biology from Albertson College of Idaho and a Graduate Assistantship in the soils department at Utah State.

Steve's position has been both challenging and rewarding for Ag Concepts®. His background is an important part of the ongoing success of our company.



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