



Laboratories, Inc.

Duane Schlieman, Agronomy Services

New Ulm, MN Nevada, IA Bismarck, ND

MVTL Newsletter

Fall of 2007

Trend vs. Variance ...

Each year most of us review a lot of soil data and observe fertility trends over time. Within those trends we have variances that need to be addressed. First and foremost, soils present high variance due to the direct impacts of soil-type, environment, drainage, and management. Second, sampling procedures remain moderately variable, but with current geo-reference capabilities, the improvements have been remarkable ... as have the advances in application equipment. Third, the actual soil-test procedures are relatively consistent and performed within acceptable ranges of error, but the chemistry and methods of analyses through the industry have not changed. So, when we look to soil as the primary variable, we're fortunate to have access to current precision technology & resources to enhance the applications of soil fundamentals.

The long-term success of precision agriculture remains highly dependent on our ability to address the most basic fundamentals of fertility management. With zone management, grid-sampling, etc., we have greater opportunities to identify fertility zones providing the highest economic response to fertilizer applications. Conveniently, research has well identified the response of phosphorus and potassium fertilizer applications (T1), and most importantly, precision ag thrives to utilize the same basic set of fundamentals to determine proper VRT applications. As precision ag continues to grow & improve, we gain new opportunities to manage old school economics, optimize build programs, and re-establish accurate crop maintenance levels.

Summary: Keep It Simple

- Utilize Information Technology

 - Geo-reference capability

 - Application advancements

 - Sampling & collection methods

- Acknowledge the Fundamentals

 - Variance (variable)

 - Response (rate)

 - Trends (technology)

- Management Goals May Vary

 - Amend Limitations ... largest impact on production is reducing the limiting factors.

 - Balance Fertility ... devalue the extreme highs and lows, and follow the trends.

 - Capabilities ... yield capability vs. soil capability is difficult, but profitable.

