

Introduction to Precision Technology in Crop Production

What is Precision Ag:

The USDA defines Precision Agriculture as: a comprehensive system designed to optimize agricultural production through the application of crop information, advanced technology and management practices.

Why look into precision technology solutions:

The main goal of precision ag is to improve profitability, efficiency and sustainability on the farm. More efficient production and effective uses of resources including: water, fertilizers, chemicals and time can result in a cost and time savings benefit for your operation.

5 Tips for Implementing a Successful Precision Technology Program

1. **Start with a goal** – Know what you want to accomplish and look for the solutions that will help you reach your goal.
2. **Have a good team** – Seek out specialists who can provide expertise and trustworthy advice.
3. **Calibration is key** – Make sure all of your technology, especially mapping software and yield monitors are properly calibrated. Reach out to your technical team for support and education on calibration.
4. **Have realistic expectations** – Adopting precision technology is often a balance between cost and your ideal level of precision and information. Be willing to analyze the cost-benefit and evaluate the immediate and long term return.
5. **Do your research** – Use the internet, watch YouTube videos and connect with other producers to stay up to date with what is out there and what is working for producers in similar situations.

Examples of Precision Technology in Crop Production

GPS Guidance & Steering Systems

Soil Management & Preparation

- Soil Sampling (Random, managed, and benchmark methods)
- Aerial Field Views
- Soil Sensors – compaction, fertility, water availability, etc.

Yield Monitoring & Mapping

Variable Rate Technology

- Seed
- Chemical
- Fertilizer

Water Management

- Variable Rate Irrigation
- Visual Field Surveys
- Mobile Sprinkler Management
- Soil Moisture Monitoring