



Precision Agriculture – Technological Alchemy

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Key Points:

- ***Precision agriculture promises to shape the future of crop production including the supporting supply chains, as practitioners continue to develop and employ more techniques to manage and analyze different streams of data.***
- ***Precision agriculture has been around for a long time. In recent years, however, sharply rising crop revenues and new technological advancements have accelerated growers' interest in utilizing precision agricultural products and practices.***
- ***As commodity prices retreat from recent highs, many growers will be impelled to sharpen their management skills and become more efficient to preserve margins. Precision agriculture will likely continue to be a key tool in addressing this challenge.***
- ***Growers and service providers alike are keenly interested in identifying and perfecting the best precision agricultural solutions. However, because precision ag "best practices" change as much and as fast as they do, service providers find it challenging to avoid technological obsolescence and to keep abreast of newly emerging competitors.***
- ***Many farm cooperatives have created their own precision ag programs. Their goal is to garner the knowledge and knowhow needed to assist their customers in interpreting their mountains of data and then formulating individualized crop plans to optimize yields and production.***
- ***Data issues abound within the realm of precision agriculture. Challenges include data collection, ownership, maintenance, reliability and integrity. With the growing success of precision ag, these data issues will become increasingly important – and contentious.***
- ***Growing concerns about the safety of the nation's food supply and the sustainability of its natural resource base will likely intersect with precision agriculture and its ability to provide hard data to address the issues of traceability and sustainability.***

This report is the first of two covering precision agriculture. This one focuses on the innovations, available services, products and practices that define precision agriculture. The second report will examine the role of agricultural cooperatives and their efforts to develop various precision agricultural services, all designed to improve their competitive position within the agribusiness industry.