How a Crop Consulting Firm is Using Precision Agriculture Technology

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Top-Soil Testing Service has been taking soil samples using 2.5 acre grids since 1975 and has sampled over 1.4 million acres of farmland in Illinois, Indiana, Wisconsin and Iowa. In 1992, Top-Soil Testing Service began a relationship with Applications Mapping, Inc. to demonstrate precision agriculture as a feasible process with added economic benefit, agronomic benefit and environmental benefit to farming operations.

Since 1975, the author has worked with hundreds of farmers that understand the importance of crop management and who have been finding through a crop management relationship that site specific crop management and variable rate applications or materials are beneficial to their operation. This paper relates the authors experience of providing soil sampling and testing services, crop management consulting services and support of those services. Top-Soil Testing Service also works with fertilizer dealers that have purchased the fully automated variable rate application equipment. This paper will discuss how a consultant interfaces with a dealer who is working to implement precision agriculture processes into his operation.

Beginning in 1992, Top-Soil Testing Service installed GPS equipment and industrial computers on six-wheel Polaris vehicles in order to begin taking soil samples by GPS technology, sampling approximately 10 000 acres. In 1993, over 100 000 acres were sampled with GPS technology. This paper provides examples of issues to be addressed when GPS technology is integrated into a consulting program and services offered to farmers as well as fertilizer dealers.

Published 1995