

MANURE MANAGEMENT USING PRECISION AGRICULTURE

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ABSTRACT

The overall purpose of this project was to develop and implement a manure application record system that was solely based on Global Positioning Systems (GPS). This system will have the ability to provide steering and position assistance for avoiding buffer areas and to keep accurate records of application location, dates and rates. The system had the ability to create electronic as well as hard copy application maps. The software portion system was also evaluated to determine how the collected electronic spreading can be used to generate regulatory required spreading reports.

The first step was to select the necessary components of the system. Components for the system were selected on the basis of product availability, user friendliness, ability to communicate with one another, and dealer support. Once the needed components were selected, a prototype system could be assembled. The prototype system consisted of an Ag Leader Insight monitor, Raven flow control valve, Krohne electromagnetic flow meter, and a Trimble Autopilot system. Once the system had been assembled, calibration could take place. Once a proper calibration was achieved, the system operated with very successful results.