

DECISION MAKING FACTORS OF PRECISION AGRICULTURAL PRACTICES IN SOUTH DAKOTA

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Previous research and surveys focused on the adoption and use of precision technology in crop production or in livestock management. However, we don't have too much information about what information farmers or agronomist use to create the management zones, or maps to implement precision technologies in their operations.

Researchers including a Sociologist at SDSU created a survey document current nutrient management practice in the state. The survey also included questions regarding adoption and use of precision ag technologies in addition to information considered to create prescription maps for variable fertilizer and seeding rates. This survey was sent to 3000 South Dakota Farmers in 2019.

The survey also collected demographic information from the producers. Overall, we received nearly 18% response rate from decision makers. Responses were analyzed for the entire state, by geographical location utilizing the USDA Reporting Districts, age and educational background of the producers, and by the farm size.

Approximately 50% of the respondents have indicated that they use variable rate fertilizer applications in corn, while variable rate seeding was 33% of the responses. Largest precision technology adoption was among the younger farmers and also farms operations larger than 800 ha.

The presentation will discuss the different decision factors (e.g. yield maps, remote sensing, etc.) used to determine the variable rate fertilizer and seeding rates.