

# GOOD COMMUNICATION KEY TO THE SUCCESS OF PRECISION AGRICULTURE

*A Case Study*

DEVERON



## INTRODUCTION

Precision Agriculture has been a part of the industry for over 20 years in some shape or form from how soil sampling the field is conducted to applying fungicide to corn through variable rate technology. The concept has focused on how to be more efficient on farms and to promote sustainability. Despite its presence in the agriculture industry for many years, grower uptake has been slow due to its constant evolution and limited education of how it can be applied. There are many different options and approaches for growers to implement on the farm which leads to confusion. The best approach is to always keep it simple and good communication with support services is instrumental for grower success with precision agriculture.

# THE GROWER

A grower in the Kawartha Lakes area is a custom farm operator and owns one of the last hot farms in the region. They operate two sprayers that are shared amongst three growers who are keen to try precision agriculture to use their equipment to its full potential.

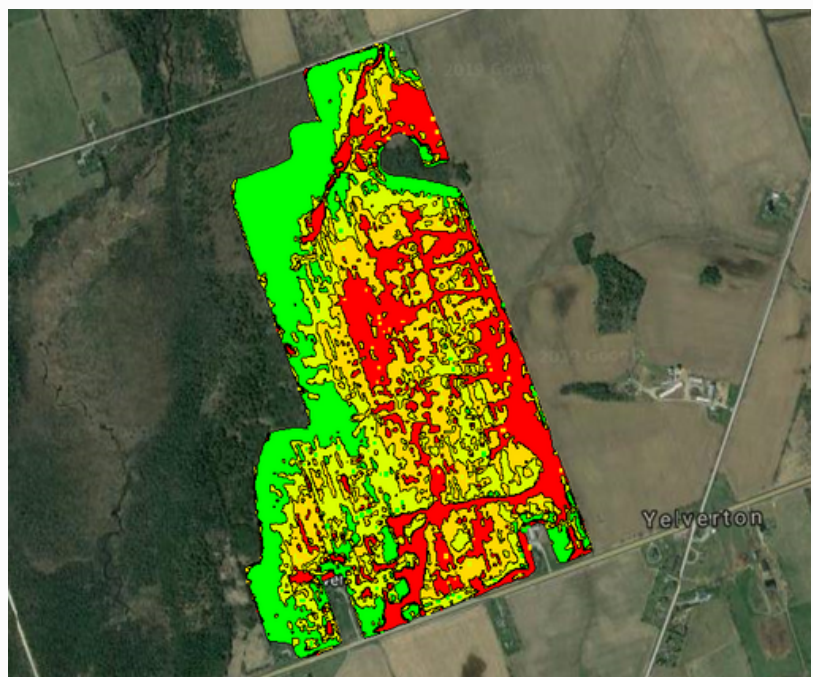
The grower and their ag-retail representative Todd Moore from Sylvite discussed analyzing wheat health to apply nitrogen as a first step into the precision ag world. Deveron was contacted to conduct a drone flight to capture an NDVI image of the wheat stand to create a variable rate prescription for the grower to apply. The goal of variable rate nitrogen (VRN) prescriptions is to ensure that nitrogen is only applied where it is needed, helping reduce cost, fertilizer use and environmental impact.

*"There is a lack of collaborative knowledge and when precision ag goes wrong it is easiest to point fingers." - Aaron Breimer, Deveron*

## THE CHALLENGE

Deveron conducted the drone flight and processed the imagery. Deveron ran the image through their algorithms and created the VRN prescription that was ready to upload to the sprayer monitor. When prescriptions are built and ready to export, it is important to know what type of monitor is in the equipment. This grower was operating a Case IH sprayer with Pro700 monitor. Prescriptions for this monitor need to be exported in a specific format known as a cn1. There was a misunderstanding between the grower and equipment dealer on what format the scripts needed to be in for upload. The grower was not familiar with the equipment and did not know to ask what file format was compatible with his monitor. This occurs frequently among producers.

The grower reached out to his Sylvite Representative frustrated the prescriptions were not working for his field. Sylvite contacted Deveron with issue to try and resolve. The biggest challenge many farmers have is with understanding the technology, there is no consistency across equipment. "There is a grey area of who needs to understand the equipment and know how to utilize the monitors" explained Todd Moore.



*"Providers of precision agriculture equipment and services must keep in mind what is easiest for us isn't easy for everyone"*  
- Aaron Breimer, Deveron

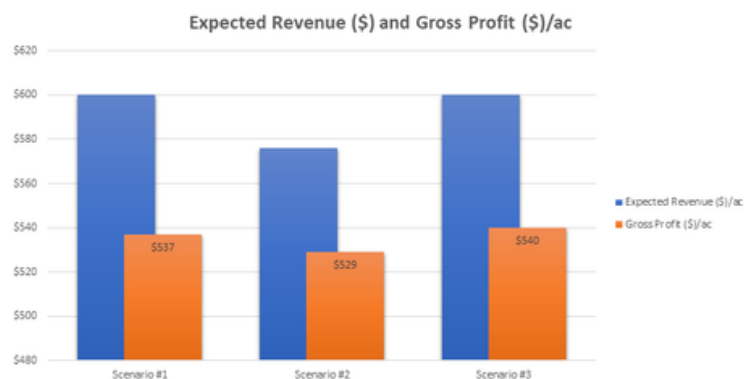
## THE SOLUTION

Sylvite reached out to Deveron to explain the situation. Deveron was able to quickly identify the issue and created two new files that were compatible with the grower's monitor. The files were sent to the representative who was uploading them for the farmer. Deveron was able to talk the Sylvite rep. through the process step-by-step of how to load the prescription into the monitor.

Communication with the producer at the start of the relationship is important, to explain the process of what goes into the prescriptions and how they will be delivered to them. This discussion will help gauge their comfort level with their equipment and monitor. It is also important to ask questions of what specific equipment they are operating to ensure the prescriptions are delivered in the right format from the start. Constant communication with the grower throughout the relationship will ensure that the experience is positive, and they will be more receptive to new technology.

## THE VALUE PROPOSITION

The most important business benefit of the proper delivery and execution of the VRN prescription is the grower's return on investment (ROI). Alternatively, to variable rate, the grower could apply a flat rate of nitrogen to his fields. When applying a flat rate of fertilizer on a field with variability there will be yield loss as there will be areas that did not get enough nitrogen. The goal of variable rate fertilizer is to apply the nutrient to the areas that need it as it will result in higher yields in traditionally lower yielding areas. The grower's ROI can be reflected in the graph.



Deveron constantly evaluate their customer delivery process and strive for an overall good experience that will continue to bring existing clients back and create new relationships. the knowledge that Deveron has in multiple equipment formats and commitment to improving their communication builds trust with the customer. It is important for the customer to feel comfortable when trying something new.

Scenarios	Rate (gal/ac)	N Product	Total Product (gals)	Nitrogen Cost (\$)	Flight/Script Cost (\$/ac)	Expected yield (bu/ac)	Price (\$)/bu	Expected Revenue (\$)/ac	Gross Profit (\$)/ac
Scenario #1	40	28%	4000	\$6,300	\$0	100	\$6	\$600	\$537
Scenario #2	30	28%	3000	\$4,700	\$0	96	\$6	\$576	\$529
Scenario #3	Variable Rate	28%	3500	\$5,500	\$5	100	\$6	\$600	\$540

\*Scenario 3 cost more than Scenario 2 of the flat rate of 30 gal/ac but when the possible yield loss to the areas that did not receive enough nitrogen is calculated, the variable rate scenario results in a net value for the farmer.

*"It is the service providers job to not give up on a problem and to keep constant communication with the grower until the job is finished"* -  
Todd Moore, Sylvite



*"Growers will  
share their  
positive experience  
with others  
creating a  
snowball effect -  
Todd Moore,  
Sylvite*

## THE RESULTS

Similar situations like this helps remind companies to continually improve their processes and make adapting new technology easier for their customers. Deveron acted quickly to resolve the issue and made uploading the prescription seamless which resulted in a positive experience for the customer. The process is meant to be as simple as possible. To ensure ease of use and proven success of the scripts, growers are encouraged to work with an experienced partner. Farmers are more inclined to share their positive experience with others based on the success of their scripts and the guidance they received throughout the process. Better communication at all levels of the service delivery will increase grower education. Improving the comfort level is key to make any form of precision agriculture work for the grower and continue to adopt new technology across their farm operations.



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