# Introduction to Precision Agriculture: The Why

Keywords: precision agriculture, variability, intentional, farm management, technology

## Purpose

This lesson introduces a description of precision agriculture. Upon completing this lesson, the students will be able to:

* Tell another individual what precision agriculture is.
* Explain a reason why we spend time exploring precision agriculture technologies.
* Discuss benefits and challenges that come with using precision agriculture technologies.

## Materials Needed

Lesson 1 PowerPoint Presentation

## Vocabulary

Precision Agriculture: a method of farm management where we use technology to make more informed, intentional decisions on agricultural and horticultural operations.

RFID: Radio Frequency Identification, technology that uses radio waves.

Nitrates: fertilizer that helps provide food and energy to the plant. Nitrates are mobile nutrients that are applied to corn fields.

Mobile nutrients: Nutrients that move through the soil profile easily with water. Prone to leaching.

Variability: Changes or differences in a system.

## Activity Class Time

While lecture time will vary for every presenter, the aim is to have it fill about 25 minutes. A shortened version of the variability activity can then be utilized within this lesson for an interactive portion.

## Set-up Before Class

The PowerPoint is all that you need. If utilizing the in-class activity, refer to that document for set up that will take about fifteen minutes. The students can help you set up the activity during class to reduce time.

## Classroom Instructions

Utilize the Speaker Notes in the presentation to introduce precision agriculture to your students.

### Introduction Talking Points

As a bell ringer, encourage students to write down what they think precision agriculture is. They can either try to define it, and/or give examples of it.

### Activity

Conduct the lesson and the potential variability activity.

### Post-Activity

After what they learned today, have them write down how they would describe precision agriculture to their grandparents.

The takeaway from today’s lesson, re-emphasized from the recap slide, is that precision agriculture is a method of farm management where we are intentional with our decision-making. We can be intentional by using technology to better understand our environment around us to notice variability. Anyone going into agriculture in any sector will want to understand and utilize this technology somehow, and there are many careers that utilize precision agriculture concepts and technology.