**Precision Agriculture Pre-Test Answers**

Please answer the following questions to the best of your ability.

1. T **F** Precision agriculture concepts apply only to grain crop production.
2. Which field operation would you be most concerned with the term “singularity”?
   1. Tillage
   2. Pest control
   3. **Planting**
   4. Harvesting
3. T **F** UAVs may be flown legally by a farm producer on their own land without FAA certification.
4. GPS receivers require acquisition from at least \_\_\_\_\_ satellites for minimum accuracy.
   1. 2
   2. **3**
   3. 4
   4. 5
5. Spatial variability is the variation in crop, soil, and environmental characteristics over:
   1. Distance and time
   2. **Distance and depth**
   3. Time
   4. None of the above
6. Variable rate technology can be used with all of the following EXCEPT:
   1. Planting
   2. Fertilization
   3. **Soil sampling**
   4. Pesticide application
7. Which of the following fields have the best potential for gains using precision agriculture techniques?
   1. Field with no variability, but high past average yield
   2. Field with no variability, but low past average yield
   3. **Field with high variability, but high past average yield**
   4. Field with high variability, but low past average yield
8. The single most important piece of equipment aboard each GPS satellite is the:
9. Radio
10. **Clock**
11. Altimeter
12. Digital Camera
13. What operation below is often considered the first logical step for producers to implement a precision agriculture program?
    1. Purchase all new equipment
    2. Purchase a UAV
    3. **Enroll in a precision agriculture program**
    4. **Utilize GPS guidance**
14. Define precision agriculture:

**A management system that is information and technology based, is site specific, and uses one or more of the following sources of data: soils, crops, nutrients, pests, moisture, or yield, for optimum profitability, sustainability, and protection of the environment.**

Bonus Question:

1. If a producer has 125 Acres and 5 precision machines, how old is the producer?

Your students will most likely try to solve this question using existing data. Typical reasoning will be:

125 + 5 = 130 (probably too old)

125 – 5 = 120 (still too old)

125 ÷ 5 = 25 (probably about right and most likely the answer you will receive)

**Correct answer: (Not enough information) Sometimes we do not have enough data to solve our problem) This is a good problem-solving question.**