



Intro to Agriscience
Precision Ag - Lesson 3 Quiz ANSWER KEY

T/F Section – Reach each statement carefully and determine if it is a True (T) statement or a False (F) statement. Place a T or an F on the blank in front of the statement. If the statement is false, write the word or words that would make the statement true in the blank provided.

- False** 1. With traditional farming practices, several pieces of data are gathered per location at one time.
one piece
- True** 2. Data can be gathered up to 200 times per second using Precision Agriculture.

- True** 3. Because observations are taken constantly with Precision Agriculture, it is completely applicable to the entire operation.

- False** 4. Atmospheric data is analyzed for Growing Degree Days and Heat Units.
historical weather
- False** 5. Remote sensing can be done by satellites or physical observation.
drones

Matching Section - Match each vocabulary word in the column on the left with its proper definition from the column on the right.

- | | |
|--|---|
| <u>8</u> Grid Sampling | 6. Planting population, seed depth, seed spacing, etc.. |
| <u>10</u> Zone Sampling | 7. Using multiple sources of data together. |
| <u>11</u> Passive Data Collection | 8. Very time consuming and expensive for the operator. |
| <u>6</u> Active Data Collection | 9. Similar outcomes that occur when an individual decision is made. |
| <u>9</u> Trends | 10. Fewer soil samples are taken and is less costly for the operator. |
| <u>7</u> Data Layering | 11. Soil temperature, soil moisture, pH, organic matter, etc.. |

Multiple Choice Section - Reach each question or statement carefully. Circle the correct answer from the choices below each question.

12. Some types of data need to be known on a higher level of _____ so sensors are used to provide more precise rather than general information.
- a. availability **b. granularity**
- c. remoteness d. supposition



13. A field boundary is used to identify _____ on which data will be gathered.
- a. an AOI
- b. a BOAC
- c. a POA
- d. an EPOX
14. A relationship between a piece of data and the result is called a _____.
- a. compound
- b. trend
- c. sample
- d. correlation
15. A _____ is a program or script that precision equipment uses to apply a specific amount of something at a specific place in the field.
- a. prescription
- b. substantiator
- c. software
- d. precision

Short Answer/Fill-in-the-Blank Section - Read each statement or question carefully. Fill in the blanks with the correct answers or write the correct response in the space provided below each question.

16. Compare and contrast 2 specific points related to traditional farming practices vs. precision agriculture that were NOT previously discussed in this quiz.

Compare: Data is collected

Contrast: *Extra time is required for physical observation using traditional farming.*

Data is recorded instantaneously using Precision Ag

Compare: Different sites are observed **Contrast:** The number of sites is limited due to time constraints using traditional farming.

A significantly higher number of sites observed and recorded using Precision Ag.

Compare: Both have a degree of accuracy.

Contrast: *Accuracy depends upon the viewpoint of the observer using traditional farming.*

The data is accurate to the level of the calibration of the equipment.



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17. Give 2 examples of where data comes from related to production agriculture.

Websites, remote sensing, digitized historical maps, physical sampling and equipment with sensors, etc.

18. Digitized **topographic** maps are very valuable because landforms change very little over many years unless there is a major occurrence such as an earthquake or major flood.

19. Name 2 pieces of data that can be identified using soil sampling.

soil pH, current fertility, fertility needs, ability to hold water, ability to release water, etc.

20. What tool is used to remove a sample of soil from the ground for testing?

a soil probe

21. Name 2 different means of saving and transferring collected data.

USB Drive, SD Card, transfer directly to PC or iPad with a cable, send it to the cloud using WiFi or cell transmitter, etc.

22. What is the first step in decision making?

gather data

23. Why is it imperative that multiple years of data are available and compared when making decisions?

So changes due to variables such as weather can be ruled out

24. Give an example of data that could be layered AND explain what could be determined by your example.

Soil type and variable rate irrigation - layering allows the operator to see how much water was delivered to each soil type.

25. What should the operator do after data has been analyzed, decisions have been made and all applications of inputs have been made?

Observe, take note of what happens, keep accurate records, etc. to see if good decision were made.