

# Module 14: Technological Advances in Nutrient Management

## ROCKY MOUNTAIN CCA SELF-STUDY EXAMINATION

4449-14 QUIZ

### DIRECTIONS

1. Clearly mark an "X" next to the best answer to each question. Complete evaluation form and registration form.
  2. Tear out this page and place in envelope along with a \$10 check (processing fee) payable to the American Society of Agronomy (or fill out credit card information). Payment in U.S. funds only.
  3. Mail self-study exam and fee to: ASA c/o CCA Self-Study Exam, 677 S. Segoe Road, Madison, WI 53711.
- A passing exam score (70%) is worth 1.0 Rocky Mountain CEU in **nutrient management**.

### QUESTIONS

1. Which of the following is a GIS application?  
 a. Positioning a vehicle  
 b. Differential correction  
 c. Mapping in-field P availability  
 d. Measuring chlorophyll content
2. Is Selective Availability a concern for GPS users today?  
 a. Yes, interference occurs frequently  
 b. Yes, it often results in inaccurate readings  
 c. No, it hasn't been a concern since 2000  
 d. No, it's never really been a concern
3. One Montana study showed that vegetation indices are well correlated with biomass but not well correlated to  
 a. Total biomass  
 b. Late-season yield  
 c. Percent N  
 d. Bare soil
4. What is a benefit of using GPS when applying nutrients or other inputs?  
 a. Improves RS interpretation  
 b. Avoids misapplication of nutrients  
 c. Assesses field variability  
 d. Locates N deficiencies
5. Of the following, when is GPS signal loss most likely to occur?  
 a. When picking up five satellites  
 b. When surrounded by tall trees  
 c. When in an open field  
 d. When using differential correction
6. What is an advantage of RS?  
 a. Useful for large areas  
 b. Quick processing  
 c. Cloud cover is not a problem  
 d. Low cost
7. Where is visible light within the electromagnetic spectrum?  
 a. Near the longest wavelengths  
 b. Near the lowest frequencies  
 c. Between radio and micro-waves  
 d. Between ultra-violet and infrared waves
8. According to a Montana study, can you usually tell a difference between till and no-till with RS?  
 a. Yes, you can see plow lines on tilled fields  
 b. Yes, one is circular and the other square  
 c. There is a difference but you can't see it with the naked eye  
 d. No, there is no difference

9. What effect did live biomass have on NDVI values in a MT study?  
 a. decreased  c. increased  
 b. no change  d. no relationship
10. Why has PA adoption probably been slow in the Northern Great Plains?  
 a. No one knows enough about it  
 b. Expense  
 c. It's not really used anywhere in the US  
 d. Applications haven't been proven

## SELF STUDY EVALUATION FORM: Nutrient Management Module 14

**Rating Scale: 1 = Strongly Disagree    5 = Strongly Agree**

Information presented will be useful in my daily crop advising activities:	1	2	3	4	5
Information was organized and logical:	1	2	3	4	5
Graphics/tables were appropriate and enhanced my learning:	1	2	3	4	5
I was stimulated to think how to use and apply the information presented:	1	2	3	4	5
The article addressed the stated competency area and performance objective(s)	1	2	3	4	5

**What suggestions (general and specific) do you have to improve future modules?**

**Topics you would like to see addressed in future self-study materials:**

### SELF-STUDY EXAM REGISTRATION FORM-FOR ROCKY MOUNTAIN CCA CREDIT

**Name:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**City, State, Zip:** \_\_\_\_\_

**CCA Certification #:** \_\_\_\_\_

Credit Card #: \_\_\_\_\_ Type of Card: Visa \_\_\_ Mastercard \_\_\_ Discovery \_\_\_ Am Express \_\_\_

Expiration Date: \_\_\_\_\_ Name on Card: \_\_\_\_\_

**A \$2.00 Processing Fee will be added to all credit card charges.**

I certify that I alone completed this self-study course and recognize that an ethics violation may revoke my CCA status.

\_\_\_\_\_  
 Signature of Registrant as it appears on Code of Ethics \_\_\_\_\_  
 Date