

ROCKY MOUNTAIN CCA SELF-STUDY EXAMINATION

DIRECTIONS

1. Clearly mark an "X" in the brackets 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 \$15 check (processing fee) payable to the American Society of Agronomy (or fill out credit card information). Payment in U.S. currency 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 1.5 Rocky Mountain CEU's in soil and water management.

QUESTIONS

1. Saltation is
 - a. The movement of particles by wind high into the air and over long distances
 - b. The wind-induced movement of particles in a bouncing fashion across the soil surface
 - c. The suspension of fine particles in water
 - d. Particles rolling across the surface
2. Of the following soils, which would be the most susceptible to wind erosion?
 - a. A highly aggregated, dry soil
 - b. A loose, moist soil
 - c. A loose, dry soil
 - d. A smooth, wet soil
3. From 1982 to 1997, estimated annual soil erosion in the U.S.
 - a. Decreased by 18%
 - b. Decreased by 28%
 - c. Decreased by 38%
 - d. Initially decreased, but then increased
4. To maximize yield and water use efficiency as well as reduce erosion, it is recommended to leave stubble
 - a. As short as possible
 - b. As tall as possible
 - c. At an intermediate height
 - d. Tilled under
5. Long-term burning of residues will most likely
 - a. Decrease erosion
 - b. Increase erosion
 - c. Maintain erosion rates
 - d. Increase SOM levels
6. Which of the following would work best for estimating soil erosion by water?
 - a. RUSLE
 - b. WEQ
 - c. HEL
 - d. T-value
7. The T value is
 - a. The amount of soil lost each year
 - b. The amount of soil lost each year to wind erosion
 - c. The amount of tolerable soil lost each year without negatively affecting productivity
 - d. The value obtained by dividing RUSLE by WEQ
8. To obtain the most accurate estimation of percent residue cover using the line-transect method, it is recommended to
 - a. Set the measuring tape straight and perpendicular to rows
 - b. Set the measuring tape straight and at a 45° angle across rows
 - c. Use a flexible tape that can curve around bare areas
 - d. Only use the most covered areas of a field for measurement
9. Tillage may temporarily control erosion by
 - a. Burying residue
 - b. Reducing infiltration
 - c. Increasing surface roughness
 - d. Compacting the soil
10. In general, the process that moves the most material via wind is
 - a. Suspension
 - b. Saltation
 - c. Creep
 - d. Sheet

11. Is PAM an effective amendment for dryland operations in the northern Great Plains?
 a. No, because of its high solubility in the soil, most PAM will be washed away
 b. Yes, PAM's high solubility makes it ideal for use in dryland systems
 c. No, because of its low solubility and high application costs
 d. Yes, because of its high gypsum content
12. In Montana and Wyoming, _____ erosion causes the majority of erosion.
 a. Irrigation-induced c. Water
 b. Tillage d. Wind
13. Rill erosion is the
 a. Uniform distribution of a thin layer of water flowing over the soil surface
 b. Channeling of water into small channels that can be smoothed by tillage
 c. Channeling of water into large channels that cannot be smoothed by tillage
 d. Movement of water downhill by rainsplash
14. Compared to conventional till, a study by Schillinger (2001) showed
 a. Surface residue and clod mass was decreased by twice the amount in minimum till plots
 b. Surface residue and clod mass was increased by twice the amount in minimum till plots
 c. Yield was decreased in minimum till plots
 d. Water use efficiency was decreased in minimum till plots
15. Based on Figure 2, the wind speeds 40 in. above a vegetated surface and bare surface were
 a. 5 and 0 ft/sec, respectively c. 0 and 5 ft/sec, respectively
 b. 5 and 20 ft/sec, respectively d. 20 and 5 ft/sec, respectively

SELF-STUDY EVALUATION FORM

SOIL AND WATER MODULE #3

		STRONGLY DISAGREE	←————→		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 and # _____

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