



INDIANA CCA POST-CONVENTION SELF-STUDY CEU QUIZ

Managed Drainage for Higher Yields: Don't Let Tile Drains Run All Year Long

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Name (please print) _____

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- A grower considering the installation of managed drainage structures should already have :**
 - a. At least a 5% tile grade across the field.
 - b. A pattern tile system.
 - c. Tile blowouts in wet years.
 - d. Large areas of drowned-out crops in wet years.
- A Midwest grower managing drainage in a field will likely keep Fall water levels:**
 - a. Low
 - b. Medium
 - c. High
 - d. Very High
- Proposed new nitrate standards may cause many local streams to be listed by the EPA as:**
 - a. Endangered
 - b. Threatened
 - c. Impaired
 - d. Hazardous
- Structures utilized for managed drainage control tile flow by:**
 - a. Plugging tile stream outlets at certain times of the year.
 - b. Regulating the level of the water table.
 - c. Creating a vacuum that pulls water through the tile.
 - d. Measuring and regulating water flow.

- A higher water table can decrease the nitrogen coming from field tiles by:**
 - a. Eliminating denitrification.
 - b. Increasing soil leaching.
 - c. Decreasing the amount of soil water leaving the system.
 - d. Increasing crop rooting depth.

Answer question 6 using the information below for a 100 acre field:

| | Percent of Field Area | Without Managed Drainage | With Managed Drainage |
|--------------|-----------------------|--------------------------|-----------------------|
| Managed Area | .20 | 150 bu/A | 160 bu/A |
| Other Area | .80 | 150 bu/A | 150 bu/A |

- The increase in production for the field by installing a managed drainage system is:**
 - a. 1 bu/A
 - b. 2 bu/A
 - c. 10 bu/A
 - d. 20 bu/A
- Managed drainage has the potential to increase crop yields by:**
 - a. Increasing microbial activity in the soil profile.
 - b. Storing soil water for dry summer periods.
 - c. Changing soil structure.
 - d. Eliminating capillary water.

- To calculate the average net benefit of a managed drainage system, the following costs should be subtracted EXCEPT:**
 - a. Hauling and drying costs of extra grain produced.
 - b. The initial cost of installing a pattern drainage system.
 - c. Annualized costs of the drainage control structure.
 - d. The cost to check each structure at least three or four times each year.
- Soil factors that may be influenced by a managed drainage system include all of the following EXCEPT:**
 - a. Soil texture.
 - b. Soil organic matter.
 - c. Soil nitrate concentration.
 - d. Earthworm populations.
- Compared to 50 years ago, most Midwest farmers today depend more on nutrients from:**
 - a. Animal manures.
 - b. Nitrogen-fixing crops in rotation.
 - c. Plowdown green manure crops.
 - d. Commercial fertilizers.

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