



Environmental and Natural Resource Career Development Event

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WASTE TEST

1. Which of the following is a true statement about soils and land use?
 - a. Any soil can be used for any purpose if it is modified.
 - b. Any soil can be used for sewage disposal without polluting ground water.
 - c. Any soil can be used for manure application with no adverse effects.
 - d. Soils vary in their suitability for a variety of uses, like construction, manure application, sewage disposal or agricultural production.
 - e. With the right fertilizer, any soil can be used to grow crops.
2. What materials are included in Municipal Solid Waste (MSW)?
 - a. Construction waste
 - b. Containers/packaging
 - c. Durable goods
 - d. Hazardous waste
 - e. b & c
3. In the USA what has been the single largest component of municipal solid waste?
 - a. Aluminum
 - b. Paper
 - c. Plastic
 - d. Wood
 - e. Yard waste
4. In the USA what municipal solid waste product has the worst recovery rate?
 - a. Aluminum
 - b. Paper
 - c. Plastic
 - d. Wood
 - e. Yard waste
5. From 1960-2015 what was the trend in Municipal waste production?
 - a. It has always decreased
 - b. It has always increased
 - c. It has increased except for one time period
 - d. It has decreased except for one time period

6. What mode of municipal waste disposal showed the greatest increase from 1960-2015?
 - a. Compost
 - b. Incineration
 - c. Landfill
 - d. Recycling
7. An energy recovery facility...
 - a. May decrease interest in recycling
 - b. Cleans used motor oil for reuse in engines
 - c. Produces energy while burning solid waste
 - d. Recovers wasted electricity from households
 - e. A & C
8. How can we decrease the source of municipal waste production?
 - a. Compost
 - b. Reduce, Reuse, Recycle
 - c. Reject items with excessive packaging
 - d. Use more fresh products
 - e. All of the above
9. Where do most of the materials in Municipal solid waste end up?
 - a. Composting
 - b. Incinerators
 - c. Landfills
 - d. Oceans
 - e. Recycling
10. In a sanitary landfill how are smells, pests and insects minimized?
 - a. Compacted trash is covered with soil
 - b. Deodorizers and water
 - c. Fencing
 - d. Pesticides
 - e. Ventilation fans
11. Which of these might be important for manure application decisions?
 - a. Application method, nutrient content of manure, soil test results
 - b. Location of streams/lakes/ponds
 - c. Precipitation, prevailing wind direction
 - d. Soil type, landscape position, soil erosion potential
 - e. All of the above

12. States have different maximum recommended levels for soil test nutrients. Some states make incentive payments when producers who voluntarily comply with recommended levels. Finally, some state regulations may result in fines if limits are exceeded. Texas may have the highest maximum recommended phosphorous (P) levels for a soil test. What level would be higher than the Texas state recommendation?
- 100 parts/million or 50 pounds/acre
 - 100 parts/million or 200 pounds/acre
 - 300 parts/million or 150 pounds/acre
 - 300 parts/million or 600 pounds/acre
 - None of the above
13. Manure composition and soil lab tests may be reported in pounds per acre or parts per million. What is an easy way to convert the results from one value to the other?
- Pounds per acre $\times 2$ = parts per million
 - Parts per million $\times 2$ = pounds per acre
 - There is no easy conversion
14. Scenario #1: Clay and Sandy Farmer have a dairy farm. It has been raining for several days and they have not been able to spread manure. They need to haul manure and tomorrow looks like the weather will be clear. They can choose to apply manure in Field 1 and/or Field 2. Soil tests indicate Field 1 has a P level of 550 pounds/acre. Field 2 has a P level of 48 pounds/acre. Based on the soil tests, in which field should they spread manure?
- Field 1
 - Field 2
 - Field 1 and Field 2
 - Neither Field 1 or Field 2
15. Algal blooms in the Western Lake Erie Basin. Eutrophication in the Gulf of Mexico. Water quality problems in Chesapeake Bay. What are the essential plant nutrients that are thought to be causing the problems?
- Manganese (Mg)
 - Nitrogen (N)
 - Phosphorous (P)
 - Potassium (K)
 - B & C
16. Cattle may cross the stream at this stream crossing but otherwise are fenced out of the stream. Why install a stream crossing?
- Cattle use the stream crossing and don't degrade stream banks along the rest of the stream
 - Improve cattle health by keeping them out of the mud
 - Improve water quality
 - Reduce soil erosion
 - All of the above

17. Scenario #2: What practices might be beneficial to correct the problems in this scene?
- Grassed waterway
 - Vegetative buffer strip
 - Manure storage
 - Roofs and Covers
 - All of the above
18. Scenario #3: Why might surface applying manure to frozen ground be a bad idea?
- It might violate federal, local or state regulations
 - Rain or snowmelt could wash manure or nutrients into streams or lakes
 - You might lose a lot of nutrients through leaching and volatilization
 - Potential for manure run-off increases during winter so manure application should only be done as a last resort
 - All the above
19. Nutrient levels in fertilizers, manure and soils can tested. What three nutrients are considered most important for plant growth?
- Nitrogen, Phosphorous, Magnesium
 - Nitrogen, Phosphorous, Potassium
 - Nitrogen, Manganese, Potassium
 - Nitrogen, Sulphur, Copper
 - None of the above
20. What are the requirements or considerations when building a solid nutrient storage facility?
- All permanent solid nutrient storage facilities must have proper runoff management
 - The number of days (or weeks) the facility has to store the material is not an issue
 - They can be built on any soil
 - The storage capacity of the facility
 - A & D above