New Technology for Commercial Vegetable and Fruit Production (IX)

Wednesday, February 24, 2021

County: ___________________________ City: ___________________________ Zip code: __________

Post-test

Name: ____________________________________________ (Use the same name or symbol for pre- and post-tests)

1. The instrument VERIS is used for one of the following measurements.
   b. Plant height.                               e. Soil minerals.
   c. Soil EC.                                   f. All the above.

2. NDVI does NOT stand for Normalized difference vegetative index.
   a. True.                            b. False.

3. The difference between active and passive sensors is:
   a. Active sensors work automatically          c. Active sensors have their light source
   b. Passive sensors need human help to operate d. Passive sensors have their light source
   c. Both sensors depend on sunlight

4. What is the one thing you need to know before making a diagnosis.
   a. The orchard history.              c. How the problem developed.
   b. What a healthy plant looks like.     d. All the above.

5. What is the difference between a symptom and a sign?
   a. A sign must always be seen with a microscope.   c. A symptom is the first indication of a pathogen and a sign is proof of a pathogen.
   b. Symptoms are on the plant first.                d. All the above.

6. What specific characteristic distinguishes a nutritional deficiency from a pathological or pest symptom.
   a. Nutritional deficiencies are generally symmetrical. c. Nutritional deficiency symptoms are different for different tree species.
   b. Nutritional deficiency symptoms do not change over time. d. All the above.

7. Which of the below new diagnostic tool/s can identify a causal pathogen with high specificity and sensitivity.
   a. Multi-spectral sensor.                      c. Raman spectroscopy
   b. Hyper-spectral sensor                       d. Recombinase polymerase amplification
8. Which of the below new diagnostic tool/s uses laser and captures molecular vibrations as the approach in analysis?
   a. Multi-spectral sensor  
   b. Hyper-spectral sensor  
   c. Raman spectroscopy  
   d. Recombinase polymerase amplification

9. Which of the below new diagnostic tool/s uses neutral network as the approach in analysis.
   a. Multi-spectral sensor  
   b. Hyper-spectral sensor  
   c. Raman spectroscopy  
   d. Machine learning and Artificial Intelligence (AI)

10. What are the weed management challenges for the future?
    a. Increasing demand for food production  
    b. Decreasing herbicide tolerance by the weeds  
    c. Increasing number of new herbicide chemistries  
    d. All the above

11. Select the appropriate statement regarding slow-release herbicide carriers?
    a. They decrease herbicide retention in the soil  
    b. They potentially improve crop-safety  
    c. Both a and b  
    d. They reduce carry-over toxicity to subsequent crops  
    e. All the above

12. Which is NOT a benefit of planting cover crops?
    a. Reduce weeds  
    b. Reduce soil erosion  
    c. Reduce soil moisture  
    d. Reduce soil compaction

13. True or false: Legumes can contribute to soil nitrogen concentrations because of a symbiotic relationship with a specific type of bacteria.?
    a. True  
    b. False

14. Which of the following ARE questions that you should ask when evaluating soil microbial amendments:
    a. What is the concentration of organisms being added?  
    b. What are the conditions required for inoculation?  
    c. Has the amendment been used with your crop of choice before?  
    d. a and b  
    e. a, b, and c

15. What is the primary challenge to optimizing N uptake by crops in organic systems?
    a. Regulations  
    b. Synchronizing N availability with crop demand  
    c. Excess precipitation  
    d. Germplasm not ideal for organic systems  
    e. Fertilizer technology

16. Which factor is the least important in the development of a nitrogen BMP for organic carrots?
    a. Irrigation and precipitation rates  
    b. Nutrients are sourced from plants and animals  
    c. Nitrogen contribution from cover crops and/or weeds  
    d. The rate of plant development