In-Service Training (IST#: 32032)/CEU Roundup (FDACS Program # 32464)/

CCA Tracking #: FL 54068 thru FL 54072

New Technology for Commercial Vegetable and Fruit Production (X)

Wednesday, February 23, 2022, from 9:45 to 3:45 PM

County:_____City:_____Zip code:____

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

Post-test

Presentation Title:
Artificial Intelligence for Precision Agriculture

Presenter: Dr. **Yiannis Ampatzidis**

This talk presents emerging technologies for precision agriculture applications. It explains how artificial intelligence, automation, and robotics can be used to enhance precision management of recourses. Examples of emerging technologies presented here include smart and variable rate sprayers for pest and disease management, robotic harvesters for fruit and vegetables, UAVs for precision nutrient management and disease detection (among others).

1. **Can unmanned aerial vehicles (UAVs) be used to detect, count, and categorize trees?**
    a. Yes, by using image processing and artificial intelligence
    b. Yes, by using Lidar technology
    c. No

2. **Can unmanned aerial vehicles (UAVs) be used for plant stress and disease detection in vegetables?**
    a. Yes, by using spectral data and artificial intelligence
    b. Yes, by using Lidar technology
    c. No

3. **The Agroview's AI-based models develop fertility maps from data collected from:**
    a. UAV-based RGB cameras
    b. UAV-based multispectral cameras
    c. UAV-based Lidar sensors

4. **How a smart and precision tree sprayer works?**
    a. Sprays in the entire field
    b. Target-based application. It detects tree size and leaf density, in real-time, and varies the amount of the sprayed chemical
    c. Controls nozzle zones based on the wind speed

5. **The strawberry robotic harvester (developed by HCR) is:**
    a. Individual fruit harvester: it can potentially detect and pick individual fruit from each plant using machine vision and artificial intelligence
    b. Entire crop harvester: cuts and lifts the entire plant stalks off the ground, separates the fruit from the stalk and other foreign matter, and loads the fruit into bins trailing behind the harvester.
    c. Harvest-aid system.