Natural Resources Conservation Service

Supplement to Conservation Practice Standard

Nutrient Management

(Acre)

Code 590

This supplement contains additional criteria for nutrient management for practice certification when precision agriculture technology is used.

Technologies applicable to all crops and pastureland:

Soil Sampling Grid or Zone Based Applications

Variable rate application will include all nutrient applications (i.e., lime and fertilizer) that have been made according to recommendations based on grid soil samples representing areas no greater than 2.5 acres or on zone soil samples.

Requirements for Certification:

1. Copies of soil test analysis (filed in Section 5 of 6-Part Folder) must be from UF-IFAS Soil Testing Lab or a certified lab approved by the North American Proficiency Testing Program and using the Mehlich – 3 test (for all soil samples taken after Oct. 1, 2013). Sampling should be completed the first year of the contract unless soil sampling data is available from within the previous two years. If prior year data is used, then subsequent sampling should be completed the second year of the contract.
2. Nutrient Management plan developed by NRCS or TSP that meets requirements set forth by Florida NRCS Nutrient Management Standard. Nutrient application cannot exceed UF-IFAS fertilizer recommendations.
3. Soil sampling maps with soil test recommendations along with as-applied nutrient maps (as-applied maps not required if no nutrients are recommended). Maps may be supplied in hardcopy or electronic form [e.g., shapefile (.shp) or Rich Text Format (RTF)]. Soil test recommendation maps should include field boundaries, sampling grid or zone boundaries, soil test recommended fertilizer rates within each sampling grid, and legend. As-applied maps should indicate field and sampling grid or zone boundaries, product applied, rate applied per sampling grid or zone, date applied, and a map legend
4. Documentation that precision agriculture equipment for GPS-enabled navigation is installed on the predominant nutrient application equipment.

Map-Based Geographic Information Systems (GIS) Applications

Variable rate application on will include all nutrient applications (i.e., lime and fertilizer) that have been made according to recommendations based on map-based geographic information system (GIS).

Requirements for Certification

1. Copy of GIS prescription map that has been created from yield maps, soil maps, crop nutrient levels, aerial images, or maps of soil electrical conductivity. The map (hard copy or electronic) should include field boundaries, GIS-based prescription fertilizer recommendations, and legend.
2. Nutrient Management plan developed by NRCS or TSP that meets requirements set forth by Florida NRCS Nutrient Management Standard. Nutrient application cannot exceed UF-IFAS fertilizer recommendations.
3. Documentation of what type of precision agriculture equipment was used. To be considered precision agriculture equipment, the equipment needs to have a volume or mass flow sensor for the product rate, a ground speed sensor, a rate controller, and actuator values/ motors. Additionally, the precision agriculture equipment needs to have GPS-enabled navigation equipment installed.

Additional technology for use on Florida citrus only:

"On-the-Go" Sensor-Based Application Technology

Requirements for Certification

Variable rate application will include all nutrient applications (i.e., lime and fertilizer) that have been made according to recommendations based "on-the-go" sensor-based technology alone or in combination with other types of precision agriculture technologies. See Chapter 5 in UF/IFAS Nutrition of Florida Citrus Trees (SL-253) for more information on precision agriculture technologies for nutrient application in citrus.

Requirements for Certification of "on-the-go" sensor-based technologies

1. Documentation of sensor type that is used to detect the tree and its size and have software applications using the "look ahead" feature. These can be ultrasonic, photoelectric, or laser sensors.
2. Nutrient Management plan developed by NRCS or TSP that meets requirements set forth by Florida NRCS Nutrient Management Standard and the UF/IFAS Nutrition of Florida Citrus Trees (SL-253).