PARSONS
ON CITRUS

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WATER WARS
Influence Irrigation

The spring dry season is upon us again, and the National Weather Service predicts that temperatures in Florida will be above normal from now through September. Rainfall in the Southeast is predicted to be at or below normal from March through June or July. The La Niña situation that has dominated our weather pattern since October 2007 is expected to last until May or June 2008. It is the strongest La Niña we have had in eight years. La Niña commonly brings warmer and drier weather to the entire Southeast. The drought this

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winter continues to be particularly severe in the Carolinas, Georgia, and Alabama. Atlanta has been under extreme drought conditions because of the record low level of Lake Lanier, its main water source.

Border Battle

To show how serious battles over water can become, the Georgia state legislature recently voted unanimously to move the Georgia-Tennessee state line. The border was originally set by the U.S. Congress in 1796 at the 35th parallel. However, when mathematician James Camak surveyed the line in 1818, it was established about 1.1 miles south of the 35th parallel. Modern surveys have verified that the present border is not on the 35th parallel, and Georgia wants the line moved northward to allow access to a part of the Tennessee River. This could potentially allow Georgia to build a water treatment plant on the river and a more than 100-mile-long pipeline to pump several hundred million gallons of water per day to north Georgia and Atlanta.

Restrictions Reduce Water Use

For the first time in its history, the South Florida Water Management District (SFWMD) declared an extreme water shortage that went into effect in January 2008. This directly affects more than five million south Florida people and hundreds of farms. SFWMD instituted the most stringent landscape irrigation restrictions it has ever had to impose. Lawn watering is limited to one day per week. With this Phase III restriction, agricultural users and golf courses must reduce their surface water consumption by 45%. In Martin and St. Lucie counties, water withdrawals will cease if levels in the C-23, C-24, and C-25 canals drop below 14 feet above sea level.

In the Southwest Florida Water Management District (SWFWMD), the rainfall deficit over the past two years is more than 20 inches. In Ft. Pierce, the deficit is more than 40 inches. In January 2007, SWFWMD implemented lawn-watering restrictions to once per week, and has encouraged skipping a week of irrigation during the cooler months of the winter. It also has promoted and funded a number of projects to create reclaimed water for irrigation.

Effects On Citrus

Also affected is the Valencia orange forecast, which was lowered by two million boxes in February 2008. Some of this reduction is probably due to the drought. Average fruit size is very small and is expected to be lower at harvest than in previous recent seasons. Some fruit drop will also continue.

As most growers know, drought stress in the spring can have a major impact on citrus. Inadequate irrigation can lead to increased young fruit drop, reduced fruit set, and lower yields. Growers need to monitor their irrigation carefully to provide adequate water. Running systems for too long can waste water by forcing it below the main root zone. In the spring, growers should irrigate at 25% to 33% depletion, but can go to a greater depletion level in the fall and winter. During the periods of little or no rain from April through June, microsprinkler irrigation should be run every two to three days for only three to five hours (depending on soil type and root-zone depth). FG

FOR MORE

Check the guidelines in "Management of Microsprinkler Systems for Florida Citrus" at **http://edis.ifas.ufl.edu/HS204** for further information. A more detailed irrigation schedule that can be tailored to local sites can be found at:
http://fawn.ifas.ufl.edu/tools/irrigation/citrus/scheduler/.