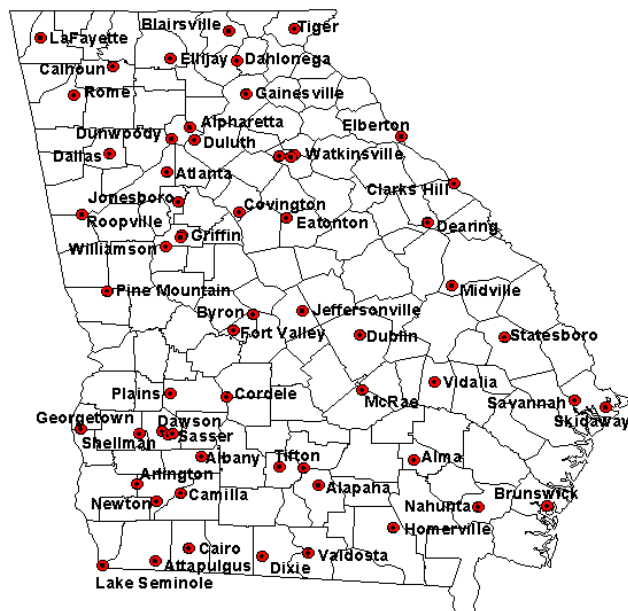


# APPLICATION OF WEATHER DATA FOR PEANUT MANAGEMENT

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Weather is one of the most critical variables that affects crop production, including peanut cropping systems. This has been clearly demonstrated during the last seven years, of which several have been some of the driest on record. South Georgia had a deficit of 15 to 20 inches of rain below normal during this drought. In 2003 rainfall conditions returned back to normal. The goal of this project is to improve the profitability of Georgia peanut producers through research and development of innovative information technology and delivery techniques of weather information via the world wide web.

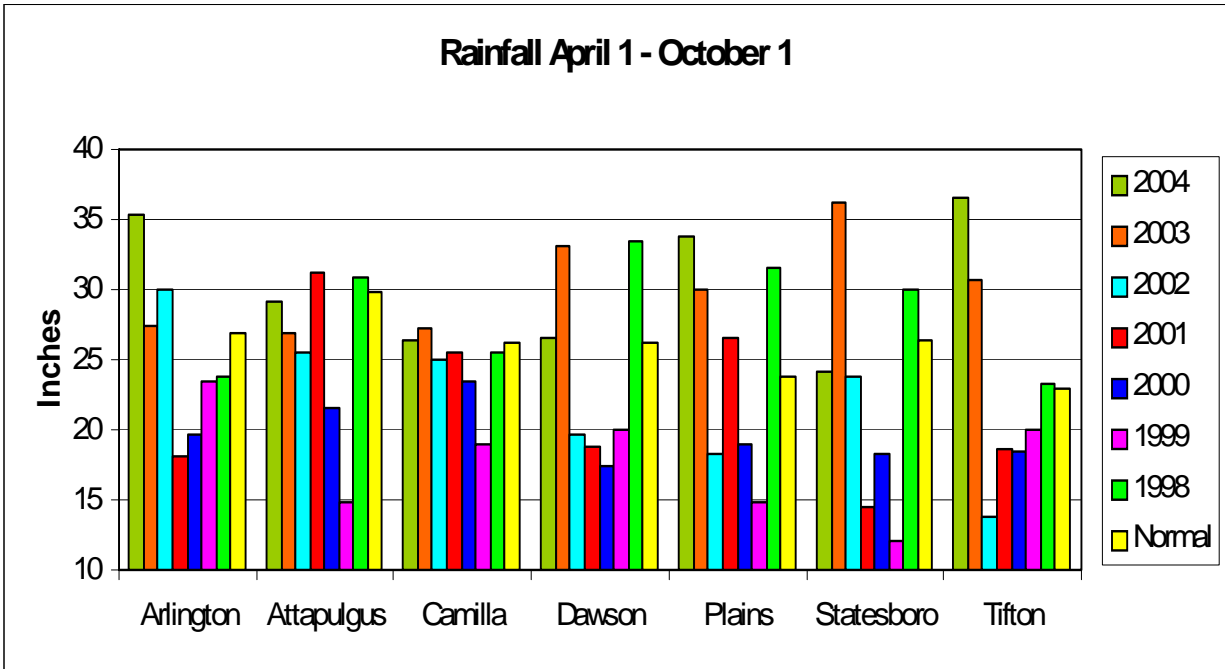


**Figure 1.** Location of the automated weather stations across the state of Georgia.

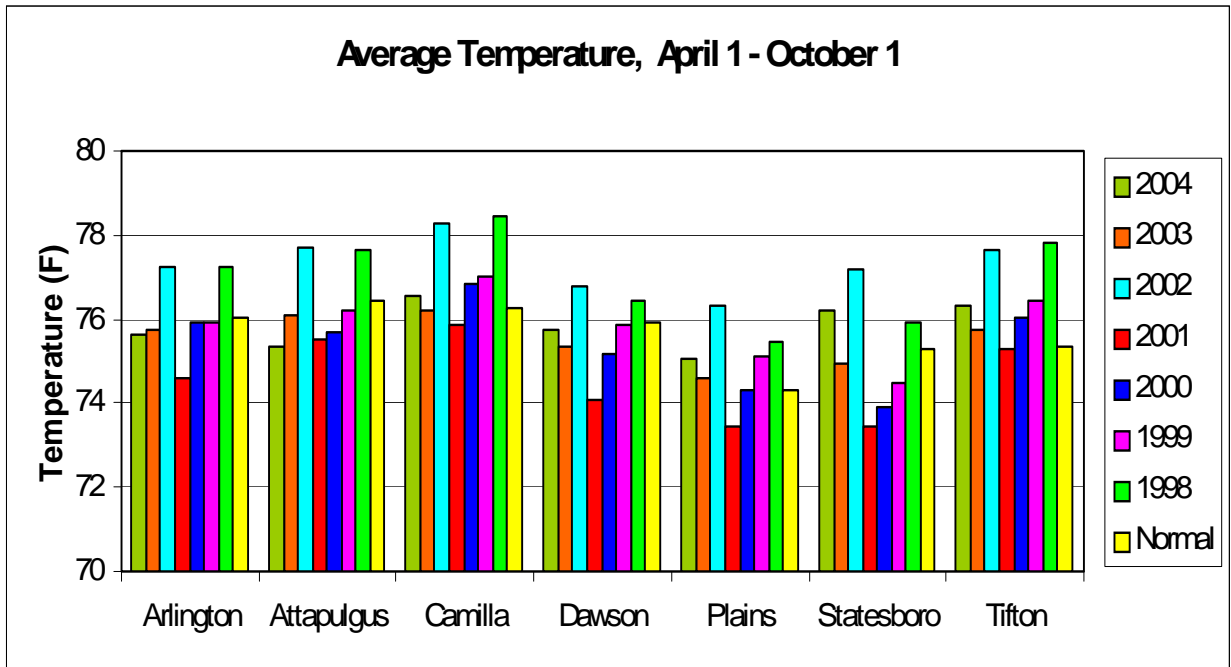
for the 2004 growing season, with Arlington, Attapulgus and Tifton showing above normal rainfall for April through September, and Attapulgus, Camilla and Dawson showing normal rainfall. Statesboro had below normal rainfall in 2004. The average temperature in 2004 was around normal for most stations (Figure 3).

An new initiative was started in 2003 to use long-term weather outlooks and climate forecasts as additional information for crop management. This is based on the ENSO phase predictions, i.e., El Nino Southern Oscillation, in which weather patterns for the Spring and Summer can be estimated during the preceding Winter months. Our current climate is neutral. As part of this effort we are developing a web-based information system for dissemination of the climate predictions and an agricultural outlook. The web page [www.Agclimate.org](http://www.Agclimate.org) will also have a yield and climate tool.

The University of Georgia has established an extensive network of 60 automated weather stations, located across the state of Georgia in the main agricultural areas (Figure 1). Weather variables that are recorded include rainfall, air temperature, soil temperature, relative humidity, wind speed and direction, solar radiation, soil moisture, and various other variables. The data are distributed via the internet and can be retrieved from [www.Georgiaweather.net](http://www.Georgiaweather.net). In addition, various weather-based products are made available. In collaboration with the peanut specialists, drought maps have been developed for the peanut production region. During the months of April and May a seven-day summary for soil temperature is provided to help with planting decisions. In Figure 2 an analysis is presented for rainfall



**Figure 2.** Rainfall totals for April 1 to October 1 for the years 1998 through 2004 as compared to normal conditions.



**Figure 3.** Average temperature for April 1 through October 1 for the years 1998 through 2004 as compared to normal conditions.