

Peanut Stunt Virus Reported on Perennial Peanut in North Florida and Southern Georgia¹

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Peanut stunt virus (Clemson isolate, Cucumovirus) causes a disease in a number of economically important crops including peanut, tobacco, soybean, clover and snap bean. The virus was first described in North Carolina and Virginia in 1964. Since then, it has been found in France, Japan, Korea D.P.R. (North), Korea Republic, Morocco, Poland and Spain. Leaves from peanut plants infected with peanut stunt virus are malformed and curl up at the edges. Infected leaves may be paler green and/or yellowed. The fruit of plants infected with the virus is frequently small, malformed and the shells are commonly split open to expose seed. Infected peanut seed do not play a role in the spread of the disease, since only seed too small for planting are infected at a high enough rate to act as a source of infection. The virus can over winter in wild or forage legumes (clovers, alfalfa, lespedeza, etc.) and then spread to other crops in the spring by aphids that carry the virus in their mouthparts after feeding on infected plants. Known aphid vectors include *Aphis craccivora* (cowpea aphid), *A. spiraecola* (spirea aphid) and

Myzus persicae (green peach aphid), but not *Aphis gossypii* (cotton aphid); Aphididae.

Recently, the presence of the virus has been confirmed in perennial peanut (*Arachis glabrata*) in Jackson and Gulf Counties, Florida and Lowndes County, Georgia. Confirmation of the virus was done by ELISA assay of foliage and rhizome material at the USDA-ARS, Griffin, GA, using symptomatic plants found in these counties. Diseased plants exhibited symptoms which included stunted plants, chlorosis, malformed leaves, and reduced foliage yield. Mottled and chlorotic leaves are shown in Figures 1 and 2. The plants were also tested for Cucumber Mosaic Virus and Tomato Spotted Wilt Virus, but all results were negative.

Usually, the virus is introduced into a cultivated peanut (*A. hypogaea*) field either by infected seed or by an aphid vector from a reservoir host such as white clover. In the field, the virus may multiply and be spread to other plants by an aphid vector. In the

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1. This document is SS-AGR-37, one of a series of the Agronomy Department and the North Florida Research and Education Center--Quincy FL; Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Publication date: January 2002. Revised: March 2006. Please visit the EDIS Web site at <http://edis.ifas.ufl.edu>.
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fall, the virus is transmitted to other hosts, such as white clover, where it over winters. At this time, it is not known what role perennial peanut may play as a reservoir of the virus in the vicinity of peanut fields. Little is also known about the potential for forage production loss and stand longevity.



Figure 1. Malformed and chlorotic leaves of Peanut Stunt-infected perennial peanut cultivar Florigraze.



Figure 2. Interveinal chlorosis and typical mottling of leaves associated with Peanut Stunt virus on perennial peanut.