

Rotating Article**For:** Week of July 14, 2003**By:** John D. Atkins
Extension Agriculture/Livestock Agent
Santa Rosa County Extension Service

Tropical Soda Apple (THE WEED FROM HELL)

Visit, <http://doacs.state.fl.us/~pi/TSA/TSAphotos.html> for photo's.

Tropical soda apple (*Solanum viarum* Dunal), is a serious weed problem in many perennial grass pastures and native areas of Florida. Geographically, the incidence of this plant in Florida has been highest in south Florida, though it has been observed throughout the state. Tropical soda apple (TSA) has been observed as a weed in pastures, ditch banks, citrus groves, sugarcane fields, and rangeland. Highest incidence of TSA has occurred in improved pastures, such as bahiagrass, with an estimated 1 million acres infested in Florida.

This invasive weed produces a yellow fruit (1-1.5 inches in diameter) which contains 200-400 seeds per fruit with a seed germination of 75% or more. The plant is readily identified by its immature fruit which are green with white mottling, similar to watermelon. Fruit production occurs throughout the year, but mostly from September through May, thus providing 40,000-50,000 viable seeds per plant for dispersal. Wildlife such as feral hogs, raccoons, and deer feed on the fruit and are vectors for spreading seed through the feces. Beef cattle will also consume the fruit and spread the seed in a similar manner.

WEED TAXONOMY

At maturity, TSA is 3-6 feet tall; stems, leaves, flower-stalks and calyxes have broad based white to yellowish thorns up to 0.4 inch long; pubescent leaves are 4-7 inches long and 2-6 inches wide, deeply divided into broad pointed lobes, flowers are white with yellow stamens, a few together on stems below the leaves; fruits are glabrous, globular, about 1 inch in diameter, yellow when mature; seeds are light red-brown, 0.10 inches in diameter.

WEED ECOLOGY

Tropical soda apple is a common weed in South America, India, West Indies, Honduras, and Mexico. It is native to Argentina and central Brazil and has been introduced in Africa, much of India and Nepal, and can be expected to occur in other subtropical areas. It was probably introduced into North America by humans or human activities.

In Florida, TSA has been observed as a common weed in pastures, ditch banks, citrus groves, sugarcane fields, and wet areas of rangeland. Reasons for the increase in TSA are not well understood.

TSA populations have been observed to increase rapidly following extended periods of dry weather (1987-1989; 1999-2001) that are followed by subsequent years of normal rainfall. Research has shown that TSA seed can survive in dry soil moisture conditions for two or more years. When favorable rainfall occurs, the seed will germinate and new TSA plants will appear.

WEED CONTROL

Sparse Infestations

Sparse infestations include pastures, vegetable fields, sod fields, hammocks, ditch banks, and road sides with low infestations where each plant is individually sprayed. Mowing these areas is not necessary; instead, spray TSA in these areas for control and to stop additional development of new fruit and seeds. There are recommended herbicides which will provide 95-100% control using spot applications.

For assistance in plant identification and control methods contact your local University of Florida, IFAS County Extension Agent.

To effectively control TSA, you must permanently stop seed production by controlling all existing plants in pastures, ditch banks, and hammock areas. Otherwise, this plant will continue to spread on your property and lower your profits.

John Atkins is Agriculture/Livestock Agent for Santa Rosa County.

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