ALABAMA COOPERATIVE Extension SYSTEM

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ALABAMA A&M AND AUBURN UNIVERSITIES

Tropical Soda Apple in Alabama

Tropical soda apple *(Solanum viarum)* is a very new weed problem for Alabama landowners. It has been found in several counties in south Alabama. Alabama Department of Agriculture personnel continue to survey the state in an attempt to identify new areas of infestation. Tropical soda apple (TSA) is a plant native to Brazil and Argentina that has become a serious pest in central and south Florida. It was first positively identified in south Florida in 1988 and was estimated to infest more than 150,000 acres in central and south Florida in 1992. Total infested acreage estimates for Florida were 350,000 in 1993 and 750,000 in 1994. Most recent estimates indicate that more than 500,000 acres of improved pastures in peninsular Florida are infested with this weed.

Within the past several years, multiple sites of TSA have been found in Georgia and Mississippi.

Tropical soda apple is a perennial shrub in the Solanaceae plant family. This plant can grow 3 to 6 feet tall and produce a network of underground roots. The stems and leaves are hairy and the leaf margins are divided into broad lobes. The leaves may be up to 8 inches long and up to 6 inches wide. The leaves, stems, flower stalks, and flower bases (calyxes) are covered with white to yellow spines of different lengths (up to ¾ inch long). Tropical soda apple produces white flowers with yellow centers (stamens), and the hairless, round fruit may be ¾ to 1¼ inches in diameter. Flowers and fruit are produced throughout the growing season. Immature fruit resemble tiny watermelons with green and white mottled coloration. Mature fruit are yellow with a leathery skin surrounding a thin layer of pale green pulp. Each fruit may contain 200 to 400 flattened reddish-brown seeds covered by a sticky mucilage. A single plant may produce more than 200 fruit.

In Florida, tropical soda apple is a noxious weed in improved pastures, rangeland, ditch banks, and fallowed areas. Within 2 years, tropical soda apple can reduce the productivity of a pasture. In severe infestations, productivity of pastures may be reduced by more than

Individual tropical soda apple plant.

Yellow-white spines of different lengths on stems and leaves.

Numerous new plants in the cow patty.

Mature and immature fruit.

90 percent. The foliage of this pest plant is unpalatable to livestock. However, livestock, deer, raccoons, and other wildlife eat the mature fruit of this pest and spread the seed in their feces. Scarification of the seeds by the digestive system of these animals promotes the germination of seed in their feces. Once established in a new location, this pest can reproduce by seed or root fragments.

Tropical soda apple is known to be introduced into new areas by three means. Cattle are known to consume the fruit when feeding in contaminated areas in Florida. The seed pass through cows and are excreted in their feces. Movement of such livestock from infested areas to areas in and through Alabama, Georgia, and Mississippi has resulted in new infestation sites. Thus, cow patties are a source of new plants. Second, hay harvested from infested areas with TSA present, when sold and moved to new areas, can spread the fruit and seed of this pest. Livestock feeding on contaminated hay will spread the seeds to uninfested areas. Third, other types of seed (such as bahiagrass, bermudagrass, clover, etc.) harvested from TSA-infested areas can be contaminated with the seed of this pest. Planting contaminated seed in clean areas can create a new TSA-infested area.

Tropical soda apple is not a widespread problem in Alabama at this time. However, landowners should remain alert for evidence of this new pest. Prompt identification of TSA and immediate initiation of management practices will reduce the time and expense involved in control. If you suspect an area has TSA, report it to the Alabama Department of Agriculture (Guy Karr, 334-240-7225). Arrangements

A difficult management problem.

will be made to make a positive identification of the unknown plant. Landowners who have this weed problem should contact their county Extension agent or agrichemical dealer for the latest weed management information. Based on the rate of spread in Florida, tropical soda apple has the potential to be a major weed problem in the years to come.

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Use pesticides **only** according to the directions on the label. Follow all directions, precautions, and restrictions that are listed. Do not use pesticides on plants that are not listed on the label.

The pesticide rates in this publication are recommended **only** if they are registered with the Environmental Protection Agency and the Alabama Department of Agriculture and Industries. If a registration is changed or cancelled, the rate listed here is no longer recommended. Before you apply any pesticide, check with your county Extension agent for the latest information.

Trade names are used **only** to give specific information. The Alabama Cooperative Extension System does not endorse or guarantee any product and does not recommend one product instead of another that might be similar.

For more information, call your county Extension office. Look in your telephone directory under your county's name to find the number.

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