



Shipping Cattle, Not Tropical Soda Apple Seed¹

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Throughout the year, Florida cattlemen ship cows and calves to other states. Unfortunately, when cattle are shipped, other items, such as weed seed (e.g., tropical soda apple) contained in the animals' digestive tracts can also be moved out of the state. Other southern states are discussing how to restrict the movement of Florida cattle infested with tropical soda apple (TSA) seed.

Tropical soda apple is an invasive weed in improved pastures that continues to threaten the Florida cattle industry. Current estimates of TSA presence in Florida from all land uses is over 1.0 million acres, and this invasive weed continues to spread to new pastures and ranches within Florida. Currently, TSA has spread as far north as Pennsylvania and west to Mississippi. Movement of TSA into Georgia and South Carolina is primarily linked to the sale of cows from Florida. In Mississippi, movement of TSA is associated with Florida feeder calves. In general, TSA seed can spread through cattle, wildlife, hay, grass seed, and sod.

How can the movement of TSA seed in Florida cattle to other states be stopped? The solution requires all cattle operators (small and large herd owners) to voluntarily adopt best management practices developed by the University of Florida, Institute of Food and Agricultural Sciences. If every cattle operator adopts these practices we can avoid having our cattle quarantined before they are shipped out of Florida.

What steps can a producer take to stop the spread of TSA? First, when shipping cattle, ship cattle from an area that does not have TSA or is TSA fruit free. Mowing a TSA infested pasture prior to shipping will eliminate the fruit and the consumption of TSA seed by the cattle. The TSA seed can remain viable in the digestive tract for up to six days. When you receive a group of calves or cows on your ranch, hold them in one area for up to six days to avoid the spread of TSA to other areas on your ranch. If you buy TSA-infested hay or grass seed, contact the seller and ask them to stop selling these products and to control the weed on their property.

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The BMPs that were developed include the following components: Prevention, Detection, and Control. These three components, the PDC, are part of a proven integrated weed management program that Florida producers can use to control TSA. Contact your local county Extension livestock agent for complete information on the BMPs. For more information, see EDIS publication SS-AGR-130 *Management Practices to Control Tropical Soda Apple* (<http://edis.ifas.ufl.edu/UW188>) and the West Florida Research and Education Web site at: (<http://tsa.ifas.ufl.edu/>).

With respect to controlling TSA, cattle producers should utilize mowing and/or herbicides to maintain an area free of TSA fruit. Mowing every 60 days will prevent fruit production and result in some (10-30% for each mowing) plant mortality. Mowing TSA to a 3-inch stubble height, or as close to this height as possible, is best. However, multiple mowings can be expensive and will not eliminate TSA from a pasture. Economical (\$3 dollars per acre) control with herbicides is possible if spot applications (spraying individual plants) are utilized. A 0.5% Remedy solution with a 0.1% non-ionic surfactant will result in excellent control. Additionally, Milestone can be applied at 0.5 to 0.8 oz per 2.5 gal (15 to 20 ml per 2.5 gal). Milestone is highly active on TSA will provide excellent control of emerged plants and germinating seedlings. Regardless of which herbicide is used, a color marker should be added to the herbicide solution to help identify sprayed plants.

Florida cattle producers have been proactive when it comes to controlling TSA and reducing the spread of this weed within Florida and into other states. In fact, other states have implemented many of Florida's BMPs for controlling TSA. All Florida cattle producers need to continue their efforts at controlling TSA and thus stop the spread of TSA within our state and throughout the southeastern United States.

Further Information

EDIS publications:

SS-AGR-50 Tropical Soda Apple (*Solanum viarum*, Dunal) in Florida
(<http://edis.ifas.ufl.edu/WG201>)

SS-AGR-77 Tropical Soda Apple: A Noxious Weed in Florida (<http://edis.ifas.ufl.edu/UW097>)

SS-AGR-129 Tropical Soda Apple Control--Sorting Through the Options
(<http://edis.ifas.ufl.edu/AG261>)

SS-AGR-130 Management Practices to Control Tropical Soda Apple
(<http://edis.ifas.ufl.edu/UW188>)

SS-AGR-131 Tropical Soda Apple Making a Comeback (<http://edis.ifas.ufl.edu/UW189>)

ENY-826 Biology of *Gratiana boliviana*, the First Biocontrol Agent Released to Control Tropical Soda Apple in the USA
(<http://edis.ifas.ufl.edu/IN487>)

ENY-824 Classical Biological Control of Tropical Soda Apple in the USA
(<http://edis.ifas.ufl.edu/IN457>)

West Florida Research and Education Center:

Tropical Soda Apple (<http://tsa.ifas.ufl.edu/>)

Tropical Soda Apple Best Management Practices--

North Florida

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<http://tsa.ifas.ufl.edu/00Slides/NorthFlorida/index.html>)

South Florida

(
<http://tsa.ifas.ufl.edu/00Slides/SouthFlorida/index.html>)