Air Potato (Dioscorea bulbifera)

The **air potato** (Dioscorea bulbifera) is a non native, invasive vine found in Florida. A member of the yam family, the air potato is covered with broad, heart-shaped leaves and produces large numbers of aerial tubers, potato-like growths attached to the stems. These grow into new plants. The plant is cultivated in West Africa for the edible tubers. However, the uncultivated form that is invading Florida is not edible, is very bitter, and may be poisonous.

Air potato is believed to have been introduced into Florida as an ornamental plant in about 1905. By the early 1970s it was already recognized as a pest plant throughout the state. Unfortunately, today it is invading our natural areas and destroying native habitat at an alarming rate. Each vine can produce up to two hundred bulbils (potatoes), resulting in exponential growth. One vine can grow 60 to 70 feet in length at the rate of 8 inches a day. Air potato will overrun and strangle everything in its path.

Air potatoes should be removed from public and private properties to help protect the state's natural areas. The plant has been listed by the Florida Exotic Pest Plant Council as one of Florida's most invasive plant species since 1993 and was added to the Florida Noxious Weed List by the Florida Department of Agriculture and Consumer Services in 1999. Plants on the Florida Noxious Weed List may not be introduced, possessed, moved or released without a permit.

How to identify air potato

Air potato stems die back to the ground during a winter dormant period. After dormancy, the underground tubers give rise to stems which quickly grow, often reaching up to 70 feet long by the end of the growing season. The heart-shaped leaves are up to 8 inches long, have long stems (petioles), and are alternate on the stem. Air potato flowers are small, greenish and fragrant, hanging in fairly long clusters. The fruit is a capsule of seeds. Air potato plants produce grayish, aerial tubers that are attached closely to the stems where leaves attach to the stem (axil). Tubers also grow underground, where they may be larger.

Management

Prevention: Prevention is a key step in the management of air potato. Even small bulbils (potatoes) sprout easily to form new plants. Movement of contaminated brush, debris, or soil causes spread, and mowers and brushcutting equipment may also disperse the plant.

Removal: Hand collection and removal of aboveground bulbils and digging up and removing underground tubers helps to eliminate small populations of the plants.

Mechanical: Mechanical methods are limited for air potato, as there is high risk that the native vegetation being climbed/smothered will also be damaged. Burning carries a similar risk. Mowing sometimes leads to the spreading of the bulbils.

Chemical: Chemical control is one of the most effective means of control for air potato, but single applications will generally not provide complete control. The best time to apply herbicide is in the spring and summer when air potato is actively growing – but before the plants begin to form new bulbils. The University of Florida Center for Aquatic and Invasive Plants recommends: "A dilution of triclopyr (Garlon 3A at 1 to 2% solution or Garlon 4 at 0.5 to 2% solution) in water can be an effective control for air potato when applied as a foliar application. Be sure to include a non-ionic surfactant at 0.25% (10 mls or 2 teaspoons per gallon of spray solution). A 2 to 3% solution of glyphosate (Roundup, etc.) can also be effective." Great care must be taken to keep the herbicide away from desirable vegetation. Persistence and integration of control methods is considered to be the key to complete air potato management.

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