

Control Air Potato with the Air Potato Leaf Beetle (*Lilioceris cheni*)

The air potato leaf beetle is being released in Florida through a partnership of the United States Department of Agriculture, the Florida Department of Agriculture and Consumer Services and the University of Florida. Below you will find answers to frequently asked questions about air potato leaf beetles.



Frequently Asked Questions

Where did air potato come from? The native range of air potato includes much of Africa and Asia. Genetic analyses indicate that air potato in Florida came from Asia. It was introduced into Florida in 1905, and has since escaped cultivation and become extremely aggressive.

Why is air potato a problem in Florida? Air potato is a vine which cannot support its own weight, so to capture sunlight, it grows over and smothers other plants. Air potato transforms plant communities by displacing native species, changing community structure and disrupting ecological functions.

Where did the beetles come from? The air potato leaf beetle was first discovered in Nepal and later in China by USDA scientists.

What's the life cycle of the beetles?

The life cycle begins in the egg stage, which lasts about 4 days. Larvae hatch from the eggs, feed on air potato leaves for about 10 days, and then drop to the ground where they pupate. Adults emerge about 2 weeks later, and begin feeding on air potato leaves. The adults can live for as long as 6 months, during which time females may lay as many as 4,000 eggs.



Left: Heavy damage by beetles to air potato vines and Right: air potato leaf beetle larvae.

When should beetles be released? Beetles can be released anytime during the air potato growing season which extends from about April to October. Releases early in the season are best because it gives the beetles time to multiply through several generations before the vines die back in the winter.

Will the beetles eat any plants other than air potato? No, the beetles have been thoroughly tested to make sure they will only eat air potato. They will not even consume winged yam, a closely related exotic vine, or two related native plants, Florida yam and fourleaf yam.

What happens after the beetles have eaten all the air potato vines? The population of beetles will decline as the abundance of air potato declines, because air potato is the only plant on which the beetles can survive. Beetles will not eradicate air potato from Florida, only make it less abundant.

How quickly will the beetles control air potato vines? We don't have sufficient experience to answer this question. However, we do know that the earlier beetles are released in the spring, the longer they will have to multiply and feed before the vines naturally die back in the winter. At several locations, we have observed heavy damage to vines a few months after beetles were released.

Will the beetles move to other locations? Yes, when air potato plants become heavily damaged in an area of release, beetles will disperse naturally to search for nearby air potato infestations.

If I release beetles, can I still use other methods of control, including herbicides, vine pulling, and collection of aerial tubers (air potatoes) to control air potato? Yes, but we recommend that that you set aside an untreated "beetle nursery" where beetles can reproduce and build up their population to a point where they can disperse to nearby air potato infestations.

What happens to the beetles in the winter when air potato vines die? The beetles enter a resting state called 'diapause'. They remain in diapause until spring when air potato vines begin growing. While in diapause, the beetles do not feed or reproduce.

Additional questions? Please check out our Air Potato Biological Control website:

<http://bcrc.ifas.ufl.edu/airpotatobiologicalcontrol.shtml>

Or contact one of the following people:

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