

Plant this, not that

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Read more here: <http://www.miamiherald.com/opinion/op-ed/article4056218.html#storylink=cpy>

Our government cannot stop all invaders at our borders. Sometimes you need to take matters into your own hands.

Plants that come into the United States from abroad can choke our crops, native plants and gardens or cause algae blooms that kill fish.

They can even poison animals. Invasive species threaten our environment, our economy and our health.

The flood of plants and food that come in through ports and airports potentially brings in pests, disease and harmful plants.

An estimated 88 percent of the nation's flower imports and 55 percent of the fruit and vegetable imports that arrive by air come through Miami. Yet less than 2 percent of food-related imports are inspected by the federal government.

Of course, once the microbes, critters and weeds make landfall in Florida, they don't stop at the state border.

Nationally, the cost of damage by invasive species is estimated at more than \$120 billion. Government agencies in Florida spend significant taxpayer dollars on prevention, detection, response, research and habitat restoration.

We're still spending millions of dollars a year on just a single century-old mistake.

The melaleuca tree was brought here from Australia to draw water off swampy areas. But it wiped out native species and degraded freshwater prairies, displaced animals and caused hotter fires because of the oils in its leaves.

If government inspectors don't have the resources to separate invaders from innocuous, or even beneficial, newcomers, what are we as individuals to do?

University of Florida ecologists Luke Flory and Deah Lieurance have devised a tool that offers the know-how to identify the Florida plants that are the real threats.

At assessment.ifas.ufl.edu, you and your neighbors will find guidance on which plants are OK to put in the ground and which ones need to be nipped in the bud.

The website is a most-wanted list of sorts. You can query the database of more than 800 non-native plant species to see if what you've got in your yard or grove — or what you're considering planting — is a threat to native species.

It will issue a "caution" in some cases, "invasive not recommended," in others and "prohibited" for species that pose the greatest ecological threats.

You can even recommend additional non-native species that need to be evaluated.

At the same time, Flory and Lieurance don't want to unleash botanical vigilantes.

Knowing which species are harmless helps avoid the financial cost and environmental impact of applying herbicides to species that don't need to be eradicated.

As scientists, UF researchers aim to inform the public, not create anxiety.

So the researchers have included many non-invasive species to avoid an inference that any plant from somewhere else is harmful.

In fact, about 70 percent of the species are not a problem, and in some cases may even be beneficial. So the database will tell you it's OK to plant Japanese holly, weeping fig, limpoglass, canna lily and bottlebrush.

We've long known the identity and effects of most harmful invasive species separately, but what Flory and Lieurance have done is organize this knowledge.

It's translational science and the land-grant university mission at its best — taking what we've learned in the lab and getting it into the hands of everyday people.

Federal and state support of Flory and Lieurance's year-long project made possible what we hope will be a widely used tool to stop the advance of invasive species.

The stakes are high. Florida agriculture has an annual economic impact of \$142 billion. Tourists from all over the world flock to our forests, rivers, swamps and seashores.

Our researchers know they have to be more than good methodologists who write articles for professional journals. They need to make their knowledge accessible.

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