



United States Department of Agriculture, Forest Service

Pacific Southwest Research Station

Institute of Pacific Islands Forestry

DON'T PLANT A PEST

ASSESSING THE RISK OF EXOTIC PLANTS

A Useful Tool for Selecting Non-invasive Plants for Hawai'i's Gardens and Landscapes

What's the Fuss?

Hawai'i is a special place. Many of Hawai'i's plants and animals are found nowhere else in the world and this legacy is worth protecting. However, Hawai'i's ecosystems are threatened by invasive exotic plants, many of which are escapes from gardens and landscaping. They suppress native species, change soil nutrient supply, increase the frequency of damaging fires, and change the structure of our native wildlands. They are expensive to control and seldom are there adequate resources for their eradication or management. Homeowners, businesses, and government agencies can unwittingly spread weeds by choosing the wrong plants to beautify Hawai'i. The good news is that Hawai'i's nurseries offer hundreds of species of native and exotic plants that are not likely to turn into garden pests. Your wise choices of plants to use in your landscaping and garden can protect Hawaii's wildlands from invasive weeds.

How can I recognize a garden pest?

Pest plants and garden gems can have many similar characteristics. Plant pests often spread quickly and aggressively or produce abundant seedlings. One of the best indications of likely invasiveness is how the species has behaved where it has been introduced elsewhere. Other key characteristics are good environmental matches with local conditions and reproductive traits that result in aggressive spread. The Hawai'i-Pacific Weed Risk Assessment provides information on these traits and others to give you an indication of the likely invasiveness of plants in the nursery trade in Hawai'i and the Pacific.

What is the Hawai'i-Pacific Weed Risk Assessment?

The HPWRA is an adaptation of a weed risk assessment system developed in Australia and New Zealand. It has been adapted for use in the tropical Pacific by researchers at the Institute of Pacific Islands Forestry and the University of Hawai'i at Manoa with support from Hawai'i Division of Forestry and Wildlife and the USDA FS International Program. The assessment considers information on species invasiveness in other places where it has been introduced together with other characteristics such as climate and habitat suitability in Hawai'i, reproduction and spread rate, difficulty of control, and presence of thorns or poisons. This information is combined to identify species likely to cause major ecological or economic impacts in Hawai'i. Carefully documented information is collected from the scientific literature and from other reliable sources. To date, more than 500 species have been screened through this system. New species are being added continually and information on screened species is updated periodically.

How do I use the Hawai'i-Pacific Weed Risk Assessment?

Information on the predicted pest status of many plants in the nursery trade is available on the web at:

www.botany.hawaii.edu/faculty/daehler/wra



Miconia in full flower

Here you can find a list of all species evaluated or you can search for a plant by its common or scientific names. Each species is given one of three general HPWRA designations based on their potential to have major impacts in Hawai`i or the tropical Pacific:

- L** = Low Risk — those species predicted to pose little risk
- H** = High Risk — those species predicted pose a significant risk
- E** = Evaluate — risk is unclear with available information

In addition, the web site provides further information on those species for which we have documented evidence of their impacts on Hawai`i's natural areas and agriculture. These are designated as follows:

- L (Hawai`i)** low or no documented impact on Hawaiian natural areas and agriculture
- H (Hawai`i)** confirmed and documented impact on Hawaiian natural areas or agriculture

These species designations provide the most reliable assessment available of the risks garden plants pose to Hawai`i's natural areas and agriculture.

Here are some examples of garden pests and garden gems with their HPWRA designations:

Plant Pest	HPWRA rating	Garden Gem	HPWRA rating	Plant Type
Chinese albizia	H	Golden shower trees	L	Landscape tree
Strawberry guava	H(Hawai`i)	Soursop	L	Fruit tree
California fan palm	H	Florida royal palm	L	Large palm
Bronze-leaved Clerodendrum	H	Star jasmine	L	Shrub
Japanese honeysuckle	H	Climbing ylang-ylang	L	Climber, vine

Risky Business

Selecting species with an 'L' or L(Hawai`i) designation decreases the risk of spreading weeds into Hawai`i's natural areas. Conversely, using 'H' or H(Hawai`i) species can be risky business. The HPWRA does not provide a cost-benefit analysis of a species to Hawai`i; some species will have economic, medicinal or cultural values. Rather the HPWRA assesses the likelihood that a given species will spread aggressively beyond the garden with severe consequences for natural communities. If you want to reduce the risk of spreading invasive species, the HPWRA designations will help you make decisions. If you want to know more about the weedy characteristics of a species, supporting information is available at the website. You may also contribute information on species under review through a form available on the website.

Prevent the spread of invasive exotic plants

- Use good judgement and good information when you decide what to plant.
- If you live near natural areas, plant species that won't spread into wildlands.
- Burn, chip or compost your yard waste on site or take it to a county greenwaste facility.
- Don't dispose of yard waste on roadsides or near natural areas.

Further Information

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Other websites

- State of Hawai`i noxious weed list: www.hawaiiag.org/hdoa/adminrules/AR-68.pdf
- Hawaiian Island Ecosystems at Risk: www.hear.org/pier/
- Institute of Pacific Islands Forestry: www.fs.fed.us/psw/programs/ipif

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