

Glorious Gardenias Market Opens for Hawaii's Growers

There's nothing quite like the sweet, exotic scent of a creamy-white gardenia. Its been said that the rich fragrance of a single blossom can perfume an entire room. Perhaps best known as a corsage flower for a prom, wedding, or other special occasion, a gardenia also makes a great gift as a potted plant. With plentiful buds and dark, glossy leaves, the potted plant is an attractive addition to a deck, patio, or garden in any climate where it can thrive—including much of the southern United States.

If you live on the U.S. mainland, you may soon be able to buy a potted gardenia or gardenia corsage shipped fresh from lush, tropical plant nurseries of the Hawaiian Islands. Several years ago, federal and state agencies lifted a 50-year-old ban, newly allowing Hawaii's nurseries to ship potted gardenias or cut blooms to the U.S. mainland. Nurseries can do that if agricultural inspectors determine that their plants are free of a tiny pest called the coffee green scale.

This soft-bodied, six-legged critter, *Coccus viridis*, feeds on gardenia, citrus, and a host of other plants—including its namesake, coffee. Adult scales are greenish-yellow ovals, about one-tenth-inch in size.

The change in regulations resulted in part from studies by Robert G. Hollingsworth of the ARS U.S. Pacific Basin Agricultural Research Center at Hilo, Hawaii, and by Arnold H. Hara of the University of Hawaii.

For several years, Hollingsworth scrutinized coffee green scale populations in a commercial, 2-acre gardenia plot on Hawaii Island. Biologist Hollingsworth was particularly interested in determining whether very young scales, called crawlers, were being blown into the gardenia field by winds coming off the Pacific Ocean.

"This was a popular but unproven notion about how plants were getting infested," he says.

Hollingsworth showed that windborne crawlers weren't the main problem. "Scale outbreaks always occurred on the same plants. This indicated that scale problems resulted from incomplete control using pesticides, not from new infestations."

If windborne crawlers had been the cause, the infestations would likely have been more random.

Growers already know that careful use of chemicals to control another insect—the ant—is actually the key to long-term control of scales. Ants of various species are scales' foremost friends. They guard scales by warding off their natural enemies—parasites and predators—and by carrying scales to uninfested plants. Ants benefit, too, because they feed on the sugary honeydew that scales secrete.

But once their plantings are free of ants and scales, Hawaii's growers can try out this new opportunity to market their tropical gardenias to stateside customers. For the thousands of people who've vacationed happily in Hawaii, the fragrance of lush gardenias from island nurseries might bring back blissful memories of those days in paradise.—By **Marcia Wood**, ARS.

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Gardenia plant in bloom.