GAINESVILLE — Stronger winds and saltier water mean fewer plants grow along Florida's Atlantic coast than along the Gulf coast.

"You can grow a lot of plants on the west coast that you can't grow on the east coast," says Sylvester Rose, an ornamental horticulturist with the Institute of Food and Agricultural Sciences (IFAS). "The salt water and strong winds are not as bad along the west coast, so the plants are less vulnerable," he said.

"You drive along the eastern coast and you find it's almost like a desert. You see the same plant over and over," Rose said. "I was interested in getting a variety of plants that could grow here."

Rose began testing plants in 1967. He uses Patrick Air Force Base and other coastal areas to test plants, trees and flowers native to Florida as well as some from around the country. Over 250 plants have been tested so far in this continuing effort to increase the number of plants available for beachfront planting. Using different locations, Rose tries to determine the amount of exposure each plant can stand.

Salt water, salt spray and the high winds damage trees and plants, causing the leaves to look burned and the plants to defoliate if they are not salt tolerant, Rose said. Plants are observed for two years before he makes any recommendations.

Some of the plants and trees that can live along the east coast beaches are: Spanish bayonet (a yucca plant), Indian Hawthorne, Morea (an iris), the sea grape and the native palmetto.

Rose is presently testing perennials and annuals. "Certain ones, like the rose family, are quite salt tolerant," Rose said. "The cabbage family is also salt tolerant and cold hardy." So far, the blanket flower, dusty Miller, lisianthus, stock, flowering kale, calendula and stroblanthes have done well along the beach.