Okinawan spinach, Gynura, Hung-tsoi, Red vegetable
Gynura crepioides

Okinawan spinach is a fast-growing, small ornamental shrub that produces large amounts of nutritious leaves for years.

It requires little maintenance and is particularly valuable because it grows well under a variety of tropical conditions, including atolls.

Characteristics

Okinawan spinach belongs to the plant family Compositae. This family includes the plants that are most commonly used in salads.

Okinawan spinach is a low, spreading shrub that forms a solid stand, reaching 3 ft (1 m) in height. Its narrow leaves are dark green on the surface and purple underneath. It has numerous small, orange, composite flowers, but viable seed is rarely produced.

Environmental Requirements

Okinawan spinach is native to Indonesia. It is well adapted to the hot and humid tropics, but will grow under much drier conditions than other perennial vegetables from the humid regions. Cultivation is possible outside of the hot tropics, but the rate of growth will decrease as the average temperature decreases.

Okinawan spinach grows under a variety of soil conditions, from heavy clays to sandy soils. It is tolerant of the alkaline and calcareous soils often found on atolls. Full sun or partial shade is best for good growth, while heavy shade will inhibit growth.

Uses and Preparation

The tender leaf shoots and young leaves are the main product from this perennial vegetable. In the markets of Taiwan, the shoots are sold tied in a bundle. Okinawan spinach can also be used to give a red coloring to other foods, such as rice.

The young, raw leaves and shoots have a flavor that most people find agreeable. However, the flavor of okinawan spinach is strong and it is generally mixed with other types of green leaves.

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The young leaves and shoots can be eaten raw in salads, after being washed in clean water. It is often mixed with other greens. When cooked as a green vegetable by itself, it is somewhat slimy. It is best to cook it with other leafy greens. The shoots and leaves can be added to soups, stews and stir-fry dishes.

Nutritional Value

Everyone in the family should eat some green leaves everyday. Children, pregnant women and nursing mothers especially need the protein, vitamins and minerals found in green leaves. For many children, green leaves are the sole source of vitamin A, an essential vitamin in preventing blindness.

Green leaves also contain phytochemicals, thousands of chemical tongue twisters like sulforaphane, genistein and indole-3-carbinol, that are the new frontier in cancer-prevention research. Serving a variety of green leaves will keep the whole family healthy.

Propagation

Okinawan spinach is propagated by cutting. To prepare cuttings, take a 10 inch (25 cm) length section of the tip or midsection of the stem. Remove all leaves and plant slanting or vertically with 1 or 2 nodes exposed.

Cuttings can be planted in nursery containers or directly in the ground, and must be kept moist. Container grown cuttings will be ready for planting within 4 to 8 weeks.

Good results have been obtained from direct planting where rainfall is adequate or irrigation is used. Cuttings can be spaced close together, 12 inches (30 cm) apart, to establish a solid stand in a short time. It is important to keep the cuttings weeded until they have grown together, which takes 4 to 8 weeks.

Establishment

Transplanting is best done at the beginning of the rainy season to ensure high survival and good growth. A thorough watering is important before planting.

Containers should be carefully lifted and spiraled roots should be cut so that all roots are growing downward. The planting hole must be deep enough to allow the roots to hang down vertically.

Plants can be spaced 20-40 inches (0.5 to 1.0 m) apart, or even closer if desired. Adding compost or green manure in the planting hole will provide nutrients for good establishment. Soil should be firmly packed around the plant after planting. Mulch placed around the transplant will reduce soil moisture loss and help to control weeds.

Management

Okinawan spinach is probably one of the easiest vegetables to grow. Once it is established, it is virtually weed free and doesn't require much fertilization. It will grow on atolls, but growth will be slow without green manure. Green manure from woody legumes is a good source of nutrients.

Okinawan spinach is harvested weekly to stimulate growth. In Hawaii, a 160 ft (14 m) raised bed of organically-grown okinawan spinach can produce 5-8 lbs per week, continuously.

It will outgrow its boundaries very rapidly, when not harvested on a regular basis. It can be trimmed monthly to promote new, tender growth for consumption. The abundant trimmings can be used as a garden mulch or around trees.

Planting Systems

A few plants scattered around the home will provide beauty and enough nutritious leaves and shoots for the entire family. It can be grown along
walkways to suppress weeds and on steep areas to control soil erosion.

Okinawan spinach can be planted around the drip line of fruit and nut trees to provide a living ground cover. It will prevent weed growth near the tree, control soil erosion, create a suitable habitat for beneficial organisms, conserve soil moisture, and add organic matter through the decay of older leaves.

Pests and Diseases

In Hawaii, okinawan spinach is susceptible to mites, grasshoppers and occasional caterpillars. Mite damage causes leaves to curl and twist, reducing growth. Mites can be controlled with pyrethrum/rotonone products or by removing infected areas manually. Grasshoppers will eat holes in the leaves.

Sources of Planting Material

Tropical Rural and Island/Atoll Development Experimental Station (TRIADES)
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