 Expansion of Ethnic Vegetable Production in Florida

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There are currently over 40 ethnic vegetable crops including 4 root, 10 leafy, 2 flower, and 26 fruiting vegetables being grown in the state of Florida. Most of them are originally from Asia and are known as Asian vegetables. They may appear unusual when first encountered, but can diversify Florida’s vegetable production systems and provide foods with health and medicinal properties. The rapidly growing interest in Asian vegetables is partial because Florida’s Asian population increased by nearly 50% between 2005 and 2015, solidifying it as the fastest growing ethnic group in the state. The purposes of this paper are to provide an overview of various novel Asian vegetable crops gaining popularity among Florida growers and to describe production of vegetable amaranth as a summer crop.

Growing ethnic vegetables is attractive to Florida farmers for a variety of reasons. Florida’s climate provides ideal growing conditions for many Asian vegetables, in some cases reducing the amount of applied fertilizer necessary and extending the growing season into the typically unproductive late summer months. Ethnic vegetables also provide new income opportunities for producers and are often more profitable than traditional vegetables. However, farmers may be disinclined from including ethnic vegetables in their crop calendars due to lack of growing information available. The cultivation guide for one such crop, which is published in the University of Florida IFAS Electronic Data Information Source (EDIS), is vegetable amaranth. Vegetable amaranth (Amaranthus tricolor L.) is a visually attractive and nutritious vegetable that is typically grown as a leafy green.

Amaranth can be categorized into four groups based on use: vegetable, grain, ornamental, and weed. Vegetable amaranth is native to tropical Asia and includes 17 species that are cosmopolitan. It is popular in parts of the Caribbean where it is known as callaloo. Seeds will germinate about one week after planting within the optimal temperature of 70 °F to 75 °F. As a warm season annual native to the tropics, amaranth prefers full sun. Leafy amaranth grows best when temperatures are between 70 °F and 85 °F, but can tolerate temperatures from 50 to 110 °F, making it particularly well-suited for Florida’s summers. Amaranth grows best with a soil pH range of 5.5–7.0 (the soil pH range of the Hastings, FL potato growing region). Fertilizer recommendations for vegetable amaranth are currently not standardized, but IFAS suggests fertilizer recommendations for leaf lettuce as a close approximation. Vegetable amaranth requires 150 lb/A of N, and 100 lb/A of both P₂O₅ and K₂O at low to medium M-3 soil indexes. It is susceptible to damage from stem- and leaf-chewing insects, as well as several common fungal diseases such as fusarium wilt and white rust. Using proper spacing is an effective deterrent of these diseases, and insect pests can be removed by hand for production in small gardens or spraying appropriate pesticide and/or broadcasting traditional wood ash for commercial production. Vegetable amaranth is ready for harvest approximately 30 days after planting and can be harvested by pulling from the soil for a once over harvest. For successive harvests, growers can remove some leaves for the first harvest, allow plants to regrow, and harvest again in two weeks later. The foliage wilts rapidly, so a short postharvest cooling of the leaves at 40 to 50 °F and 75% relative humidity is recommended. Vegetable amaranth’s high yields and adaptability to hot climates increases its appeal to Florida farmers seeking to expand their production into the late summer months.

Vegetable amaranth is rich in mineral nutrients and vitamins, contributing to its popularity with Western consumers. In the future, distribution of cooking and preparation instructions for Asian vegetables to grocery stores, markets, and buyers will increase awareness—and thus desirability—of the wide variety of Asian vegetable crops that can be grown in Florida. More information is available to growers who are interested in cultivating Asian vegetables online at at <https://edis.ifas.ufl.edu/publication/CV301> and <https://edis.ifas.ufl.edu/publication/HS1407>.

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