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## **Title**

Evaluation of Seed Sources and Cultural Practices of Maxixe (Cucumis anguria L.) for Production in Massachusetts

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## Abstract

Maxixe (*Cucumis anguria* L.), also known as Burr gherkin and West Indian gherkin, was brought to Brazil from Africa during the slave trade. This crop was grown extensively in New England in the 18th and 19th centuries. There has been a tremendous increase of immigrants to the United States in recent years, and this has provided an opportunity for farmers to produce crops desired by these new and expanding markets. In order to benefit local farmers, two field experiments were implemented in 2009 and 2010 to address the effect of plant population, the use of a trellis and evaluate different seed sources of maxixe to assist producers interested in growing this crop in the Northeastern United States. The Trellis/Spacing trial was set up as a randomized–complete-block-split-plot design with five replications of ‘Trellis’ versus ‘No Trellis’ and within each trellis treatment there were five spacing between plants in the row: 15, 30, 45, 60, and 75 cm. The Seed Source trial was set up as a randomized complete block design with five replications and five sources of maxixe from five different seed companies: ‘Isla’, ‘Feltrin’, ‘Topseed’, ‘HF’, ‘Seed Savers Exchange’, and ‘Baker Creek Heirloom Seeds’. The five seed sources of maxixe are commercially viable for production in Massachusetts. The best plant spacing for marketable yield and marketable number of fruits was ‘15 cm’ in 2009; however, in 2010, the plant spacing that had the best marketable yield and the greater marketable number of fruits was ‘60 cm’ and ‘30 cm’, respectively. The use of trellis support indicated that the net returns on the ‘Trellis’ are higher than ‘No trellis’. However it is critical to understand the market preferences, such as size of the fruits and spines. This work speaks to the opportunities to supply the Brazilian markets and introduce this crop to non-Brazilian markets.

## First Advisor

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