

**Project #9021 NUTRITIONAL & HEALTH BENEFITS
Past, Present & Future**

BRIEF

DESCRIPTION

Given the limited growing season in southwestern Ontario, tomato and pepper transplants which establish and begin to grow quickly soon after transplanting are desired. Managing transplant height in the greenhouse can at times be challenging, and techniques to help manage plant height would be useful.

Triazoles are a group of agricultural chemicals which were initially developed as fungicides but were also found to regulate plant growth. Previous work using the triazole Sumagci on processing tomato transplants involved treating the plants with a 5 ppm soil drench at the 2 leaf stage, and subsequently fertilizing heavily (up to 5 times the normal rate) to achieve the desired plant height. This treatment controlled plant growth in the greenhouse, and resulted in increased vigour in the field (measured as plant dry and fresh weight), advanced plant development (earlier bloom), and advanced fruit maturity. Uniconazole is presently registered as a growth regulator on bedding plants in the greenhouse in Ontario, and there is an application (IR4) by US growers to have it registered for height control on fresh market tomato and pepper transplants in the greenhouse

PROJECT

OBJECTIVE

Determine optimum rates, timings of application, and subsequent fertilizer regimes for producing high quality tomato and pepper transplants using the regulator Sumagic.

Establish field trials using products and rates which were effective at managing transplant growth in the greenhouse, in order to document effects on plant establishment, growth, development and yield.

Generate data to accompany processing tomato transplant production data using growth regulators for a minor use submission to PMRA