

## Parthenocarpic Crops for High Tunnels

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Parthenocarpy is development of a fruit without pollination. Parthenocarpy could be a genetic trait or induced by environmental conditions such as low light and cool temperatures. Many greenhouse cucumber varieties and some summer squash can set parthenocarpic fruit. Parthenocarpy may be of particular interest to high tunnel producers since early-season cucumber and squash production is often limited by bee activity within the high tunnel. Cucurbit pollen is very heavy and sticky and is only carried by pollinating insects. Moreover, cucurbits are monoecious, meaning there are separate male and female flowers on the same plant (Figure 1). Cucurbit flowers may be open for only 6 hours and pollen viability rapidly declines.



**Figure 1.** Squash has separate male and female flowers. Bees are necessary to cross-pollinate most varieties of squash. Parthenocarpic varieties of cucumbers and squash do not require cross pollination for fruit set and are well-suited to high tunnel production.

**Table 1.** Cultivars of parthenocarpic cucumbers and summer squash.

Cultivar	Vegetable
Camaro	Cucumber
Corona	Cucumber
Sultan	Cucumber (Beit alpha)
Diva	Cucumber
Rocky	Cucumber (Beit alpha)
Socrates	Cucumber (Beit alpha)
Tyria	Cucumber
Tasty Jade	Cucumber
Timor	Cucumber (Beit alpha)
Cavili	Zucchini
Defender	Zucchini
Dundoo	Zucchini
Parthenon	Zucchini
Venus	Zucchini

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