

**2015 ACORN Conference & Trade Show
Delta Prince Edward Hotel, Charlottetown, PE**

Workshop Title: Best Practices for Protected Culture: Eggplant and Cucumber Production

Speaker & their title: Andrew Mefferd, Johnny's Selected Seeds / Growing For Market

Executive Summary

Growing in protected culture can lengthen the season and increase production for eggplant and cucumbers, especially in colder areas such as Atlantic Canada. This presentation describes best practices for protected production of both crops, including heated and unheated production.

Detailed Notes

Andrew felt that small growers might be interested in expanding their production of cucumbers and especially eggplants because there is plenty of room in the market. He provided details on the management of both crops.

Climate:

Eggplants should be started about 28 degrees Celsius with the temperature kept as consistent as possible. Cucumbers like it a little hotter - 17 to 30 degrees. Plants will shut down if temperature slips below 17. Monitor night temperatures carefully to avoid transplanting outside too soon for both crops. Cucumbers are more forgiving of high temperatures. As long as one keeps cucumbers watered they will tolerate high temperatures. Optimum growing temperatures are 21 for cucumbers and 19 for eggplants.

Extreme high temperatures can be tolerated if night temperatures are cool.

Varieties:

Choices here are very important for protected culture. Far fewer varieties are available for eggplants. It is just a smaller market. One is selecting for vigour and heat tolerance.

For cucumbers seek varieties that don't require pollination to set fruit. The other trait to seek is only varieties that are female plants. The female plants will have a much higher yield. Male flowers will not produce a cucumber.

Fertility:

It is ideal to break up the fertility over the growing season. Avoid front end loading of fertility. Plan to side dress or use another way to add fertilizer to the plant half way through the season.

Spacing:

Use double rows to achieve higher density in the greenhouse for both crops. Example- five double rows in a 10-meter wide house. The pattern will be two plants 60cm apart with one-meter pathways.

For cucumbers remove suckers except near the top where you let a couple of laterals/suckers grow so that they can grow along the top supports. This will provide an umbrella style canopy.

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One can then pinch off the laterals and the pruning is complete. Grow the cucumber vine as one stem.

For eggplants plant three plants per square meter if you are growing single heads. Eggplants can support two growing heads so plant one and a half plants per meter if this is your choice and prune to two heads per plant.

Pollination

Again seek female plants for cucumbers. Eggplants don't require pollination.

Trellising

Use strings and twist the plant around the string or use a clip of some sort. Always twist the plant in the same direction.

Pruning

Each plant requires a different approach. With cucumbers one takes off each sucker and each tendril at each node. One only wants one fruit per node. Otherwise fruits will not mature in most cases. Many greenhouse varieties will only produce one blossom per node.

There is a pruning cut that is unique to eggplants. Eggplant suckers start to flower right from the sucker point unlike tomatoes. As the sucker grows out cut the sucker just above the sucker. This will increase yield. Leave these sucker fruits.

Watering

Break watering up into multiple watering's per day. Avoid one larger watering and watering at night.

Harvest and storage

High humidity is required for both plants. Both loose moisture through their skins

Pests and Diseases

For cucumbers the cucumber beetle is the biggest pest. The best solution is to screen the greenhouse or hoop house. Otherwise use Beneficial's to handle other pests.

Q. Quick run down on varieties

A. I like the ones Johnny's is selling because I picked them.

Q. What size should the wire be?

A. Most people use 12-gauge wire for horizontal lines with twine dropping down.

Q. How to deal with botrytis.

A. Cut the botrytis out. Keep the temperature up and the humidity down. Botrytis forms with temperatures under 65 degrees and high humidity.