

Iowa High Tunnel Vegetable Production

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Unlike greenhouse = No heat , No ventilation (fans), only a single layer of plastic

Note
solid
north
wall



Roll up sides (better = roll down)

Problems Noticed:

- Soil compaction
- Poor ventilation
- Irrigation management
- Wasted fertilizer
- Insects
- Diseases



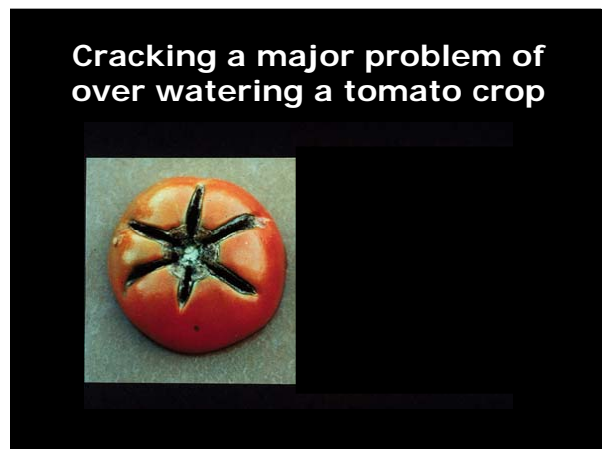
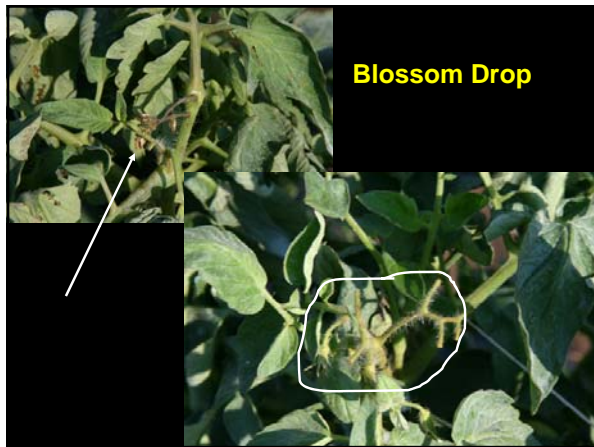
Note
slope of
ground
for
runoff

High winds August 2007
destroyed cover, only sides left



Windbreak
necessary

Tile Line - to improve drainage



Irrigation Problem

- Need – when to turn on the system and how long to run it?
- Evapotranspiration in high tunnel does not correlate to field work
- Growers have been experiencing high disease incidence – soil has been maintained at too high a moisture

Blossom End Rot

Result of infrequent watering



Tensiometers work well with trickle

Tensiometers set at two depths



Pest Problems Observed

Insects

- Tomato hornworm
- Thrips & aphids
- Whitefly

Diseases

- White mold
- Bacterial canker
- Botrytis



Tomato Hornworm



Cutworm Damage

minor





For More Information:

- Go ISU commercial vegetables website:
www.public.iastate.edu/~taber/Extension/index.htm
- Obtain a copy of the Midwest Vegetable Production Guide for Commercial Growers

Or, go online at:

www.entm.purdue.edu/entomology/ext/targets/ID/index.htm

- Go to Great Plains High Tunnel website – access from the ISU commercial vegetables page