A Tour of Irrigation Systems on Vermont Vegetable Farms

a diversity of irrigation systems

- field, greenhouse, or high tunnel
- whole field, beds, or containers
- annual or perennial crops
- overhead or drip
- manual or automatic controls
- pond, river, spring, stream, well, or town water

solid-set pipe and sprinklers

mobile, lots of water, fast; coverage?

sprinklers get stuck sometimes

pipe leaks can promote Phytopthora

hose reel, or traveling sprinkler ‘gun’

traveling wheeled sprinklers

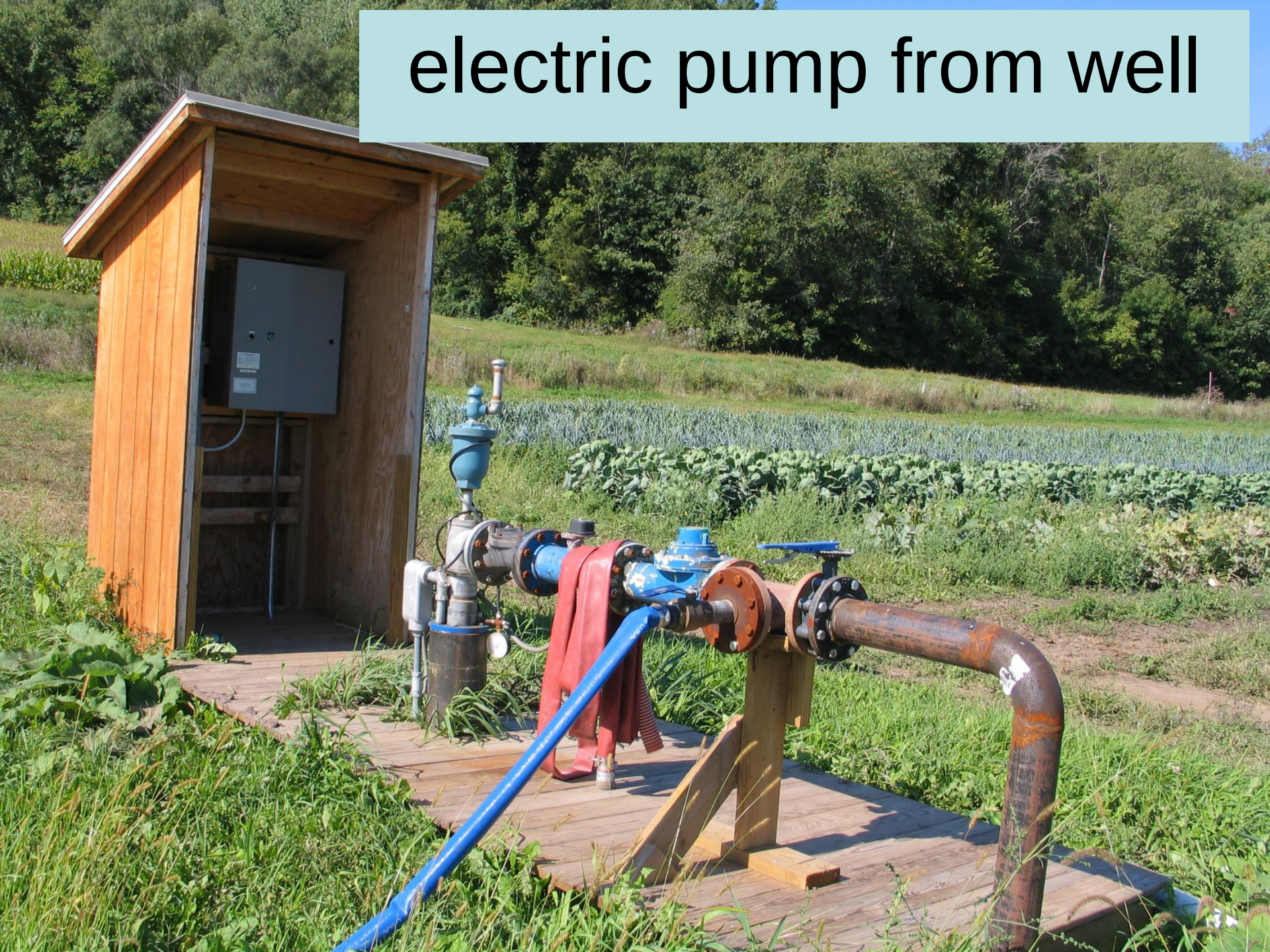
drip: less water use, put where needed

drip valves and filter

annual tape use=more plastic waste

gas pump to drip system

gas pump to solid set out of river


electric pump from well

spring water storage for drip

quick release fitting to riser
from buried water supply line

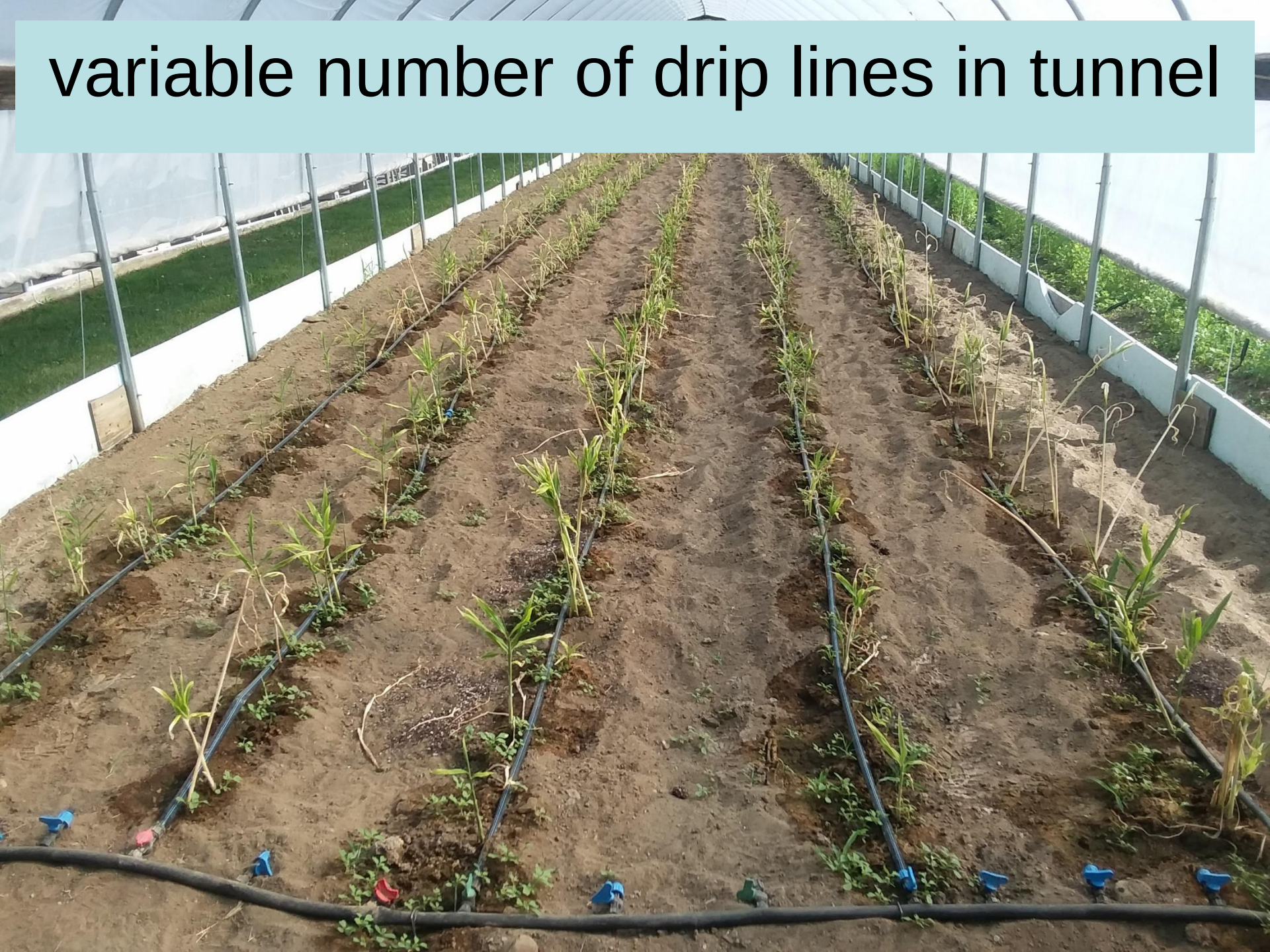
‘spaghetti’ drip to container crop

hand watering a greenhouse

hose and wand hangers

drip lines in high tunnel beds

variable number of drip lines in tunnel



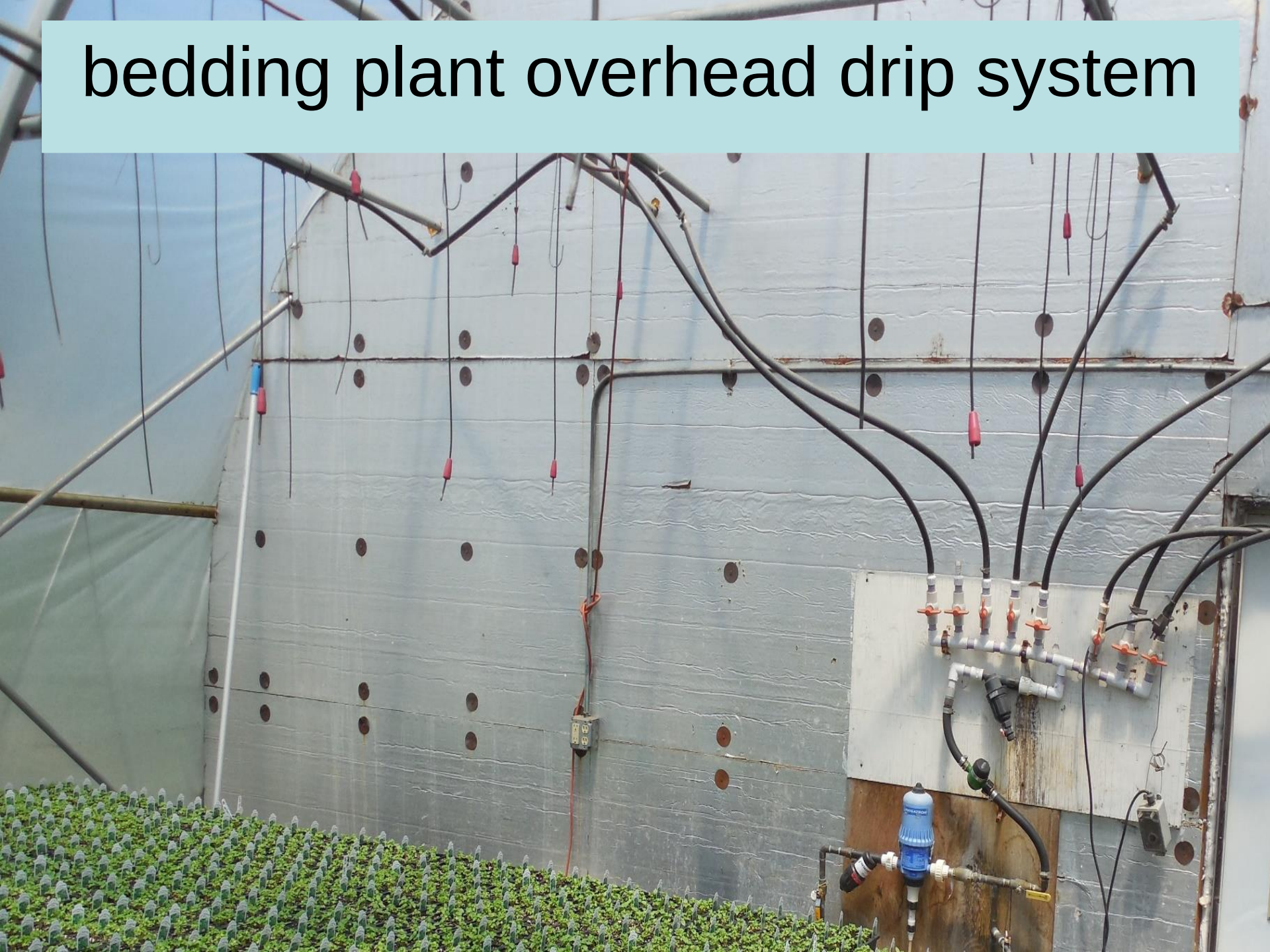
drip plus sprinklers in tunnel

greenhouse controls and manifold

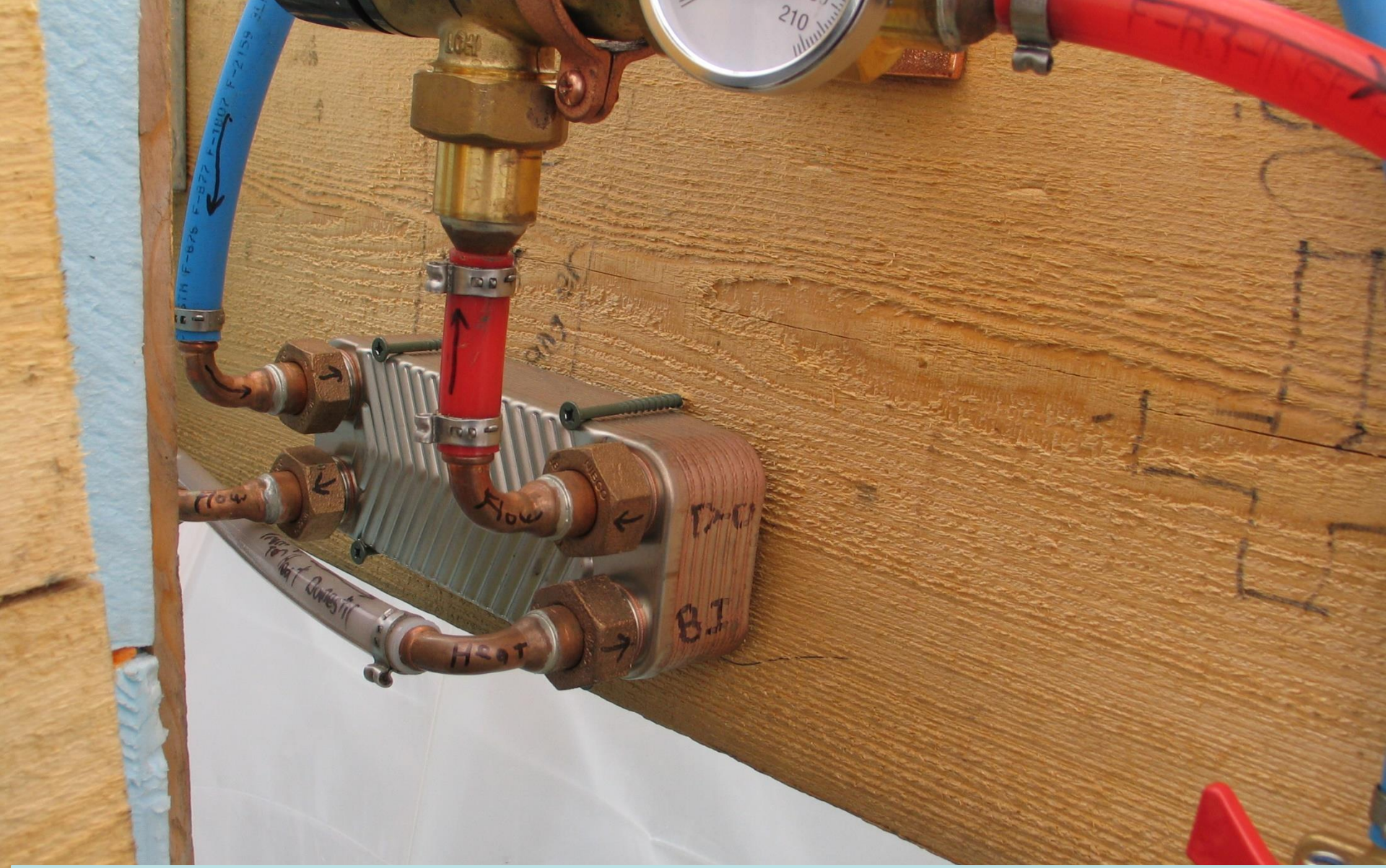
drip “chemigation”

drip fertigation

bedding plant overhead drip system



bedding plant overhead sprinklers



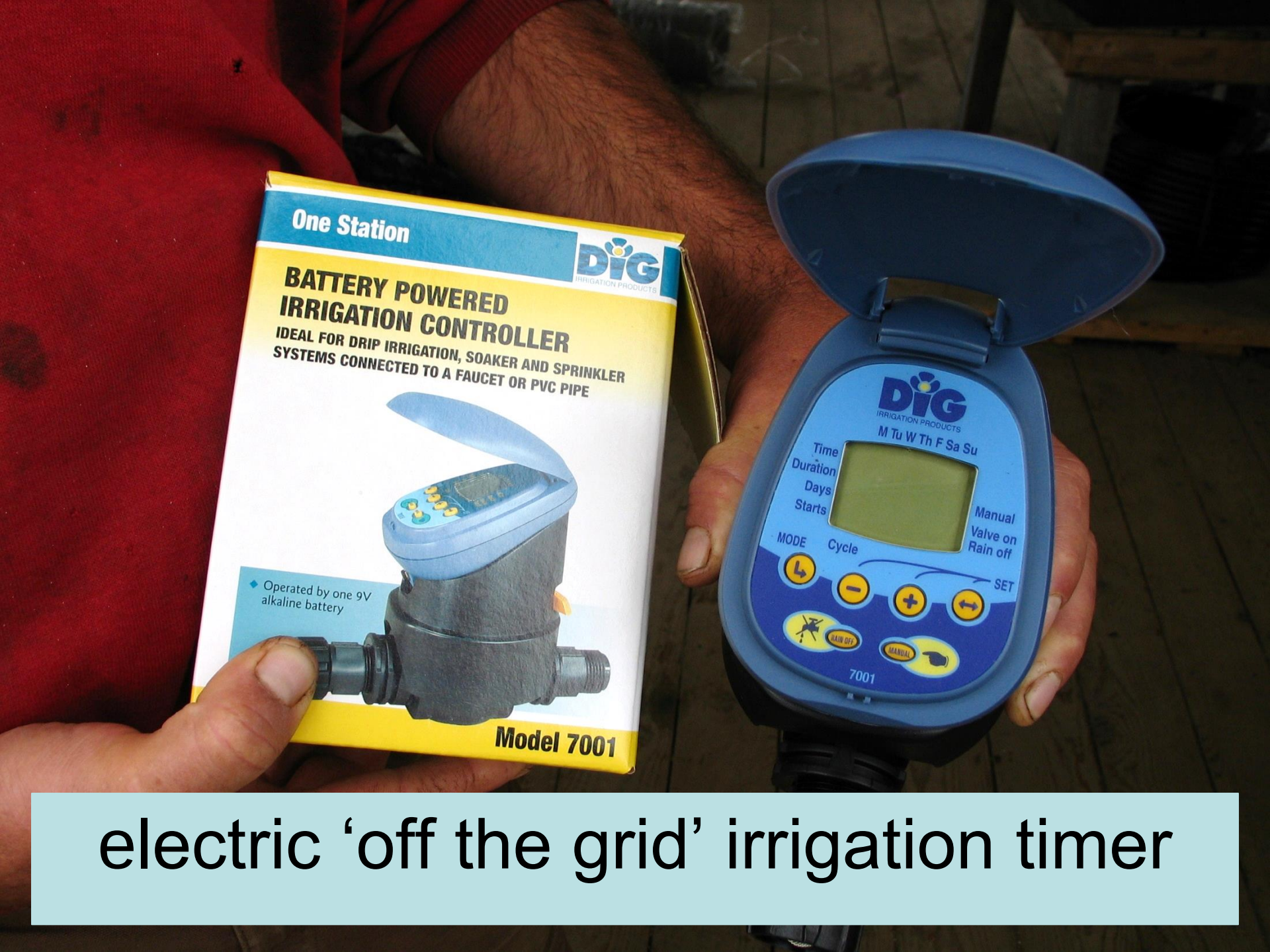
heat exchanger to warm tunnel water

heater to warm tunnel water reservoir

programmable irrigation timer

most growers guess how much water to apply

mechanical tunnel irrigation timer



electric ‘off the grid’ irrigation timer

greenhouse drip controller

multiple drip lines are needed to wet entire root zone

plastic mulch plus drip allows crop roots to proliferate near moist, warm surface

Moisture sensors: the next frontier in irrigation management for most vegetable growers

There is a lot of grower interest in improving irrigation!