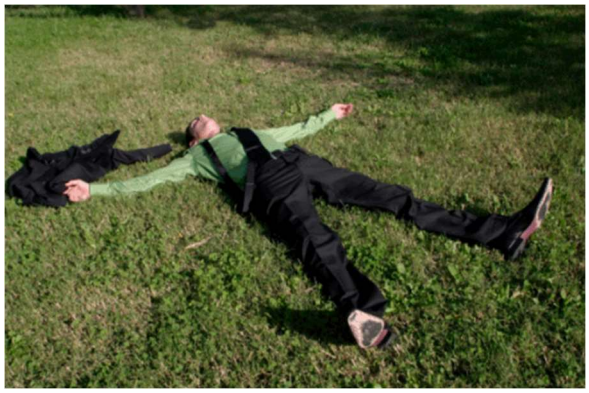
Trellis Gardening, a.k.a. “The Lazy Man’s Community Garden”

A plan for an "Automated Community Garden System"

OVERVIEW

Many organizations plan community gardens in the late winter / early spring and are very ‘gung-ho’ on their potential.



Things go great for the first few weeks until planting is complete and success seems to pop out of every container, every square inch of the garden. But then it gets to be summer, and activities become many and time becomes scarce. Volunteers get scarce as the summer heat and humidity becomes unbearable and it simply becomes too hot for people to work comfortably outdoors, particularly in the South. As volunteers drop out of the project due to health reasons or simple exhaustion, it typically falls upon one or two individuals to water the

garden, maintain the plants, and even harvest the food. These brave souls have to get up super-early (before the high heat sets in) and go down to the site and spend a couple of hours watering.

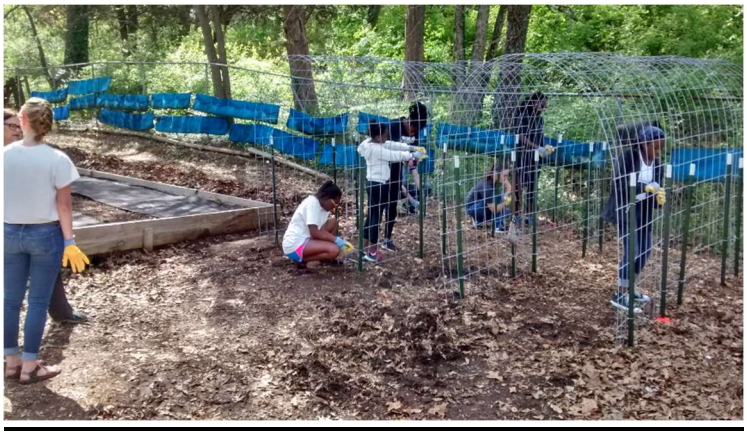
Then, very likely, that same person has to go back in the evening and spend a couple MORE hours watering. Eventually, he or she gets fed up and wants to strangle the other volunteer gardeners who DIDN'T make the effort, and DIDN'T have to suffer by spending so much time at the site. Tempers flare / accusations are made, and what started out as a "fun" project becomes a "nightmare" project where friends are no longer friends.

It's the sad reality that unless one or more people maintain a dogged loyalty to the plants, the output of the garden fails, and the intended benefactors do not receive the quantity of food that was intended for them. This is further exacerbated by the original volunteers "coming out of the woodwork" at harvest time wanting their share of the crops, based on their early contributions to the garden. It's a problem that has no solution... or DOES it?

Introducing the Hydroponic Trellis Garden, a true self-watering garden.

The concept of a self-watering garden is not new. BUT, what if it could be done "on the cheap" and still be highly effective?
With our system, plants are grown either HYDROPONICALLY (in nutrient-filled water) or TRADITIONALLY (in soil.) Both have pros and cons depending on the local environment.

We grow the crops in simple 5-gallon plastic pails – the same ones you can buy at Home Depot or Lowes – and bury them in the ground. Nutrients are fed via a traditional gravity-fed drip line.



THE BIG IDEA

Separate the mechanics of the garden into two distinct sectors:
1) WATER SUPPLY SYSTEM, and:
2) WATER DISTRIBUTION SYSTEM

The Water SUPPLY System provides a constant, closed-loop pressurized source for nutrient-enhanced water at the garden site – one that requires very little day-to-day human intervention.

The Water DISTRIBUTION System takes the water from the supply system, and releases it in the correct quantities, at the correct times, to each of the plants in the garden. This occurs on a timed, fixed schedule that requires very little day-to-day human intervention.

BIG ADVANTAGE

Once both systems are in-place and functioning, garden operation jobs can be clearly defined, the need for daily volunteers is minimized, and **MULTIPLE INDIVIDUALS** can be trained to perform each job correctly and completely. Of critical importance is that job requirements DO NOT CROSS LINES; each person has their own responsibility and "territory", and nobody can "pull rank" on someone else's job. Everybody knows what is expected of them, and if they cannot fulfill the duties of their job, another volunteer can replace them.

SPECIFIC JOB ASSIGNMENTS

1) Garden Manager / Master Gardener. This person/persons monitors that all operations of the garden are functioning properly. They are responsible for determining which individual or team of individuals is on duty for each specific day. They are to verify that all work has been performed and all operations of the garden are functioning properly.

2) Technical Manager – Water Supply System. This person/persons monitors the correct operation of the water supply system, assuring that it is performing as intended, and supplies are replenished on a timely basis. Their ONE JOB is to make sure that the water storage tote is filling with water as intended, that the water meets the correct nutrient standards (as verified by a TDS or "Total Dissolved Solids" meter), that the 12V battery is properly charged at all times and is powering the water pump, and that the water pressure at the point of release is within the specified tolerance range.

3) Technical Manager – Water Distribution System. This person/persons job is to monitor that the water/nutrient solution is properly traveling through all drip irrigation lines, and that each plant is receiving the correct amount of water on an ongoing basis. Their ONE JOB is to make sure that the moisture level of the soil at the root level of the plant is just right; not too wet or dry. If problems are found, their job is to open up / close the water release adjustment at the plant site, or replace it with a different adaptor to increase / decrease the water flow.

4) Plant Maintenance Manager / Gardener. This person/persons job is to make sure that the plants are climbing the trellises properly and fruit is supported properly, plants are free of disease, bugs are treated & eliminated, tomato suckers are removed, etc. This person **REPORTS** watering issues, but does not **PERFORM** watering repair.

5) Harvester Volunteer. This person's ONLY job is to pick the fruit when it is ripe. He / she is trained in the proper methods of picking vegetables so as to not damage the plants.

BIG RESULTS

If all five jobs are performed correctly, five things will occur:

1) The garden will function as intended and should not experience grand crop failure.

2) Plants will receive everything they need to thrive.

3) The garden will produce its maximum potential yield of crops.

4) No individual volunteer will become "burned out" by taking on too many tasks / too much commitment.

5) The garden team will work in harmony and maintain a warm and friendly respect for all other members of the team.