

Garden Club Meeting Minutes
September 17, 2026

Garden Tips

Ellen Popejoy advised us to be on the watch for snakes. She's had several sightings of corral snakes and a cottonmouth snake in her yard recently. As a general rule, poisonous snakes have a diamond-shaped head, that is large relative to their body; non-poisonous snakes tend to have a "thumb-shaped" head. Non-poisonous snakes are beneficial and should be left alone.

Fall is a good time to lightly clean garden beds and dead-head plants, to make it easier for fall planting. Don't overdo it – leave cover for beneficial insects, frogs, & wildlife. Parsley and cilantro are good fall crops. See Resources section for link to planting calendar.

Speaker – Mike Serant, Topic: Forget NPK (The Future is Organic)

Mike is the co-owner of San Jacinto Environmental Supplies, parent company of MicroLife. He started San Jacinto Environmental Supplies in 1984 and started manufacturing MicroLife in 1988. In 2003, Mike co-founded OHBA (Organic Horticulture Business Association) & served as President for 23 years. He is current or past officer of TNLA, TACL, TAP, Texas Agrilife Horticulture Education, Urban Harvest.

The chemical industry has not changed much in 70 years. It focuses on NPK (nitrogen, phosphorous, potassium), which is only a small part of what plants need to be healthy. High-salt chemical fertilizers kill soil microbes and degrade soil biology.

Benefits of using organics:

- Safe for the environment
- Reduced costs
- Healthier plants
- Reduced problems
- Increased biodiversity
- Water conservation

Forget NPK – Keys to healthy plants:

- Oxygen
- Carbon
- Microbes
- Minerals
- Metabolites
- Brix level

Mike used to sell synthetic fertilizers and discovered that the more chemicals a customer used, the more problems they had. For every \$1 spent on synthetic fertilizers, they spent \$10 on pesticides. Mike described this as a chemical merry-go-round: junk fertilizer degrades the soil, weakens plants, & causes them stress. This leads to use of fungicides, insecticides, herbicides, and increased water use, and the cycle repeats.

If you feed the soil, you feed the plant. Feed the soil by feeding fungi, protozoa, nematodes, & bacteria in the soil. More than 20,000 species of nematodes have been identified, but only 19 are harmful.

Notable places where MicroLife is being used include Reed Center at Texas A&M, Dallas Arboretum, Houston's Centennial Garden, Glenwood Cemetery, Houston Zoo, North Carolina Zoo, Bayou Bend. Zoos need to be fully organic, to avoid harm to animals and visitors. Kids and elderly are more susceptible to harm from chemical sprays. MicroLife is safe in public areas. By switching to organics, Bayou Bend's annual water saving is now estimated at \$36,600.

Gardens are spaces for personal healing. Plants are airborne healers. Plants produce 293 chemical compounds and we take them in. There are 10 trillion bacteria in our intestines, and we need to feed the gut good microbes. Plants activate natural killers of disease, repair neurological functions, and boost the immune system. Human microbiome – affects mental health, the heart, immune system, obesity, diabetes, cancer.

Organics Core Principles:

- Follows Natural Law (vs. fighting mother nature)
- Nutrition is the foundation
- Healthy growth
- Economically the most feasible
- Safe; provides good future
- Conserves water

3 Myths About Organics:

- It costs too much
- It takes too long
- Doesn't produce results

Chemical Fertilizers Cause¹

- More pests
- More diseases
- More weeds
- More water use

US Agriculture fertilizer sales – \$24.4 billion

US Agriculture pesticide sales – \$21 billion

¹ Sources – Dr. Elaine Ingham 'The Soil Foodweb', Dr. Arden Andersen, Suzanne Wainwright-Evans 'The Bug Lad', Jeff Lowenfelts 'Teaming with Microbes Series', University of California Berkeley, Dr. Harold Willis, The Leibniz Institute of Plant Genetics and Crop Plant Research, etc.

Annual Costs Per Acre – Chemical vs. Organics

	Chemical Cost	Organic Cost
Fertilizer Cost	\$1,597.20	\$2,640.00
Water Cost	\$3,600.00	
Herbicide Cost	\$696.00	
Liability/Pollution Cost	????	
	\$5,893.20	\$2,640.00

This chart does not include pesticide or fungicide costs.

Pesticides:

- 1 billion pounds are used every year in America
- 23,000 truckloads
- Only 1% hits the targeted problem. The rest poisons the environment. It leaches into water, soil, or volatilizes into the atmosphere. Our systems can't handle this overload.

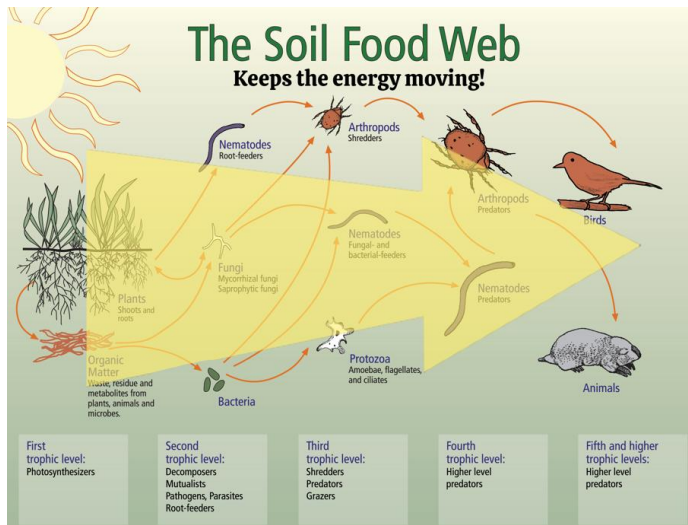
Weed and feed – Unintended Consequences:

- Makes the weeds grow stronger
- Harms tree and shrub roots throughout the lawn. Trees are the most valuable asset in your yard.

All chemical pesticides weaken the human immune system. They are deadly to cats & dogs.

Organics simply means:

- Following Natural Law
- Following the Laws of Nutrition

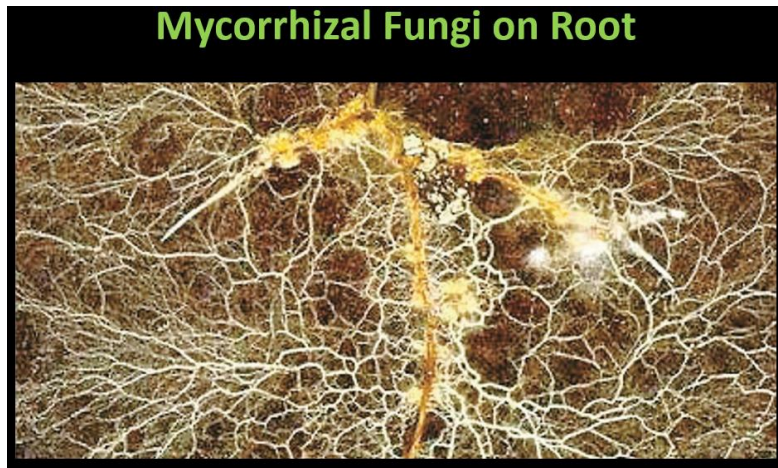


Chemical programs poison the ecosystem and throw natural order into chaos.

A plant in a 4" container has:

- 9,000,000,000 bacteria
- 2,000 miles of fungal hyphae

- 3,500,000 protozoa
- 350,000 beneficial nematodes



The root is the yellow portion of this photo (center). The white lines are mycorrhizal fungi. Chemical fungicides attack good fungus, not just bad.

Nutrient density comes from biological management. Supports the system with carbon, minerals; no chemical fertilizers or pesticides.

Human food is a good comparison – Chemical fertilizers are analogous to eating fast food that has lots of fat, sodium, and carbs, and no significant minerals and vitamins. Organic fertilizers are analogous to eating a salad – less fat, sodium and carbs, but a lot more minerals, vitamins, and antioxidants.

Synthetic Fertilizer	MicroLife
80% loss of nitrogen - 15% nitrogen effectively delivers ~3%	100% of nitrogen available
Fast release – binge eating, stress	100% slow release
Salt index – 99.9%	Salt index – 14.4%
Kills microbes	Promotes microbes
3-7 minerals; incomplete nutrition	70+ minerals; complete nutrition
Burns plants	Helps plants

Plants need at least 52 minerals to be healthy. People need at least 72 minerals.

How pests find plants:

- Color spectrum
- Gas bubbles
- Energy wave

Microbes = Great Plant Health

- More minerals

- Primary plant metabolites: amino acids, lipids, vitamins, etc. = energy, cellular growth, brain function
- Secondary plant metabolites: phytochemicals, polyphenols, terpenes, flavonoids, etc. = anti-cancer, anti-inflammatory, improved cardio, increases immune function.

Plants exude sugars from roots to attract and feed microbes (symbiotic relationship) Microbes produce metabolites (terpenes, volatiles) that:

- Protect the plant from pests, sun scald, & disease
- Benefit humans via immune activation, cancer-fighting T-cells, cardio support

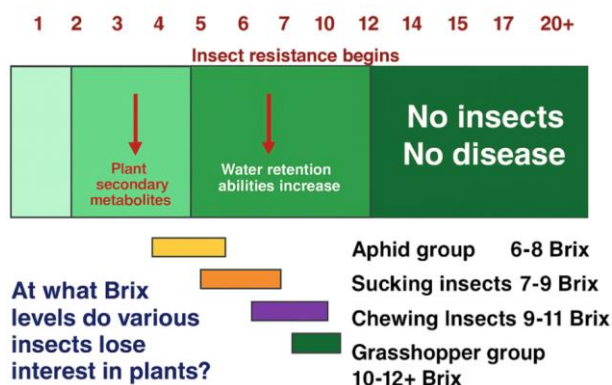
Brix scale measures the sugar (energy) level in plants. The higher the level, the healthier the plant.

Increases brix levels: compost, organic fertilizers, humates, organic liquids

Lowers brix levels: chemical fertilizers, chemical insecticides, chemical fungicides, chemical herbicides.

Raising the brix level to 12–15 makes plants essentially inedible to insects.

Leaf Brix chart - generalized markers



A global study published by the Lancet found that poor diet is the leading cause of early death & chronic illness around the world.

Pesticide exposure reduces human intelligence, according to the Columbia Center for Children's Environmental Health.

Eating organic foods reduces cancer risk by 25%, according to a 4-year study involving 70,000 participants, published by JAMA Internal Medicine. Plants have pores, so washing the produce does not get rid of all the pesticides.

University of Michigan landmark report involving 293 different global studies showed:

- Organic farming can feed the world
- Organic food has more nutritional value
- No negative impacts

Annual lawn, shrub, containers fertilizer program:

- 2x – 3x MicroLife Organic Fertilizers
- 2x MicroLife Humates Plus 0-0-4

MicroLife Multi-Purpose 6-2-4 ingredients: alfalfa, fish meal, kelp meal, soy meal, wheat middlings, bone meal, bat guano, potassium sulfate, iron sulfate, K-mag, humates, corn meal, molasses, yucca wetting agent, plus billions of beneficial microorganisms. The first part of the label lists minerals; the second part lists microbes.

It's better to enhance the biology around the roots and let the microbes do the work.

MicroLife Humates Plus – “Concentrated compost” in a bag – carbon, minerals, & microbes. Use it for annual, inexpensive soil and plant improvement, and for improving new sites. Humates are long chain carbon molecules. They improve all soils mechanically, chemically, biologically. It provides over 65 minerals and natural growth stimulators. Humates build root systems, feed microbes, & improve drainage. It is much easier to apply humates to a large area than compost. Mike's 2000 sq. ft. lawn would require 2 cu. yards of compost (3000 lbs.). He applies humates, instead.

Never use fertilizers with poultry products

- Contains arsenic, steroids, high salts, anti-biotics, artificial hormones
- Smells bad, attracts black flies, seals soils
- Supports a corrupt industry & GMO crops
- Considered a bio-waste product

Foliar spray to increase photosynthesis: Add the following to a gallon of water:

2 oz. fish hydrolysate, 2 oz. humic acid, 1 oz. seaweed, 1 oz. molasses

Q&A

- Humates vs. compost: use both on raised beds; humates alone are practical for large lawns. In beds, apply humates first, top with aged hardwood mulch. Fresh mulch becomes compost the following year.
- Wood chips: usable but slow to break down and temporarily rob minerals. Aged compost is better
- Fire ant control:
 - Long-term: bait (Amdro or Extinguish) apply 2–3x/year. Sterilizes queen, mound collapses in 6–8 weeks
 - Spot treatment: 6–8 oz orange oil per gallon of water, half gallon per mound, kills on contact
 - Organic soil biology (nematodes, etc.) also reduces fire ant populations significantly
 - For every mound you see, there are 5-6 more underground.
 - Sun deactivates the product, so put out more bait because the mounds continue to divide.
- Nutsedge: chemical option is Sedgehammer (Citra); no reliable organic solution known
- Native plants: light application of humates & MicroLife 6-2-4 twice a year recommended
- For indoor/potted plants, Biomatrix recommended (pleasant odor, high microbe content)
- Foliar spraying: apply to point of drip; best in morning or late afternoon when xylem is active, but that doesn't work for everyone, so any time is ok. MicroLife won't burn the plants.
 - Increases photosynthesis efficiency by 25% (Virginia Tech study)
 - Effective against aphids and stink bugs (makes plant undesirable)
- Application frequency: 3–4 times/year granular is sufficient; foliar can supplement as desired

- There is no regulation on compost or mulch. Buy good quality compost/mulch/soil or it will undermine your efforts. Nature Way Resource or The Ground Up support organic gardening.

Resources

Mike Serant: Office phone 713-957-0909, mserant@sanjacsupply.com

<https://www.microlifefertilizer.com/>

<https://www.facebook.com/microlifeorganics>

<https://www.ohbaonline.org/>

<https://harris.agrilife.org/files/2019/03/Vegetable-Planting-Chart-2019.pdf>

<https://www.natureswayresources.com/>

<https://thegroundup.com/>

