



Healthy Soils
Healthy Plants
Healthy People
VOL 7. | SUMMER
Love Mother Nature

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IT'S GETTING BETTER BY MIKE SERANT

Good things are happening: America is starting a serious love affair with Mother Nature. Never before have we seen the explosion in the lawn and garden industry as we all have been experiencing the last 1.5 years.



Mother Nature **truly loves us** all regardless of race, creed, color, age or sex. With all the benefits Mother Nature gives us, why would we ever want to put poisons on her? To poison Earth is to poison ourselves, we are all connected. For example, we as humans share up to 60% common DNA with plants and up to 80% common DNA with animals. 30% of our essential gut microbes that protect us from mental and physical disease come from the soil. **A scathing report** just came out that absolutely condemns chemical pesticides for destroying the web of life.



With all this proof, why would anybody ever use poisons that predicate the doom of humanity?

The good news is that we as a whole, are finally getting it. A few examples:

- **The state of Texas just passed SB 1118 The Healthy Soils Bill. While SB 1118 is weak, it is a start, directing the Texas State Soil & Water Conservation Board to provide education, technical assistance and grants via federal agencies.**
- **The Wall Street Journal reported May 22, 2021 that environmental investments reached \$2 Trillion in the first quarter of 2021.**
- **Unilever, a \$60 Billion a year sales company of primarily consumer products just announced complete support for 'Regenerative Agriculture'.**

Regenerative Agriculture is a new term for Organics that we all need to become familiar with and it is gaining a lot of traction. We may think 'why confuse the marketplace with another new term'. To me, who cares, as long as we pursue the path of a bright future. Fortunately, more & more of us realize that we cannot have civilization unless we have a healthy home & are working to make that future happen.

Thank you for your Organic support,

Mike

Mike Serant
Owner & Manufacturer
of MicroLife

TABLE OF CONTENTS

1. IT'S GETTING BETTER
MIKE SERANT

2-3. WANT TO AVOID NEW PANDEMICS? PRESERVING BIODIVERSITY IS STEP ONE, RESEARCH ARGUES
FERMIN KOOP

4-5. LUSH LAWNS WITHOUT CHEMICALS
MIKE SERANT

6. LOVE YOUR LAWN THIS SUMMER

7. WHAT'S NEW IN THE WORLD OF ORGANICS?

8-9. GROWING PLANTS IN TIMES LIKE THESE
DR. BOB RANDALL

10. IN THE DEFENSE OF WASPS & TURNING A NEW LEAF
SARA WISSINGER

WANT TO AVOID NEW PANDEMICS? PRESERVING BIODIVERSITY IS STEP ONE, RESEARCH ARGUES

FERMIN KOOP | ZMESCIENCE REPORTER FROM BUENOS AIRES



So it's not that more species directly means more risk — it's more about how we interact with those species, and how they interact with each other.

Natural biodiversity (and its loss) can affect this pathway at multiple points, potentially affecting the probability that a new pathogen will become established in humans. But do diverse communities of host species serve as sources for new pathogens? Recent research seems to suggest that's not the case.

A growing body of evidence is already showing that preventing new pandemics like COVID-19 will require addressing biodiversity loss from human activities such as deforestation and agriculture. Now, a new study has synthesized the current understanding of how biodiversity affects human health and why it's so important to preserve and protect it.

Felicia Keesing, a Bard College professor and lead author of the paper, says it's a myth that wild areas with high levels of biodiversity represent hotspots for diseases. The more animal diversity, the more pathogens — the myth goes. **But this is plain wrong**, Keesing says. Biodiversity itself isn't a threat, quite the contrary: it protects us from the species that carry pathogens.

Zoonotic diseases such as Ebola, SARS, & maybe COVID-19 are caused by pathogens that jump to humans from other species. A pathogen might travel from one host to another in droplets or aerosols from coughs or sneezes; through bodily fluids; through fecal material; or by being transferred during the bite of a vector. It's never easy to figure out how the next virus may jump.

Cross-species transmission results from a complex interplay between the characteristics of the pathogen, the original host's infection, behavior, and ecology, how the pathogen is shed into and survives in the environment, how humans are exposed to the pathogen, and how susceptible those humans are to infection.



“Research is mounting that species that thrive in developed and degraded landscapes are often much more efficient at harboring pathogens and transmitting them to people. In less-disturbed landscapes with more animal diversity, these risky reservoirs are less abundant and biodiversity has a protective effect,”

Rick Ostfeld, co-author of the paper, said in a statement.

<https://www.zmescience.com/science/want-to-avoid-new-pandemics-preserving-biodiversity-is-step-one-research-argues/>

WANT TO AVOID NEW PANDEMICS? PRESERVING BIODIVERSITY IS STEP ONE, RESEARCH ARGUES

FERMIN KOOP | ZMESCIENCE REPORTER FROM BUENOS AIRES

The researchers argued that innate biodiversity can reduce the risk of infectious diseases through a dilution effect, in which species in diverse communities dilute the impact of host species that thrive when diversity declines. This happens when the transmission of a pathogen increases as diversity declines, as has been demonstrated for a number of disease systems.



Despite abundant evidence for the dilution effect, the more general idea that biodiversity can reduce human disease risk has been controversial, in large part because biodiversity was thought to be a source of new zoonotic pathogens via spillover. This is why we need to reconcile the effects of biodiversity on the emergence and ongoing transmission, Ostfeld and Keesing said.

Human impacts like land-use change have been linked to emerging infectious diseases of humans in many studies. When this happens, long-lived and larger-bodied species tend to disappear first, while smaller-bodied species with fast life histories tend to proliferate.



“When we erode biodiversity, we favor species that are more likely to be zoonotic hosts, increasing our risk of spill over events,” Ostfeld said. **“Managing this risk will require a better understanding of how things like habitat conversion, climate change, & over harvesting affect zoonotic hosts, and how restoring biodiversity to degraded areas might reduce their abundance.”**

The researchers argued we debating the importance of one taxonomic group or another and instead focus on the host attributes linked with diseases transmissions. Getting a better understanding of the features of effective zoonotic hosts such as their habitat preferences and resilience to disturbance will be essential to protect public health, they argued.

The study was published in the journal PNAS.

<https://www.zmescience.com/science/want-to-avoid-new-pandemics-preserving-biodiversity-is-step-one-research-argues/>



LUSH LAWNS WITHOUT CHEMICALS

MIKE SERANT | MICROLIFE ORGANIC FERTILIZERS | MICROLIFEFERTILIZER.COM



Since the beginning of time, we have been drawn to open spaces; it is in our DNA. We love uncluttered views; they make us feel safe and we have lawns to thank for these vistas. Plus, lawns give us great value back in many other ways. Just to name a few, lawns increase real estate value, cool our buildings, clean the air, clean the water, abate noise, provide habitat for biodiversity, make oxygen for us, are essential for play time, great for mediation spots and a must for kids & dogs, just to name a few.

With all this tremendous wealth of benefits, why would we ever want to poison our lawns? **It is important to remember that all chemical pesticides weaken the human immune system** & are dangerous for all living things to be around, including our turfgrass. So why not get into a program that will produce fabulous results, save you money, save you aggravation, keep your turf areas safe and become places to enjoy.

The Fertilization: Lawns are a combination of living plants & living soil microorganisms. Whatever you apply must be beneficial to both. To the soil do no harm. 3 x a year apply a quality Organic fertilizer like MicroLife 6-2-4 or MicroLife Hybrid 20-0-5. When you apply is not really important as they will last 3- 4 months regardless of the time of the year. Most of us like to fertilize Spring, Summer and Fall. The important thing to remember is that your lawn is a living system and needs steady, clean nutrition just like you do. And, least once a year apply a quality Humate product like MicroLife Humates Plus. Humates are very remarkable, tiny particles of concentrated carbon & minerals that improves all soils & feeds all plants.

Organics always work because Organics follows natural law & uses nutrition as the foundation.

Soil Health is Critical: As humans we cannot be mentally and physically healthy without a strong gut microbiome. The same is true with turfgrass and the soil ecology. The soil must be healthy for turfgrass to be healthy. With Organics, our soils will breathe easier, more beneficial microbes will exist and problems with weeds, diseases and pest insects go way down if not all together disappear. See, Organics lawns are already making you happier & costing you less.



To learn more about Going Organic with your landscapes, go to ohbaonline.org for great information from leading Organic experts in their fields.

Mowing Height: You want to mow as high as you can. Longer leaf blades means more photosynthesis activity (which we know drives plant health). Longer leaf blades also means deeper roots, better water conservation and less weed problems. For St Augustine and Zoysia this means a cut height of 4.0". For Bermuda, 2.5" cut height.



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LUSH LAWNS WITHOUT CHEMICALS

MIKE SERANT | MICROLIFE ORGANIC FERTILIZERS | MICROLIFEFERTILIZER.COM

Weeds: We are led to believe that weeds are evil, & we must poison them to extinction. The chemical lawn herbicides widely used are dangerous to all living things, your trees, your pets, your kids, your soil life and the lawn itself. Healthy turf will bully weeds away especially if you have St Augustine or Zoysia. Bermuda is tougher because it loves to share its space with everybody.

To further your lawn success you will want to change your soil ecology to become more fungal. That will cause Mother Nature to select for perennial species like grass rather than annual weeds. Humates are great for making this happen.

Then there are other great tricks like hand pulling, using AgraLawn to spot treat and correct watering.

Mainly though relish lawn biodiversity. Clover, a plant chemical companies want you to poison, is a pretty little plant that feeds your lawn Nitrogen and produces a beautiful pollinator flower that bees love.

A good way to look at what we call weeds is to call them Lawn Herbs.



Each plant growing either provides a service to you and/or tells you something about your soil that needs to be fixed. No need to spray dangerous chemicals. For an expanded look at Organic Weed Control, download our free booklet [here](http://microlifefertilizer.com/wp-content/uploads/2019/12/MLOrganicWeedControlBooklet-1.pdf).

microlifefertilizer.com/wp-content/uploads/2019/12/MLOrganicWeedControlBooklet-1.pdf

Disease Control: There are really only two lawn diseases to be concerned about; Brown Patch & Take All Patch (TAP). By far TAP is the worst. In both cases the cause is poor soil health, compaction, bad drainage and over watering. The soil has gone anaerobic.

The solution is to only use Organic fertilizers & Humates & not over water. If the disease does pop up, only apply MicroGro Inoculant and never ever apply a chemical fungicide which is super dangerous to be around and kills the very thing we want, which is a healthy soil ecosystem full of beneficial microbes. MicroGro defeats lawn diseases by putting in billions of beneficial microbes that immediately attack the bad guys.

Lawn Pest Insects: Like lawn diseases, there are only two main lawn pests to worry about: Cinch Bugs and Sod Webworm. Of the two, Cinch Bugs are the easiest to take care. First, make sure your lawn is well watered during the hot months of May – Sept. If a problem, apply EcoSmart granulars which is a botanical. Perfectly safe to be around.



Sod Webworms are much more difficult because the egg-laying adults live in the shrubs and not the lawn which their larvae attack. Sod Webworms are attracted to overwatered lawns, so it is a balance on how to water your lawn to ward off Cinch Bugs and conversely, Sod Webworms. If you have Sod Webworm, apply BT mixed with MicroLife Soil & Plant Energy. Be prepared to do this several times.

Lawns are wonderful, beautiful, places to play & give us tremendous value. For all these gifts and for the love of great health, only go Organic. You will be richly reward with a gorgeous lawn that is easy to care for.

Love Your Lawn This Summer

It's time for the Texas Two Step folks, use one of the MicroLife fertilizers below & partner up with MicroLife Humates Plus!

STEP 1



MicroLife Multi-Purpose 6-2-4

Increases soil biology life, improves all soils & does an awesome job of feeding your plants. The Original MicroLife formula.

Rate: 20 lb per 1,000 sq ft

- OR -



MicroLife Hybrid 20-0-5

Increases soil biology life, improves all soils & does an awesome job of feeding your plants. Uses Nutralene for large coverage.

Rate: 5 lb per 1,000 sq ft

STEP 2



Humates Plus 0-0-4: Our 'Concentrated Compost in a Bag'

Excellent for reducing water use, Improves all soils & plants, Adds Mycorrhizal Fungi & billions of essential Microbes, greatly reduces weed problems.

Rate: 10 lb per 1,000 sq ft

A fantastic soil conditioner & soil health builder!

Fast Blast Your Plants to Good Health

HOW TO APPLY MICROLIFE LIQUIDS:

Choose one of our concentrated liquid fertilizers & mix 2 oz. with 1 gallon of water



Soil drench with a watering can

-OR-

Foliar spray with a hose in sprayer



What's New in the World of Organics?

Exciting New Film Available on Netflix!

Kiss The Ground

Narrated by:
Woody Harrelson

Learn About:

Reversing Climate Change.

Restoring Healthy
Soil Globally.

Discover How We
Make A Difference!

Providing Healthier
Foods for Everyone.



DO YOU WANT TO ROCK THE FOUNDATION OF LIFE?



JOIN US FOR JEFF LOWENFELS LORD OF THE ROOTS

Jeff is the author of a trilogy of best selling books on the science behind organic gardening (Teaming with Microbes, Teaming with Fungi & Teaming with Nurtients). His 4th book details a radical expansion of the power of the soil food web. Get ready to learn something new!

Monday, June 21ST

**Live Watch Party or Zoom
Event Tickets available!**



For more information go to
ohbaonline.org



JULY 15TH
Live Watch Party or
Zoom Event Tickets
available!

Nature's Best Hope Doug Tallamy

Recent headlines about global insect declines and three billion fewer birds in North America are a bleak reality check about how ineffective our current landscape designs have been at sustaining the plants and animals that sustain us. Such losses are not an option if we wish to continue our current standard of living on Planet Earth.

For more information go to
ohbaonline.org

GROWING PLANTS IN TIMES LIKE THESE

BOB RANDALL, PH.D., PC-ED, PC-DESIGN | BOARD OF DIRECTORS, OHBA



Droughts are not increasing, but temperatures are. **Our climate is changing rapidly.** Nearly all yearly and monthly hot temperature records have happened according to the weather stations since 2000, so evaporation is increasing and in the absence of rainfall this will cause plants more problems. Yearly rainfall has, except for Galveston, increased but often comes in the form of multi-day storms that saturate the soil, breed root damaging pathogens, and are more harmful than beneficial. Five of our 10 wettest years and most of our wettest storms have been recently.

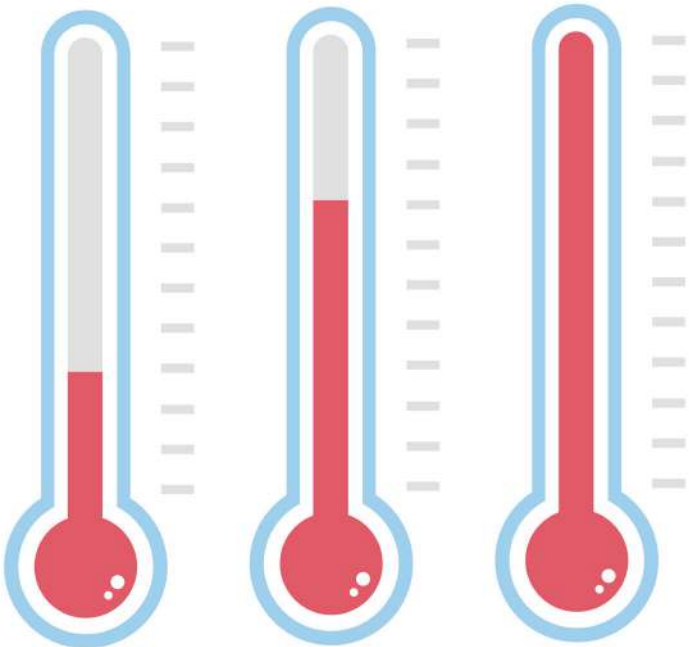
We all know plants need water and everyone knows what wilting in hot weather leads to. Plants use water to fix carbon, to transport minerals & sugar to their leaves and cells, and those that lack wood use water to keep themselves upright. They also use it to cool themselves on a hot day. Plants transpire and once temperatures heat up to the 90's, most plants use most of their water to cool themselves rather than to grow. If this evaporation is needed more rapidly than the roots can get, leaves die and sometimes plants do too.

Water shortage has other profound effects, but my point is this: if the temperatures rise into the 90's, most plants will stop growing and in the 100's basically all of them will stop growing.

What most of us have been less aware of & need to learn is the hot temperature tolerances of plants & the likely hot temperatures each month. Basically, all plants and even animals have optimum temperatures in which they thrive. At wider temperature ranges, both colder & hotter, they don't grow. This can lead to heavy damage and death.



What does this mean for times like these where temperatures are now increasing rapidly?



GROWING PLANTS IN TIMES LIKE THESE

BOB RANDALL, PH.D., PC-ED, PC-DESIGN | BOARD OF DIRECTORS, OHBA

If you are planting 5-month annals, you need to plant them when this year's temperatures where you live will be optimum. And if the temperatures are usually not what they were in 1992, **you need to change your planting date.**

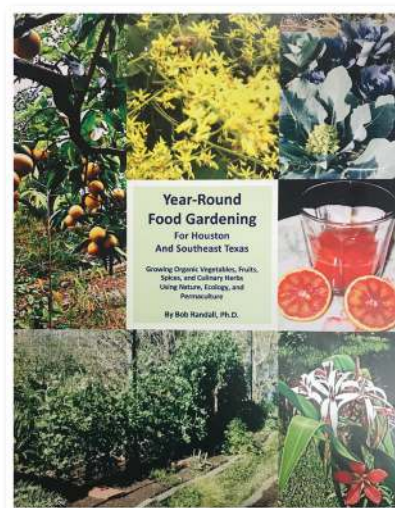
And if you are planting perennials that you expect to live for a decade or more, they will need to tolerate longer summers, hotter temperatures, and shorter, (probably) less severe winters. You also need to use rain gardens and rain tanks to reduce flooding.



Additionally, **you will need to use shade, biologically rich mulches, & microbe friendly organics to reduce evaporation.** This will increase the number and length of beneficial root-microbe associations and encourage deep water reserves.



I have explained how to do this for most food crops in my book **Year-Round Food Gardening for Houston and Southeast Texas** (see <http://yearroundgardening.ME> for sources), but other plants need hot weather planting instructions too, & so far optimum temperature data as well as heat damage information for many nursery plants is hard to find.



IN THE DEFENSE OF WASPS & TURNING A NEW LEAF

SARA WISSINGER | WASP ENTHUSIAST

Wasps – danger flies, spicy bees, flying death traps – whatever you call them, they are the pollinators that everyone loves to hate.

Wasps have a bad reputation; can you think of one person in your life that loves wasps? Me neither. This isn't a new trend though, since the dawn of time wasps have been hated by basically everyone. But now, modern research shows it's time to change the negative conversation around wasps to a positive one.



Paper Wasps, Hornets, Yellow Jackets, Trichogramma, just to name a few, have many benefits that better the ecosystem & our society as a whole. Wasps are pest controllers, pollinators, have medicinal qualities & contribute to the economy.

Pest control: Without wasps there would be far too many larvae, like caterpillars & aphids in the environment. Wasps feed on aphids, which are nasty pests that destroy gardens & crop plants. Another particularly frustrating larvae in the Houston area is Sod Webworms. There is a lot of damage done to our landscapes because of these guys and wasps attack them too. No need to shoo away wasps anymore with benefits like these. Natural pest control is crucial for balancing the ecosystem.



Pollinators: There are 33,000 varieties of wasps and around 1,000 plant species that are pollinated by wasps. 164 of those plant species rely solely on wasps for pollination, like the Hammer Orchid.

This Australian flower has evolved to be shaped similar to a female wasp in order to attract male wasps for pollination purposes. These flowers would not be able to bloom without wasp pollination.

Human Health: There are medicinal features in wasp saliva that can be used in antibiotics. Scientists have also discovered that wasp venom can kill cancer cells in humans, a peptide called 'Mitoparan'. For the Mitoparan to reach cancer cells, scientists attached the venom to other molecules which preserves it as it travels through to body to kill cancer cells, one molecule in particular is a protein that targets breast cancer cells.

The Economy: According to a study done by Ryan Brock, a doctoral student in evolutionary ecology at the University of East Anglia, says that beneficial insects eating pest insects is a **\$417 Billion** contribution to the world's economy each year. Insect pollination is estimated to add **\$250 Billion** to the global economy. And if we have no insect pollination we have no food.



With the human bias of historically hating wasps because they sting, there has been a lack of funding put into research that will further investigate the benefits of wasps. In the world of Organics we talk a lot about how deadly pesticides are for the environment and ourselves. If we make an effort towards using natural remedies, like wasps, to control pests we are able to reduce pesticide use dramatically.

"I always encourage people to educate themselves about misunderstood things in nature." - Amy Toth, Iowa State University

My goal for the Summer is to show wasps some love and let mother nature do her job so I can continue to do mine, **are you on board?**