Antidepressant Microbes In Soil: Does Dirt Make You Happy?

source: Gardening Know How

Prozac may not be the only way to get rid of your serious blues. Soil microbes have been found to have similar effects on the brain and are without side effects and chemical dependency potential. Read on to see how dirt makes you happy.

Soil Microbes and Human Health
Did you know that there’s a natural antidepressant in soil? It’s true. Mycobacterium vaccae is the substance under study and has indeed been found to mirror the effect on neurons that drugs like Prozac provide. The bacterium is found in soil and may stimulate serotonin production, which makes you relaxed and happier. Studies were conducted on cancer patients and they reported a better quality of life and less stress.

Lack of serotonin has been linked to depression, anxiety, obsessive compulsive disorder and bipolar problems. The bacterium appears to be a natural antidepressant in soil and has no adverse health effects.

These antidepressant microbes in soil may be as easy to use as just playing in the dirt.

Most avid gardeners will tell you that their landscape is their “happy place” and the actual physical act of gardening is a stress reducer and mood lifter. The fact that there is some science behind it adds additional credibility to these garden addicts’ claims. The presence of a soil bacteria antidepressant is not a surprise to many of us who have experienced the phenomenon ourselves.

How Dirt Makes You Happy
Antidepressant microbes in soil cause cytokine levels to rise, which results in the production of higher levels of serotonin. The bacterium was tested both by injection and ingestion on rats, and the results were increased cognitive ability, lower stress and better concentration on tasks than in a control group.

Gardeners inhale the bacteria, have topical contact with it and get it into their bloodstream when there is a cut or other pathway for infection. The natural effects of the soil bacteria antidepressant can be felt for up to three weeks, if the experiments with rats are any indication. So get out and play in the dirt and improve your mood and your life.
Dear Master Gardener Volunteers,

March is almost here and we are full steam ahead into 2019 Master Gardener Training, slated to begin on March 21 at the Ag Center. We have great interest in the program and this year’s training is shaping up to be AWESOME!! While the entire schedule is not yet complete, here’s the highlights as of early February:

March 21
Stan Smith – Soils
Jerry Iles – Invasives

March 28
Dr. Cookie Trivett – Botany
Chris Penrose – Lawns

April 11
Denise Ellsworth – Pollinators (pm session)

April 18
Dr. Shetlar – OSU Bug Doc (am session)

May 23
MG Presentation Day

All of these sessions will be held at the Ag Center in Fairfield County. Once completed, the final schedule will be shared via email. Each of the Master Gardener Training Sessions will be three hours of Continuing Education credit if you attend the entire session.

At our February 21 MGV meeting, we focused on Master Gardener Training duties. We discussed the Master Gardener Training Mentorship program as well as Hostess duties and Lunch Crew ideas. Yes, we will need lots of help (Volunteer Give Back Hours) to accomplish eight weeks of training.

Now let’s just hope that Groundhog was correct...an early spring is on the way!!

Sincerely,

Connie Smith
Master Gardener Coordinator
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740.652.7267

CONNIE’S CORNER

The Ohio Invasive Plant Council (OIPC) recently released information on the assessment of nine new plant species for inclusion on their list of invasive plants. With this announcement also begins a six-month public comment period for the new additions to the list. Comments, suggestions and questions during this period should be directed to Theresa Culley, theresa.culley@uc.edu. Pictured here are the most invasive of these new species: Canadian Thistle, Poison Hemlock, Wild Parsnip and Amur Corktree. Also under review, but not considered as invasive as the others, are Common Burdock, Star-of-Bethlehem, Ravenna Grass, Goutweed and Golden Raintree.

Nine New Plant Species Considered for Invasive List

source: Buckeye Yard and Garden
Thanks to all the Master Gardener Volunteers who attended the first meeting of 2019. After a few announcements, yearly activity calendars were distributed. The group then formed project teams and each team spent 45 minutes putting together a plan and wish list of supplies and materials for 2019. Good conversation and plans and goals for the MGV projects in 2019 were recorded and reported back to the group. It was really good to watch the interaction and outcomes from the various project groups.

**AG Center Renovation Team 2019**
*168 Hours recorded for work in 2018*
**Team Members:** DJ Hoermele, Michel Byrne, Lise Ricketts, Lisa Stoklosa, Mary Ann Richards, Edna Wilson, Nancy Weidman, Connie Shields, Lisa Dominquez
**Plan:** Remove overabundance of salvia, divide perennials, add new annuals and additional perennials, and develop brochure of courtyard plants.
**2019 Wish List:** Plant ID labels, sprinklers to replace soaker hoses, working wheelbarrow, and garden structure or dry stack pillar with large pot on top.

**AHA !! Children’s Museum**
*40 Hours recorded for meetings/planning in 2018*
**Team Members:** Keith Eichhorn, Barbara Velez Barbosa, Bruce Garrett, Lisa Dominquez, Connie Shields, Edna Wilson, Dianna Wears
**Plan:** Meet with AHA Director, Wendy Gregory, to firm up what to plant and to come with types of seed packets to give away, plant early season crops mid- to late April, plant best of crops in mid-May or after last frost date, and use area behind garden fence for shrubs and native wildflowers for pollinators.
**2019 Wish List:** Small greenhouse for growing and starting seeds, tool shed, tomato cages, stakes for plants, large pots, row cover supplies, and children’s and Adults’ tools and garden gloves.

**Fairgrounds Entrance Gardens**
*31 Hours recorded for give back hours in 2018*
**Team Members:** Louise Smith, Mary Ann Richards
**Plan:** Remove grasses and dwarf Lilac bushes under main sign and replace with small low growing shrubs that will not overtake the bottom edge of the sign.
**2019 Wish List:** Three to five small shrubs and annuals to color up the front of the garden bed.

**Green Machine Gardeners**
*262 Hours recorded as project work in 2018*
**Team Members:** Jane Eberly, Patty Turner
Also, Jessica Dent from Learning Never Ends who will complete Master Gardener Training in 2019.

**Friends of Wagnalls Gardens**
*528 hours recorded for work in 2018*
**Team Members:** Pam Jarvis, Patty Sykes, Dolly Browning, Mary Carter, Beverly Zurhorst, Susan Lloyd, Mary Ann Richards, Nancy Weidman, Lisa Stoklosa
**Plan:** Group reviewed Pam Jarvis’ plan for 2019. Would like to find more volunteer groups to assist with garden clean-up. Considered seasonal work days with MGV’s as mentors for volunteers. Not interested in garden tour of area gardens, more interest generated in creating monthly activities for story time such as, I Spy in the Garden Activity for Kids and Mini Fairy Gardens with succulents, etc., for kids.
**2019 Wish List:** Plant tags, garden brochure, brochure distribution box on grounds, and materials for children’s activities.

**Thru the Vine MGV Newsletter**
*80 hours were recorded as project work in 2018*
**Team Members:** Lisa Stoklosa, Gina Supthin, Chuck Zurhorst, Mary Carter
**2019 Wish List:** Consider email subscriptions to newsletters from general public and start a Fairfield County MGV Facebook group to share gardening items of interest and MGV newsletter. Fairfield County Master Gardener FB group established: January 2019

**Tranquility Garden**
*346 Hours were given back in 2018*
**Team Members:** Brian and Michele Myers

**Wesley Ridge**
*31 hours were recorded as project work in 2018*
**2019 Wish List:** Tall flower pots

*The OSU Master Gardener program places a value of $24.10 for each volunteer hour recorded. Your Volunteer Commitment of just one hour to the Master Gardener program is HUGE.*

Thanks to each of you for your efforts and commitment!!
Fungus Gnats in House Plants

source: University of Minnesota Extension

HOW TO IDENTIFY FUNGUS GNATS

Adult Fungus Gnats
- Small, about 1/16 inch long
- Slender, dark-colored fly with very long legs
- Not good at flying
- Usually found close to where larvae are developing

Larvae
- Small, worm-like insect, no more than 1/4 inch long
- Pale white almost translucent color
- Black head but no legs or other appendages
- Likes very damp conditions
- Feeds on decaying plant material, moist organic matter and fungi

FUNGUS GNATS CAUSE NO DAMAGE
- Fungus gnats do not damage houseplants and are considered only to be nuisances.
- Fungus gnats are found in houseplants that are:
  - Over-watered and might have decaying roots
  - Grown in potting soil high in organic matter such as peat
- Fungus gnats rarely feed on healthy roots.
- If you see these flies, it means that your plants might have other problems, like damping off.

HOW TO GET RID OF FUNGUS GNATS

Reduce Soil Moisture in Houseplants
- Allow the soil surface to dry between watering but do not allow plants to wilt.
- Water plants based on how heavy they feel when they're picked up.
- Water plants when leaves look dull and limp.

Place Traps to Check for Fungus Gnats
Place sticky paper traps in the pots to tell you which plants have fungus gnats. This method might also reduce some fungus gnats but will not get rid of them completely.

Using Pesticides

For larvae
- The only effective product for treating fungus gnat larvae in the soil is a bacterial insecticide, *Bacillus thuringiensis var. Israelensis* (known as B.t. H-14).
- This pesticide is specific to fly larvae and does not kill adult fungus gnats.
- Look for this insecticide in garden centers.

For adult fungus gnats
- Pesticides like pyrethrins are effective against adult fungus gnats but this is a short-term solution.
- If there are favorable conditions with high moisture, the fungus gnat larvae will keep transforming into adult flies.

CAUTION: Mention of a pesticide or use of a pesticide label is for educational purposes only. Always follow the pesticide label directions attached to the pesticide container you are using. Remember, the label is the law.

Layer sand on top of the soil
Placing a layer of sand on top of the soil to prevent egg laying or larvae from reaching the soil is NOT very effective.
GARDEN MUSINGS

Seed Sightings
by Gina Sutphin, Master Gardener 2015

How many of you have specific events that are a yearly marker in the journey towards spring? I have several. My computer currently has a browser open that is counting down the Days, Hours, Minutes and Seconds until the First Day of Spring! The start of Daylight Savings is marked on my calendar with a picture of the Sun, Flowers and Butterflies. But the earliest and completely unplanned for marker that spring is coming, is always the first Annual Seed Sighting.

Each year, I’m usually wandering through a store, deep in thought, as I shop for some random item. There is usually some degree of Winter Slump to my shoulders and a Frigid Funk weaving its way through my mind. And then suddenly and without warning, I turn a corner and come face to face with Seeds! Every time this glorious event happens it feels as if the world stands still for just a moment. No matter what haze was filling my mind a moment earlier, it seems as if a fresh breeze of clarity rattles loose the cobwebs and the truth begins to filter in. That reliable truth that no matter how cold and dark the winter feels, there is always hope. Spring will always come, the snow will always melt, and new beginnings will poke their tiny heads up through the mud, no matter how deep it has become. And for a moment, I always stand still, taking in the glory of this potential and hope. And then, standing a little taller, with a bit of the icy burden melted away, I continue on my journey and make my way to the cash register. This marker of spring cannot be added to the calendar or be counted down to on a computer screen. But instead, it always seems to find me at just the right time, exactly when it was needed and without warning.

Sometimes it happens at Walmart, Lowes or Meijer where it’s expected that seeds will be a normal yearly display. But some of my favorite experiences are in the truly unexpected locations. Like in 2018 when the sighting happened during a quick stop at Drug Mart. My seed sighting this year was courtesy of Menards. Where have you had some of your favorite first seed sightings?

Newsletter Deadlines

Do you have an article, garden musing, photo from an MGV project, calendar event or other idea you’d like to submit for the MGV newsletter? Articles and information are welcome at any time! Items not used in an upcoming newsletter can be saved and used in a future newsletter. Newsletters are published quarterly with the following submission deadlines:

Spring Newsletter—submit by February 1
Summer Newsletter—submit by May 1
Autumn Newsletter—submit by August 1
Winter Newsletter—submit by November 1

Congratulations, Jackie!

Our Jackie Marion was presented with the Pillar of the Community Award at the Canal Winchester Chamber of Commerce Banquet recently...proud of you and all the ways you find the time and energy to give back!!
GARDEN MUSINGS

Tropical Ohio?
by Bruce Garett, Master Gardener 2015

Wasting away in Margaritaville. Looking for my lost shaker of salt. SALT! SALT! SALT! Come on. Sing along. Do Jimmy Buffet songs get you thinking of these topics like it does me? I have enjoyed several visits to tropical areas and enjoyed the flora and fauna. When I began thinking about how I could have a little of the tropics in my own backyard, I quickly gave up on ideas for fauna. But I could replicate some of the flora, if just for the warm months.

I started years ago when I heard that a greenhouse near Lithopolis needed to get rid of some banana trees as they were growing so tall they were lifting the glass off of the greenhouse. The owner couldn’t bring himself to throw them away and couldn’t find buyers so he was giving banana trees away. I came away with several which I have set out each spring each year since. Yes, that’s the downside of a tropical garden. You must dig the plants in the fall, keep them in a warm, dry, dark spot over winter, and set them out again in the spring or lose them.

I usually cut the banana trees off one to two feet above the ground, dig up the root ball and stem, and put them in a dark basement room. I have brought in trees of various sizes in pots for winter greenery and they do well in a sunny spot. One year I brought in a 12-14 foot tree that had a root ball that weighed over 50 pounds. It was quite a chore to get it into the house but it did produce some small, inedible bananas. It was fun watching this process.

My next tropical plant was giant elephant ears which I got from my parents. The leaves on this plant get up to five feet long and my wife enjoys watching them “wave” in the warm breezes of summer. These must also be cut off and dug up for winter. Note: if you like to make hypertufa, the leaves make great forms.

Over the years, I have added a red banana which doesn’t get as tall as the other and a couple other types of elephant ears. This overwhelmed my small tropical garden by the gazebo so I decided to make another garden and added cannas, another contribution from my parents. I started with about six starts and ended the summer with a wheelbarrow full. Want some? Free to a good home.

My new garden is at the end of a downspout so I guess I could call it a water garden. These plants are thirsty. I also added a rock sculpture (art) and a trellis with bugle vine. Both tropical gardens are mulched heavily. Next summer I plan on adding ginger plants which I picked up in Georgia and another green/purple variegated landscaping plant I picked up in Ft. Lauderdale but can’t remember the name.

Tropical gardens require little care during the summer other than making sure there is enough water for them, not a problem last year. So if you don’t mind the spring and fall digging, give it a try. You’ll find yourself singing Jimmy Buffet songs under your banana trees.

Looking Forward to Spring Events

Please be sure to take a look at page 9 to see a listing of upcoming spring events!
The Gardens on Spring Creek

by Barbara Kochick, Master Gardener 2013

On a recent visit to family in Fort Collins, Colorado, we explored the eighteen acre site of the public/private Gardens on Spring Creek. The mission of this partnership between the City of Fort Collins and the Friends of The Gardens on Spring Creek is to enrich the lives of residents and foster environmental stewardship through horticulture.

The gardens are divided into eight areas. Of primary interest to me was the Children’s Garden where my grandchildren enjoyed the scarecrows, water pumps, playhouse and colorful plants.

A large outdoor cooking demonstration area is the central feature of the Garden Of Eatin’. Here cooking shows illustrate how to prepare the vegetables and herbs surrounding the kitchen. Featured in the Rock Garden are many plants native to the unique growing conditions of Colorado.

The Community Gardens are securely fenced areas where residents can grow their own produce, herbs and flowers.

Eco-conscience ideas for homeowners abound in the Sustainable Backyard. Drip irrigation, permeable pavers, and a dry creek are among these ideas. A fun section here was a “scratch and sniff” wall. Their Xeriscape Parkway Strip is an amazingly varied collection of plants that can survive and thrive in the often inhospitable area between the street and the sidewalk.

A daylily area, wetlands and a turf garden make up the Demonstration Gardens. The lovely Entrance Garden is what greets visitors. Work is ongoing for the creation of a cafe, a meeting room, a butterfly house, foothills, prairie and great lawn gardens. I will be sure to visit whenever we are there to enjoy the gardens and keep up with their progress.
Harry Crane is a U.S. Forest Service analyst. This paper-pushing bureaucrat spends his days at his desk longing for the woods. When misfortune strikes, grief and guilt drive him to those trees. There he meets a grieving widow and her ten-year-old fairy-tale-loving daughter. There is a library that needs saving and even a big, bad wolf who needs taming. This is magic firmly rooted in reality. The ordinary world is extraordinary for everyone, all the time.
In and Around the Garden—You Won’t Want to Miss It!

Mark Your Calendars with these Important Dates and Upcoming Activities and Events!

COMING SOON:

March 2, 2019, 8:30 am-2:15 pm
Muskingum Valley Garden Society’s 16th Annual “Spring Fever” Home Gardening Symposium
The Ohio University Campus-Zanesville
For Info: http://MVGardenSociety.org

March 7, 2019, 9 am-4:15 pm
20th Annual Central Ohio Perennial Flower School
Hollenbeck Bayley Creative Arts and Conference Center, Springfield, OH
For Info: go.osu.edu/2019perennialschoolclarkcounty

March 16, 2019, 10 am-12 pm
Fruit tree Pruning School
Hugus Fruit Farm
1960 Old Rushville Road, Rushville, OH

March 18, 2019, 7 pm
Basil Garden Club’s Annual Guest Night
Christ United Methodist Church
700 S. Main Street, Baltimore, OH
RSVP: Sharon Anderson, 740-756-7265 by 3/8

March 23, 2019, 8 am-4 pm
Four Seasons of Gardening
Licking County, OH
For Info: https://www.fourseasonsofgardening.com/

April 27, 2019 1 pm-4 pm
Earth Day Activity—Seed necklaces
Smeck Historical Farm
7395 Basil Road, in Baltimore, OH

May 20, 2019, 6 pm (Auction at 7 pm)
Plant and Chinese Auction
Hosted by Basil Garden Club
VFW, 2155 Baltimore-Reynoldsburg Rd, Baltimore, OH
For Info: Sharon Anderson, 740-756-7265

June 17-21, 2019
International Master Gardener Conference
Valley Forge/Casino Resort, Pennsylvania

SAVE THE DATE:

March 10
Clocks Spring Forward

March 20
SPRING BEGINS!!!!

March 21–May 16, 2019
Master Gardener Training
Fairfield County Agriculture Center
831 College Avenue, Lancaster, OH

May 23, 2019 (time TBD)
MG Presentation Day

May 27, 2019
AG Ext. office Closed for Memorial Day
ACROSS THE FENCE

Megawatt Begonias—My New Impatiens

By Edna Wilson, Master Gardener 2017

Living in Hocking Hills, I am pleased to be blessed with lots of trees and shade. One disadvantage is not having the full sun needed for most blooming flowers. I was devastated when my Impatiens developed downy mildew.

Last spring, I discovered a new begonia, Megawatt Begonia interspecific. This begonia is similar to the annual bedding wax begonia but is much larger and more attractive. It can almost be mistaken for the Angel Wing Begonia (pictured on right). The Megawatt works well for borders, containers, and mass plantings. It is easy to grow, grows quite large, and has large leaves and hearty stems to support and show off the nice size flowers. Allow space for its spread and it may grow up to 20+ inches in height. No deadheading. Drought tolerant. As with most begonias, allow it to dry out between watering. My begonias did great even with all the rain we had last summer.

My flowers got dappled sun and some had maybe four hours of sun. I bought the flowers from a new greenhouse in Adelphi, Ohio. They were sold in hanging baskets and also in four-inch pots at a very reasonable price. I did not check for them in other garden locations. I highly recommend the Megawatt Begonia Series.

These begonias come in green and bronze leaf colors and the flowers in colors of red, rose and pink. They are great for partial shade locations.

I also recommend the Hardy Begonia (Begonia grandis - perennial). A couple of years ago, I saw beds of lovely pink begonias down at the Ohio River but did not realize they were perennials. Last summer, I found the Hardy Begonia plants at the Lily Festival, sold by Circa Plants. After this, I discovered that a couple of my neighbors also had them and the plants were doing well. This variety is perennial to Zone 5 and also does well in a shade garden.
ACROSS THE FENCE

Hummingbirds
by Edna Wilson, Master Gardener 2017

It's not too soon to start thinking and preparing for the return of the hummingbirds in April. The male scouts will be returning by the middle of April, checking their good feeding spots from the previous summer. It is a good idea to have at least a small feeder hung and ready for them. The males return first from their Southern migration flight and the females follow in a couple weeks. I always hang a small feeder in the same place every year, and just like clockwork, the male returns to it by April 15 almost every year.

I do feed a lot of hummingbirds. Last summer I kept track of the sugar. I had used 202 pounds from mid-April to the first of October.

A few good tips for feeding:
- Make sugar nectar with four parts water to one part sugar
- Store unused nectar in refrigerator for up to two weeks
- Keep feeders clean
- Keep fresh food in feeders
- Hang feeders in shady areas, not in full sun
- Use feeders that have red bases or tops to attract the birds

When purchasing feeders it is not necessary to buy fancy feeders. Instead, buy more practical ones that are easy to fill and clean and also have a bee guard and ant moat.

Hummingbirds will migrate back south towards the end of September to the middle of October. It is important to keep a feeder up into the end of the season until all the birds are gone. The hummers need to double their weight before migrating and need to keep feeding.

Through the Vine is a publication of the Ohio State University Extension Office in Fairfield County
Lisa Stoklosa, Fairfield Master Gardener Volunteer Editor

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For the latest information and news about OSU Extension in Fairfield County, including the Master Gardeners of Fairfield County, visit http://fairfield.osu.edu/

Ohio Master Gardener Program Mission
We are Ohio State University Extension trained volunteers empowered to educate others with timely research-based gardening information.