

**W15 Health, science and environment writing**  
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## **The healing nature of horticultural therapy**

### **Aug. 3**

WHITE POST — As Helen Lake walks the gravel pathways of the sensory garden of the San Damiano Spiritual Retreat, she likes to ask visitors what they see, hear, feel and sometimes even taste.

A certified horticultural therapist, Lake uses gardening and nature to help soothe the body, mind and spirit of her fellow Master Gardeners.

When Lake first started her journey she had no idea what horticultural therapy was, much that it existed.

Horticultural therapy was first documented in the 19th century by Dr. Benjamin Rush, who noted the positive effects tending to a garden had on those with mental illnesses. Later, during World War II, it caught on as a form of rehabilitative care for hospitalized war veterans, and was introduced to the Veterans Administration by the National Garden Club of Virginia.

Lake, who was first a Master Gardener, discovered her interest after retiring from her federal government job, when the time-proven practice gave her an opportunity to find peace after working 12-hour days, usually in a space with no windows.

“I told myself there must be something else to this,” Lake said. “I was very fortunate that a fellow, who was our coordinator, knew about a conference going on in Williamsburg about horticulture therapy.”

Presented by the James River Master Gardeners, Lake had the opportunity to learn from Dr. Diane Relf, who created and designed the American Horticultural Therapy Association.

“After I heard her [Diane] speak, I cornered her in the bathroom. I had to, because I couldn’t get close to [her] anywhere else and asked her where I could get my training. Bless her heart. She sent me, after I gave her my email, an email of the schools that provided it.”

After two years of flying back and forth to Colorado, Lake graduated with her certificate in horticultural therapy from the Horticultural Therapy Institute, where she trained alongside other Master Gardeners as well as healthcare workers.

Lake, who customizes programs for patients depending on their needs, has helped war veterans returning from the frontlines with PTSD as well as their families, cancer survivors and memory loss patients.

“It’s kind of interesting,” she said. “The pandemic sort of brought everything to the forefront, the very biases of being drawn to the outside.”

Simply taking a walk or a stroll around the park can leave one refreshed, with a different perspective on life, Lake said.

“If a patient can see green or can see outside their window and see a tree, it increases their healing capacity,” she said.

Lake completed her internship at the VA Hospital in Martinsburg, West Virginia, working with veterans suffering from anger management and a variety of psychiatric issues.

“These guys were fascinated. Some had never seen any herbs in front of them before. Total fascination, with laughter, because of how could they be used in the home or just for cooking. Very basic things we take for granted.”

It was at this moment, Lake made a realization.

“They reminded me a lot of the very basic things that were important to them: memories. The good and the bad.”

Looking back, Lake said something as simple as creating a vegetable plot created a positive memory, among so many that weren't.

Lake, who collaborates and coordinates her efforts understands that each patient is different. Some clients need more physical exertion, some less, she said. Some can stand for longer periods of time, while others can't.

As part of a Master Gardener project, Lake and fellow members created a sensory garden at San Damiano, a spiritual retreat center for the Arlington Diocese of the Catholic Church. The garden, which is not open to the public, is the perfect example of what therapeutic horticulture can be.

Tall grasses sway in the wind, hummingbirds flutter amongst the brightly colored petals and wind chimes bring a sense of calm to those sitting observing their surroundings. Peace is always present.

“Guests are being drawn out here, even in the wintertime. The purity of the area is intriguing, it's interesting but it's also safe,” Lake said.

The project, which took three years to complete, encompasses various gardens including a sensory and culinary garden, a rosary garden walk, an herbal meditation garden, and various statues surrounded by colorful flowers.

Moonflowers, which open in the evening, invite guests to take a stroll under the stars and take in their floral fragrances. Boxwood, once perfectly shaped, has now taken on a mind of its own, and irises add a bright pop of color when in bloom.

The garden plays into the five senses, as water can be heard in the background, Egyptian papyrus adds texture and movement as the wind blows and herbs like lavender provide opportunities for taste, smell and touch.

But, Lake said, participating in therapeutic horticulture can be as simple as bringing a potted plant indoors.

“In a nutshell, horticulture therapy is using nature, using horticulture, as a means to assist or channel an end result, whether it’s to provide peace for someone from a mental health standpoint or to provide physical stimulation,” she said. “You have to present them with the opportunity or environment where they can be physically engaged, a raised bed or a wheelchair where they can reach and work designing or providing them an environment where they can successfully engage in a horticultural activity.”

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## **Farmer keeps his eyes on the sky, waiting for rain**

### **Aug. 14**

TOMS BROOK — On a cloudless, hot late day Greg Bowman observes his cornfields swaying in the wind. With a few more weeks before harvest, Bowman, like many other Valley farmers, continues to wait for measurable rain to help his crops.

“Weather plays a big role in farming,” Bowman said. “One thing you can’t count on is the rain.”

Data from the National Oceanic and Atmospheric Administration shows that rainfall in July barely hit 1.14 inches in Strasburg, a dramatic decline from early spring. A high yielding corn crop requires approximately 20 to 30 inches of water per year.

“The corn is shutting down to preserve what moisture it does have in the plant to still produce,” Bowman explained while looking out at the cornfields.

According to the U.S. drought monitor, much of the Northern Shenandoah Valley is still abnormally dry. Defined by the National Weather Service, abnormally dry is when an area is going into a drought, but drought conditions are not yet present but could later develop. Short-term dryness can affect the growth of crops and pastures.

Bowman said the last severe drought was 1977.

“Last year was bumper crops. It was a wet season, just a complete reversal to what we’re talking about here today,” he said.

Bowman, who planted his corn in May, worries about water-related stress, which can stunt the corn’s growth and weaken its roots. Other local farmers waited until mid-May to plant, which Bowman said might work out better. But it’s all a gamble.

Research indicates that when corn doesn’t receive enough water during early germination, the crop produces fewer kernels on its ear. Bowman, who describes this as popcorning, said this happens when the crop never pollinates. This is the most sensitive time for the crop’s yield.

Walking through Bowman's field it's noticeable that his crop is suffering. Tassels are emerging, which usually indicate critical water stress. With drought and high temperatures, tassel emergence can affect corn pollination.

Bowman, who uses a specific corn variety that holds up against droughts, is worried about his crop and the yield it will produce.

Unlike some cool-season crops, corn does have the ability to recover from drought stress by increasing root growth at the expense of the leaves. With a couple of inches of rain, Bowman said the tasseling would cease and growth could continue until harvesting in a few days.

When harvested, the corn will be used as feed for 500 cattle. In October, cattle will weigh-in at roughly 400 pounds. When it's time to travel to the Midwest in springtime, Bowman said they will weigh up to 700 pounds.

"We give them as much space as possible," he said. "We don't confine them. But the environment does change as you feed them."

Along with producing corn, Bowman harvests wheat, soybeans and hay on his acreage. He noted that while his wheat was plentiful, his hay production was down 50 percent.

"I've seen it get dry like this towards the fall," he said. "And then we get some of those tropical rains, which come in and make us a late bunch of hay."

Recalling past years, when the rains were generous, the farm was producing hay into October, November and December. One year Bowman said he was making hay at Christmas.

Due to the Valley's cooler temperatures and lack of humidity in the spring, Bowman had a successful wheat harvest. Planting began last October until mid-December and was harvested in July.

"Because of the cold weather germination, you just don't know," he said. "The seeds have to have a temperature in the 50s. While the group itself had to be 50 degrees to germinate."

Currently, soybeans are growing in place of wheat; this is known as double cropping. Double cropping, Bowman said, allows for additional revenue during a time when most farmers only receive a few checks a year.

Bowman noted that the soybeans had already emerged between two and three inches above the ground, which gave him hope.

But what he said he really needs is rain. Without it, Bowman is beginning to feel the heat as the rain clouds dry up and the crop withers.

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# **‘Don’t light a match’: Experienced farmers patiently wait for rain**

## **Sept. 11**

FRONT ROYAL — Donnie Atwood has lived through several droughts on his family farm in Warren County.

There was the drought of 1963. At the time, Atwood was packing his bags and leaving for basic training while his family remained on the farm trying to provide for their cattle, sheep and hogs.

During that drought, there was an abnormally long period of low precipitation similar to what farmers across the Shenandoah Valley are experiencing today.

And then there was the drought of 1977.

“I don’t ever remember anything like this — except for '77,” Atwood said. “I always remember it getting dry at the end of the year. Normally in April, May, or June it’s fairly wet. But not this year. It’s been dry all summer long.”

Virginia has seen its fair share of droughts over the decades. The drought of 1930-32 was one of the most severe droughts on record in the state, while the drought of 1980-82 was less severe and had a shorter duration. But ask anyone in the Valley, and they’ll say the 1977 drought was especially bad for local farmers.

“In '77, corn was brought here from somewhere. We had to go to Southern States. We only had one pick-up truck at the time, had to load it and get it weighed,” Atwood recalled. “The cost was very low — I forgot how much — but I do remember thinking how much they eat.”

Atwood's five-generation farm, which covers roughly 500 acres, sits among the mountains with views on all four sides. With more than 300 cattle, the family farm is continuously in motion. During this unseasonably dry farming season, Al Atwood, Donnie’s son, said he started rotating the cattle's grazing periods and began providing feed at the end of July, something he said he has never had to do so early in the season.

While it's certainly not ideal, Al said it’s the only way to sustain the cattle through the extreme heat and dry conditions.

“[We’re] feeding them a little bit at a time to keep them full because really right now there’s nothing growing for them to eat,” Al said.

“Except for weeds,” Donnie added.

The Atwoods said they are feeding the cattle more MSG pellets to try and make the hay last a little longer, because as Donnie said, it’s hard to predict the future of farming when Mother Nature doesn’t cooperate.

“They’re grazers,” Donnie said. “Typically there’s grass right now. Like I said, some years you’re lucky and some you’re not.”

With the lack of rain, most farmers in Warren County, struggled during hay-cutting season. Al said he was only able to get one good cutting. While he waits on the rain, he made the decision to begin purchasing additional hay bales from local farmers to prepare for the months ahead.

“Most of us farmers finished making our hay a lot earlier because it was just so dry — and no rain,” Al said.

Other ways the Atwoods are managing their livestock through the drought include rotating their cattle on various pastures as well as considering destocking 30 to 40 cattle before the year ends, something they typically do but on a smaller scale.

Donnie said he recently drove to Woodstock and took the scenic route to see what other farms looked like.

“Don’t light a match or toss out a cigarette — it’ll all go up in flames,” Donnie said.

Al said that with the proper supplements, water and hay, they’ve been able to manage the cattle's health and well-being successfully. He hopes it continues.

“There are people out there who are much worse off than we are,” Al said.

Glancing ahead to the next few months and years, Al said he hopes the unseasonably warm temperatures and dry seasons won’t continue. But it’s hard to predict the future.

“I really hope it's not a year-to-year thing, but you just don’t know anymore,” Al said.

If it does continue, he worries that he will have to sell everything off and wait for the grounds to rejuvenate. And then possibly purchase everything back.

“Like everything else, with farming you just have to take it as it is,” Donnie said. “And make plans as they come along. And wait. Wait for the rains.”

Examining the weekly radar, Donnie said it would take a substantial amount of rain to bring the grasses back to grazing stage.

“It could start raining next week and you could have grass until January. It’s not likely — but stranger things have happened,” Donnie said.

To see the farmlands turn green again, Donnie said it would take two to three, maybe four days of steady rainfall. He said it would take a good several inches but not all at one time.

“We almost need a week of just steady rain — good rain on and off for the next eight weeks,” Donnie said. “It’s going to take a lot to fix the damage on the pastures.”

Recent rains in the county have done nothing but settle the dust. Donnie said there are chores to be completed around the farm but with the continued dryness, neither he nor his son want to

risk disturbing the ground. Donnie said all it would take is hitting a rock to create a single spark and that would be the end of the farm.

If there's one thing the father-son agree on is there's no sense in worrying.

"We have to pray for rain," Donnie said. "That's all we can do."