



This page, left: One night's collection; Middle top: Row cover over gourd plant; Middle bottom: Orgy of cucumber beetles; Right top: Scaring

Right page, left: Robust seedling; Right: A couple of cucumber beetles

Growing Gourds in Upstate New York: Cucumber Beetles Otto Ottoson, Contributing Editor



Striped cucumber beetle

This article is going to cover what we've learned about dealing with cucumber beetles. To be perfectly honest, we haven't learned everything, and we just keep trying different things and the cucumber beetles keep coming back to laugh at us. So, we'll tell you what we've tried and observed. We do like to garden organically, which means we don't use insecticide sprays. We don't grow that many plants, only a couple dozen or so, so we can spend time tending each vine.

We have two kinds of cucumber beetles, the striped cucumber beetle and the somewhat larger spotted cucumber beetle. The striped cucumber beetle shows up first, pretty much as soon as the gourd vines are planted. It's like they've been biding their time, just waiting for the vines to show up. They mostly seem to hang around the plants, on the leaves and in the flowers. They can be the carriers of the bacterium that causes bacterial wilt.

The slightly larger spotted cucumber beetles don't show up until later in the summer. They too can be found in the male flowers, but they will also chew on the gourds themselves, eating through the skin and leaving large scars. Sometimes they will go for one variety, and they can decimate every gourd on that vine. Pretty rude, if you ask me.

What do we do about these little six-legged, four-winged pests? The best place to start is with robust, lush, healthy, vibrant seedlings. Spindly plants with pale leaves are already weakened and more susceptible to attack. It is crucial to keep plants well-fed and healthy during that first month when they are in pots. When we're hardening them off before transplanting, we keep them covered with floating row cover to keep the cucumber beetles off of the plants. We bring them in at night if it's going to be too cold so as not to stress them.



Spotted cucumber beetle



We've written in a previous article about covering the new transplants with bonnets of floating row cover. The cover is put on immediately and the perimeter completely buried. This is a very effective method for keeping the adult beetles away. The cover is removed when the vines start to flower.

Ithaca is a college town. Cornell University has a large agricultural school, with some world-renowned experts in several fields. We have been introduced to the cucurbit specialist, the cucumber beetle specialist (now retired), and a couple other entomologists, who have been very happy to come and visit Gourderlandia and share their knowledge. It's so great to talk with people who are enthusiastic about their work, and get excited when they see what we are trying to do. The major words of wisdom we've been told? "Growing gourds organically might be one of the toughest jobs on the planet! Cucumber beetles love gourds and are very hard to control organically." That sure makes us feel better! At least we know we're not missing anything obvious.

One thing the cucumber beetle expert told us is that cucumber beetles don't overwinter in the soil. They go off to better shelter, usually nearby woods. We realized we've been covering our gourd patch with leaf mulch in the Fall, because leaves are free and readily available. But it's possible we've been creating a perfect habitat for the beetles to overwinter, right in our gourd patch. Last year, the Fall 2018/Winter 2019, we didn't do that. We left the ground uncovered through the Winter and all through the growing season. Cucumber beetle numbers were noticeably down. Just a coincidence? Perhaps the weather was a factor? This past Fall, instead of mulching, we planted a cover crop of Winter Rye, which will get turned in - in the Spring. We do like to experiment.



What about the weather? How much does it affect cucumber beetles? We've been told cucumber beetles much prefer hot and dry weather to wet weather. Probably our worst year for cucumber beetle presence was the driest, hottest summer in over 130 years of record keeping. No two years here are the same. The last couple years have been quite wet and pretty average temperatures (the average high here in July is about 81 degrees).

We've experimented with planting a trap crop, something that the beetles would love. The idea is they go to that plant instead of the gourds, thereby making it easier for us to catch them. Reading up on cucumber beetles' favorite squash, it appears Hubbard is at the top of the list. We planted some seeds, and growing squash was a complete failure. They struggled to grow, and then the gourd vines just ran right over them. More reading revealed what gets used as a trap crop to protect Hubbards. You guessed it. Gourds! It seems on the cucumber beetles' list of favorite cucurbits, gourds are at the very top. We have inadvertently planted varieties of gourds that the beetles seem to prefer over the other varieties. We could just keep planting one of those vines every year. But it's just too hard to watch all those good gourds getting chewed to bits by those voracious spotted beetles.

Vacuuming cucumber beetles was suggested to us. Cornell University researchers do this in their squash fields. We tried it, but it destroyed the gourd flowers. Tin foil, companion flowers, diatomaceous earth... we've tried a lot of things, and will keep trying more! Guinea fowl?

There are a couple of things we've noticed about cucumber beetles. They seem to be most active at night, when the

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Cucumber Beetles cont

gourd blossoms are open. They definitely prefer male flowers to female flowers. We used to think, "Well at least they're pollinating the plants." But we've been told by entomologists that that is not what they are doing. What they are doing is eating the pollen. The nerve! So bacterial wilt, eating gourds until they shrivel up, and no pollination. That's three strikes, they're out. We've also noticed that their favorite defense is to drop, just let go of whatever they're on and fall.

Okay, time to get down into the real nitty-gritty.....Hand picking! Yep, we do lots of hand picking. We've become pretty good at it. In fact, we almost never touch a single cucumber beetle, although it is kind of fun to snatch them out of the air, easier than catching flies.

Our approach to catching cucumber beetles uses a headlamp and a quart-sized yogurt container half-filled with soapy water. A little bit of dish detergent is all that's needed. We go out at



dusk and look for beetles. Early in the summer when the vines are small, just look around to find the beetles wherever you can. When the vines start flowering, we look in the flowers, especially the males. There can be anywhere from two to ten beetles in a single flower! Hold the container under the flower, tip the flower a bit, give it a gentle shake, and all the beetles fall into the water. The soap breaks the surface tension so the beetles can't float. Graham and I can each collect 50-60 beetles each night, and when they are at peak numbers, we can each collect 250 or more beetles. Those are the nights when the beetles, attracted by the headlamp, start flying right into your face! It can get a little, ummm, disconcerting? intimidating? They start to really bug you. Turn off the headlamp for a few seconds and they go away.

The following morning, when the flowers have closed up, you can go around with a larger bucket of soapy water, pick the spent male flowers and put them in the bucket. There are often lots of beetles hiding out in these closed up flowers.

During the month of July, we're out in the gourd patch pretty much every night (if it's not raining) pollinating the gourds and catching cucumber beetles. After July, it's mostly just catching beetles. We tend to relax a little more. After a month of being up until 11 o'clock or later, it's time to get to bed at a more reasonable hour. Night owls we are not.

Then there's the "No Cucumber Beetles" sign. You probably thought "Ha, pretty good joke." We're here to tell you that's the best deterrent of all. They really pay attention to that sign. 🐞



Pests in the Gourd Garden – Fall/Winter 2019

Contributing editor: *Ida Kennedy*

This year has been a real summer-sault in growing gourds. The Spring was wet and cool again, then we got a hot, dry spell, then the bugs started attacking. Actually, my garden did pretty well until the end



Top: *Mexican Bottle*

Middle: *Long Handle Dippers*

Bottom: *Baby Bottle*

of July, then a lot of my plants started getting a virus. I tried to spray them to stop it around mid- August, but I think I waited too long. Next year I plan on spraying for virus' before they even start to show up. I have been talking to other growers and a lot of them are having the same problem as I did this year. One grower I talked to said he contacts the Purdue Extension office in Indiana each Spring and gets their advice on what type of virus' they expect in the current season and what to use to help prevent it. He is one of the few growers I talked to that had good results since following Purdue's advice.

Quality vs Quantity. I was able to manage the bug problem pretty well. I planted a marigold plant in every hill and then put 1 or 2 gourd plants in the same hill. As the plants grew, I let the healthiest plant grow and cut off the weaker one. You don't get as many gourds this way but I am more concerned about getting a few good seed gourds. This also helps with the pollination process. I put a circular wire hog panel fencing, about 24" diameter x 48" high, around each plant. When it starts to vine, I wind the vines around the fence in a circular direction. It doesn't matter which direction you go in, but keep going in the same direction so your vines won't get tangled up too much. This also makes hand pollinating easier and more accurate. The plants can be put closer together and kept from intertwining to help reduce cross pollination.

Homemade Cucumber Beetle Traps. This year I made some insect sticky traps to set out to catch unwelcome visitors. To make the traps, I ordered **yellow 12 oz plastic cups and Tangle Trap Sticky Coating** on the internet.



To make the traps I first put a couple holes in the bottom of the cup and threaded a pipe cleaner (or zip tie) thru the holes to attach the cup to a wooden stake. Next, I painted the sticky coating on the inside bottom of the cup, and stuck a cotton swab or cotton ball in the bottom of the cup. To attract the beetles, **put 5 or 6 drops of clove oil on** the cotton swab. Last step is to coat the inside and outside of the cup with the Sticky Coating. I placed the traps by my trellis' and this worked very well. I will definitely use this method again to catch unwanted visitors.



You can look this up on Youtube.com and look up "Easy DIY Cucumber Beetle Trap." It will show you how to make a Cucumber Beetle trap like this.

End of the Growing Season. It's mid- October now. The frost just killed my plants a day or so ago. For Indiana, it is not unusual to have frosty nights this time of the year. I will be picking my gourds soon and putting them in my shed so they don't freeze solid. I hope to get the seeds harvested by December. There is still a lot of work to do with the seeds. I need to let them sit and mature for a short time, then remove, dry, and test the seeds for next season. I will store the seeds in foil bags until I need to package them.

If anyone would like to get involved with growing gourds for the seed so we can keep the different varieties going, please contact me. Ida Kennedy ikennedy@msn.com 219-767-2901. 🍷

Ode to a Cucumber Beetle

by
Graham Ottoson, Gourdlandia,
Ithaca, NY

Oh cucumber beetle,
So cute and so leetle,
Why do you do me these wrongs?
It's not just you, Mister,
But Uncle, and Sister...
Your family, the Hordes and the Throngs!

If it were only you,
I could spare one or two
Of my pepos (the immature gourds)
But they've chosen to dine
Upon the whole vine
These masses, the Throngs and the Hordes!

They don't take the hint
When I spray them with mint
Or with Neem, or with diatomaceous...
They persist in their visit
Oh tell me, why is it?
As a host, I could not be less gracious!

So please tell the lot
That they really must NOT
Cause my sweet viney darlings to wilt!
They must now desist,
For if they persist
Their beetle bug blood will be spilt!

I'll squash them and mush them
And pop them and squish them
I'll trap them and fry them for dinner

I'll bait them and trick them
And even hand pick them
It's war, and I must be the winner!

Oh cucumber beetle,
So cute and so leetle,
So stripey and nimble and gay
You must catch my drift,
Go Now! Be swift!
Exhort them to all go away!

But wait, one more thing
Before you take wing
Just one more small thing I must do...
If you would please come
Twixt my finger and thumb...
That's right, yes that's very good... ew.