the lazy gardener's guide to fungal

TOMATO DISEASES

THE BEGINNER'S GARDEN

Most gardeners have been there. We watch our young tomato plants grow by the day, thriving as their bright green leaves reach higher into the sky. Visions of plump, juicy summer tomatoes dance in our minds.

And then, we start to notice something awry. What are those brown spots? What happened to that bright green color to the leaves? Why are the lower leaves turning yellow?

The first time you experience this, you probably—understandably—begin to panic. What's going on? What can I do? Is my tomato plant ruined? Is all of my work for nothing?

Those were all questions I asked when I noticed those telltale signs of what I now know as fungal tomato diseases.

Now, after having battled this yearly for a decade—and also having produced enough tomatoes to stock my family's year-long supply of tomato products for almost as many years—I can tell you, fungal diseases on tomatoes aren't an immediate death sentence. If untreated, yes, you'll eventually lose your crop. But thankfully, it doesn't have to be that way.

WHAT ARE WE DEALING WITH EXACTLY?

Yellowing tomato leaves can be caused by a host of origins. But most commonly, gardeners deal with fungal diseases—namely, early blight and septoria leaf spot.

Early blight occurs, as its name implies, early in the season. It's generally exacerbated by humid conditions and excessive rainfall. Septoria leaf spot usually occurs later in the season but is also worse in humid and wet conditions. Both diseases present similarly—brown spots and yellow lower leaves. Septoria leaf spot will have a more conspicuous collection of brown dots with centers that become a tan color in time. Each lesion of early blight resembles a target with a brown spot in the middle and a bright yellow ring radiating outward.

In both cases, left unchecked, the disease will progress up the plant, with the affected leaves eventually turning brown, shriveling, and dying.

Our goal is not only to stop this "dying" part from happening but to slow down the progression of the disease in order to harvest as much from the plant as possible.

AN UNCOMMON APPROACH

Let's chat about my approach to these fungal tomato diseases, because my perspective on them will differ a bit from other resources you may find. I'm definitely not saying other resources are wrong but rather that I choose not to use many of those suggestions for various reasons.

For example, I'm an organic gardener, and I won't spray non-

organic fungicides in my garden. Very rarely will I spray even organic fungicides, either. I try to keep my garden as natural as possible.

But being an organic gardener isn't the only reason I don't use many of the common sprays and remedies. Even more of a factor is that I consider myself a lazy gardener.

A lazy gardener? No, you wouldn't look at my garden and describe me as lazy. I work really hard at my garden, and my space is quite large. I'm not lazy in the sense you might be thinking. Instead, because my time and effort are already stretched thin, I simply don't have the time and energy to stay on top of a spraying regimen or try every new solution that comes my way.

My time is my biggest commodity, and if I'm going to spend time doing something, it had better work.

So, in this guide, you won't find the most common remedies for fungal diseases. Instead, you'll find what I personally do to deal with this threat to my tomato crop and still manage to produce 99% of the tomato products my family uses for the entire year.

#1 DON'T PLANT IN THE SAME PLACE

The fungi that cause the most common tomato diseases are soil-borne, which means the disease lives in the soil. More specifically, it overwinters in infected plant debris from the previous year. By planting tomatoes infected with early blight, septoria leaf spot, and similar diseases in the same garden spot, you're giving the fungi easy access to attack your new plants.

Ideally, you want to wait four years between planting tomatoes, or other vegetables in the same family (like potatoes, which are highly susceptible also), in the same area. Sometimes I don't make it four years, but I like to definitely wait at least three.

I do want to caution you that rotating your tomato plants from year to year isn't a

cure. As I mentioned, this disease shows up without fail in my garden each year, no matter how well I rotate my crops. But by rotating, in my opinion, I'm buying time before the spores already in my garden find their way to the new planting. This helps the plants grow stronger and more able to withstand the disease early in their lives.

Related: Crop Rotation for the Home Vegetable Garden ▸

#2 MULCH WELL

The easiest way for fungal spores to infect your tomato plants is through splash-up, from the soil to the lower leaves of the plant. In order to prevent this, a heavy layer of mulch is a common practice—two inches minimum up to four inches.

What kind of mulch? Though my favorite mulch in general is wood chips, I haven't found them the best at inhibiting tomato diseases. Straw or organic hay have performed the best for me. (Don't use hay that isn't organic. Most likely it has been sprayed and will poison your entire crop. I learned that the hard way.) Other options include a thick layer of straight compost, pine needles, or shredded leaves.

Mulching with the residue of the cover crop winter rye has also been shown to prevent early blight, though in my one year of trying it I didn't notice a difference. However, I didn't have enough residue for the 2-4" thick layer, either. It's worth testing again.

Whatever mulch you choose, just use it. Don't let your tomato plants grow on bare soil without mulch. Doing so gives the fungal spores an unobstructed path to your tomato plants.

Related: 9 Organic Mulch Options for the Vegetable Garden ▸

#3 CONSIDER STRAW BALES

Straw Bale Gardening has become increasingly popular—for good reason. I've used it for two seasons and have been more than pleased with my results, particularly for tomatoes.

Although the tomatoes I planted in the bales eventually suffered from early blight, they were affected later than other plantings in the ground or in raised beds. I also plant a row of tomatoes right next to the straw bales, which probably serve as vectors of the disease to the plants in straw bales. I'm sure if I didn't have that planting there, I'd have even better results.

The reason for this is similar to the purpose of using mulch to prevent fungal diseases. The more of a barrier you can create between the soil and the leaves of your plant, the harder it is for those fungal diseases to take hold.

Related: Getting Started with Straw Bale Gardening ▸

#4 PLANT MORE PLANTS

This may not be a popular gardening opinion, but in many areas of my garden I have adopted an "if you can't beat 'em, join 'em" mentality.

I've learned that in my garden, partly because of our wet and humid climate, fungal diseases are unavoidable. That's why I plant more tomato plants than a gardener without those conditions might have to plant for the same expected production.

With that in mind, I'm not upset when I've had a good 4-6 weeks of tomato harvest and the fungal disease has won the battle because I've already gotten all that I need and more. And by that time, I'm actually pretty sick of canning tomatoes.

By planting more tomato plants than I think I need, I can stack the odds in my favor from a production standpoint and then take out the plants when disease starts to reach the point of no return.

#5 TEST DIFFERENT TYPES AND VARIETIES

Tomatoes come in two main types—determinate and indeterminate. (There's also semi-determinate, which is a blend of both.) Determinate tomatoes grow to a set height and produce its fruit in one flush—usually about a month of harvest. They generally begin fruiting earlier, though not always.

Determinate tomatoes like Romas can be a great choice because you're more likely to get a large harvest before the disease gets too entrenched. I've also found that Romas tend to suffer the least from early blight in comparison to my other trials.

Indeterminate tomatoes can grow all season, and I've found those to suffer more from fungal diseases simply because there's more time for them to be affected. That said, I've found some indeterminate varieties more susceptible than others.

If your garden suffers with fungal tomato diseases, test different types and varieties to see which yield more for you. Take note of harvest timing as well. For example, in my garden, Amish Paste tomatoes are the most susceptible to early blight, but they also yield earlier so I can get the harvest sooner, before they succumb.

#6 FOCUS ON SOIL QUALITY

I've grown a lot of tomatoes in a lot of different ways—in the ground, in raised beds with new soil, raised beds with old soil, straw bales, and containers. Here's the one thing I've learned from all of my observations: soil quality matters.

The crops I grow in raised beds with a hefty amount of compost (the top 4-6" of the soil is 100% compost) outperform the others exponentially. Let's compare two plantings of Roma tomatoes—one was in a new raised bed with ample compost, and one was in the ground bed that hadn't been amended much. Per plant, the Romas in the raised bed produced over five times in pounds than the ones in the ground bed.

Why does this matter when we're talking about fungal diseases? Because, as mentioned above, healthy plants can withstand disease onslaught more than stunted plants. Also, healthier soil creates an environment in which fungal diseases struggle to thrive. The Roma tomatoes in the ground bed suffered all season with early blight, despite my efforts that I'll list next. They just couldn't keep up a good amount of production because they were so sickly.

Just that comparison (and I continue to see the same year after year) convinced me that while we may learn all these tricks to combating fungal diseases, I'm not sure that any technique can compare with good soil to get good yield—particularly when diseases are present.

#7 PRUNE BOTTOM STEMS AGGRESSIVELY

Thus far we've talked about "big picture" ways of avoiding, dealing with, and living with fungal tomato diseases. Now we'll move on to specific strategies to employ in your garden.

The first is to prune the bottom stems of the tomato plants. If we know fungal spores live in the soil and often splash up on the bottom leaves, we want to keep those bottom leaves as far away from the ground as possible.

This may prove tough at planting because you want to bury the tomato plant as far as possible, but once your plant is about 12" high, you want to start cutting off those stems growing on the first 6" of the plant. As the plant continues to grow, continue trimming until at least the bottom 12" of the plant has no stems. The new leaves at the top will be doing most of the work, and the bottom limbs only will serve as vectors for disease. Don't delay this step; it's of utmost importance.

#8 DON'T PRUNE THE SUCKERS

This is probably going to be the most controversial of my suggestions, and I will admit that this suggestion may not be the best for everyone.

Most sources will recommend you prune the suckers of your indeterminate tomato plants to promote airflow, which helps inhibit fungal disease. I definitely get the logic in that, and you may find it makes a difference in your fight against early blight and septoria leaf spot.

But for me, I tested it one year. I left one row unpruned and I pruned all of the suckers off another row. This planting was mainly Amish Paste and a few others, for reference. What I found is that the unpruned row actually yielded more tomatoes than the pruned row. (Here are more details on my test.)

What about disease, though? The disease that year was worse than I'd ever seen it, and it affected both rows. But the difference in the unpruned row was that those plants had more foliage so it took them longer to die. The pruned row was affected just as much and died quicker because it has less foliage volume in total. For that reason, I don't generally prune the suckers of my tomato plants. It's a similar train of thought behind why I plant more tomato plants altogether—the more growth I have the more likely I'll get a better harvest.

Here's the key to this suggestion: test it in your garden. My conditions will be different from yours, so you may have different results.

While there are lots of reasons to prune suckers, in my garden, preventing disease isn't one of them.

#9 TRIM DISEASED STEMS REGULARLY

This step is the hardest one for us lazy gardeners, but I include it because for me, this is a MUST.

When you notice fungal disease on your plants, it's imperative you do everything you can to remove those leaves and stems as soon as possible. These diseases spread rapidly, especially in wet and humid conditions.

Be brutal in your pruning. Consider each affected stem a vector for disease. Get it out. Use a sharp pair of pruners (don't snap with your fingers or you could damage the plant) and do this in the evening. That part is really important. I love to work in the garden in the morning, but trimming fungal-infected leaves and stems when dew is still on the plant is to be avoided at all costs.

In the height of the summer, or when spring rains come relentlessly, this is a task that I try to do weekly while the tomatoes are growing. It's not fun, but I click "play" on a good podcast to make it more enjoyable.

#10 DON'T USE TOMATO CAGES

This is a tough one to suggest, because I love the tomato cages I use. They're "set-it-and-forget-it," which is the ultimately lazy gardener solution for trellising tomatoes. But I have to admit, trimming fungal-affected leaves in those cages is more than frustrating.

Particularly when the tomato plant is full-grown, I have to fight through leaves and through the openings in the cage to get to the juncture between the main stem and side stem to cut it. Then I have to fish the entire stem out, which probably deposits more fungal spores around the area at the same time.

Oftentimes I just don't do it. And when that happens, of course, the disease continues up the plant, unhindered.

The easiest way, I've found, to stay on top of the relentless trimming that's necessary with fungal diseases is to trellis the tomatoes up a livestock panel. I do this with my straw bales, but I've also done it with the "one-string" method (more on this method here). Either way, there's no hindrance to reaching the stems to cut like there is with traditional tomato cages. And when you take that hindrance away, you're more likely to follow through.

#11 CONSIDER PROPAGATING MID-SEASON

I mentioned earlier that I grow tomatoes to preserve for year-round use. This means that almost all of the tomatoes I grow are for preservation, and once my preservation goals are met, I no longer need the tomato plants. That makes it easy to remove those plants when I'm finished with them, which usually coincides with the overtaking of the fungal diseases. For me, this is usually in mid-August.

But what if you want fresh tomatoes longer? In my climate, I can grow tomatoes through October before a frost would kill them. It's rare that this happens, however, due to the fungal pressure.

Even though most of the tomatoes I grow are paste tomatoes for preservation, I do grow a few slicing tomatoes for fresh eating. In this case, I've learned to propagate new tomato plants for a later summer crop.

This is easier than it seems. In mid-summer, find a tomato sucker that's about 4-6" long. Clip it with pruners and put it in a jar of water and leave outside. I mix my water with Organic REV, because Organic REV stimulates root growth. After a few weeks, you'll notice the stems developing roots. When this happens, plant the young plant in a small container with potting soil. You now have a baby tomato plant without having to start the seeds. Once it gets established, then plant it wherever you want it to go. Of course, fungal diseases are still an issue in the garden, so don't plant it where tomatoes have grown recently. I prefer to plant mine in grow bags with new soil.

#9

This entire process only takes a few minutes per step, and you can have bonus tomatoes later in the season, long after you've waved the white flag to the fungal diseases in your main crop.

CONCLUSION

We've made it through eleven steps you can take to help prevent fungal diseases from spoiling your harvest entirely. You'll notice no mention of sprays, treatments, non-organic compromises, or old wives tales that may or may not work.

Instead, my hope is that you consider this alternative approach. While we all want spot-free, beautiful plants all season long, this is not reality for many of us. I, for one, am tired of fighting an uphill battle with my climate conditions. My tomato plants look sad in August, but you know what? My pantry is full of tomato products and we don't buy tomatoes from the grocery store, ever.

One last note—you'll notice I mention my climate quite a bit. I live in the southeastern US with excessive spring rain, summer heat, and season-long humidity. I have learned how to deal with fungal diseases that thrive in these conditions. But know that all gardens are different. You may struggle more or less than I do. You may find some of my strategies work for you and some don't.

This guide isn't a prescription; it's a jumping off point to give you ideas to test in your garden. No one will know your garden and your climate better than you, so take these ideas, test them, and let me know what you learned!