

## Daffodil Pests and Diseases

August, 2001

One of the nicest things about growing daffodils is that they are relatively pest- and disease-free. I've been growing daffodils seriously for over 30 years, and have never had problems—until this year. This year I learned that my daffodils were infested by the bulb and stem nematode, *Ditylenchus dipsaci*. This may be the most dreaded daffodil pest, because the soil also gets infected, and it must be sterilized, or left fallow (no weeds, no other plants) for at least two years (three is better), before you can plant daffodils there again. This pest was confirmed by my state university, through the County Extension Service. So, everything in the affected beds had to be dug—daffodils, perennials, everything. My soil has been fumigated, by professionals, the perennials were given away to non-daffodil growing friends, and I've given the remaining bulbs hot water treatment. The HWT was easy enough to do, though time consuming. Amateurs have done this several different ways: using an ice chest and filling it with water of the desired temperature (112 degrees F) and immersing the bulbs for three hours. You have to keep checking the temperature of the water, adding more hot water if the temperature goes below 112 degrees. I used a warming tray that you might use on a buffet table and an old canning kettle of my mother's. The warming tray kept the temperature pretty steady, though I did have to add some cold water when the temperature got too high. We don't hear much about nematode infestation, because reputable growers are all very careful with their bulbs. But I understand they can come into your garden in a pot of perennials. In my case, I think they came in with some mushroom compost I added to the beds two years ago. So what were the symptoms? I didn't notice the classic symptoms of leaf "spikkels." In my case, the bulbs just plain didn't come up! The nematodes eat the bulb, then when it has disintegrated, they migrate through the soil to other bulbs.



The Narcissus Fly, *Merodon equestris*, can cause bulb losses. It looks like a large fly, but has the coloration of a bee. It emerges in the first really warm days of spring, usually towards the end of flowering season, and can be spotted flying erratically in and around the daffodil foliage. It makes a buzzing noise. It doesn't go for the flowers, but sits on the foliage, and would eventually crawl down to the soil and deposit its

egg at soil level. The larva hatches, and goes down to the bulb where it usually enters from the basal plate, though it can also enter the bulb from the top or

sides. It lives in the bulb over winter, feasting on your choicest bulb, and emerges the following spring. It doesn't always kill the bulb. Sometimes you might find very fine foliage, sort of grass-like, instead of typical foliage. This means the fly has eaten the center of the bulb, and tiny bulblets have formed around the edges of the bulb. In time these will become big enough to bloom again. Hot water treatment will kill the larva in the bulb, and there are also chemical controls available. The photo clearly shows the entry point of the larva, and the smaller bulblets around the base of the bulb.

There are several kinds of viruses which attack daffodils, yellow stripe being the most common. It's easy to identify, as there are noticeable yellow stripes vertically through the leaves. There's no cure for virus; you just have to dig the bulb and throw it away. DON'T put it on your compost pile. It goes into the trash! Sometimes you'll see color breaking in the flower as well; a yellow flower may have blotchy white patches in the bloom. You may think, "Oh, well, it doesn't look SO sick; I'll just keep it awhile." Bad move. The virus can be spread by aphids, or by your cutting knife if you pick the flowers.

Basal rot, *Fusarium*, is another troublesome disease. This occurs most frequently when you have hot, moist summers. Some cultivars are more susceptible than others. I'm told that white daffodils are very susceptible, and don't do well in the South. They just don't come up. It helps if you plant late in the fall after the soil has cooled, and you could also give the bulbs a dip in a fungicide. Don't use a lot of fertilizer high in nitrogen; it contributes to the problem as well.

You should examine the bulbs you're planting very carefully. Give the bulb a squeeze. If it's sort of soft, like a marshmallow, it's likely got a bulb fly larva inside. Look carefully for the telltale holes where the larva entered. And discard the bulb (trash, not compost!).

You're not very likely to encounter these problems, but it pays to look out for them!

Check the Washington State University, UC Davis, and Geophyte bulb pest page (Clemson University) sites in my links, as well as those below, to learn more about daffodil diseases and pests.

[http://ipmwww.ncsu.edu/INSECT\\_ID/AG136/f...](http://ipmwww.ncsu.edu/INSECT_ID/AG136/f...)

<http://www.cas.psu.edu/docs/CASDEPT/PLAN...> (plant diseases of narcissus)