

CONSUMER

ALERT



Late Blight on Tomato & Potato Found in Oneida County!!!!

This is a highly contagious airborne Plant disease that can quickly spread to other gardens and Fields!

If you suspect your plants are infected

DO NOT

bring contaminated material to local garden centers for identification.

Instead visit

<http://counties.cce.cornell.edu/oneida/>

or contact

Cornell Cooperative

Extension of Oneida County at

736-3394

DISEASE DESCRIPTION: This caused the Irish potato famine and can knock down a crop within a week. Classic symptoms are large (at least nickel sized) olive green to brown spots on leaves. When conditions have been humid (early morning or after rain) fuzzy white fungal growth may appear on the underside of leaf. Sometimes the lesion border is yellow or has a water-soaked appearance. Leaf lesions begin as tiny, irregularly shaped brown spots. Brown to blackish lesions also develop on upper stems. Firm, brown spots develop on tomato fruit.

TREATMENT: There is no treatment once the plant is infected. To prevent the spread of this disease double bag infected plants and place in the trash.

Do not compost!!!!!!!!!!

PREVENTION: If your plants have not been infected apply fungicides containing **CHLOROTHALONIL** follow the manufactures instructions.



This information is supplied with the understanding that no discrimination is intended and no endorsement by Cornell Cooperative Extension is implied.

Some of the products listed above may be legal for use only on tomatoes, some only on potatoes, and some are legal for use on both. Check the pesticide label for specific directions and follow them exactly. Pesticide labels are considered legal documents; if you do not follow the label directions you are breaking the law.

Additional products may be available for commercial use. Commercial applicators should refer to the appropriate commercial pest management guidelines, or contact their local Cooperative Extension Office for more information on currently registered products. The Cornell *Integrated Crop & Pest Management Guidelines for Commercial Vegetable Production* is currently available on-line. See: <http://www.nysaes.cornell.edu/recommends/>.

Some **chlorothalonil** products registered in NYS for "home garden" use for Late Blight and/or Early Blight on potato and tomato, and for Septoria Leaf Spot on tomato are listed below. Note: Additional products may be available. Early Blight and Septoria Leaf Spot are other common diseases we are seeing on plants during the 2009 growing season in NYS.

Bonide Fung-onil Multi-purpose Fungicide: EPA Reg # 4-410,

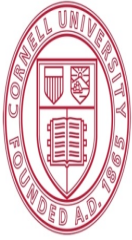
Bonide Fung-onil Multi-purpose Fungicide Concentrate: EPA Reg # 60063-9-4,

Fruit Tree, Vegetable & Ornamental Fungicide: EPA Reg # 60063-9-54705,

Garden Disease Control Concentrate - Ortho Group: EPA Reg # 239-2522,

Gardentech Daconil Fungicide Concentrate: EPA Reg # 67572-82-71004, or

Gardentech Daconil Fungicide RTU: EPA Reg # 67572-2-71004



Cornell University
Cooperative Extension
Oneida County

PRESS RELEASE

FOR IMMEDIATE RELEASE

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For Release:
Immediate
July 28, 2009

So you've got the Late Blight! Now What!!!!

As many of you know (because you have had to destroy your entire Tomato crop) Late Blight arrived early and with a vengeance in upstate New York. Those of you who still have healthy tomato or potato plants should start a fungicide treatment immediately. Look for products containing the chemical Chlorothalonil. Follow the manufactures instructions for application rates.

If you do have Late Blight here is what you need to know and do!

- Confirm that it is late blight visit these two websites:
<http://counties.cce.cornell.edu/oneida/tomato%20blight.pdf>
<http://vegetablemndonline.ppath.cornell.edu/>
- If it is Late Blight remove plants. Dispose of by double bagging and putting in the trash. Do not compost!
- This highly contagious air-borne disease will not survive our freezing winters in the soil. Therefore you do not have to treat the soil. However it is very important to practice crop rotation. Do not plant: potato, tomato or peppers in the same spot next year as these plants not only belong to the same family, they also absorb and require the same nutrients. Nutrient poor soil leads to plant stress and disease susceptibility.
- If you have Late Blight on Potato, this is the disease that caused the Irish potato famine that killed millions of people. The disease itself is not harmful to people, so yes it is safe to cut out or around the diseased parts and eat the potato or tomato. So, why the famine? Because the diseased potato will not keep for long periods of time, the cool conditions where potatoes are stored is not cold enough to kill the spores, causing next years crop to be infected.

So what do you do with that empty space where your tomatoes/potatoes once were?

Tony Salerno, Master Gardener and vegetable guru says "don't let that garden space go to waste. Improve the soil for next year, plant a cover crop or use the space for bush beans, beets, carrots, broccoli, cabbage or garlic."

Visit the Home & Garden, Fact Sheet, section of the Cornell Cooperative Extension of Oneida Counties website for help on your home gardening needs www.cce.cornell.edu/oneida/

July 29, 2009

Northeast Tomatoes Lost, and Potatoes May Follow

By JULIA MOSKIN, New York Times

RIPE local tomatoes, keenly anticipated by growers and cooks, will be missing from many markets, farm stands and farm shares this summer.

Although there are no official estimates yet on crop loss, a severe outbreak of late blight fungus in tomatoes, first noted in June, is sweeping through farms and gardens in the Northeast.

John Mishanec, an educator with the integrated pest management program at Cornell University, compared the highly contagious and incurable disease to a "nuclear explosion" in the region's tomato crop. "And unless the weather changes, it's going to get worse," he said.

Consumers, he and others said, must be prepared to pay high prices to support local agriculture this summer.

Organic farmers, who have only a few approved weapons in their arsenal of pesticides, are absorbing much of the damage. Other farmers, whose tomatoes are already coming in late and stunted because of cool, wet weather, are waiting to see if pesticides, sunshine and luck will cooperate to prevent the infection from reaching their fruit.

The Hudson Valley region of New York, where the disease has jumped from tomatoes to potatoes and is wreaking havoc in both, has already experienced widespread crop loss. "I've never seen anything like this," said Amy Hepworth, a seventh-generation farmer who is raising 20 acres of organic tomatoes in Ulster County, N.Y., for customers that include Whole Foods and the Park Slope Food Co-op. On July 25, she was burning affected plants to try to prevent the fungus's spores from spreading farther into her fields.

Keith Stewart, a farmer in Orange County, N.Y., who has lost much of his tomato and potato crop, estimates his loss so far at \$40,000. Jay and Polly Armour, who grow about 40 different kinds of tomatoes at Four Winds Farm in Gardiner, N.Y., say that at least half their crop is gone. They sprayed their tomatoes for the first time in 20 years of organic farming, but the disease had already taken hold. "The fruit is rotting under the spray," Mr. Armour said.

Farmers and pathologists said that the fungicides available to organic farmers, mostly copper-based sprays used since the 19th century, are only intermittently effective.

Many farmers say that tomatoes are their most important cash crop and that the blight will be devastating. "Tomatoes get me out of debt every year," said Kira Kinney, an owner of Evolutionary Organics in New Paltz, N.Y., who has late blight on potatoes and tomatoes and expects that most of the crop will be destroyed. "I go into the season with credit card debt and I come out O.K.," she said. "That's how I cover my annual costs for the whole farm."

On July 23, William van Roestenberg said that 11 of the 12 growers who participate in the weekly farmers' market he runs in New Paltz had already seen late blight in their fields that was likely to ruin their crops. The next day, the 12th farmer — Mr. van Roestenberg himself — found the disease on his own tomatoes.

Late blight, which caused the Irish potato famine in the mid-19th century, thrives in damp, windy weather. Its symptoms include white powdery spores, brown spots on leaves and open lesions, each of which can produce hundreds of thousands of infectious spores. Burning, spraying and deeply burying infected plants are options for farmers; home gardeners should pull plants out at the first sign of the disease. Rather than composting them, the plants should be sealed in plastic bags and thrown away.

Every state in the Northeast and mid-Atlantic has confirmed recent cases of late blight, which normally does not appear in the region until August, if at all. The source of the outbreak is being investigated by pathologists. Home gardens likely helped spread the infection: Lowe's, Home Depot, Kmart and Wal-Mart all sold tomato seedlings with late blight in their garden centers from April to June. All are offering refunds or credits to gardeners who must destroy their plants.

But there is no similar recourse for farmers. Even those who have not lost a crop to blight are suffering financially because of it. To ward off the infection, which has been sweeping through farms in her area, Ms. Hepworth has been spraying all her plants with a covering of fixed copper, an approved organic fungicide that creates a physical barrier preventing spores from reaching the plant. Because copper, unlike synthetic fungicides, washes off in heavy rain and must be carefully reapplied, "It costs me \$1,000 every time it rains," she said.

Dale Mohler, an agricultural meteorologist at AccuWeather.com, said that low temperatures in June and July broke records across the Northeast and that rainfall is running 50 to 100 percent higher than normal around the region. Mr. Mohler, who said he lost his own home-grown tomato plants to late blight, said August isn't likely to bring the sustained hot weather — about 10 days with temperatures above 85 and dry conditions at night — that could stop the continued spread of late blight.

Like other growers, David Hambleton, a farmer in Dutchess County, N.Y., whose crop is shared by about 250 members of the Sisters Hill Farm community supported agriculture program, is concerned that members who do not receive the vine-ripe juicy summer tomatoes they look forward to will not pay \$500 to \$700 for a share next year. "Last year was a bumper crop, one of the best ever," he said. "This year, we'll have to ask our members to participate in local agriculture in a more realistic way."

Farmers who do not practice organics, like Bill Maxwell of Changewater, N.J., are using pesticide sprays to protect their tomatoes, but still must worry about blight, weather and the state of the crop, which is running about a month late. "I have huge, beautiful cauliflowers, but I'm not going to make a lot of money on that in July," he said. "People want their tomatoes."



Crop Rotation for the Vegetable Garden

To get the best from your vegetable garden, you should practice a crop rotation management system. This entails only growing the same kind of crop in the same position one year in four. By moving plant groups each year, the soil doesn't get depleted of particular nutrients as different types of vegetables use different ones from the soil. Nutrient deficiencies cause plant stress which in turn makes a plant more susceptible to disease.

Divide your vegetable garden into four sections. The next year move the same plant group into the next section as shown in the diagram. That way each group will go back into its original section every four years

FIRST YEAR

| BED 1 | BED 2 | BED 3 | BED 4 |
|--|---|---|--|
| BEANS CELERY CORN EGGPLANT ONIONS PEAS PEPPERS SQUASH TOMATOES | BROCCOLI BRUSSELL SPROUTS CABBAGE CAULFLOWER LETTUCE SWEET BASIL | BEETS CARROTS POTATOES RADISHES TURNIPS | PLANT A COVER CROP. SPREAD/TILL IN COMPOST OR "GREEN MANURE". |

SECOND YEAR

| BED 1 | BED 2 | BED 3 | BED 4 |
|--|--|---|---|
| PLANT A COVER CROP. SPREAD/TILL IN COMPOST OR "GREEN MANURE". | BEANS CELERY CORN EGGPLANT ONIONS PEAS PEPPERS SQUASH TOMATOES | BROCCOLI BRUSSELS SPROUTS CABBAGE CAULFLOWER LETTUCE SWEET BASIL | BEETS CARROTS POTATOES RADISHES TURNIPS |

Helping You Put Knowledge to Work

THIRD YEAR

| BED 1 | BED 2 | BED 3 | BED 4 |
|---|---|--|---|
| BEETS CARROTS POTATOES RADISHES TURNIPS | PLANT A COVER CROP. SPREAD/TILL IN COMPOST OR “GREEN MANURE”. | BEANS CELERY CORN EGGPLANT ONIONS PEAS PEPPERS SQUASH TOMATOES | BROCCOLI BRUSSELS SPROUTS CABBAGE CAULFLOWER LETTUCE SWEET BASIL |

FOURTH YEAR

| BED 1 | BED 2 | BED 3 | BED 4 |
|---|---|--|--|
| BROCCOLI BRUSSELS SPROUTS CABBAGE CAULFLOWER LETTUCE SWEET BASIL | BEETS CARROTS POTATOES RADISHES TURNIPS | PLANT A COVER CROP. SPREAD/TILL IN COMPOST OR “GREEN MANURE”. | BEANS CELERY CORN EGGPLANT ONIONS PEAS PEPPERS SQUASH TOMATOES |

Do not plant potatoes where tomatoes, peppers or eggplants were grown the previous year

This publication contains pesticide recommendations. Changes in pesticide regulations occur constantly, some materials mentioned may no longer be available, and some uses may no longer be legal. All pesticides distributed, sold, and/or applied in New York State must be registered with the New York State Department of Environmental Conservation (DEC). Questions concerning the legality and/or registration status for pesticide use in New York State should be directed to the appropriate Cornell Cooperative Extension Specialist or your regional DEC office. **READ THE LABEL BEFORE APPLYING ANY PESTICIDE.**

Updated 2009

Source: <http://www.yankeegardener.com/resource/croprotate.html>

Vegetable Pest Status Report August 6, 2009

By John Mishanec, IPM Vegetable Program

Potatoes

Late blight came into the region on tomatoes. It appears to be a tomato strain.

http://vegetablemndonline.ppath.cornell.edu/factsheets/Potato_LateBl1983.htm

This means it is more aggressive on tomatoes than potatoes. Growers with LB on their tomatoes, with a good protective fungicide program on their potatoes were not showing late blight. Organic growers were not seeing the aggressive knock down of plants in their potatoes they were seeing in the tomatoes. As time passes, late blight has crept into the potatoes and could seriously endanger the crop.

Late blight on tomatoes is pretty apparent on both the plant and the fruit. When a spore lands on a leaf, it makes a large spot with lots of spores on the underside of the leaf. Those millions of spores then either spread to more leaves or land on the tomato fruit. That is why it spreads and kills the plants so quickly.

With potatoes, the tubers are under the ground. For a tuber to become infected, a spore needs to wash down cracks in the ground and attach itself to a tuber. Obviously, it is more difficult for a spore to come into contact with a tuber than an exposed tomato fruit. If you have late blight in your potato field, assess how wide spread and aggressive it is. With lots of spots on the plants, you will have lots of spores and more chance to infect tubers.

As the late blight gets worse in the potatoes, growers should assess if it might not be a good idea to kill the plants before late blight gets really bad in their fields. Most growers are digging some early potatoes now. With all the rain we have had, potatoes have generally sized up very well by now. Go out and assess the rest of your potatoes to see if you can get away with killing the tops on everything now. If you feel you have a yield you can live with, mow or kill off the tops of your potatoes to avoid more spores and more late blight infestation.

Late blight will not survive on dead tissue, therefore, if you kill or eliminate the tops, than when you dig the tubers, this will lessen the chance of tuber infection. If you are organic, either mow off the tops or allow them to be completely dead. You should wait at least two weeks with the tops completely dead for skin set before digging tubers.

Once you have dug your tubers, do not wash them before putting them into storage. With the cool, moist conditions of storage, any potato with late blight will turn to mush and bring all the other tubers around it down too. Store your tubers in as small batches as possible to lessen the chance of tuber infection spreading to the bigger storage population. Increase ventilation to help keep the humidity down in your storage area.

If you can, grade your potatoes well before selling them. Look for dark spots on the tuber. When you wash potatoes try to make sure they are dry before bagging. Wait a few days after bagging to make sure you do not have any break down.

According to Vern Grubinger, UVM, organic growers can use Storox (Oxidate) or chlorine (must dilute to 4ppm before discharge) at labeled rates in wash water; another more effective option for suppressing late blight tuber rot appears to be Phostrol but it is labeled for russet-skinned varieties only.

Lastly, if you have more than one variety of potato, assess which varieties show the disease more. From my unscientific observations, Keuka Gold and Katadin show less disease than other varieties. Red Norland shows the most.