

# FIGHT THE BLIGHT – An Editorial

June 14, 2010

## PROVINCE ADVISES LATE BLIGHT FUNGUS FOUND IN RETAIL TOMATO PLANTS

### Fungus Can Harm Potato, Other Nightshade Plants

Manitoba Agriculture, Food and Rural Initiatives (MAFRI) advises that last week the fungal disease ‘late blight’ was discovered on tomato seedlings at several retail locations in Winnipeg and Brandon, raising concerns in Manitoba’s potato industry... *“this fungus is a serious disease issue for vegetables and weeds in the nightshade family that includes tomatoes and potatoes. The retail outlets involved have stopped selling the tomato plants. In order to identify the source of the infestation, plant suppliers have also been notified and action has been taken to prevent further distribution of infected plants”.*

Forget about the potato industry. Most commercial farmers sprayed their way through last season and ended up with a normal-enough looking crop. But 2010 was a heartbreaking year for home gardeners, as a nasty blight worked its way across Manitoba decimating all but the most remote or chemically treated tomatoes.

First word of the blight appeared in a June 14 press release from Manitoba Agriculture in June. Home gardeners were advised to dispose of infected plants by removing all plant parts and burning them away from the garden or by bagging them, sealing the bags, and “cooking” them in the hot sun.

As the summer progressed, many of us felt we had beaten the blight. We had planted healthy heritage plants that we knew from past years were great producers. Our JUST Community Market plants are always started in fresh soil. This year, I planted them into a freshly dug and organically amended virgin garden plot. And, although we live in the country, our garden clearing is surrounded by thick bush. Other people across the province did their own starts from their own saved seeds, as they have always done. While it was a damp year, by mid-summer my plants were the biggest ever, taller than my head, perfectly healthy and loaded with unripe fruit.

*Plants susceptible to late blight include potato, tomato, various nightshade weeds and other solanaceous plants. The disease affects all parts of susceptible crops (ie foliage, fruit, tubers, etc). Late Blight spores are microscopic and are dispersed by the wind.*

*MAFRI, June 2010*

Then one weekend, I ran into a local potato farmer who asked me... *“Do you have blight yet?”*. *“No”*, I replied smugly. *“Well, you will”* he stated.

That weekend, I surveyed my garden with smug satisfaction. Everything was thriving beautifully on the mid-season feed of compost tea. Then a wet wind blew in from the west, right up our 200 foot drive cut into the bush. On Monday, August 9th, a few Yukon Golds at the entrance to the clearing looked a little... odd. The very next day, my tomato patch was full of lesions, breaking out on fruit, stem and leaf. Working quickly, I bagged up the worst of it, pruned back the best looking plants, harvested as much fruit as possible, and sprayed with hydrogen peroxide.

By Saturday, everything left was totally infected. My salvaged fruit was grey and rotting. I ripped everything out, including the mulch, and hauled it to the burning pile at the RM landfill. I pulled the Yukons and stored them in the basement, checking weekly, eventually loosing about 30% to blight in storage. The Reds were next to the tomatoes, so we pulled off the tops, sprayed the residue with copper sulphate, kept them stored underground. In the fall, we dug them up. In storage, we lost about 20%. Interestingly, the pepper plants that shared the tomato bed were unaffected.

Some people to the east who got the blight a few weeks later actually managed to harvest and can their fruit right off the blighted vine, but one story I heard from a long-time country gardener was particularly troublesome. Life-long canner Liz Klotz of St. Claude had managed to preserve a lot of fruit, but over Christmas, when she opened her first jar of whole tomatoes, she found a grey white fuzzy blight mould INSIDE the fruit. Thinking it was some kind of anomaly, she opened one jar, then another. All of the beautiful red fruits were rotten from the inside out. Others who had made crushed tomatoes, or sauces, had better luck, which is useful information. It is clear that the heat of processing is not adequate to kill the blight spores, but the acid/salt mix used to preserve the tomatoes will do the trick.

*Some infected tomato plants will have been purchased by the public and planted in local gardens. Under favourable conditions, the spores on infected plants can be carried to nearby fields primarily by wind and infect other plants like potatoes. Manitoba has a significant potato industry and the spread of this blight could jeopardize the quality and market value of this year's crop.*

*MAFRI, June 2010*

## Implications

The fact that the blighted tomato seedlings were being sold simultaneously at several unnamed retail outlets in Winnipeg and Brandon makes me assume that both the greenhouse supplier and the outlets were "*too big to be named*" - big box-type stores. Now, more than ever, it is important to maintain food security and genetic diversity by maintaining smaller operations, and by growing and saving seed from open pollinated heritage varieties. It is this old stock that breeders turn to when searching for traits of blight resistance. I also can't help but notice that the MAFRI bulletin is 100% concerned with the cross-contamination of the commercial potato crop.

But what were the implications for market gardeners, home gardeners, and organic farmers? I live in sparsely populated rural Manitoba, in the bush, where the kitchen gardens are small and few and far between. It seems a far stretch that Manitoba winds became

saturated with blight spores because a handful of oblivious kitchen gardeners did not notice their 1) tomatoes were blighted and 2) had reached the stage of spore creation. IMHO, the elimination of shelter belts and bush pushing to enable industrial sized potato operations were the real vectors of the blight that impacted Manitoba's home gardeners, creating a tomato famine in the canning cupboard.

## So what about this year?

Long-time gardeners are approaching the season with trepidation. Old-timers say that the only chemical-free way to beat the blight is to hope for a really dry summer or two, and rest the soil from **Solanaceae** plants for as much as 8 years. Organic systems allow for only the occasional copper sulphate spray, and then only sparingly so that metals will not build up in the soil. Copper spray is also a preventative measure – it must be applied before the plant comes in contact with the blight spores. Hydrogen peroxide in watering water didn't really help.

So, this year, we are starting yet another fresh plot, this time in a clearing about 100 feet away from the infected beds and the driveway, which we have decided is a vector for not only wind-borne blight, but other nasty sprays that are part of today's standard agricultural practices. In addition to our heritage varieties, I am trying an expensive hybrid that is touted to be blight-resistant. Limited quantities may be available to our customers.

We will be spacing our plants further apart and pruning and staking with more care to allow more plant isolation and circulation. If it is a really wet summer, I might not mulch to allow better drainage. And I won't be smug until the fruit is in the pudding, so to speak.

If you have any advice or guidance on how you have successfully dealt with blight, I'd love to hear from you. Meantime, good luck to you, Goddess Bless your greens and fruits this summer!

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