



Root rot on young apple tree

Posted by [Claude Jolicoeur](#)

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[Claude Jolicoeur](#)

[Root rot on young apple tree](#)

May 02, 2022 07:16AM

Registered: 11 years ago

Posts: 226

This is some kind of collar rot that I found on a young apple tree yesterday.

All the top of the tree looks healthy and the tree has been very vigorous last summer.

However, at ground level, the bark simply disintegrated upon touching it. Only the solid wood in the middle remains.

Out of about 80 trees I have grafted and planted in the last 5-6 years, this is the third time I see this. Interestingly, in all 3 cases, the problem happened after a summer of very good growth on the tree, which appeared very vigorous and healthy. This indicates the problem only started late in fall or during the winter, and the damage happened very quickly. It does look as if the whole root is dead.

This particular tree is on B-118 rootstock, and the 2 previous occurrences were on Beautiful Arcade seedling.

Here are 2 photos, the second after diggind a bit (click on [open image URL] to see the photos):

Is this the disease called collar rot? It doesn't correspond to what I can see as collar rot with Google.

I have planted 2 small trees which I will graft to the top of this tree in hope this might save it... We'll see!

[Jolicoeur Orchard](#)

Zone 4 in Quebec

Author, [The New Cider Maker's Handbook](#)

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[David Maxwell](#)

[Re: Root rot on young apple tree](#)

May 03, 2022 12:27AM

Registered: 11 years ago

Posts: 197

I don't know what it is, but I had it on a number of young trees in the past, and thought it was due to meadow voles girdling the tree. I made inarch grafts on most of them, and, many years later have relatively healthy tops, although the trees are significantly stunted. In fact, I am in the process of removing most of the "repaired" trees while replanting at a wider spacing. (I planted my orchard too close originally.)

[Broomholm Orchard](#)

Zone 5b in Nova Scotia

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[Steve Dagger](#)

[Re: Root rot on young apple tree](#)

May 03, 2022 06:30PM

Registered: 9 years ago

Posts: 28

Claude - Check out this reference to see if it helps identify what you are dealing with: [treefruit.wsu.edu]

Phytophthora fungi are widespread and common and can also be confused with a few other factors. I've had problems in the past where I have sprinkler irrigated younger trees.

[Pommes de Terre Acres](#)

USDA Zone 5 - Dixon, Montana

Intermountain West Region

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[Claude Jolicoeur](#)

[Re: Root rot on young apple tree](#)

May 03, 2022 07:35PM

Registered: 11 years ago

Posts: 226

Steve Dagger Wrote:

> Claude - Check out this reference to see if it

- > helps identify what you are dealing with:
- > [treefruit.wsu.edu]
- >
- > Phytophthora fungi are widespread and common and
- > can also be confused with a few other factors.
- > I've had problems in the past where I have
- > sprinkler irrigated younger trees.

Thanks for the link.

It does look with the root rot they describe, but one thing, this quote:

Quote

Trees impacted by crown and root rot may appear to have a slow general decline that from a distance can be confused with winter injury, nutrient deficiency, fire blight, or wet feet (where saturated soils reduce the oxygen level to the point where roots die) (Figures 1–4). Susceptible varieties may decline more quickly.

does not apply - in all 3 occurrences of the disease that I saw, the tree had had strong growth the season before, and there was no sign of slow decline.

[Jolicoeur Orchard](#)

Zone 4 in Quebec

Author, [The New Cider Maker's Handbook](#)

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[Steve Dagger](#)

[Re: Root rot on young apple tree](#)

May 07, 2022 07:01PM

Registered: 9 years ago

Posts: 28

Claude - I agree that the quick decline of your trees could indicate something beside Phytophthora may be killing the young trees. On the other hand, very young seedlings often decline quickly when infected with Botritis, Phytophthora and other pathogens because of their small size and limited root development.

Good luck in your quest to understand what is going on. I will check back if I come up with any other ideas.

[Pommes de Terre Acres](#)

USDA Zone 5 - Dixon, Montana

Intermountain West Region

[Reply Quote](#)

[Mike Biltonen](#)

[Re: Root rot on young apple tree](#)

May 10, 2022 04:01PM

Registered: 10 years ago

Posts: 298

A "quick" test for any pathogens would be pasteurize a small qty of the soil where your trees are planted and then do a beak sprout test where you germinate mung beans (or whatever) in separate samples of pasteurized and unpasteurized soil. If there is any difference in growth, the you have "some issue." What it is or may be a different question. It could be phytophthora, rhizoctonia, verticillium, fusarium, or even nematodes - or even a virus. However, in your case, and based solely on the pictures, this is not collar rot or any other disease I am familiar with. It looks like vole damage. That said, I don't see the tell-tale tooth marks, nibbling. Is the damaged area soft? Is there any live tissue below the damaged area (cut into it)? Is there evidence of any tunneling? And just for clarification, is the area where the damage begins at the graft or bud union? I've started to see a propensity of B118 to have burr knots and have started to think these might be an entry point for other issues. Anyway - doesn't look like fungal disease. Doesn't look like voles Could be a virus (failed graft or bud union). Could be nematodes (unlikely)? Or some other insect issue. Let me know what else you can add to this mystery.

[Mike Biltonen, Know Your Roots](#)

Zone 5b in New York

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[Claude Jolicoeur](#)

[Re: Root rot on young apple tree](#)

May 10, 2022 06:08PM

Registered: 11 years ago

Posts: 226

Mike Biltonen Wrote:

-
- > However, in your case, and based solely on the pictures, this is
 - > not collar rot or any other disease I am familiar with. It looks like vole damage.

Mike, it is not vole eating because the bark and cambium were still there when I scratched the soil. Simply that these tissues were rotten and disintegrated upon touching them.

- > And just for clarification, is the area where the damage begins
- > at the graft or bud union?

No - the graft union is quite a bit higher than the damage (about 8 inches).

> I've started to see a propensity of B118 to have burr knots and have
> started to think these might be an entry point for other issues.

Possible, but I have had this on a tree grafted over seedling rootstock also.

Oh well! We might never know for sure...

[Jolicoeur Orchard](#)

Zone 4 in Quebec

Author, [The New Cider Maker's Handbook](#)

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[Claude Jolicoeur](#)

[Re: Root rot on young apple tree](#)

May 14, 2022 08:52AM

Did a repair to this tree.

A few days ago I planted 2 small apple tree seedlings besides the affected tree. I also added compost to cover the dead tissues and recovered with wood chips.

Today I grafted these 2 small trees to the stem.

One thing this will tell: if there is something in the soil, then the 2 small trees should also get it...

(click on [open image URL])

[Jolicoeur Orchard](#)

Zone 4 in Quebec

Author, [The New Cider Maker's Handbook](#)

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Registered: 11 years ago

Posts: 226