



Apple Proliferation Phytoplasma

Candidatus Phytoplasma mali

This pathogen from Europe mainly targets apple trees but can also infect stone fruit trees such as cherry, apricot and plum. Its main mode of distribution is through insect pests mainly *Cacopsylla picta* and *C. melanoneura* which are pests of apple trees also. **It has not been found in the U.S.** It is considered a high risk disease for fruit trees due to the fact that it causes significant damage.



Infected apple leaf (bottom) compared to healthy apple leaf (top). <http://www.inspection.gc.ca/>



Apples from infected tree (left) are reduced in size by 50% compared to apples from a healthy tree (right). www.eppo.int

Symptoms and Damage:

- Fruits from infected trees are 50% smaller in size than those from healthy trees and the stem is longer.
- Infected trees have a smaller trunk circumference and crown diameter.
- Some trees may die due to the infection, usually younger trees, or may have severe dieback or withered branches and/or leaves.
- During the fall, the leaves from unhealthy trees turn red instead of the usual yellow.
- In Europe, this disease has spread in Germany and northern Italy causing severe damage in some of the traditional apple growing areas.

Informational Sources:

[Candidatus Phytoplasma mali](http://www.inspection.gc.ca/plants/plant-protection/diseases/apple-proliferation-phytoplasma/fact-sheet/eng/1368214278249/1368453914898). CAPS Survey Reference. 20 June 2013. 1 May 2014.
https://caps.ceris.purdue.edu/webfm_send/1019.

Photo Sources:

[Apple Proliferation Phytoplasma - Fact Sheet](http://www.inspection.gc.ca/plants/plant-protection/diseases/apple-proliferation-phytoplasma/fact-sheet/eng/1368214278249/1368453914898). Canadian Food Inspection Agency. 27 October 2013. 1 May 2014.
<http://www.inspection.gc.ca/plants/plant-protection/diseases/apple-proliferation-phytoplasma/fact-sheet/eng/1368214278249/1368453914898>.

Institut für Pflanzenschutz im Obstbau, Dossenheim (DE). [Apple Proliferation phytoplasma](https://www.eppo.int/QUARANTINE/bacteria/Apple_proliferation/PHYPPMA_images.htm). European and Mediterranean Plant Protection Organization. 1 May 2014.
https://www.eppo.int/QUARANTINE/bacteria/Apple_proliferation/PHYPPMA_images.htm.