

# *Pear Trellis Rust in BC — The Problem with Ornamental Pears*



Pear trellis rust caused by the fungus, *Gymnosporangium fuscum* has been known in Greater Victoria and the Lower Fraser Valley since the 1960's. In 1997, the disease was reported in Washington State. Previously it was not known to occur anywhere else in North America except for one county in California. Thus a quarantine was put on the South Coast Region of British Columbia in 1973. Since no junipers were allowed to move out of the coastal area, buyers elsewhere in Canada found it easier to order mixed loads, including junipers, out of Oregon and other competing areas of production.

To overcome this problem, a certification program was started in 1975 through the cooperative efforts of the BC Landscape and Nursery Association, the BC Ministry of Agriculture and Food and Agriculture Canada. Only disease-free junipers could be used as sources of propagating stock; all pear trees within one kilometer of juniper-producing nurseries had to be inspected every year; any infected junipers in that area had to be destroyed; and the growers had to apply a fungicide spray each fall. In the 15 years between 1975 and 1990, over 1,000,000 juniper and 500,000 pear tree inspections were carried out. Over 5,000 infected junipers were removed from private home gardens in the Lower Fraser Valley and on southern Vancouver Island.

Since then, unaware of a potential problem, some municipal parks departments have planted ornamental pears as residential street trees. At the same time, homeowners have planted junipers in their front yards close to and, in some cases, right under the pear trees. This creates a "time-bomb" for future explosion of the disease. As there are always some rust spores in the air, a few will land on either the junipers or the pears and start an infection. Because the two hosts are so close together, it will only be a matter of time before the disease builds up to very high levels on both hosts. The pear trees will no longer be attractive and will instead become a major source of complaints as the leaves will be covered with unsightly spots and growths.

In 1997, Agriculture and Agri-Food Canada proposed to deregulate pear trellis rust. This will have no short-term effect on the build-up of pear trellis rust in subdivisions with ornamental street trees. But, in the long term, deregulation will result in a gradual increase in pear trellis rust throughout the coastal area of BC since infected junipers will no longer be removed.

*Crop Protection*

# FACTSHEET



**BRITISH  
COLUMBIA**

**Ministry of Agriculture and Food**  
Abbotsford Agriculture Centre  
1767 Angus Campbell Road  
Abbotsford, BC V3G 2M3  
Phone: (604) 556-3032  
Fax: (604) 556-3117

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If nothing is done, the disease build-up will occur something like this:

- Both junipers and ornamental pears will be disease-free for the first year or two.
- As the pear trees grow and produce more leaves, some rust spores drifting through the air will land on the leaves and infect them. This would ordinarily be of little concern.
- The infections on pear trees will be scattered and barely noticeable for the first few years but they will produce spores which will land on the nearby junipers and infect them.
- Within another two or three years, the new infections on nearby junipers will begin to produce significant numbers of spores which will re-infect the pear trees each spring.
- With the greatly increased number of infections on pear trees, the number of spores which infect nearby junipers each fall will also greatly increase.
- Soon all of the pear trees and all of the susceptible junipers in a subdivision will be heavily infected and they will be producing billions of spores every spring and fall. Some of these spores will drift in the air to other areas and start new infection centres.
- The infected junipers will continue to grow and appear healthy with no outward signs of the disease.



- The pear leaves will be covered with orange spots in the early summer. These will turn into grotesque, fuzzy growths in the fall and homeowners will phone in to see what can be done about it.

To try to head off this problem, the BCLNA growers formed an ad hoc Street Tree Committee. One of the first activities was a meeting in December, 1993. The situation was outlined to about 20 parks department staff and BC Society of Landscape Architects representatives. In a wide-ranging discussion, various solutions were debated.

There was no unanimous agreement on any of the steps to be taken, however, the following are “middle of the road” suggestions which most agreed with.

- Parks departments will stop planting ornamental pear trees in residential areas where homeowners may plant junipers within 30m (100 ft).
- Landscape architects are not to specify ornamental pear trees for sites where there are susceptible junipers nearby. *Juniperus horizontalis*, *J. communis* and *J. squamata* may be grown as they are resistant to this disease. All other junipers must be avoided.
- Ornamental pears may still be planted in controlled developments such as industrial parks provided that no susceptible junipers were planted nearby.

We urge everyone in the industry to continue to follow these guidelines.

***Prepared by:***

Dave Ormrod/ Janice Elmhirst  
Crop Protection Program  
BCMAF  
1767 Angus Campbell Road  
ABBOTSFORD BC V3G 2M3

***For further information:***

Contact: Janice Elmhirst  
Crop Protection Program  
BCMAF  
1767 Angus Campbell Road  
ABBOTSFORD BC V3G 2M3  
Phone: (604) 556-3032  
Fax: (604) 556-3117