

Short communication

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Viruses transmitted by *Xiphinema* species in the Netherlands

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Several viruses are known to be transmitted by *Xiphinema* species. *X. diversicaudatum* and *X. coxi* are found in the Netherlands where arabis mosaic virus is transmitted by the former but not by the latter species (van Hoof, 1966). Three populations of each nematode species were unable to transmit cherry leaf roll virus (van Hoof, 1969).

Some further experiments with the two *Xiphinema* species were done with two other viruses, viz. strawberry latent ringspot virus and tobacco ringspot virus. Strawberry latent ringspot virus, hitherto unreported in the Netherlands, was found to be transmitted by *X. diversicaudatum* elutriated from soil sampled near Marum, province of Groningen. This virus was transmitted by two populations of *X. diversicaudatum*, but not by two populations of *X. coxi*.

In the USA *X. americanum* is a vector of tobacco ringspot virus (Fulton, 1962). An isolate of this virus, obtained from Peruvian potatoes, was not transmitted by three Dutch populations of *X. diversicaudatum*, but two out of three populations of *X. coxi* transmitted it; in both cases three out of ten plants became infected.

The experimental method of transmission was identical with that described by van Hoof, 1966.

The results of the earlier and present transmission experiments are summarized in Table 1.

Table 1. Transmission experiments with four viruses and two *Xiphinema* species.

	<i>X. diversicaudatum</i>	<i>X. coxi</i>
Arabis mosaic virus (van Hoof, 1966)	+	—
Cherry leaf roll virus (van Hoof, 1969)	—	—
Strawberry latent ringspot virus	+	—
Tobacco ringspot virus	—	+

Table 1. Overbrengingsproeven met twee *Xiphinema*-soorten en een viertal virussen.

Samenvatting

Virusoverdracht door Xiphinema-soorten in Nederland

De in Nederland voorkomende *Xiphinema*-soorten te weten *X. diversicaudatum* en *X. coxi*, werden bestudeerd op hun vermogen om vier virussen over te brengen

(Tabel 1). *X. coxi* bleek een vector van het 'tobacco ringspot' virus te zijn. Het 'strawberry latent ringspot' virus werd voor de eerste maal in Nederland overgebracht met *X. diversicaudatum*.

References

- Fulton, J. P., 1962. Transmission of tobacco ringspot virus by *Xiphinema americanum*. *Phytopathology* 52:375.
- Hoof, H. A. van, 1966. Nematode populations active and inactive with regard to transmission of Nepo viruses. *Nematologica* 12:615-618.
- Hoof, H. A. van, 1969. Onderzoek van virussen, die samenhangen met de grond. *Jversl. Inst. Pl-Ziektenk. Onderz.* 1968:87-90.

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BOOK REVIEWS

Air Pollution, Proceedings of the First European Symposium on the Influence of Air Pollution on Plants and Animals (Wageningen 1968). Pudoc, Wageningen, 1969. 415 pages, price Dfl. 42.50, size 15 × 23 cm.

This Symposium was organized at the request of the Council of Europe. Its Committee for the Conservation of Nature and Natural Resources which conceived this idea had wished to hold it in the Netherlands.

Over 100 participants from 15 countries were present. They represented a wide range of disciplines, having no regular contact with each other. As all lectures were given at different times participants had an excellent opportunity to get acquainted with the work in other fields.

The Organizing Committee had invited two specialists on photochemical air pollution problems from the United States, as very little experience existed in Europe on the influence of such oxidizing products as ozone and peroxyacetylnitrate (PAN). These pollutants are of increasing importance in Europe owing to the rapid expansion of motorized traffic, especially automobiles, and industry. The lectures were concentrated into the following sections:

1. Inventory of damage due to industrial and urban air pollution and research done in relation to this pollution.
2. Experimental research.
3. The effects of air pollution on plants.
4. The effects of air pollution on vascular plants.
5. The effects of air pollution on non-vascular plants.
6. The effects of air pollution on animals.
7. Measuring air pollution in vascular plants.
8. Measuring air pollution in non-vascular plants.
9. Resistance of plants to air pollution.
10. Shelter belts for air purification.

In each session there were one or two general lectures by invited speakers followed by a number of short communications. Lectures were given in English, French or German. At the end of each paper a summary in the two other languages is given. Ample time was reserved for discussion of the theme of each session. A summary of these discussions is printed at the end of each section.

In an epilogue Mr. Eilers, chairman of the Committee of Experts on Air Pollution of the Council of Europe, gave an excellent survey of the main items of the Symposium.

Because much more work has been done on the influence of air pollution on domestic animals and on cultivated plants (including forest trees) than on the wild flora and fauna, most of the lectures dealt