

A VIRUS OF CELERY RELATED TO
CUCUMIS VIRUS 1 st. Chr. NOORDAM

Met een samenvatting: Een virus van selderij verwant met Cucumis virus 1 st. Chr. Noordam

BY

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INTRODUCTION

In the beginning of September 1955, a virus was isolated from celeries (*Apium graveolens*, var. „Roi des Jaunes”), grown in the field. Symptoms on affected plants appeared as light vein-clearing and interveinal circular or elongated yellow spots.

TRIALS AND RESULTS

Some test plants (*Nicotinia tabacum* var. „Samsun”, *Nicotinia glutinosa*, *Cucumis sativus* var. „Blanc hâtif”) were inoculated with the sap of infected celeries, and kept in an insectproof glasshouse. Details about these trials are given elsewhere (SEMAL, 1956).

Symptoms on the test plants were similar to those described by NOORDAM (1952) for *Cucumis virus* 1 st. Chr., and to the symptoms observed by the writer in trials conducted by DR. ROLAND with *Cucumis virus* 1 st. Chr. isolated from *Chrysanthemum* (ROLAND, 1954).

The sap of a tobacco plant infected with the studied virus was inoculated to 5 celeries of var. „Plein blanc doré”, grown in pots. Yellow spots appeared on inoculated leaves of 2 plants after 10 days; 4 of the 5 celeries developed yellow circular and ring spots on old and medium leaves after about 1 month. Check plants remained symptomless.

A serological test made on the virus of celery, recovered from tobacco, with a serum of *Cucumis virus* 1 st. Chr. kindly supplied to the writer by DR. ROLAND gave positive results.

Cucumis virus 1 st. Chr. NOORDAM isolated by DR. ROLAND from *Chrysanthemum*, was also inoculated to celeries of var. „Plein blanc doré”; the symptoms were similar to those produced with the virus isolated from celeries.

DISCUSSION

The virus isolated from celeries grown in the field presents the most important characteristics of *Cucumis virus* 1 st. Chr. NOORDAM, and may be considered as synonymous with this virus. *Apium graveolens* is thus a host for *Cucumis virus* 1 st. Chr.

¹⁾ Sustained by the Institute for Scientific Research in Agriculture and Industry (IRSIA).

Comparison with what is known about *tomato aspermy virus* gives following results: SMITH (1952) does not report celery as a host for this virus. BRIERLEY & AL. (1955) consider *Cucumis virus 1 st. Chr.* NOORDAM as synonymous with aspermy virus, but points out that celery is a non-susceptible plant to this virus. HOLLINGS (1955) making comparative trials with three strains of *tomato aspermy virus*, reports that sap inoculation of this virus failed to infect Dwarf white celery.

CONCLUSION

There is a difference between the reactions of *Apium graveolens* to the typical *tomato aspermy virus* on the one hand, and to the virus isolated by the writer from celery, and identified after NOORDAM and ROLAND as *Cucumis virus 1 st. Chr.* NOORDAM, on the other hand.

If it is assumed that the difference is not caused by the varieties of celery used, this suggests that *tomato aspermy virus* and *Cucumis virus 1 st. Chr.* are not quite identical.

SAMENVATTING

Op selderij werd een virus gevonden dat dezelfde symptomen op toetsplanten, en dezelfde serologische reactie geeft als *Cucumis virus 1 st. Chr.* NOORDAM. Tot nu toe kon het „*tomato aspermy virus*” niet op selderij worden overgebracht. Als dit verschil niet veroorzaakt wordt door de gebruikte selderij-variëteiten, dan kan geconcludeerd worden, dat de twee virussen niet precies dezelfde zijn.

ACKNOWLEDGEMENT

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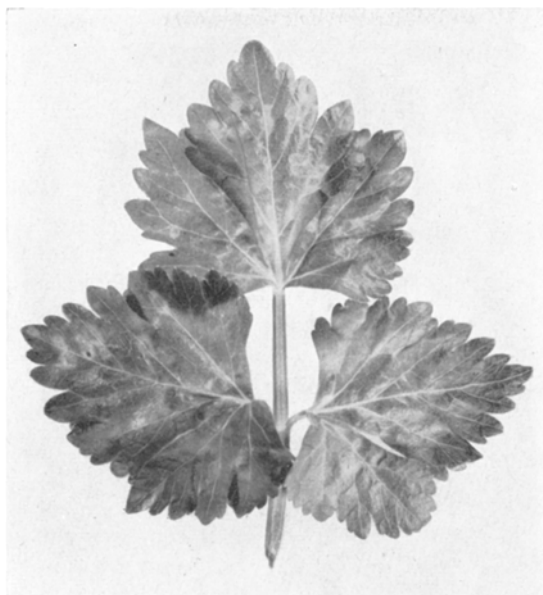


FIG. 1. *Cucumis virus 1* st. Chr. op selderij var. „Plein blanc doré”. Voorbeeld van vroege symptomen: licht-gele vlekken en ringen

Cucumis virus 1 st. Chr. on celery var. „Plein blanc doré”. Type of early symptoms: light yellow spots and rings

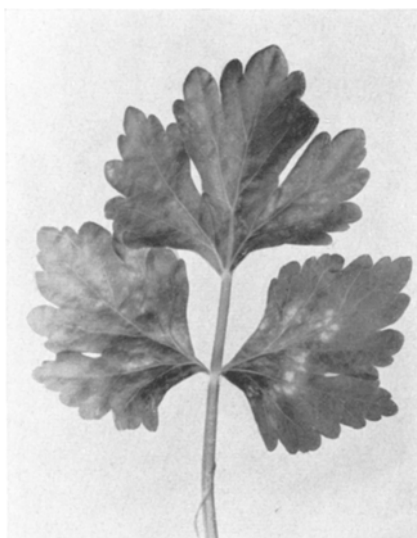
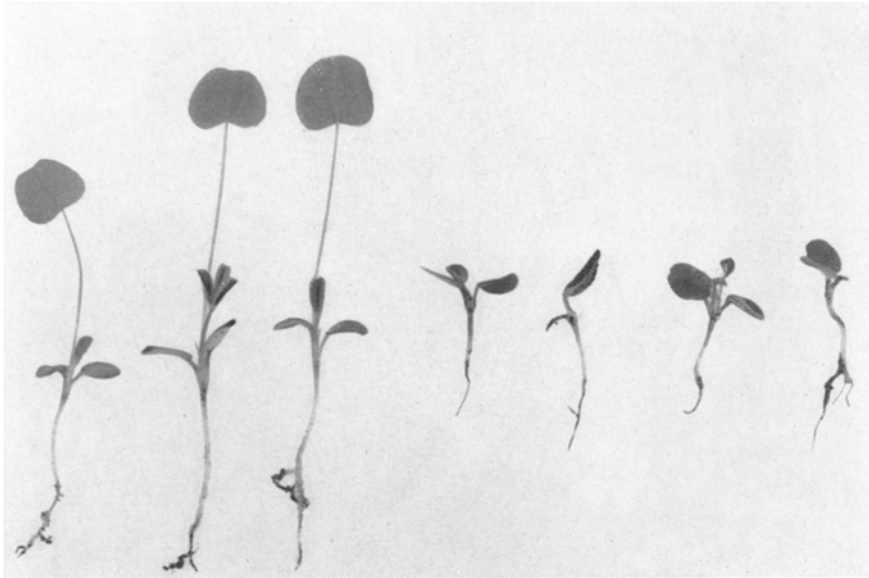


FIG. 2. *Cucumis virus 1* st. Chr. op selderij var. „Plein blanc doré”. 15 dagen na de eerste symptomen: diep-gele vlekken

Cucumis virus 1 st. Chr. on celery var. „Plein blanc doré” 15 days after apparition of symptoms: type yellow spots



A

B



A

B

FIG. 1. Abnormale symptomen, veroorzaakt door stengelaaltjes uit aardappelen bij rode klaver (boven) en witte klaver (beneden)

A. Drie controleplanten, niet geïnoculeerd

B. Geïnoculeerd

Abnormal symptoms in red clover (top) and white clover (below) caused by stem eelworms from potatoes

A. Three control plants, not inoculated

B. Inoculated