## The virus type at your field

Do you want to know more about it?



The virus species is visually not distinguishable!

Only sampling and testing in the lab provides a clear result.





Please contact your KWS consultant to identify the type of virus present in your field.

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#### Virus Yellows Protect

Minimize risk, optimize performance

> SEEDING THE FUTURE SINCE 1856



## Virus Yellows is back

#### Challenging sugarbeet cultivation in Europe

In the 70's, Virus Yellows disease was one of the most detrimental diseases in sugarbeets. The disease is transmitted by aphids, and with the registration of chemicals to control the insects, the disease practically disappeared for many years. Nowadays, after the ban of neonicotinoid seed treatments, the Virus Yellows disease returned to sugarbeet fields in large parts of Europe. The temperature has an impact on aphids population, and mild winters additionally promote aphids pressure, increasing the threat of the disease for sugarbeet growers.



#### KWS Virus Yellows Monitoring

Composition of yellowing viruses in Europe



# Aphids as virus transmitter

Yellowing viruses are mainly transmitted into the beet crop by the Peach Potato Aphid (*Myzus persicae*) as well as the Black Bean Aphid (*Aphis fabae*).





Source: KWS SAAT SE & Co. KGaA

The earlier and higher the aphid pressure (especially of Peach Potato Aphid) the higher the risk of virus infection in the field. Virus infection in sugarbeet leads to reduced sugar yield.

**Mild winters** offer favorable conditions for aphids. They allow the aphid species to survive in host crops and cause early infections in the following spring.

## Yield loss by Virus Yellows infection

The infection caused by different virus strains. The most relevant viruses are:



\* Yield loss refers to 100% virus infested acreage.

### Virus Yellows Protect

#### The new approach to control yellowing viruses

Control of Virus Yellows requires an integrated approach including the development of tolerant sugarbeet varieties, agronomic measures and crop protection products.

KWS strengthens the sugarbeet's own defense with innovative breeding programs and is working on research and breeding to supply the grower with Virus Yellows tolerant varieties – a powerful tool to keep sugarbeet competitive.



Source: KWS Monitoring Data