

New project focuses on yellowing virus in sugar beet

The scientists and breeders at Strube Research, a subsidiary of the Strube Group, are the initiators and main partners in an exciting project: MODEFY, which aims to research the basics of the problem of yellowing virus in sugar beet and develop suitable measures. The aim of this five-year project is to find technical solutions to control yellowing virus, which can lead to a yield loss of up to 50%.

The yellowing virus has become a serious problem in beet cultivation due to the planned phase-out of neonicotinoids in many European countries. In some regions of Germany, emergency approvals have been given for this year, but currently there is still no concrete solution to the problem. For this reason, solutions are now to be found in a project at international level: In cooperation with the French seed specialist Deleplanque, the ITB (Institut Technique de la Betterave) and INRAe (Institut national de la recherche agronomique), the MODEFY project was initiated to find genetic and technical solutions to combat yellowing virus in sugar beet.

MODEFY stands for **MON**itoring and **DEF**ence against **Y**ellow virus. Up to and including 2025, MODEFY will be concerned with a wide range of topics, such as monitoring the development of the vectors (green peach aphid, *Myzus persicae*; black bean aphid, *Aphis fabae*). The focus is on the three main viruses: Beet Mild Yellow Virus (BMV), Beet Chlorosis Virus (BChV) and Beet Yellow Virus (BYV). Phenotyping using technical tools, vaccination, selection and biological defence/dispersal of beneficial insects as well as analysis of feeding behaviour and transmission of vectors are also an integral part of the project. The primary goal of the effort is to develop high-yielding, yellowing-tolerant varieties as quickly as possible using precise high-throughput methods in the selection process.

"With MODEFY, we are taking another step towards sustainability and continuing our VisionBlue company strategy. In this way, we are focusing on a holistic approach at the genetic, agronomic, and ecological level, which we support with our expertise from sugar beet breeding. This will enable us to gain the latest insights into the yellowing virus," explains Dr Axel Schechert, Head of Sugar Beet Breeding at Strube Research and leader of the MODEFY project. "We are proud to be able to implement the project with our French partners and colleagues over the next few years and to make an important contribution to the future of European beet cultivation," says Schechert. The project was made possible by the financial support of the French regions Ile de France and Grand Est.

