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**Always on the watch: supplementing networks with technology to monitor changing sugar beet pathogen and pest composition and distribution.**

The monitoring of pathogens and pests has become increasingly critical. This urgency arises not only from the adaptation of pathogens to control measures but also from the heightened movement driven by the global economy and climatic instability. Compounding this issue is the reduced availability of chemical treatments, particularly in Europe, to manage pest outbreaks. This situation underscores the pressing need for sugar beet varieties with stable resistance to diseases and pests. Fortunately, advances in expertise, data collection, and technology are helping to combat these problems. Networks connecting farmers, sales representatives, breeders, and researchers can provide early warning signals of potential problems from unusual observations in the field. Digital technologies including drones and camera traps provide large and small views of the field that were previously unavailable. Molecular analysis allows us to quickly identify changes in pathogen populations that once required a time-consuming process of growing test plants with characterized resistances. GIS technology enables us to monitor high pressure areas and shifts in pathogens/vectors over time. Using a centralized database system, we can track changes in diseases/pests of concern both in the United States and abroad. At KWS, current monitoring efforts are focused on pathogens and vectors of high concern including Cercospora Leaf Spot, leafhoppers, aphids, and Beet Necrotic Yellow Vein Virus. However, our system is flexible enough to pivot if a new major threat is identified. By monitoring both established and emerging pathogen and insect pests, as well as distribution patterns, we are better able to determine what new strategies are needed to ensure stability of resistance traits and continued sugar beet profitability. To that end, vigilance can be a powerful tool, and everyone involved in sugar beet production should be encouraged to be alert to potential concerns and empowered to communicate their observations.