

How we determine the right application timing?



xarvio™
Digital Farming
Solutions

INPUT



To provide you with the **right field-specific spray time**, we incorporate a number of different types of data into our growth stage and disease risk models.

We gather the following data for individual fields:

- > Geolocation
- > Crop/Variety
- > Crop rotation
- > Previous fungicide applications
- > Tillage
- > Observed infestation
- > Seeding date

We combine the field-specific information with our expertise in the areas listed below.

Variety data

- > Susceptibilities
- > Growth stage characteristics

Crop protection expertise

- > Country specifications (regulations)
- > Efficiency
- > Protection times

Local weather data and forecasts provided by external experts

- > Air temperature & humidity
- > Soil temperature & humidity
- > Rainfall & Wind
- > Sunshine index



ANALYSIS



After collecting and preprocessing the raw data, we add the information to the following tried-and-tested models:

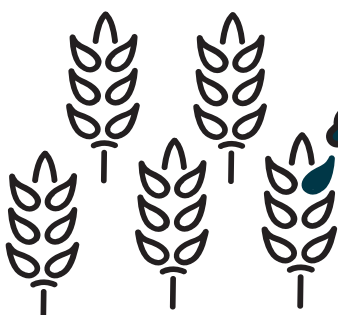
- > Growth stage model
- > Disease risk model (including 8 analyzed diseases)



Based on these models, we can evaluate the individual disease risk for each field. In the first step, we **assess the basic**

risk of the field by analyzing field-specific parameters like the current growth stage or crop variety. If we recognize known patterns for infestations, we expand the risk assessment. We will also check whether the **current and historical weather** indicates a risk of infestation. Observed infestation levels can correct our estimations or be starting points for recalculations. When there is a serious disease risk, we **check the protective effects of previous applications. In case of expiring protection or conditions conducive to infection**, we will **recommend an application**.

OUTPUT



When an **application is necessary**, we will **notify you** on your mobile. Our notification includes a recommendation on the right timing for your applications based on the forecast local weather and the expected course of infestation.

