CPO model for Mildew in barley

Mildew is a fungal disease, causing damage in barley

Powdery mildew (Blumeria graminis) can attack barley. Fungicide treatments may need to be applied between early tillering (GS 26) and full flowering (GS 65), to protect leaves from powdery mildew and yield losses.
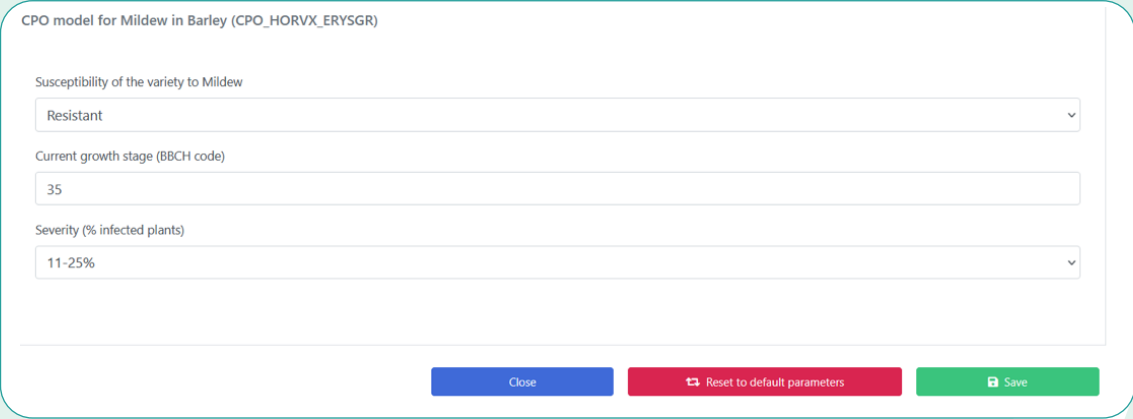

Mildew in barley

Control with help of DSS on platform.ipmdecisions.net

The CPO powdery mildew model is recommending treatments in barley when thresholds are exceeded. The risk of attack is based on visual monitoring using frequency of plants attacked. The disease observation is the percentage of plants showing any infection. For example, if 25 plants out of 100 show even a very small amount of disease and the remaining 75 plants are completely healthy, then the observation is 25%. In susceptible cultivars treatments are recommended at lower incidence levels than in resistant cultivars. If treatments are recommended, specific fungicides known to be effective against this disease should be chosen. When running the powdery mildew model, the risk for yield losses from other diseases is not considered. If no action is recommended it is advised to revisit the crop after about one week to make a new risk evaluation.

DSS parameters

To obtain accurate risk predictions it is essential to click on the 'Edit parameters' button to enter information on the cultivar's susceptibility to powdery mildew. Only two categorizes are used susceptible and resistant, if a cultivar is categorized as partly resistant, it is recommended to considered it as susceptible. Enter the specific growth stages at the time when the crop monitoring was done. Enter information on the incidence of attacked plants by powdery mildew based on scouting the crop. Between GS 29-31 whole crop should be assessed. Between GS 32 and 40 assessments should only be done on 3 upper leaves. Clicking on 'Save' will keep the entered information and update the risk. The model does not automatically adjust risk for the effect of previous fungicide sprays. If a fungicide effective against mildew has been applied in the last 10 days, the risk can be interpreted as low.

Figure 1. Parameters DSS to be customized

DSS output

The DSS shows information about the risk of infection of barley.
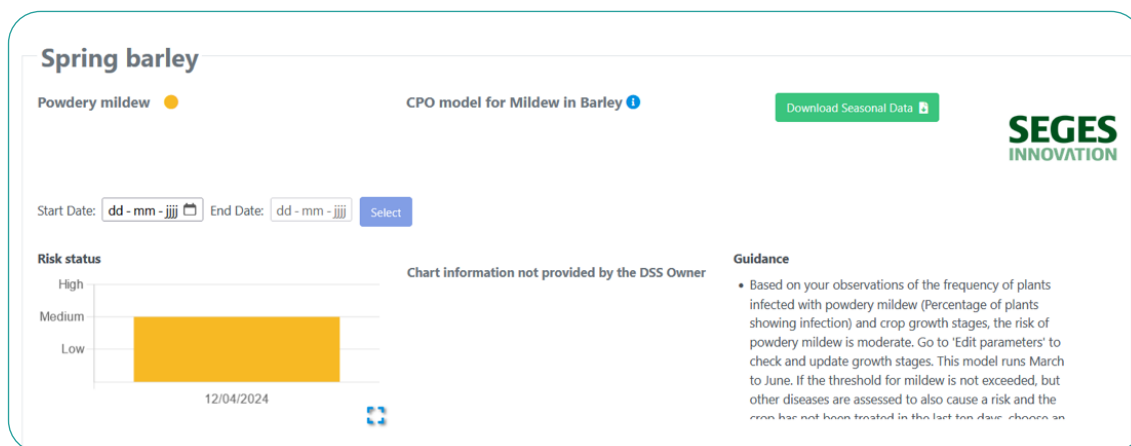

Figure 2. Risk information from DSS CPO model for mildew in Barley

The 'Risk status' chart indicates the daily risk for the infection of the barley crop.

Where can DSS be used

The DSS is created by Aarhus University and SEGES and released in Denmark in 2000. The whole CPO model has been tested in the Nordic and Baltic countries previously, but this might not have included testing of the specific mildew rust part. This model may be of use in other countries in Northern Europe, it is important to first test in practice before using the DSS for decision support.

NEED MORE INFORMATION?

platform.ipmdecisions.net

Follow us at

🐦 @IPMDECISIONS

📘 IPM DECISIONS

in IPM DECISIONS