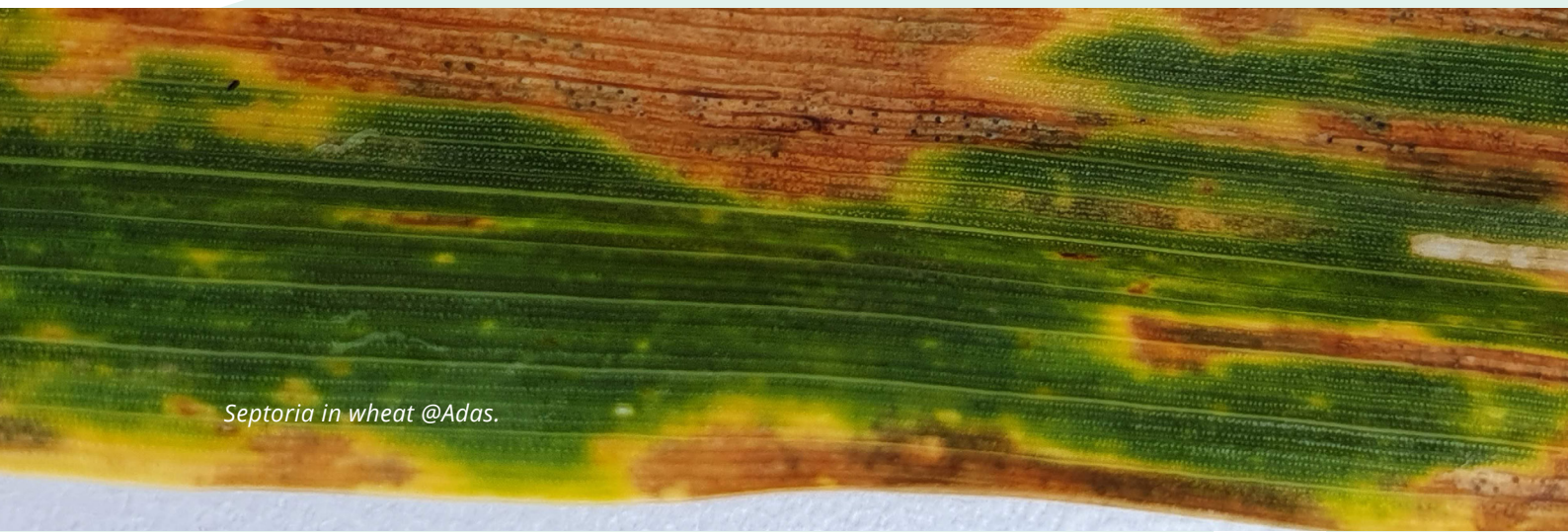# CPO model for Septoria in wheat

FACTSHEET

Septoria is a fungal disease, causing damage in wheat

Leaf blotch diseases of wheat can be caused by septoria tritici blotch (Zymoseptoria tritici), and Septoria nodorum blotch (Stagonospora nodorium), which are both favoured by wet conditions. Fungicide treatments may need to be applied once or twice between stem extension (GS 32) and flowering (GS 69), mainly to protect the upper leaves from attack of Septoria diseases.
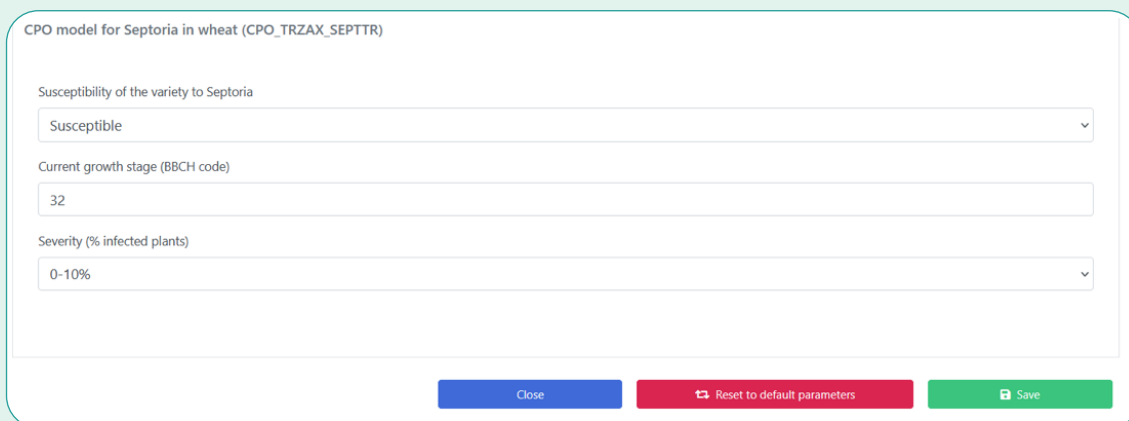
Septoria in wheat @Adas.

Control with help of DSS on platform.ipmdecisions.net

The CPO Septoria model estimates risk of septoria tritici blotch infections in winter wheat. Weather data from GS 32 to GS 69 are used. Spraying is recommended after minimum 4 days with rain (> 1mm) in susceptible cultivars counting days between GS 32 and GS 69. In resistant cultivars risk of attack is assumed after 5 days with rain (>1mm) between GS 37 and GS 69. Counting of days with rain goes back a maximum of 30 days. When running the Septoria model the risk for yield losses from other diseases than Septoria is not considered. If no action is recommended it is advised to revisit the crop after approximately one week to make a new evaluation of the risk.

DSS parameters

To obtain accurate risk predictions it is essential to click on the 'Edit parameters' button and enter information on the cultivar's susceptibility to Septoria diseases. Only two categories are used: susceptible and resistant. If a cultivar is categorized as partly resistant, we recommend that it is considered as susceptible. Enter the specific growth stages at the time when the crop monitoring and weather data is entered. Enter information on the incidence of attacked plants by Septoria diseases based on scouting the crop on the third leaf down from the top. If more than 10% of 3rd leaves (flag leaf -2) are attacked and no previous treatments have been applied against Septoria it is recommended to spray even if fewer than 4 days with precipitation has been counted. Clicking on 'Save' will keep the observations entered and update the risk. The model does not automatically adjust for the effect of previous fungicide sprays. If a fungicide effective against septoria 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 wheat.
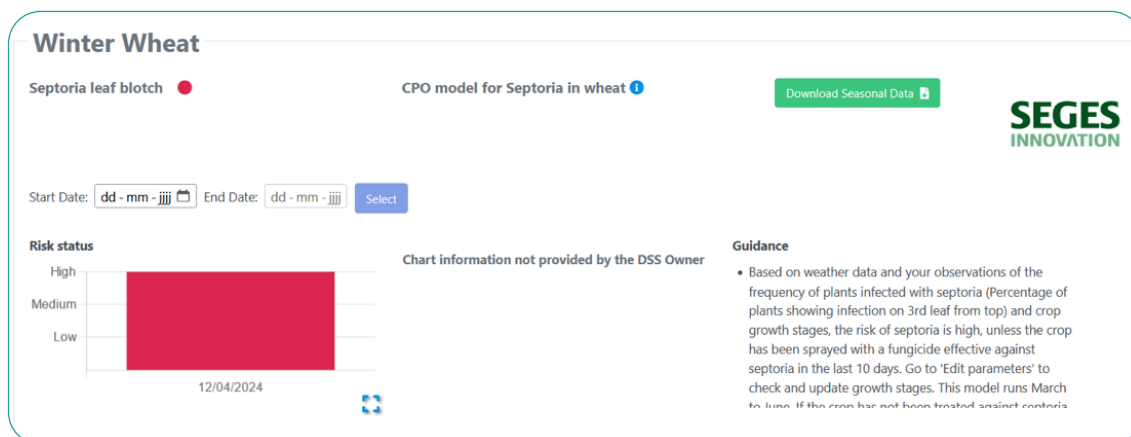

Figure 2. Risk information from DSS CPO model for Septoria in wheat

The 'Risk status' chart indicates the daily risk for the infection of the wheat 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 Septoria 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.

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