

A Digital Service for Managing Grains' Mycotoxin Risk

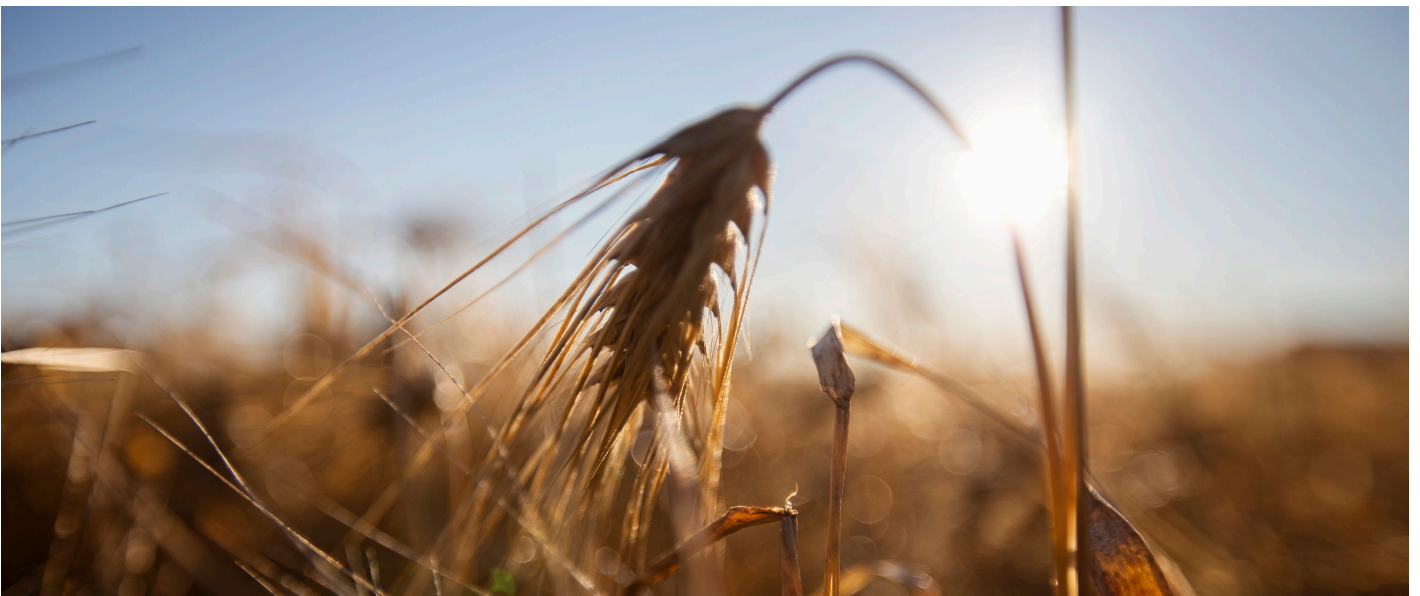


The *Fusarium* fungi and mycotoxins cause an increasing amount of quality problems and financial losses for companies in grain business. The risk for mycotoxins has grown so much that new tools for predicting and managing it are needed. Spring grains are the most susceptible for getting infected by the *Fusarium* fungi and forming the toxins. Oats is clearly the most sensitive for toxin risks.

Why this solution?

The Natural Resources Institute Finland (Luke) is developing a digital DON Early Warning service for predicting and managing mycotoxin risks. This user-friendly service works already with a web browser and as a mobile application. Luke will bring the completed service to market in 2021 if companies commit to use the service in advance.

When evaluating the toxin risk, the most important input information are the field's toxin or *Fusarium* fungi infection history, cultivation technique (the seed's quality and dressing, field tillage method, variety), as well as the crop rotation and weather information during the most critical phases of *Fusarium* fungi infection and DON toxin production. Weather information is obtained automatically. If the farmer wants, he can complement information for example using his own weather station.



Benefits

By virtue of the service developed by Luke, the grain chain actors can evaluate and follow the mycotoxin risk during the growth season, get prepared for managing the mycotoxins and taking actions during the growth season both at harvest time and when drying the grain.

- DON Early Warning gives the risk forecast of mycotoxins in a field plot as percentage
- DON Early Warning is updates in real time according to the changes in weather
- The farmers can complement or alter the weather information in the service, if they wish to make the risk forecast more accurate using their own weather stations
- Information about the used grain varieties, cultivation techniques, and weather as well as their impact on mycotoxin presence get cumulated in the system



” Finland has a long tradition in systematically investigating how mycotoxins are formed. DON Early Warning service collects this information cumulated over several decades and offers it in an easily usable digital form. The service benefits the whole grain chain.”

Head of Digital Services & eCommerce
Ilmo Aronen, Lantmännen Agro Ltd

Why Luke and DON Early Warning

Luke is responsible for making sure that the service, information, and forecast models are all up-to-date. Luke has research-backed know-how about cultivation, techniques, plant diseases, and risk management.

Are you interested and want to get acquainted with the service's logic and application? Please, contact:

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