



RUSTWATCH

WHEAT RUST EARLY WARNING

Three rust species infect wheat and are distributed globally, i.e.;

- **Yellow (stripe) rust** caused by *Puccinia striiformis* f.sp. *tritici*
- **Leaf (brown) rust** caused by *Puccinia triticina*
- **Stem (black) rust** caused by *Puccinia graminis* f.sp. *tritici*.

These pathogens have a worldwide prevalence and potential for long distance spread. Invasions into new areas pose a serious threat to food security regionally and globally.

▲ In 2011 a new population of yellow rust (the Warrior races) became established across Europe – probably originating in the Himalayan region.

▲ By 2016 the pre-existing European population of wheat yellow rust had been replaced by these invasive races.

▲ In 2016 Europe experienced the most severe epidemics of wheat stem rust for more than 50 years.

▲ In 2017 unusual and severe epidemics of yellow rust were observed on several continents. In many cases, these epidemics were caused by genetically identical yellow rust races.

When and where the next high-impact wheat rust race incursions are not known. In order to mitigate their impact, we need effective, coordinated surveillance at all levels across cereals and alternate hosts around the world.

