

Heavy Attacks of Yellow Rust in Southern Sweden for the Last Seven Years

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Yellow rust (*Puccinia striiformis*) has been monitored in wheat during the last 25 years and since 2007 severe attacks of yellow rust have been very common every year in the southern part of Sweden. The repeated appearance of new yellow rust races continues to challenge varietal resistance. In 2007 became suddenly the former resistant varieties Tulsa and SW Gnejs very susceptible to yellow rust. The heavy attacks were caused by a new race, the Tulsa race, and that was determined by MS Hovmøller, Aarhus University. Mild winters and large areas of the variety Tulsa (40%) susceptible to the new race made the situation bad. A few years later, in 2011, a new race, the Kranich race, appeared and the former resistant variety Kranich now proved to be very susceptible. The Kranich race has a broad virulence spectra and several varieties cultured, e.g. Audi and Cumulus, also proved to be very susceptible to the Kranich race. During the last years both the Kranich race and the Warrior race have been common in Sweden. However, the Kranich race has been the dominating of the two races until now.

In 2008 there were sporadic attacks of yellow rust on triticale and in 2009-2010 triticale was aggressively attacked by the new yellow rust race, a race named Triticale aggressive. It was predominantly the varieties Dinaro and Cando that were infected and very big yield losses appear in untreated crops. In 2012 there was again high incidence of yellow rust in triticale, e.g. Tulus. During the last years Kranich and Warrior races have dominated the yellow rust and they do also to a certain extent attack triticale.

Yellow rust can reduce yields by 50% or more in untreated crops. Field trials in southern Sweden have shown yield increases for three treatments, up to 9 ton/ha, in susceptible winter wheat varieties. The important timing for treatment starts at BBCH 30. In mild autumn symptoms of yellow rust have easily been found in November in many cultivars. Field trial with fungicide treatment in the autumn showed no impact on the yellow rust development in the spring or yield response. Azoles, strobilurin and morpholine fungicides are all effective to protect crops from yellow rust. In Sweden there are only a few azoles approved, propiconazole, prothioconazole and difenoconazole in mixture with propiconazole. Timing of the fungicide spraying has shown to be more important than the dose. It is of outermost importance that farmer fields are monitored regularly, since new races can occur.

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