

Regional analysis of the stem canker attacks variability in oilseed rape crops

Stéphane Gripon¹, Florent Dupeuble¹, Etienne Pilorgé¹,
Raymond Reau¹, Marie Taverne¹

¹CETIOM BP 4 - F 78850 Thiverval Grignon

Stem canker disease due to phoma (*Leptosphaeria maculans*) develops in France, notably in the West-Atlantic and Centre regions where the climate is rather mild during autumn. During two successive seasons, a number of oilseed rape fields in the Centre of France (83 fields in 2000-2001 and 38 in 2001-2002) have been observed from sowing to harvesting. The registered information deals with cropping practices and oilseed rape straws management in neighbouring fields and in the OSR field itself in the past years. OSR crop status has been followed up as well. The disease itself was observed in autumn through the rate of plants bearing stains on leaves, and through the cankers on stem basis before maturity. The data analysis shows that phoma problems are particularly frequent in OSR crops which emerged early and which received organic fertilization (as slurry or manure). The rates of plants bearing stains on leaves during autumn, or stem basis cankers before maturity are positively correlated to autumn OSR growth. The OSR straws management in previous years, in the considered field and in neighbouring fields seems to be less important in this region where OSR is very frequent in rotations and cropping patterns. These results allow to propose hypothesis to be tested on experimental plots: How far the OSR growth during the vegetative phase influences phoma development? Is the rate of plants with phoma stains depending on the individual plants leaf area at the time of spores releases? Do the OSR standing crops with a high biomass favour the disease development? Is it worth to integrate the importance of genotype x environment interactions in the protocols for cultivars evaluation to phoma? If OSR growth effect on stem canker attacks is confirmed, do we have to adjust OSR cropping management limiting growth in order to control phoma, and develop an integrated crop protection against this disease?