THE EFFECT OF EXTREM CLIMATICAL CONDITION DURING 2005-2007 ON WHEAT SEED QUALITY IN ARDS SIMNIC AREA

Muller Ofelia Marilena¹, Gabriela Paunescu², Fraga Oncica²

¹ ITCSMS Dolj, Str. Niculiei Romanescu, Nr. 41, e-mail: itcsms@rdscv.ro
² ARDS Simnic-Craiova, Soseaua Balcesti Street, Nr.54, e-mail: cvpaunescu@yahoo.com

Key words: wheat, disease incidence, pre-harvest sprouting, black point

SUMMARY

Wheat is a crop with an extremely short period between harvest and next crop initiation. Therefore, concerning to the seed that will be used has to be taken a fast decision. Finally, the farmer has the responsibility for a good crop based on seeds with high quality (Nelson, 1997). The use of certified seed from recognized producers is the best option. The quality certificate gives you the guarantee that variety is what you wanted; the seed accomplish a minimum physical purity; there are not foreign seeds and in the field and laboratory existed checks before harvest and sale.

In this experiment were used 25 samples from Romanian winter wheat lines tested during 2005-2007. Three samples by 10g were analyzed to determinate Fusarium attack, black point, pre-harvest sprouting and healthy seed percentage. At 10 wheat varieties with these symptoms, in three replications, at germinating laboratory of ITCSMS Dolj were also analyzed germination level and 1000 kernel weight. The attack recorded for Fusarium was among 4% (Dor) and 17.2% (Simnic30 variety). From this point of view, comparative with check variety Dropia, the following variants: Simnic30, Lovrin34, Gruia, Alex, Bezostaia, Rapid, Hambar and Izvor were inferior, statistically assured, while Dor variety was significantly superior. Attack level oscillated among 0.3% (Flamura84) and 18.5% (Junona). Check variety Dropia recorded a low attack by 2.3%. At the same incidence were: Romulus, Simnic30, Rapid, Alex, Glosa, Faur and Fundulea4 which nearby Flamura85 and Hambar also presented their superiority against the experiment average by 7%.

The highest attack percentage was recorded for black point, with values among 19.7% (Holda) and 51.1% (Izvor). Check variety Dropia also recorded a high incidence of this disease 46.7%, most of the varieties being it superior from this point of view. With better results comparative with the average percentage (36.6%) were: Jiana, Briana, Alex, Gloria, Crina, Simnic30, Bezostaia and Holda.

Regarding to germination, in generally, the grains with pre-harvest sprouting were very significant inferior against healthy grains in differently by the variety.

Another analyzed element was the weight of 1000 grains. The grains with Fusarium attack, at all samples, presented a very significant decrease of 1000 grains weight, while the pre-harvest sprouting grains had a very significant increase of 1000 grains weight caused by the water content. In generally, the main tested varieties presented a higher 1000 grains weight value at pre-harvest sprouting grains except: Fundulea4, Rapid and Dropia varieties.

BIBLIOGRAPHY