

A STUDY OF BIODIVERSITY OF PHENOLIC CONTENT IN THE WHEAT CARYOPSIS

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Pigmented wheat, phenolic biodiversity, antioxidant compounds

Pigmented cereals, including pigmented wheat, are interesting for the production of functional foods, since the caryopsis colour is associated with total phenolic content, which, in turn, is highly correlated with the total antioxidant capacity. Wheat is the most important cereal in our diet, therefore the use of this antioxidant-rich cereal for the production of bakery products would import them an high nutritional quality. Moreover, pigments, although in very low concentration, can significantly affect the quality of bread and pasta.

We have analyzed bread wheat and durum wheat genotypes from two harvests; these different pigmentation of the pericarp or aleurone layer: the durum wheat germplasm included genotypes with red or purple pericarp and blue aleurone, while the bread wheat germplasm tested icluded purple and blue aleurone genotypes. The samples were analysed for their polyphenol content and their technological behaviour. The results evidenced that pigmented wheat are often characterized by a polyphenol content higher than that of the genotypes normally cultivated.