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Poster Abstract - C.02

WILD EMMER AND SPELT EUROPEAN WHEAT: AGRONOMICAL AND GRAIN QUALITY TRAITS EVALUATION

P. DE VITA**, P. CODIANNI*, M.G. SCHIAVONE*, F. NIGRO*, L. CATTIVELLI*, C. FARES*

*) C.R.A. Istituto Sperimentale per la Cerealicoltura, S.S. 16 km 675, 71100 Foggia, Italy - pdevita@libero.it
**) Enea Trisaia, S.S. 106 Jonica km 419,5, 75026 Rotondella (MT)

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Organic agriculture and health food products have been gaining increasing popularity that has led to a renewed interest in hulled wheat species such as emmer (*Triticum turgidum* spp. *dicoccum*) and spelt (*Triticum aestivum* spp. *spelta*). The description of agronomically important and useful characteristics is an important prerequisite for effective and efficient use of germplasm collections in breeding programs. In spite of the importance of the Italian landraces only limited agromorphological characterization data are available. The objective of this study was to estimate agronomical and grain quality characteristics of some Italian emmerand European spelt wheat. A total of 30 wild emmer and spelta accessions consisting of 20 emmer populations, advanced breeding lines and variety originated from Italy and 10 spelt wheat genotypes originated and still cultivated in Central and North Europe were examined under low input conditions. The study was conducted for three successive years (2001/2002, 2002/2003, 2003/2004) at one location of Southern Italy (Foggia). The crop cycle was from November to end June. In both seasons, each genotypes was planted in three replicates in a randomized complete block design. The entries were characterized for qualitative [grain protein content as N * 5.7 (%), gluten index and yellow index colour measured by CIE colour values (L*a*b*)] and quantitative traits [grain yield (t ha^{-1}), thousand grain weight (g), test weight (kg hl^{-1})]. The results showed a large genetic variability for many agronomically important traits and, even thought the genetic materials showed inferior bread- and pasta-making performance, several genotypes exhibited some potential to perform good pasta and bread thanks to processing technologies (allowing the use of flour and semolina for making biscuits and pasta) and marketing strategies (emphasizing its low input cultivating practices).

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