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Evaluation of suitability of emmer wheat varieties (Triticum dicoccum schuebl) for organic farming

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Emmer wheat, Triticum dicoccum SCHUEBL, is an old variety of cereals which has been traditionally grown in aride areas. Nowdays, it is mainly grown in Italy, Spain, Turkey, Austria and in the Czech republic. The surface of the growing areas is usually several tens of ha. The renewed interest in this variety has its origin in favourable quality parametres of emmer wheat grain and a beneficial effect on human organism. This article deals with a study of 10 varieties of emmer wheat (which have been chosen from the collection of gene bank at the Research institute of Crop Production in Prague-Ruzyně and in České Budějovice). The particular morphological and biological features were screened during all the vegetation period. Postharvest analysis was carried out after that and the economic characters were set up. Respect of the variety ideotype for organic farming was evaluated too. Concerning the morphological characters, emmer wheat is a suitable genus for condition of low-input farming systems. Plants of emmer wheat are middle tall or tall and they have suitable flag leaves. Spike is supposed to be dense. The biological characters are represented by the resistance to diseases and they are supposed to be very good. Varieties are usually not affected by funga diseases. Emmer wheat is very resistant to drought. When the economic characters evaluated, high degree of diversity of the varieties was found out. Spike is usually dense, it has high TGW and grain weight per spike is 1 g. Harvest index is lower than usual, because emmer wheat is not breeded variety. Some materials which achieve sufficient spike productivity and may provide a relevant yield may be found among the varieties. Some of the chosen varieties reached a sufficient evaluation, therefore, they are suitable for low-input farming systems in less favoured areas.