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10. Genetic Resources of Wild Emmer, *Triticum dicoccoides*, for Wheat Improvement: News and Views

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The genetic resources and diversities, discovered since the 7th IWGS, of wild emmer wheat, *Triticum dicoccoides*, the progenitor of almost all wheats, are reviewed at macro-and microgeographic levels, Macrogeographically, diverse genetic polymorphisms have been described across Israel: a and b amylases; photosynthetic yield and predictability; Cab circadian rhythms and polymorphisms; herbicide response polymorphisms and their ecological and alozyme correlates, and chromosomal localization; genetic divergence of heat production; salt tolerance; Na uptake polymorphism; amino acid polymorphisms; disease resistance polymorphisms (leaf, stem and stripe rusts, wheat soil borne mosaic virus) and their ecological and allozyme correlates. Microgeographically, the multi- and interdisciplinary long term (1984-1989) microsite study at Ammiad, eastern Galilee, is reviewed summarizing allozyme diversity. Finally, dynamic in-situ conservation is reviewed. These results strongly support the idea that wild emmer, *T. dicoccoides*, harbours rich of genetic resource polymorphisms appopriate for wheat improvement. Cultivar release is a long-term process. Cultivars harbouring *T.dicoccoides* genes resistant to powdery mildew, yellow (=stripe) rust, as well as high protein content and improved baking quality, will be commercially released in the foreseable future. *T.dicoccoides* will play a major role in future wheat improvement.