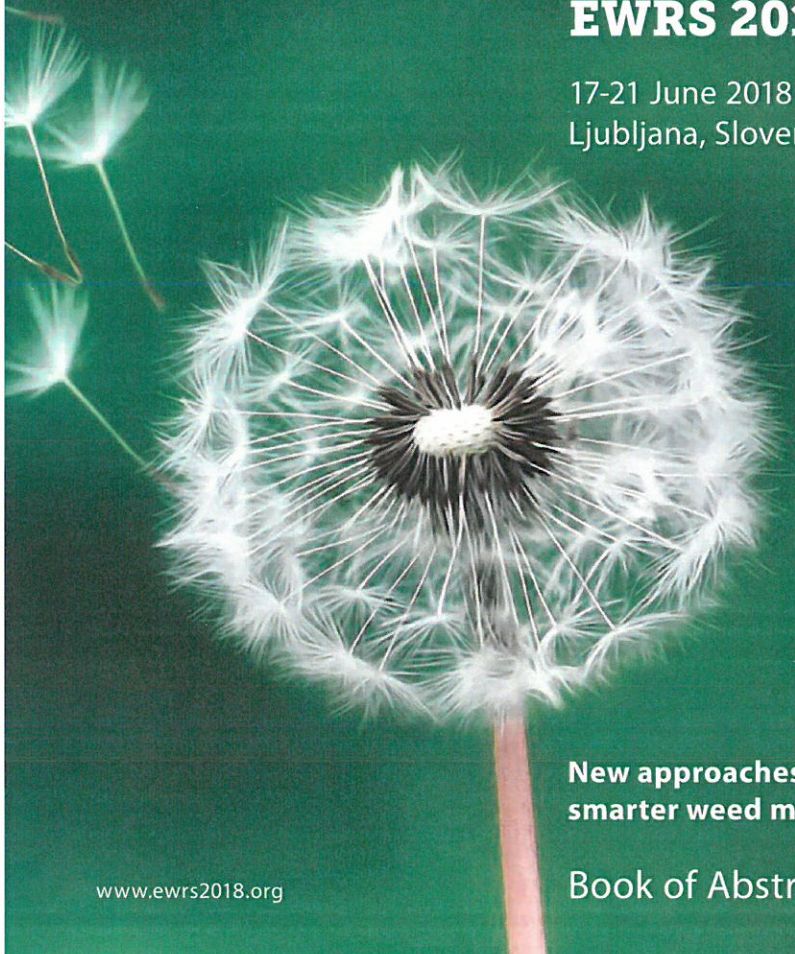




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ORAL PRESENTATIONS**

Can variety mixtures of spring cereals benefit weed management?

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Variety mixtures of spring cereals are gaining interest for greater yield stability based on resilience towards climatic conditions and diseases. Cultivars with suppressive abilities against weeds are increasingly used as part of an integrated weed management scheme, but the added benefits of mixing varieties to support weed management is less well understood. As part of the PRODIVA project, mixtures of barley and oat varieties, respectively, were established to study their weed suppressing ability and weed tolerance, including any added benefits compared to single varieties. The hypothesis was that the earlier the ground is covered and the denser the canopy becomes, the higher weed tolerance and suppression are achieved. Due to lack of information on variety characteristics, not all mixtures were based on existing knowledge of characteristics, but were characterised during the experiments.

Field experiments were established in Latvia, Poland and Denmark in either 2 or 3 growing seasons, partly with a surrogate weed and partly with natural weed populations. In each country, 6 barley and 3 oat varieties were sown both as single varieties and in mixtures. The varieties differed among countries. Growth parameters were measured to follow the development through the growing season, *e.g.* height, leaf area index, weed biomass, and crop biomass. Furthermore, yields in terms of quantity and quality were measured.

There were no consistent benefits for weed management of combining the varieties, the results, however, indicate larger potential for barley than oat, and some barley mixtures had more potential than others. The size of the weed population influenced the correlation among the measured parameters.