

EFRC Cereal Variety and Mixture Trials 2001 – Preliminary Results

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As a result of a very wet autumn period and foot and mouth disease in the spring only three (Berkshire, Suffolk and Wiltshire) of the intended six sites had variety trials established. This brief report provides an overview of the yield data collected so far and will hopefully come in time for making those final decisions on varieties for next year. A detailed report of the trials (weeds, disease, yield and grain quality) will appear in the next issue of the bulletin.

Seven winter wheat varieties, as well as mixtures of these varieties (+ triticale cv. Taurus), were included in the trials this year. For the second consecutive season Claire (Soft endosperm NABIM Group 3 wheat with good biscuit making potential) produced the highest yield. Of the bread-making varieties, Hereward, Malacca, Shamrock and Spark, all performed well with the exception of Malacca which was the lowest yielding variety in the trials this year. Both Shamrock and Spark had similar yields and out-performed Hereward by 0.24 t ha⁻¹ on average. In terms of the feed wheats, Aardvark and Deben, Aardvark performed very well out-yielding Deben by 1.28 t ha⁻¹.

The mixture Aardvark/Claire/Deben produced the highest yield. One very interesting result is the comparison of Hereward/Malacca/Shamrock and Hereward/Malacca/Shamrock/2 mixtures. Following the 2000 harvest, seed was saved from the Hereward/Malacca/Shamrock mixture at each site so that it could be re-sown this year (2000/01). The idea of this was to determine whether the mixture adapted to the different conditions at each site, altering the relative composition of the component varieties. The results clearly show that the re-sown mixture (H/M/S/2) out-yield the first generation mixture (H/M/S) indicating that some adaptation has occurred. Seed from this second generation mixture has been saved for re-sowing next season.

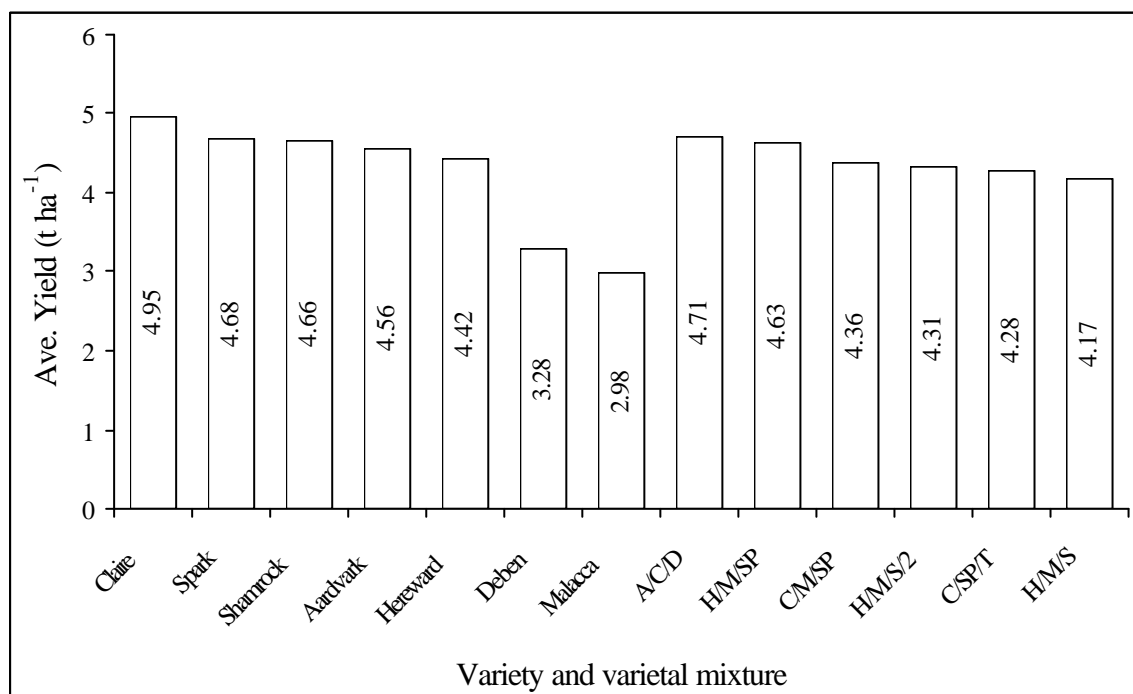


Figure 1. Average yield data for the winter wheat varieties and mixtures from three sites (Berkshire, Suffolk and Wiltshire)

Three varieties each of winter triticale and winter oats were trialled this year at the site in Berkshire. In terms of triticale, both Ego and Fidelio performed well. For winter oats, Kingfisher was clearly the superior variety.

The winter oat mixture (Dunkeld/Jalna/Kingfisher) produced yields significantly greater than the average of its component varieties. In a similar experiment to the winter wheat trial, seed from the triticale mixture (Ego/Fidelio/Taurus/) was saved following harvest 2000 and re-sown. Again, it can be seen that the saved seed mixture out-performs the first generation mixture indicating the population is altering its relative composition in response to the local conditions at the site.

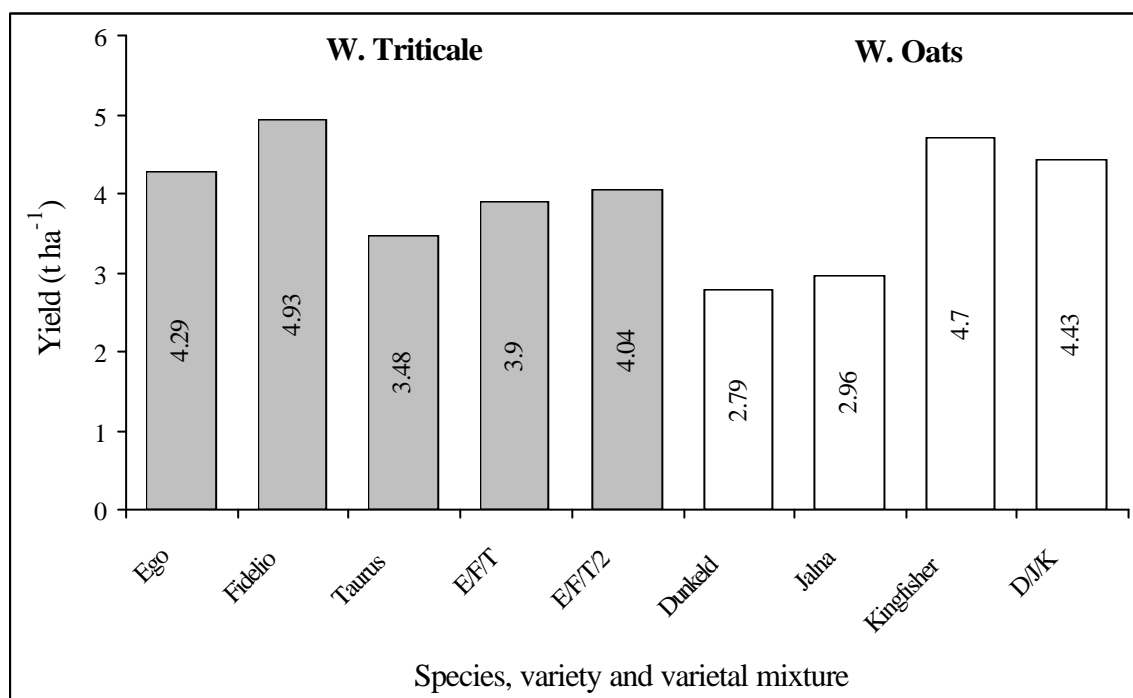


Figure 2. Yield data for the winter oat and triticale variety and mixture trial at the Berkshire site.

At the time of writing we still have one more trial of winter oats and triticale as well as a spring trial (barley, oats and wheat) to harvest. We look forward to bringing you these results in the next issue of the *Bulletin* as well as on our web site www.efrc.com.

Acknowledgements

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