

Super Wheat Crop

Summary: No limiting factors (other than rainfall) could be found for these crops. The yield achieved was at the 100% efficiency rating using Water Use Efficiency principles. In dry years it is unlikely to find factors limiting production other than rain.

Aim: To identify the limiting factors to wheat production in the Southern Mallee.

Methods: 'Best bet' agronomic practices were employed to grow a Super wheat crop (Frame). If the crop does not reach its potential of 20kg/mm/ha (Optimum Water Use Efficiency) then reasons for this have to be found. The treatments employed were urea, higher rates of P fertiliser and Impact in Furrow (possibly to reduce the incidence of Take-all). If the season had been more favourable Urea would have been considered for topdressing, foliar nutrients would have been applied and in a wet season the crop would have been sprayed with a fungicide.

Results:

pre-drilled Urea kg/ha	Mallee Mix 1 kg/ha	Single Super kg/ha	Impact in Furrow	Yield t/ha	Protein %
40	65	0	not applied	2.29	12.7
80	80	180	not applied	2.48	12.7
80	80	180	applied	2.29	12.7

Interpretation: the crop reached the 100% efficiency rating according to WUE principles (see introduction to this Manual). In years with low rainfall agronomic practices aimed at optimising production are unlikely to have any special benefits. It is only in years with average to above average rain that limiting factors can start to be identified.