1719 Evaluation of cotton cultivars under irrigation in South Africa

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Cotton (Gossypium hirsutum) is an important fibre throughout the world. Cotton seed has high oil and protein content and is used for human and animal consumption. Cultivar choice is very important in the production of any agricultural crop and the correct cultivar could greatly contribute to the reduction of risks and the optimization of yields. The importance of cultivars cannot be overemphasized. From the 2003/2004 season up to the 2005/2006 season, five cultivars were planted, namely, DeltaOPAL, NuOPAL, DeltaOPALRR, SZ9314 and LS9219. These trials were planted under irrigation at six localities in the different cotton-production areas of South Africa. The following observations were taken: seed cotton yield, fibre percentage, fibre yield, fibre length, fibre uniformity, fibre strength, fibre elongation, and micronaire. The highest yields were attained at Upington (8468 t ha^{-1}) and the lowest at Rustenburg (2117 t ha^{-1}). The Bt cultivar, NuOPAL produced the highest seed cotton yield and fibre yield at 12 out of the 18 environments.