

Summary of results and benefits:

Dr W L Weir, a farm adviser with the University of California for the past 21 years, spent his sabbatical at Narrabri for 6 months from November 1988. Dr Weir has been involved in an extensive research program with Pix on cotton in California for the past 8 years. His involvement enabled a rapid up-to-date research program to be instigated in Australia. Pix experiments were located adjacent to some ACCT (Australian Cotton Cultivar Trial) sites. In this way, planting and harvesting equipment were used on both projects. In addition, larger and more detailed experiments were located on a site near the Research Station.

The growth regulator Pix (mepiquat chloride) has become a popular treatment on cotton. The role of the chemical is to restrict internode extension so that excessive vegetative growth is minimised. Research is needed to help decide which crops require spraying and particularly rates; timing and cultivar sensitivity. The chemical is relatively expensive, but potential benefits justify its use, at least on rank crops.

An overall yield increase of 6% was obtained with Pix in five experiments when applied within three weeks of flowering. The preferred application timing was at flowering. Plant height was reduced by 6 to 11 cm. There were trends for a greater set of lower bolls with Pix, but concomitant reductions in boll size cancelled those benefits and all treatments had similar maturity. There was no benefit from multiple applications of Pix over a single application.

Applications late in boll filling had no effect.

A detailed report is appended.