

MEPIQUAT PENTABORATE FOR USE IN COTTON CULTIVATION

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Mepiquat chloride (MQC) was commercially introduced under the trade name Pix[®] for vegetative growth control in cotton in the USA in 1980 and has, since, become a cornerstone in modern cotton production. In some countries, such as India and Australia, the related compound chlormequat chloride (CCC) is used for the same purpose. However, a number of reasons indicate that CCC is the inferior product due to acting too abruptly and intensively and affecting only the main stem. Another variant is mepiquat pentaborate (MQB) (trade name Pentia[®]), which has just been introduced in the USA. The pentaborate form of mepiquat is showing a superior performance under field conditions as compared to its chloride salt. Mepiquat is absorbed more rapidly in the presence of pentaborate. As a result, new shoot growth is inhibited more intensively but the effect is not as “sharp” as after a CCC treatment. Another positive effect of faster uptake is improved rain-fastness. The anion pentaborate provides some boron, which, under boron deficiency, may be of nutritive value. Finally, MQB is a non-hygroscopic salt, which would allow for a production of granular formulations.