

ATRAZINE IN DRYLAND GRAIN SORGHUM PRODUCTION -  
A CASE STUDY IN THE INVERELL DISTRICT

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During the rapid expansion in grain sorghum area in the north west of New South Wales in the early 1970s, it became evident that a number of weeds would be major problems. These were: barnyard grasses (*Echinochloa* spp.), pigeon grasses (*Setaria* spp.), stinking love grasses (*Eragrostis* spp.), mint weed (*Salvia reflexa*), thornapples (*Datura* spp.) and annual ground cherry (*Physalis angulata*). Cultural methods of control were ineffective, particularly in relation to grassy weeds, and phenoxy herbicides were only partially effective in controlling these broad-leaf weeds.

Results of a research program undertaken from the Tamworth Agricultural Research Centre in 1971 showed that weeds caused large yield losses in dryland sorghum and that atrazine was effective against the defined problem weeds. Reduction in the price of atrazine and an increase in the price of sorghum made the use of atrazine in dryland grain sorghum economically feasible.

In early 1973 the improvement of weed control techniques in dryland grain sorghum was adopted as a planned extension objective in the Inverell district. Using information gathered from industry and research sources, two television programs dealing with the use of atrazine in grain sorghum were prepared. These were telecast during September 1973 prior to sorghum sowing and aroused widespread interest amongst sorghum growers.

Also during September 1973, four neighbour group meetings were held in the Inverell district. At these meetings, the use of atrazine was described to and discussed with a total of about 30 landholders.

In the 1973/74 season an area of about 1500 ha of grain sorghum was treated with atrazine on a trial basis. During that season, several sites were chosen to demonstrate the effect of atrazine, and two field days were held to acquaint more local farmers with the current development and experience. Results during the 1973/74 season were very encouraging, and interest in atrazine use increased sharply.

The number of enquiries made it obvious that during the 1974/75 season, many growers would be using atrazine for the first time, without having any direct advice on its use. To avert potential problems a farmers' meeting was held at Delungra during the spring of 1974. This meeting was held in conjunction