

ALTERNATIVES TO DINOSEB ON PROCESSING PEAS IN  
EAST GIPPSLAND, VICTORIA

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*Abstract.* In East Gippsland, garden peas for processing are grown without irrigation. When conditions are dry following sowing, pre-emergence herbicides do not provide adequate weed control. In such conditions, dinoseb was the main post-emergence herbicide until its withdrawal in 1987. MCPB (sodium salt) was not widely used as it set back crop growth and delayed harvesting.

In October 1987, alternatives to dinoseb were tested in dry conditions on clay-loam and sandy-loam soils in the Stratford area. Herbicides were applied to 20x2 m plots, replicated twice, on seven crops cv Small Sieve Freezer. The weed spectrum and weather conditions varied between sites. Weed control and crop tolerance was rated using the EWRC scoring system 21 and 36 days after spraying.

When moisture was adequate, metribuzin (0.21-0.315 kg/ha) was a more effective herbicide than the post-emergence options. MCPB (sodium salt) (1.6 kg ai/ha) applied on its own, provided good control of Indian hedge mustard, *Sisymbrium orientale*, stinging nettle, *Urtica urens*, and fumitory, *Fumaria officinalis*, but poor control of other weeds. It delayed flowering of the peas by several days. A mixture of MCPB (sodium salt) (0.8 kg/ha) with cyanazine (1 kg/ha) provided excellent control of chickweed, *Stellaria media*, fumitory, wild radish, *Raphanus raphanistrum*, and Indian hedge mustard, but did not affect flowering date. Even in extremely dry conditions, excellent control of wild radish was achieved with this mixture. It is a preferred option to MCPB (sodium salt) alone.

MCPB (dimethylamine salt) (1.6-2 kg ai/ha) caused greater damage to peas than the sodium salt, but provided some control of wireweed, *Polygonum aviculare*, and dock, *Rumex* spp. Damage to the crop was less and weed control improved when MCPB (dimethylamine salt) (1 kg/ha) was mixed with cyanazine (1 kg/ha). A mixture of MCPB (dimethylamine salt) (1 kg/ha) with acifluorfen (sodium salt) (0.448 kg ai/ha) provided complete control of Indian hedge mustard and is a preferred option where this weed is dominant.

Bentazone (0.72-0.96 kg/ha) provided good control of wild radish except in extremely dry conditions. In such conditions, a mixture of bentazone (0.48 kg/ha) with cyanazine (1 kg/ha) provided excellent control of wild radish, but not other weeds. Addition of 2% nitrogen as ammonium sulphate, increased the efficacy of bentazone while reducing damage to the crop. Bentazone and mixes with cyanazine provide a useful option where wild radish is dominant.

Acifluorfen (0.448 kg/ha) provided excellent control of the cruciferous weeds and stinging nettle. It has potential for use in combination with cyanazine, as an alternative to bentazone, where wild radish or Indian hedge mustard are dominant.

Linuron and diflufenican were also assessed but caused an unacceptable level of damage to the peas.