

Glory Lily (*Gloriosa superba*) Control Trials

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Glory lily is native to tropical Asia and Africa and was introduced into Australia as an ornamental.

It is cultivated because of its vibrant red and yellow flowers and its ability to grow near the coast.

It has naturalized along much of the coastal sandy dunes of north-east NSW and South East Queensland where it successfully competes with other weedy species and has become a major environmental weed.

Herbicide trials have been conducted at Warana on the Sunshine coast, in March 1991 and Bribie Island, in March 2001.

Most herbicides have an effect on the foliage and brown it out easily, but it is the persistent tubers that remain in the soil and re-shoot that creates the on going problem.

To date 2,4-D acid [AF 300®], 2,4-D amine [Amicide Lo®], metsulfuron-methyl [Brush Off®] and imazapyr [Arsenal®] have shown promising field trial results in reducing tuber size and vigour.

With this information a pot trial was set up at the Alan Fletcher Research Station. The aim of this experiment was to investigate tuber degeneration in *G. superba*, following translocation of the herbicides, before the plant senesces in autumn.

Lower rates of a mix of 2,4 -D amine + metsulfuron-methyl than previously used were applied, and a slightly earlier application time have shown encouraging results.

These rates & mixes have shown increased tuber decomposition in a tunnel situation.

These new rates of 2,4-D, amine + metsulfuron-methyl & imazaypr with the addition of BS1000 have shown the best results for promoting tuber decomposition.

This now has to be replicated in the field to confirm herbicide activity. A replicated field trial will commence late 2004 to show efficacy of these new rates of effective herbicides.