MYCOHERBICIDE CO-OPERATIVE PROJECT

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Mycoherbicides are fungal pathogens applied in suspension to kill weeds in the same way as conventional herbicides. The technique, which uses indigenous pathogens, overcomes many of the problems associated with the importation of exotic organisms for biological control. There are two commercial mycoherbicides marketed in the U.S.A.

The strategies for using mycoherbicides are: (1) use of high concentration (*c.f.* naturally occurring) inoculum (inundative strategy); (2) application of inoculum at different times of the season and/or at different stages of weed growth than that naturally occurring in the field; (3) possible synergistic effects between fungal inoculum and chemical herbicides; (4) combinations of these options.

A co-operative project has been established between the Department of Plant Pathology at the University of Arkansas and the Agricultural Research and Veterinary Centre, Orange, to examine mycoherbicides for *Xanthium* species

Colletotrichum xanthii, first recorded from U.S.A., causes a seedling blight and stem anthracnose of Bathurst burr, *Xanthium spinosum* in some areas of N.S.W., especially after wet summers. Field releases of *C. xanthii* were made by Butler (1951), however, an inundative approach using massive spore doses was not possible at that time.

We are examining the potential for *C. xanthii* as a mycoherbicide. In February-March, 1984, we undertook a series of field trips in N.S.W. to collect a wide range of isolates of *C. xanthii*. The disease was found in coastal, tablelands, slopes and plains areas. Isolates of the disease are currently being tested on a range of *Xanthium* species at Fayetteville and Orange.

LITERATURE CITED

Butler, F.C. 1951. Aust. J. Agric. Res. 2: 401-410.