TROPICAL WEEDS RESEARCH CENTRE - A NEW FACILITY

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Abstract. The Alan P. Dodd Tropical Weeds Research Centre (TWRC) at Charters Towers, was constructed during 1984 and staffed during 1985 and 1986. Thus the Centre has only recently become fully operational. The total staff of 13 includes four scientisits, four technical assistants and three casual assistants.

TWRC is one of two weed research facilities of the Biological Branch, Queensland Department of Lands, the other being the Alan Fletcher Research Station at Sherwood in Brisbane. The branch, directed by Mr G. Diatloff, also has overseas staff doing biological control investigations.

The area of operation for TWRC is the northern half of Queensland, with regions varying from the wet tropical coast to arid grazing lands.

The primary responsibility of TWRC is research on declared plants (noxious weeds). However, research is also undertaken on other weeds, particularly introduced woody species. This research will benefit the grazing industry primarily, but other industries (sugar, dairying and tourism) and the maintenance of public lands (e.g. roadsides and stock routes) will also benefit.

Our research is aimed at achieving weed control using any one or a combination of biological, chemical, mechanical, or managerial control. Biological control work currently involves mass-rearing, aiding distribution, and monitoring of insects already released on prickly acacia, *Acacia nilotica*, parthenium weed, *Parthenium hysterophorus*, lantana, *Lantana camara*, Harrisia cactus, *Eriocereus martinii*, and salvinia, *Salvinia molesta*. Insects tested at Sherwood may soon be released for mass-rearing and distribution on giant sensitive plant, *Mimosa invisa*, and rubber vine, *Cryptostegia grandiflora*.

Herbicide research includes developing new formulations (e.g. for 2,4-D), evaluating additives, evaluating application methods, and studying the effect of environmental factors and plant growth status on herbicide efficacy. Experiments are in progress on rubber vine, prickly acacia, parthenium weed, chinee apple *Ziziphus mauritiana*, parkinsonia, *Parkinsonia aculeata*, currant bush, *Carrisa ovata*, milkweed, *Euphorbia heterophylla*, wild tobacco tree *Solanum mauritianum*, and privet, *Ligustrum* spp..

Research on the ecology of prickly acacia is in progress in association with the Department of Primary Industries. The results should contribute to managerial control and to the development of a state-wide strategy for prickly acacia.

In addition to research, TWRC has an important extension role. TWRC also has an educational role, such as contributing to training Shire Council spray operators and regional inspectors of the Rural Lands Protection Board.