

## Call for Preliminary Research Proposals

Cotton Research and Development Corporation (CRDC) invests in a wide range of research, development and extension projects aimed at enhancing the environmental, economic and social performance of the Australian cotton industry.

Preliminary research proposals (PRPs) are now being accepted for R&D support from CRDC in 2008/09, for up to 3 years duration.

Competition for funds is expected to be intense as the Corporation currently has a significant portfolio of existing R&D commitments.

### Guidelines

Projects may relate to any field of cotton-related research, including but not limited to the Corporations' six strategic R&D Programs:

People & Knowledge, Integrated Natural Resource Management, Crop Protection, Farming Systems, Breeding & Biotechnology, Value Chain

### Postgraduate Scholarships

Applications are now being accepted for **Postgraduate Scholarships** (\$32,000 pa for 3 years).

These scholarships are open to anyone who is an Australian resident, studying at an Australian university and interested in working in the Australian cotton industry to pursue postgraduate studies relating to the cotton industry or its related community activities. Studies may align with the academic year (starting 1 January 2008) or 1 July 2008.

### Applications close September 1, 2007

Applicants are advised to seek CRDC and industry input before compiling a proposal. A list of contacts for each R&D program can be found on the CRDC website.

Applicants should consult the Researchers' Handbook which along with the PRP form and Scholarship Application form which can be found on the CRDC website.



**Australian Government**  
Cotton Research and  
Development Corporation

**Cotton Research & Development Corporation**  
2 Lloyd Street, Narrabri NSW 2390  
Tel: 02 6792 4088 Fax: 02-6792 4400  
Website: [www.crdc.com.au](http://www.crdc.com.au)  
Email: [research@crdc.com.au](mailto:research@crdc.com.au)

CRDC08/07

# Laser weed zapper to save farmers millions

A weed sensor and spraying system that can cut herbicide costs for Australian agriculture by up to \$640 million annually — and improve crop yields by an anticipated 30 per cent — is under development at Edith Cowan University (ECU) in Perth.

A world-first technology for agricultural weed control, the system will revolutionise current crop spraying methods with a fully automated, laser-driven weed sensing technique.

Because it identifies and targets specific weeds only, the new technology will bring an unprecedented level of accuracy and efficiency to crop spraying.

The researchers expect the technology to reduce herbicide usage by up to 80 per cent, and as a result increase crop yields, minimise environmental impacts and boost farm profits.

The system has been developed by the WA Centre of Excellence in MicroPhotonic Systems (COMPS) at ECU and industry partner, Photonic Detection Systems Pty Ltd (formerly Weed Control Australia).

COMPS Director Professor Kamal Alameh said that unlike existing precision spraying systems which can only distinguish between green (vegetation) and brown (soil), this technology uses lasers to distinguish between green and green — or crops and weeds — based on extracting the slopes between different wavelengths of plant colour, characteristics and leaf size.

A bench top prototype has already been developed and patented.

"We are now taking the technology to the next level of sophistication — targeting specific weeds which infest our major agricultural sectors such as guinea grass in sugar cane and skeleton weed in broadacre. We're also looking at the cotton industry," Kamal said.



**Professor Kamal Alameh and John Rowe.**

“We’ll develop three prototypes, with an initial focus on developing a sensor system for the sugar industry to discriminate between sugar cane and guinea grass.

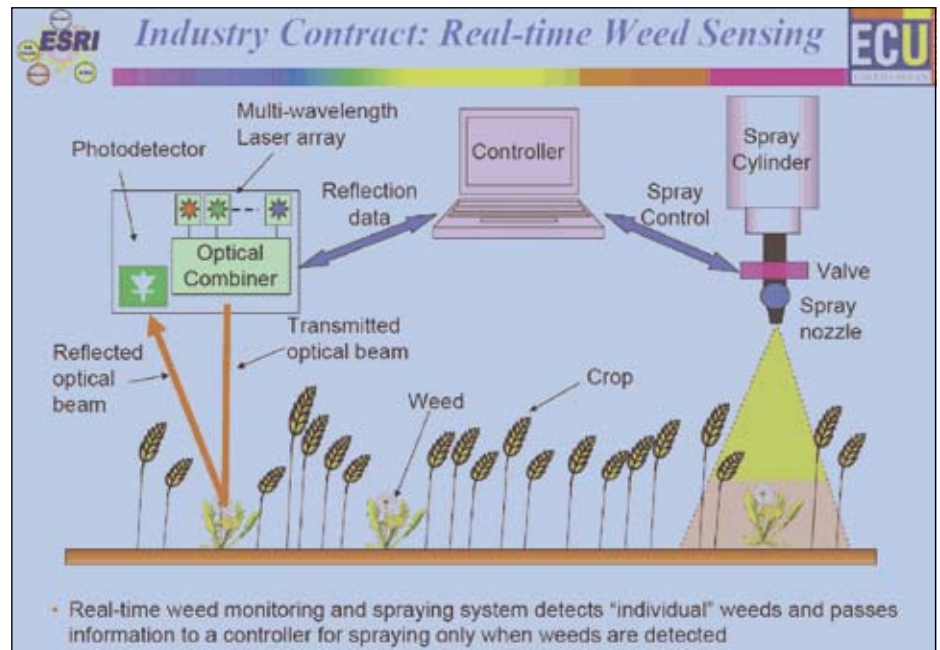
“The number and wavelengths of lasers in each device depend on the type of weed targeted. It’s an intelligent mechanism and can be programmed to sense changing spectral characteristics of the specific weed arising from variations in season, location and plant age.”

The device works by mounting laser sensors housed in small ‘boxes’ on the boom of a standard crop spraying vehicle, with two boxes per metre of boom. For every 10 boxes there is a controller which gives the signal to ‘strike’ (spray) when the lasers identify the target weed. The sensors work in real time at the travelling speed of the vehicle.

Current indications are that the accuracy of the sensor system is about 98 per cent, but the final accuracy rate will be determined in field tests.

The system can also be used as a micro diagnostic aid to measure such things as water and phosphate levels. This will assist farmers to assess plant health or stress anywhere in a paddock.

The system recently attracted a \$265,000 Australian Research Council



(ARC) Linkage Grant and COMPS and industry partner Photonic Detection Systems Pty Ltd, have contributed \$92,500.

Photonic Detection Systems Managing Director John Rowe said the goal is to have the first field prototypes for sugar, broadacre and cotton tested within two years.

“We want to be developing specialised

machines for other countries in three years,” he said.

“There is no other comparable technology worldwide so it has application way beyond Australia. The international marketplace for a product like this is immense.”

Contact Professor Kamal Alameh,  
Mob: 0415 334 876 Ph: 08 6304 5836 Email:  
k.alameh@ecu.edu.au



# Collective Bargaining under the Trade Practices Act making it easier to do business

## Collective bargaining – making it easier to do business, whatever the size of your business

Collective bargaining enables businesses of all sizes, like those in the agribusiness sector, to work together co-operatively.

Small businesses can benefit by joining together to negotiate with a larger business, who is their common customer or supplier. Larger businesses can find it more efficient to negotiate directly with a group of small businesses rather than each small business individually.

Businesses can collectively bargain with other businesses as long as they get approval to do so from the Australian Competition and Consumer Commission (ACCC) under the *Trade Practices Act 1974*.

Recent Australian Government reforms to the collective bargaining processes under the Trade Practices Act have established a new **notification** process. This will make it simpler, quicker and cheaper

for small businesses to engage in collective bargaining.

The new notification process allows small business to commence collective bargaining, where it is in the public interest, in as little as 28 days following the lodgement of a valid notification with the ACCC.

In addition to this, the existing process of **authorisation**, which is how businesses originally could apply to engage in collective bargaining, has been improved as part of these new changes.

For further information on how collective bargaining can be used by your business, including the higher transaction threshold of \$5 million available to primary producers, under the notification process, visit our website or call the helpline number below.



To find out more about collective bargaining changes and other government initiatives for small business, visit [www.business.gov.au](http://www.business.gov.au)



For information on collective bargaining processes go to [www.accc.gov.au](http://www.accc.gov.au) or call the ACCC small business helpline on 1300 302 021



Australian Government

Department of Industry, Tourism and Resources

hmaC067585