Part 1 - Summary Details

CRDC Project Number: **DAQ 126**

Project Title: Heliothis egg collecting from Downs & Burnett for CRDC project DAQ126C "Management of Heliothis Resistance to Synthetic Insecticides (and Bt)"

Project Commencement Date: 2005 **Project Completion Date:** 2005

CRDC Program: On-Farm

Part 2 – Contact Details

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Part 3 – Final Report Guide

Table 1: Summary of monthly helicoverpa egg collections from the Downs and South Burnett regions in southern Qld. during 2004/05.

MONTH	DOWNS	BURNETT	TOTAL
DEC	2080	500	2580
JAN	2530	150	2680
FEB	1750	0	1750
MAR		850	850
TOTAL	6360	1500	7860

Table 2: Summary of helicoverpa egg collections from cotton and grain crops in southern Qld during 2004/05.

CROP	DOWNS	BURNETT	TOTAL
Cotton Bollgard	5395	600	5995
Cotton conventional	915		915
Corn	50	800	850
Mungbeans		100	100
TOTAL	6360	1500	7860

Comment: The number of eggs collected this year was below target. This was due to lower than average heliothis activity on the Downs and Burnett (confirmed with Dave Murray). The impact of this low number on resistance testing was compounded in some cases by very poor egg survival. For example, heavy late-season heliothis egg lays in pulses in the Burnett (eg 50/m) came to nothing, with very few larvae surviving. We actually pegged out trials in some of these crops to no avail. The net result for our egg collector for 2003/04 (Fiona) was a lot of effort (miles driven and crops inspected) for little result. Hopefully heliothis activity will be higher this year. One way that may improve efficiency will be for collectors to keep collecting until the monthly target for a particular lab is reached (rather than sending small numbers of eggs in dribs and drabs to all labs at once).

Attached is a summary provided by Sharon Downes and Louise Rossiter.

Bt and Conventional Chemistry Resistance monitoring Sharon Downes, CSIRO and Louise Rossiter, NSW DPI.

Number of eggs and **% Hatch** is from collections from all crops supplied for Bt and Conventional Chemistry Resistance monitoring.

% H. armigera is from crops that attract both Helicoverpa species, cotton and pigeon pea, to give an indication of species composition. Excluded are collections from maize and sorghum.

% Parasitism is the percentage of eggs from all crops supplied to the Bt resistance monitoring program that were parasitised by *Trichogramma* spp.

Valley	Trait	November	December	January	February	March	Season Total
Darling Downs	number of eggs	329	4033	2497	1879	711	9449
	% hatch	18	60	53	42	33	50
	% H. armigera	9	6	38	73	92	28
	% parasitism	-	7	24	33	49	24

% H. armigera (total no. larvae speciated) All crops/sources

Valley	Nov	Dec	Jan	Feb	March
Kingaroy		17 (645)	45 (554)	92 (261)	97 (311)
Dalby	9 (58)	4 (735)	28 (207)	44 (27)	47 (30)

% H. armigera (total no. larvae speciated) cotton and pigeon pea only

Valley	Nov	Dec	Jan	Feb	March
Kingaroy		11 (599)	43 (536)	92 (261)	100 (21)
Dalby	9 (58)	4 (735)	28 (207)	44 (27)	47 (30)