

TABLE 1: Economic outcomes based on the Colonsay 2007–08 sorghum experiment

Crop (\$/t)	250						
N (\$/kg)	2						
Target crop available N (kg/ha)	Starting crop available N (kg/ha)						
		50	75	100	125	150	175
	200	250	93	-1	-46	-54	-37
	175	287	129	36	-9	-18	
	150	305	147	54	9		
	125	296	138	45			
	100	251	93				
	75	158					
Crop (\$/t)	200						
N (\$/kg)	2						
Target crop available N (kg/ha)	Starting crop available N (kg/ha)						
		50	75	100	125	150	175
	200	140	24	-41	-66	-63	-39
	175	179	63	-1	-27	-24	
	150	204	88	23	-3		
	125	207	91	26			
	100	181	65				
	75	116					
Crop (\$/t)	300						
N (\$/kg)	2						
Target crop available N (kg/ha)	Starting crop available N (kg/ha)						
		50	75	100	125	150	175
	200	360	161	39	-25	-45	-34
	175	394	195	73	9	-11	
	150	406	206	84	20		
	125	385	186	64			
	100	321	122				
	75	199					
Crop (\$/t)	250						
N (\$/kg)	2.5						
Target crop available N (kg/ha)	Starting crop available N (kg/ha)						
		50	75	100	125	150	175
	200	175	30	-51	-83	-79	-49
	175	224	79	-2	-34	-30	
	150	255	110	29	-4		
	125	258	113	32			
	100	226	81				
	75	145					
Crop (\$/t)	200						
N (\$/kg)	2.5						
Target crop available N (kg/ha)	Starting crop available N (kg/ha)						
		50	75	100	125	150	175
	200	65	-38	-91	-104	-88	-52
	175	117	13	-39	-52	-37	
	150	154	50	-2	-16		
	125	169	66	13			
	100	156	52				
	75	104					
Crop (\$/t)	300						
N (\$/kg)	2.5						
Target crop available N (kg/ha)	Starting crop available N (kg/ha)						
		50	75	100	125	150	175
	200	285	99	-11	-62	-70	-46
	175	332	145	36	-16	-24	
	150	356	169	59	8		
	125	348	161	51			
	100	296	110				
	75	187					

New pest control thresholds for chickpeas

New GRDC-supported research has changed recommendations for helicoverpa control in chickpea. Dr Melina Miles, Queensland Department of Primary Industries and Fisheries (QDPI&F) senior entomologist says growers are now advised to base their decisions to spray on the relationship between helicoverpa damage potential, the chickpea grain price, and the cost of control, rather than a fixed number of larvae per square metre (see suggested decision-making procedure next page).

“Helicoverpa has the potential to reduce yield by two grams per larva,” Melina said. “Grain quality or the percentage of defective grain at harvest does not decline within the range of larval densities that is economic to control to prevent yield loss.”

The period of crop susceptibility to helicoverpa is early pod set through to maturity and growers are advised to check crops regularly – usually once per week increasing to twice a week from early pod set onwards, or when larval numbers approach threshold.

“We are also encouraging growers to use a beatsheet to measure infestations but not to include eggs and very small larvae in the count used to calculate the threshold,” Melina said.

“Very small larvae are difficult to assess accurately, and are not reliable indicators of subsequent populations of larger larvae because of the high level of death in these small larvae.”

Melina says a large number of eggs and very small larvae is indicative of a recent egg lay and may warrant rechecking a few days later.

“As crops approach desiccation and harvest, egg-lays may not result in damaging populations of larvae. But if areas of the crop remain green, or there is cool wet weather, the crop may not dry down as fast as expected.”

She says growers should continue to check the crops through until they have dried down, and pods are too hard for medium and large larvae to damage.

“Methomyl and thiodicarb are options with short withholding periods, if the crop does need to be treated late,” she said.

To download a QDPI&F brochure on helicoverpa control in chickpea, visit www.dpi.qld.gov.au/fieldcrops. Click on the link to Helicoverpa management in chickpea. ■



Richard Lloyd, Queensland DPI&F principal experimentalist, entomology, uses a beatsheet to assess helicoverpa infestations in trial plots.