

Beneficials in grain production landscapes: quantifying impacts and management priorities

Outline of workshop aims and focus

Beneficial invertebrates that attack and kill crop pests (e.g. predators and parasitoids) have potential to be an important part of a sustainable pest management strategy. However, they are currently challenging to manage, and hence under-utilized in Australian grain production landscapes. Thus, their potential has not yet been realized. In part, this is because the value and impact of the services provided by beneficials is not clear.

The economic rationale for investment by growers into management of beneficials is complex, understudied and difficult to quantify. However, the value of the services provided by beneficials is likely significant: An economic valuation of pest control services in the United States estimated that beneficials are worth over \$4 billion annually. But what does this mean for a grower at the farm-scale? Furthermore, predictions about the likely impact of beneficials on pest populations and therefore protection from yield loss are unclear. This NIPI forum will focus on how we research the benefits associated with the management of beneficials for pest control. We will discuss: (1) Issues around quantifying the direct and indirect impacts of beneficials; and (2) the research gaps we need to fill in order to facilitate the better integration of beneficials into pest management decision-making.

The areas we will cover include:

- The economic value of beneficials
- Quantification of biophysical impacts
- Habitat manipulation
- Integrating beneficials into IPM strategies
- Reducing the impact of pesticides
- Information growers need to better manage beneficials

Date: Co-located with the Australian Entomological Society meeting, Rydges Swanston St., Melbourne 27-30 Nov. NIPI forum will be held on the first day following the AES (Thursday 1st Dec. 8:30am-4pm) and we will propose a symposium for the last day of AES.

Outputs: In addition to the report sent to GRDC, the organising committee is considering writing a co-authored article based on the discussion held at the workshop. From this an information sheet aimed at growers and consultants could also be developed. We will canvas interest in this idea during the workshop.

Travel funds: There are funds to cover some of your expenses if you attend the symposium and the NIPI workshop. We can commit up to \$700 (inclusive of GST) per person (dependent on final numbers). This can be claimed back from CSIRO via an invoice after the workshop.

Draft Agenda

Wednesday 30th November, Rydges Swanston, Melbourne

AES+ESNZ conference symposium: Biological control for Agriculture and the Environment

Session 9A 11:00am-12:15 (may be extended TBC)

7:30pm **NIPI Dinner Seasons Provedore**, 199 Lygon Street Carlton. Approx. 400m from Rydges on Swanston. Leave from reception at 7:15pm.

Thursday 1st December 2015

8:30am	Morning coffee	
8:50	Introductions and welcome	
9:00	Findings of the gap analysis: overview of the day	Sarina Macfadyen
	Morning session: Economic and Biophysical Impacts	
9:20	The economic benefits of beneficials	Steve Naranjo
10:00	Morning tea	
10:30	Key questions around beneficials? Do we have the data?	Melina Miles and co.
10:50	Community-level impact of beneficials	Vesna Gagic
11:10	Working group discussion – economic and biophysical impact of beneficial invertebrates in Australian grains <ul style="list-style-type: none">Do we need more economic analysis/data? Pro/conDo we need more biophysical analysis/data? Pro/con Four key arguments for and against each statement.	All
12:10	Lunch	
	Afternoon session: Management of Beneficials	
13:00	Habitat manipulation for supporting beneficials	Geoff Gurr
13:20	From models to management: Working towards decision support for weed removal to suppress pests and planting natives to boost beneficials	Hazel Parry
13:40	Integrating beneficials into an IPM programme (parasitoids in brassicas)	Mike Furlong
14:00	GPAC: Agrochemicals and pest management (priority areas identified)	Garry McDonald
14:20	Working group session – what do grain growers need know to make better use of beneficials on their farm?	All
15:20pm	Feedback session Outputs – interest in paper? The future of NIPI?	
4:00pm	Closing remarks and thank you	

- Please see registration desk to book taxi to airport

