



# Inaugural irrigated faba bean competition a success

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## IN A NUTSHELL

- ▶ The inaugural Irrigated Faba Bean Competition for southern New South Wales showcased some of the best managed irrigated faba bean crops in the Murrumbidgee Valley
- ▶ Three key factors determined the difference between a good crop and a champion crop: sowing time, disease control and spring irrigation management
- ▶ The winning crop was sown dry on 10 May, had minimal disease due regular preventative sprays, was watered twice in spring and yielded just over 5 t/ha

***Sowing on time, a preventative disease management strategy and timely spring waterings were the key features that distinguished the top faba bean crops from the 'others' in the inaugural Irrigated Faba Bean Competition.***

Held in the 2005 season, the competition was initiated by Pulse Australia and NSW DPI to promote irrigated faba bean Best Management Practices. The competition was an enormous success culminating in a presentation dinner at L'Oasis Restaurant in Griffith, attended by over 90 growers and industry representative, with thanks to AWB Seeds, Plant-Tech, RaboBank and IncitecPivot who sponsored the event.

The competition gave the opportunity to showcase some of the best managed irrigated faba bean crops from the Griffith, Coleambally, Hillston, Hay and Leeton areas, and to select the 'Champion Irrigated Faba Bean Grower' for 2005. The competition is now set to expand into the Murray and Goulburn valleys this year with regional winners to be selected and the possibility of an overseas trip to the overall winner, thanks to the support of the major competition sponsor, Dow Agrosiences.

### **The judging process**

A total of 22 crops were entered in the competition and preliminary judging took place in late September 2005. The crops were scored on seven key management criteria: plant stand, disease management, weed control, irrigation management, insect control, flowering and podding.

The score obtained was then matched against a *Cropcheck* data score that farmers had already completed looking at paddock selection, rotation, sowing time, nutrition, crop monitoring, marketing and overall record keeping.

The preliminary judging narrowed the field to six crops that

were separated by a narrow margin. These crops were judged again in late October on disease presence and management, insect management and level of damage, spring irrigation management, pod fill and maturity of the crop, and hence overall yield potential of the crop. The six finalists were:

- Simon Maynard of Hay
- Wooloondool Farms (Nick Maynard) of Hay
- Graham and Paul Moon of Yenda
- Terry McFarlane of Widgelli
- Frank Dal Bon of Widgelli
- Chris and Wendy Salafia of Leeton

### **What made a top crop in 2005?**

Three key management factors spread the field in 2005.

#### **1. Sowing time and consequent lodging**

Current faba bean varieties on irrigation should ideally be sown from early to mid May. Crops sown earlier were visibly more lodged, due to excessive vegetative growth, and often showed increased presence of leaf disease. Faba beans sown late are slow to emerge in the colder soil conditions, often setting pods lower to the ground making harvest difficult. Their ability to achieve maximum pod set is greatly reduced and higher temperatures at this time can often lead to decreases in yield and quality.

#### **2. Disease control and its effectiveness**

A strategic preventative spray program was the key to successfully managing disease. Crops that had their second or third spray too late or missed a spray had higher levels of chocolate spot, with lesions occurring mostly on the leaf and stem, increasing the potential for pod infection. Fungicide selection and rotation was also a crucial factor for good disease management of both ascochyta and chocolate spot



with the best crops receiving six fungicide sprays.

### 3. Spring irrigation management

Regardless of irrigation layout the first spring irrigation needed to be applied as soon as required. Any delays that led to water stress reduced yield potential by shortening the flowering period. In 2005 most growers made good use of off-allocation water.

### The winners for 2005

#### First - Graham & Paul Moon of Yenda

Graham and Paul's Farah crop was sown dry with a precision disc seeder on 36" row spacings into beds on 10 May, and watered up a day later. Establishment was 17 to 19 plants per metre row.

The crop had excellent health when inspected by the judging team. It had received 250 kg/ha of single super broadcast, and a further 125 kg/ha drilled in when hilling up, a total phosphorus application of about 34 kg/ha and sulphur at 41 kg/ha. The crop also received foliar applications of molybdenum and boron with fungicide sprays.

The 40 ha field showed good weed control having been sprayed with 2.5 L/ha of simazine and a further 2 L/ha of Sprayseed® (active ingredients paraquat and diquat) just prior to crop emergence.

The crop showed minimal disease presence with a good disease management strategy of regular preventative sprays of Dithane® (mancozeb) and Howzat® (carbendazim) at critical periods, totalling six sprays in all.

The spring irrigation management consisted of two irrigations, the first with off-allocation water in late August and again in mid October. Past experience and a shovel are Paul's best monitoring tools for knowing when to irrigate.

Paul managed this crop targeting a potential yield of 5 t/ha, and crop inspections in September showed he was on track with excellent quality, a very heavy pod load, and only some lodging. This crop went on to yield just over 5 t/ha.

First prize was a weekend package for two in Melbourne, with tickets to the "The Lion King".

#### Second - Terry McFarlane of Widgelli

Terry's Fiesta crop was sown in the optimum window and showed minimal lodging. It too was weed free, with no visible insect damage, minimal disease, and a good watering regime. The crop yielded 5 t/ha.

#### Third - Wooloondool Farms (Nick Maynard) of Hay

Insect management was a standout feature of Nick's Farah crop, with minimal disease and also a good watering regime. His crop yielded approximately 4.6 t/ha.

### The official launch of Nura

The competition dinner also doubled as the official launch of the new faba bean variety Nura, by Dr. Jeff Paul and AWB Seeds. Dr. Paul from Adelaide University is head of the national faba bean breeding program, and was responsible for breeding the current varieties Fiesta and Farah. AWB Seeds will market the new variety.

Nura is a shorter variety than Fiesta and Farah, and will have a decreased chance of lodging. It has improved disease resistance against chocolate spot and rust compared with current varieties. Although of similar maturity to Farah and Fiesta it is later to commence flowering, and will need to be sown earlier in the optimum sowing window. Trials in southern NSW have shown Nura to be around 6% lower yielding than Fiesta across all sites, however irrigated trials have looked more promising. Reduced fungicide costs and better standability will see it suit irrigation areas in NSW and Victoria. 🌞

### Acknowledgements

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### Further information

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Figure 1 Kieran O'Keefe, Ross Harvie and Trevor Bray inspecting Simon Maynard's crop



Figure 2 L to R Nick Maynard, Nick Koch from Dow Agrosiences (sponsor), Paul Moon, Terry McFarlane