

KEY FEATURES

- Early flowering desi chickpea for central Queensland region
- Proven higher yield than Jimbour, Howzat and Amethyst in DPI&F trials between 1999 and 2006
- Tall and erect plant type with good lodging resistance, suited to dryland and irrigated production
- **Suitable for central Queensland only.**

Varietal Description

Breeding and Development

Moti was bred by Dr Tanveer Khan of the Department of Agriculture and Food, Western Australia (DAFWA) from a cross made at NSW DPI, Tamworth. It was evaluated (as WACPE 2012 and 89-05.F5-4W) and developed jointly by the Queensland Department of Primary Industries and Fisheries and DAFWA. Moti is a Hindi/Urdu word meaning 'pearl' in the variety's target market of the Indian Subcontinent, and also celebrates the pearl industry of Western Australia.

Agronomic features

Variety	Days to flowering	Plant height (cm)	Lowest pod height (cm)	Lodging	Seed weight (g/100)
Moti	61	69	36	2.5	20.7
Jimbour	68	64	34	2.4	20.7
Howzat	64	59	31	3.0	21.1
Amethyst	67	59	33	2.3	16.6

Data from DPI&F trials in central Queensland, lodging is scored on a 1-9 scale (1=fully erect, 9=flat)

Area of Adaptation

Moti has **zero resistance to Ascochyta Blight** and as such the variety will not be available for production outside of central Queensland. It is well suited to the heavy clay and alluvial soils of the region but like all chickpea varieties is intolerant of water logging.

Maturity

Moti is the earliest flowering chickpea variety that is commercially available in Australia. This characteristic makes it ideally suited to the short duration, hot Central Queensland winter where chickpea yield potential is limited by terminal drought. Moti typically commences flowering 7 – 12 days earlier than full-season varieties.

Yield

Moti has demonstrated a significant yield advantage over other cultivars. The sites listed below include a range of soil types, sowing dates and seasonal conditions ranging from extremely poor to very good.

Early plant situations may increase the risk of exposure to frosts at flowering and early podding. However in DPI&F trials Moti has consistently out yielded other varieties from planting dates in early May through to late June.

Central Queensland grain yields for desi chickpea expressed as percentage (%) of Jimbour.

Location	Biloela	Emerald	Gindie
Number of sites	11 Trials	10 Trials	5 Trials
Years conducted	1999 to 2006	2000 to 2006	2001 & 2002, 2005 & 2006
Moti	108	106	113
Jimbour	100	100	100
Howzat	97	95	99
Amethyst	97	105	100

Yield data from DPI&F trials 1999-2006.

Plant Characteristics

Moti has excellent plant height, lowest pod height and an erect growth habit which improves harvestability in central Queensland. Distinguishing characteristics are earlier flowering/pod set and high yield potential.

Grain Characteristics

Moti grain is similar to that of Jimbour and is suitable for overseas splitting and flour markets.

Agronomic Management

Follow chickpea planting and management recommendations for your area with the following modifications:

Sowing Date and Seeding Rate

The recommended sowing window is through May – June in central Queensland. Moti is particularly well suited to late season plantings due to its early flowering habit. Moti produces large seed that is equivalent in size to Jimbour, growers should target an established dryland population of 30 plants/m².

Irrigation

Yields of up to 4 t/ha are achievable under irrigation production. Narrower rows will maximise yield potential and plant population should be increased to 35-40 plants/m².

Disease Management

Moti has **zero resistance to Ascochyta blight** and should not be grown outside of Central Queensland.

Seed Commercialisation

Moti is protected by Plant Breeders Rights (PBR). Growers can retain seed from production of Moti for their own seed use. Seed is commercialised through AWB Seeds and is available through local seed suppliers.

<p>Moti^ϕ Seed Supply enquiries:</p>		<p>Phone 1800 054 433</p>
---	--	----------------------------------

Agronomic Enquiries

Col Douglas (DPI&F)	phone: 07 4992 9112	email: col.douglas@dpi.qld.gov.au
Jon Thelander (AWB Seeds)	phone: 07 4637 3035	email: jon.thelander@awb.com.au
Gordon Cumming (Pulse Australia)	phone: 0408 923 474	email: pulse.gordon@bigpond.com

This Moti^ϕ VMP was jointly prepared by Col Douglas (DPI&F), Jon Thelander (AWB Seeds), Gordon Cumming (Pulse Australia) reproduction of this Pulse VMP in any edited form must be approved by Pulse Australia 2006, AWB Seeds and DPI&F.