

KEY FEATURES

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

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.

Agronomic features

Variety	Days to flowering	Plant height (cm)	Lowest pod height (cm)	Lodging	Seed weight (g/100)
Moti	59	74	37	4	22.2
Kyabra	65	73	37	3	25.3
Jimbour	65	71	37	4	22.0
Amethyst	63	68	36	3	15.9

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

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 and Adaptation

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

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. (Yield expressed at % of Moti in parentheses)

Variety	Biloela		Emerald		Region 1 Combined	
	t/ha	% of Moti	t/ha	% of Moti	t/ha	% of Moti
Moti	3.00	100	2.41	100	2.62	100
Kyabra	2.92	97	2.56	106	2.69	103
Jimbour	2.86	95	2.37	98	2.54	97
Amethyst	2.75	92	2.30	96	2.46	94
# Sites 2005 - 08	5		9		14	

Yield data from DPI&F trials.

Grain Characteristics

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

Management Package

(Consult local grower guides for more detailed information)

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.

Weed Control

Use of a post plant, pre-emergent herbicide for weed control is strongly recommended.

Consult your agronomist regarding your weed spectrum and for details about re-cropping intervals.

Disease Management

Moti is highly susceptible to *Ascochyta* blight and should not be grown outside of Central Queensland.

After the discovery of *Ascochyta* blight in central Queensland during 2008, growers are reminded that the seed moratorium continues. This means that;

- Planting seed must only be sourced from central Queensland.
- All planting seed should be treated with a fungicide containing Thiram.

All chickpea crops should be carefully inspected for *Ascochyta* 7 to 10 days after a rain event as well as at the commencement of flowering and at mid pod fill.

Immediately consult your local DPI&F officer or Pulse Australia for advice if *Ascochyta* is suspected

Seed Commercialisation

Moti[®] is protected by Plant Breeders Rights (PBR).

Growers can retain seed from their production of Moti for their own seed use only.

Moti is commercialised by AWB Seeds and is available through local seed suppliers.

Moti[®]

Seed Supply enquiries:



Phone 1800 054 433

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