

# Flipper<sup>®</sup>

## Desi Chickpea

### VARIETY SUMMARY

- Excellent Ascochyta resistance. Most crops should not need in-crop fungicides.
- Moderately susceptible to Phytophthora, equivalent to Howzat.
- Tall plant type with good lodging resistance.
- Attractive medium-sized seed type suited to the whole seed and/or splitting market.



### BREEDING

Flipper (formerly 93011-1021) was bred by Ted Knights and the NSW Department of Primary Industries Chickpea breeding team as part of the National Program. It continues the tradition of naming the varieties after cricketing terms to appeal to the Indian Sub-Continent (ISC) target market.



### AREA OF ADAPTATION

Flipper and Yorker are two new varieties bred for Northern NSW with improved Ascochyta resistance. Flipper is a preferred variety where Ascochyta is considered the greatest risk.

Suggested areas are Higher rainfall areas of NSW, and adjacent Queensland border districts.

Trial data has suggested it is not well adapted to the Western areas of Southern Queensland.



### PLANT CHARACTERISTICS / GRAIN QUALITY

Flipper is a tall and erect variety.

Mature plant height at least equivalent to Jimbour. Height to lowest pod greater than other varieties (including Jimbour).

Harvestability is enhanced by lodging resistance expressed even under conditions of early sowings.

Later flowering than other varieties (4-10 days) and slightly later to harvest maturity (up to 4 days).

Flipper produces a medium-sized grain, light in colour, and suitable to the whole seed and/or splitting market.



### DISEASE RESISTANCE

Flipper has an Ascochyta resistance of 4, far superior to Howzat (Mod. susceptible 7), and Jimbour (Highly susceptible 8).

For all situations, there is no cost benefit in applying a fungicide to Flipper until after Ascochyta is detected.

(Please refer to the Pulse Australia Flipper VMP for further details: [www.seednet.com.au](http://www.seednet.com.au)).

Flipper has shown it is moderately susceptible to Phytophthora (6), compared to Jimbour (5).

Crops should be monitored for Botrytis Grey Mould in spring as temperatures rise.

 **YIELD**

Flipper has the potential to significantly outyield Ascochyta susceptible varieties (e.g. Howzat, Jimbour, Amethyst) where the disease is not adequately controlled.

For example, in Disease Management trials at Tamworth a yield advantage of up to 2.1 t/ha has been demonstrated under high disease pressure.

Flipper has yielded slightly less than Jimbour and Howzat, but similar to Amethyst in NSW DPI trials, under disease-free conditions.

**Table 1: Yield (t/ha) of four chickpea varieties under low and high levels of Ascochyta.**

Ascochyta Pressure	Flipper	Yorker	Jimbour	Howzat
Very Low	<b>2.90</b>	3.38	3.12	3.15
Very High	<b>2.54</b>	2.11	0.43	0.62

Data source: NSW DPI TAC04 trial 2004  
(Note: Trial was inoculated with diseased chickpea residue)

**Table 2: Predicted yield (t/ha) under very low Ascochyta conditions.**

	Flipper	Yorker	Jimbour	Howzat	Amethyst
2004	<b>1.72 (14)</b>	1.82 (14)	1.90 (12)	1.83 (15)	1.70 (10)
2003	<b>1.38 (10)</b>	1.42 (12)	1.50 (11)	1.62 (13)	1.42 (9)
2002	<b>0.82 (6)</b>	0.78 (6)	0.76 (6)	0.72 (6)	0.75 (6)

Data source: NSW DPI S3 trials (No. of trials)

 **AGRONOMIC GUIDELINES  
PLANTING**

- Can be planted earlier (up to 10 days) in the planting window due to the combination of improved Ascochyta resistance, better standability and slightly later maturity.
- Sow high quality seed at rates calculated to achieve 25-30 plants/square metre field establishment (50-65 kg/ha depending on planting conditions and seed quality).
- Seed should be treated with a registered fungicide to reduce the risk of infection with Ascochyta Blight and other diseases.
- All chickpeas should be inoculated with Group N Chickpea inoculant immediately before sowing.

 **WEED CONTROL**

Growers should consult the Flipper Variety Management Package (VMP) for further information (available from the Seednet website).

 **PLANT BREEDER RIGHTS AND ROYALTIES**

Flipper is protected by Plant Breeder Rights, any unauthorised commercial propagation or any sale, conditioning, export, import or stocking of propagating material of this variety is an infringement under the Plant Breeder's Rights Act, 1994.

Growers are allowed to retain seed from production of this variety for their own use as seed only.

An End Point Royalty of \$3.30 per tonne (GST inclusive), which includes breeder royalties, applies to this variety.

**ACKNOWLEDGMENTS**

Flipper was bred by the NSW Department of Primary Industries with support from other partners in the National Breeding Program (especially QDPI&F and Agriculture Victoria Services) and growers through the GRDC.



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