

Nafice[®]

Kabuli Chickpea

VARIETY SUMMARY

- A kabuli chickpea with improved ascochyta blight resistance.
- Yield greater than current large seeded kabuli chickpea varieties.
- Greater seed size than Kaniva and Almaz.



BREEDING

Nafice was developed by Professor Kadambot Siddique, Ms Kerry Regan, Mr Mike Baker, Mr Tim Pope and Dr Rajendra Malhotra. Nafice was developed from single plants selected from segregating material provided by ICARDA, Syria. Initial cross was made at ICARDA in 1994. Nafice has been evaluated in Turkey and Australia during 1998 to 2004.

Pedigree = X94TH8 / FLIP86-6 X FLIP90-109

The variety name Nafice is Arabic for very precious. The name was chosen due to the high quality and to acknowledge the initial crossing made at ICARDA, Syria.



AREA OF ADAPTATION

Nafice is most suited for winter sowing in cropping regions of Australia with medium to high rainfall (400 - 700mm annual), deep fertile soils and mild spring conditions favourable to seed filling.



MATURITY

Nafice starts flowering on average two days later than Kaniva with similar maturity.



PLANT CHARACTERISTICS

Nafice is a kabuli chickpea with semi-erect growth habit, pinnate-leaf type and white flowers. It has similar flowering, maturity, height and plant morphology as Kaniva.



YIELD

Nafice has produced greater yield than Kaniva across 15 trials in southern Australia during 2002 to 2004.

Yield expressed as % Kaniva in trials across WA, Vic, NSW and SA 2002-2004. (Ascochyta blight absent in 2002. Varying levels of disease in trials 2003 and 2004)

VARIETY	2002 (1)	2003 (8)	2004 (6)	Overall (15)
Nafice	100	125	108	116
Almaz	105	151	128	138
Kaniva (yield, kg/ha)	1188	932	1072	856



SEED CHARACTERISTICS

Nafice produces seeds larger than Kaniva and Almaz. The seed coat is an attractive beige colour similar to Kaniva. Nafice has similar cooking qualities to Kaniva and Almaz.

Mean seed size and distribution of Nafice

VARIETY	Mean Seed Weight	
	%Kaniva	mg/seed
Nafice	120	40
Almaz	117	39
Kaniva	100	34

(Mean of 15 trials between 2002 and 2004)

VARIETY	Proportion of Seed (%)			
	>9mm	8-9mm	7-8mm	<7mm
Nafice	52	34	11	3
Almaz	38	43	15	4
Kaniva	24	46	23	7

(Mean of 7 trials between 2002 and 2004)



DISEASE RESISTANCE

Nafice has disease ratings of moderately resistant (4) and moderately susceptible - susceptible (7) for ascochyta and phytophthora disease respectively. Both these ratings are significant improvements over Kaniva's very susceptible rating (9) for both these diseases.

Ascochyta blight disease rating

VARIETY	Rating*
Nafice	MR
Almaz	MR
Kaniva	VS

*Ratings sourced from Pulse Australia Chickpea disease manual - 2006 booklet.
MR = Moderately Resistant, VS = Very Susceptible

AGRONOMIC GUIDELINES

Planting

- Avoid sowing too early to minimise risk from ascochyta blight.
- Separate by at least 500m from the previous year's chickpea stubble.
- Sow seed free from ascochyta blight.
- Aim to establish 25-35 plants per m².
- Kabuli chickpea has thin seed coat and care should be taken to avoid mechanical damage while handling. The seed should be treated with a registered fungicide to reduce the risk of infection with seedling diseases.
- Follow the local instructions on crop rotation and paddock selection.
- Inoculate with Group N Chickpea rhizobial inoculum immediately before sowing.

Disease Management

Nafice will require reduced strategic fungicide sprays against possible ascochyta blight damage. Do not wait to see the disease. The first spray is the most important. Apply first spray 4 weeks after sowing and a second spray may be useful mid-flowering to early podding. The crop should be examined regularly during the growing season and further fungicide sprays applied if required.

Weed Management:

Good weed management is critical for high yields and grain quality in chickpea. Choose a paddock with a low broad-leaved weed burden and do not sow chickpea into a pasture paddock. A range of pre-emergence and post-emergence herbicides are available depending upon the weed spectrum. Consult your local chickpea specialist.

Insect Management:

Chickpea can tolerate red-legged earth mite, lucerne flea and aphids. Chickpea is very susceptible to native budworm (*Helicoverpa*). Spray thresholds depend on the value of the crop. As a rule of thumb spray insecticide if more than one grub per 20 sweeps is present. The crop needs to be monitored from the commencement of podding.



PLANT BREEDER RIGHTS AND ROYALTIES

Nafice 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 \$7.15 per tonne (GST inclusive), which includes breeder royalties, applies to this variety.

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