Registration of ‘Almaz’ Kabuli Chickpea Cultivar

‘Almaz’ kabuli chickpea (Cicer arietinum L.) (Reg. no. CV-268, PI 642852) was developed by the Centre for Legumes in Mediterranean Agriculture (CLIMA) Germplasm Development Program. It is adapted to winter sowing in cropping regions of Australia with medium to high rainfall (400–700 mm annual), deep fertile soils, and mild spring conditions. It was released by CLIMA in August 2005.

Almaz was developed from single plants selected from segregating material provided by the International Centre for Agriculture in the Dry Areas (ICARDA), Aleppo, Syria. The initial cross was made at Tel Hadya, Syria, in 1994. The pedigree is X94TH103/(FLIP 91–186C/FLIP 91–96C)//FLIP 90–109C. Single plants were initially selected from F5 segregating populations sown in field plots in Turkey in 1998 and Western Australia (WA) in 2000 on the basis of resistance to Ascochyta blight [caused by Ascochyta rabiei (Pass.) Labr.], uniformity, flowering time, seed coat color, and seed size. Almaz has been evaluated in Turkey and Australia from 1999 to 2005.

Seed from individual plants was planted in separate rows at the Gascoyne Research Station at Carnarvon, WA, in 2001. Plots of nonuniform plants were removed. Seed from uniform plants were bulked and planted at Carnarvon, WA, in 2002, Carnarvon and Deepdale, WA, in 2003, and in WA, Victoria (VIC) and Queensland (QLD) in 2004.

Almaz was evaluated in 18 trials between 2002 and 2005 at various sites in WA, VIC, South Australia (SA) and New South Wales (NSW). It produces greater yields than ‘Kaniva’ (standard variety) and ‘Nafice’ (Siddique et al., 2007) with an average yield of 1.26 Mg ha\(^{-1}\) across sites and seasons. The plant has a semierect growth habit and is medium to tall in height (580 mm). The primary branches are erect and average about three per plant. The stem is woody and anthocyanin pigmentation is absent. Leaves are pinnate (16 mm long × 9 mm wide) with medium green color. The white flowers, which have medium peduncles, are large (30 mm long × 12.5 mm wide), have medium green color, with hairs absent to weak, and 1.3 ovules. Almaz has a medium time to flowering (113 d after sowing) and early to medium time to maturity with medium to heavy weight (36–43 mg seed) of angular shape, and weak ribbing. Almaz has seeds with seed weight approximately 12% greater and 3% smaller than Nafice. Almaz exhibits resistance greater than Kaniva and similar to Nafice.

Seed of Almaz is maintained and can be used for research purposes through the Germplasm Development Program, Centre for Legumes in Mediterranean Agriculture, University of Western Australia, Australia. Seed distribution for research purposes will be done for the first 5 yr from publication date by the owner and then will be available freely from the NPGS.

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References


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