Registration of ‘Barichhola-3’ Chickpea

‘Barichhola-3’ chickpea (Cicer arietinum L.) (Reg. no. CV-148, PI 583753) was released in Bangladesh for commercial cultivation in October 1993. This line was introduced from the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), India, as ICC 83105. Preliminary observations on a nonreplicated plot were made at the Pulses Research Centre (PRC), Ishurdi, Pabna, Bangladesh. This evaluation was followed with multilocational yield trials in the chickpea growing areas of Bangladesh.

Barichhola-3 was developed through hybridization between an F2 plant from the cross K-850 (ICC 5003) × T-3 (ICC 4998) and an F1 plant from the cross JG-62 (ICC 4951) × BEG 482 (ICC 4923), followed by the bulk pedigree method of breeding. Finally a single plant selected in F6 was progeny-rowed and bulked in F7. This line was moderately resistant to fusarium wilt [caused by Fusarium oxysporum Schlechtend.:Fr. f. sp. ciceris (Padwick) Matuo & K. Sato] at PRC, Ishurdi. Barichhola-3 has a 100-seed mass of 17 to 18 g, which is about 50% greater than the popular cultivar Nabin. The plants are erect type, with light pigmentation. The leaves have comparatively larger leaflets and are light green in color. Its dhal recovery is 76.5%, protein content is 25.2%, and starch content is 52.8% (1). Barichhola-3 produced 20% higher seed yield in three replicated yield trials in the Barind region (northwestern Bangladesh) than the local control, ‘Rajshahi Local’.

Barichhola-3 was introduced to Bangladesh as ICCL-85222 (Reg. no. CV-148, PI 596368) was developed by the Bangladesh Agricultural Research Institute (BARI), Pulses Research Centre (PRC-BARI) at Ishurdi, Pabna, Bangladesh. The entry HMS 1035 (ICC 3844) × T-3 (ICC 4998) and was derived from the cross JG-62 (ICC 4951) × BEG 482 (ICC 4923), followed by the bulk pedigree method of breeding. Finally a single plant selected in F6 was progeny-rowed and bulked in F7. This line was moderately resistant to fusarium wilt [caused by Fusarium oxysporum Schlechtend.:Fr. f. sp. ciceris (Padwick) Matuo & K. Sato] at PRC, Ishurdi. Barichhola-3 has a 100-seed mass of 17 to 18 g, which is about 50% greater than the popular cultivar Nabin. The plants are erect type, with light pigmentation. The leaves have comparatively larger leaflets and are light green in color. Its dhal recovery is 76.5%, protein content is 25.2%, and starch content is 52.8% (1). Barichhola-3 produced 20% higher seed yield in three replicated yield trials in the Barind region (northwestern Bangladesh) than the local control, ‘Rajshahi Local’.

Barichhola-3 was introduced to Bangladesh as ICCL-85222 (Reg. no. CV-148, PI 596368) was developed by the Bangladesh Agricultural Research Institute (BARI), Pulses Research Centre (PRC-BARI) at Ishurdi, Pabna, Bangladesh. The entry HMS 1035 (ICC 3844) × T-3 (ICC 4998) and was derived from the cross JG-62 (ICC 4951) × BEG 482 (ICC 4923), followed by the bulk pedigree method of breeding. Finally a single plant selected in F6 was progeny-rowed and bulked in F7. This line was moderately resistant to fusarium wilt [caused by Fusarium oxysporum Schlechtend.:Fr. f. sp. ciceris (Padwick) Matuo & K. Sato] at PRC, Ishurdi. Barichhola-3 has a 100-seed mass of 17 to 18 g, which is about 50% greater than the popular cultivar Nabin. The plants are erect type, with light pigmentation. The leaves have comparatively larger leaflets and are light green in color. Its dhal recovery is 76.5%, protein content is 25.2%, and starch content is 52.8% (1). Barichhola-3 produced 20% higher seed yield in three replicated yield trials in the Barind region (northwestern Bangladesh) than the local control, ‘Rajshahi Local’.

Barichhola-4 is a double-podded cultivar, a character known to increase the number of pods and to enhance yield under droughty conditions often encountered in the postrainy season. Barichhola-4 has been recommended for the Barind region and is expected to play a significant role in increasing productivity in that area.

Breeder seed of Barichhola-3 will be maintained by the Pulses Research Center of the Bangladesh Agricultural Research Institute (PRC-BARI) at Ishurdi, Pabna, Bangladesh. Foundation seed will be produced and distributed by the Bangladesh Agricultural Development Corporation, Dhaka, Bangladesh. Seed is also deposited with the U.S. National Seed Storage Laboratory, 1111 S. Mason St., Fort Collins, CO 80521-4500.

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References and Notes


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