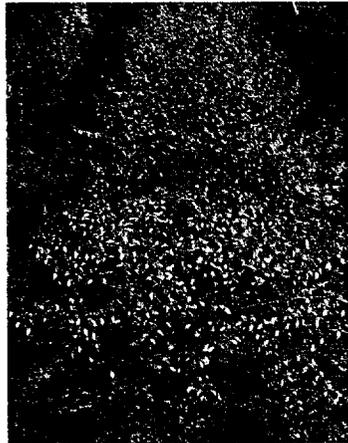


PN-ABR-062
ISN 87010

Chickpea Variety Nabin (ICCL 81248)



- High yield
- Short duration (120–125 days)
- Large seeds



ICRISAT

Plant Material Description no. 46

International Crops Research Institute for the Semi-Arid Tropics
Patancheru, Andhra Pradesh 502 324, India

Nabin is a high-yielding, short-duration chickpea cultivar recommended for general cultivation in Bangladesh by the National Seed Board of Bangladesh in 1987. Its seeds are about 50% larger, and more attractively colored, than those of the local variety Hyprosola.

Origin and Development

Nabin was derived from a line (ICCL 81248) supplied by ICRISAT to the Bangladesh Agricultural Research Institute (BARI) in 1981/82, as a part of the International Chickpea Screening Nursery. The selection was designated as S₁. ICCL 81248 was bulked in the F₈ generation from a three-way cross P 481 × (JG 62 × P 1630) at ICRISAT Center. The selection number of the line is ICCX 74754-2P-LB-1P-2P-1P-BP. The cross was made in 1974, followed by single plant selection in F₂, bulking in F₄ in the Lahaul valley in Himachal Pradesh, and subsequent single plant selections in the F₅-F₇ generations.

Synonym

ICCV 81248.

Plant Characters

Nabin has pink flowers, paler in color than those of Hyprosola. The growth habit is semi-erect.

Seed Characters

The seed is typically desi, light yellowish in color, and larger than the seed of local varieties in Bangladesh.

Seed Availability

Breeders' seed is maintained by the BARI Pulses Research Centre, Joydebpur, Bangladesh.

Performance

S₁ was tested in replicated trials for 4 years (1982/83 to 1985/86) at Ishurdi (Regional Agricultural Research Station, BARI) and at other locations in Bangladesh. In comparison with the local variety Hyprosola, Nabin flowered about 12 days earlier, grew taller, and produced more pods; seeds were about 50% larger and seed yield about 34% higher than in Hyprosola (Tables 1, 2).

The Crop Monitoring Project of the Canadian International Development Agency (CIDA) tested Nabin in large minikit plots (1330 m²) at several locations in Bangladesh for

2 years. Yields of up to 3.5 t ha⁻¹ (mean 2.1 t ha⁻¹) were obtained from 25 farmers' fields. In contrast, average chickpea yields are about 750 kg ha⁻¹ in Bangladesh.

Table 1. Agronomic characters of Nabin and the control variety Hyprosola at Ishurdi, Pabna, Bangladesh, 1984–86.

| Cultivar | Days to | | Plant height (cm) | Pods plant ⁻¹ | 100-seed mass (g) |
|-----------|-----------|----------|-------------------|--------------------------|-------------------|
| | Flowering | Maturity | | | |
| Nabin | 60 | 122 | 67 | 154 | 11.8 |
| Hyprosola | 72 | 127 | 52 | 110 | 7.6 |

Source: Bangladesh Agricultural Research Institute (BARI)

Table 2. Mean seed yields of Nabin and the control variety Hyprosola at different locations in Bangladesh, 1982–86.

| Cultivar | Seed yield (t ha ⁻¹) | | | | Mean |
|-----------|----------------------------------|-------------|-------------|-------------|------|
| | 1982/83 (1) ¹ | 1983/84 (2) | 1984/85 (3) | 1985/86 (5) | |
| Nabin | 2.68 | 4.12 | 2.11 | 2.10 | 2.75 |
| Hyprosola | 1.55 | 3.03 | 1.81 | 1.80 | 2.05 |

1. Figures in parentheses indicate number of locations.

Source: Bangladesh Agricultural Research Institute (BARI)

Plant Material Descriptions from ICRISAT

Leaflets in this series provide brief descriptions of crop genotypes identified or developed by ICRISAT, including:

- germplasm accessions with important agronomic or resistance attributes;
- breeding materials, both segregating and stabilized, with unique character combinations; and
- cultivars that have been released for cultivation.

These descriptions announce the availability of plant material, primarily for the benefit of the Institute's cooperators. Their purpose is to facilitate the identification of cultivars and lines and to promote their wide utilization. Requests should be addressed to the Director General, ICRISAT, or to appropriate seed suppliers. Stocks for research use issued by ICRISAT are sent to cooperators and other users free of charge.

ICRISAT is a nonprofit, scientific, research and training institute receiving support from donors through the Consultative Group on International Agricultural Research. It serves as a world center for the improvement of grain yield and quality of sorghum, pearl millet, finger millet, chickpea, pigeonpea, and groundnut, and acts as a world repository for the genetic resources of these crops. The plant materials announced in these leaflets are end-products of this work, which is aimed at enhancing the agricultural productivity of resource-poor farmers throughout the semi-arid tropics.

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