

STUDIES ON THE VARIETAL PERFORMANCE OF POINTED GOURD (*Trichosanthes dioica* Roxb.) IN GANGA DIARA OF BIHAR, INDIA

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ABSTRACT

Among the 12 test cultivars of Pointed gourd, Rajendra Parwal-1 proved significantly superior to rest of the cultivars in terms of fruit yield (144.33 q/ha) and yield attributing characters. It was statistically comparable with Rajendra Parwal-2 (138.41 q/ha), Swarna Rekha (138.08 q/ha), Swarna Alokik (134.75 q/ha) but the maximum benefit cost ratio was obtained by the variety Rajendra Parwal-2 recording the values of 2.45, 2.50 and 2.47 under the investigation during individual years and on pooled data basis. Swarna Rekha and Swarna Alokik had benefit cost ratio of 2.45, 2.50 and 2.47 in first year, second year and pooled basis. The minimum value of B:C ratio was noticed as 0.86, 1.02 and 0.94 in respective years and pooled basis by the cultivar Charkolwa.

Key words : Pointed gourd, P₂O₅, K₂O.

Pointed gourd commonly known as 'Patal', 'Parwal' is a native of India. The fruit is used as an ingredient of vegetable curry and the leaves and tender shoots for the preparation of soups for convalescents. This vegetable is easily digestible, diuretic and laxative, also invigorates the heart and brain and is considered useful in disorders of the circulatory system.

Parwal (Pointed gourd) *Trichosanthes dioica* Roxb. is one of the most important commercial cucurbitaceous vegetable of Diara eco-system in Gangetic plains of Bihar. It is widely grown on river terrace, deposited with recent young alluvium. It gains commercial importance on account of prolonged availability of its fruits right from the month of March to early November on flood free lands of different 'Diaras'. It is an important revenue-earning crop of small and marginal farmers of 'Diara' lands, which helps in raising their socio-economic status.

The experiment under ICAR's Adhoc Project was carried out in randomized block design with 3 replications on 12 important cultivars of Parwal in Ganga Diara belt of Sabour. The soil properties of the experimental plot was sandy loam in texture. The values of organic carbon ranged between 0.40 and 0.42 per cent; available N-180 and 182 kg/ha, P₂O₅- 18.0 and 18.4 kg/ha, available K₂O- 210.0 and 215.0 kg/ha during two years of the study. The pH value was 8.0 and 7.9 ie; slightly alkaline in reaction with E.C. value of 0.18 and 0.20 dsm⁻¹ during the year 1999-2000 and 2000-2001, respectively. Thus, the soil

fertility indicated low organic carbon and available nitrogen and medium in available P₂O₅ and K₂O in the test plot during both the years of experimentation. The annual rainfall received during first and second year of experimentation were 1375.5 and 1257.4 mm, respectively.

MATERIALS AND METHODS

Present experiment was conducted under the aegis of ICAR's Adhoc Project at Bihar Agricultural College, Sabour in Babupur Ganga Diara during the year 1999-2000 and 2000-2001 to identify and select the promising variety of Parwal for this region, utilizing Twelve commercial popular varieties viz; Rajendra Parwal-1 (V₁), Rajendra Parwal-2 (V₂), Swarna Rekha (V₃), Swarna Alokik (V₄), Kranti (V₅), Bombaiya (V₆), Nemia (V₇), Kelwa (V₈), Doglaha (V₉), Mirdangia (V₁₀), Sampulia (V₁₁) and Charkolwa (V₁₂). The seed rate comprised of 2500 vines/ha planted after flood recede at 2m x 2m spacing on 25th and 18th October for 1st and 2nd year of experimentation. All the cultural operations were done in time and plant protection measures were provided as and when required five per cent. Male plants were also planted as pollen donator. The first picking of fruits commenced from 1st week of April and continued till 1st week of July in both the year of experimentation. Weekly harvesting was done in the months of April and May and picking twice a week was done in the months of June and July during which the total fruit yield and other ancillary characters were recorded. The benefit cost ratio was calculated yearwise and on pooled data basis also, which