



RESEARCH PAPER

Study on physico-chemical properties of selected pigeonpea (*Cajanus cajan* L.) cultivars

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SUMMARY :

The study revealed the distinct variation in physical properties of three cultivars viz., Asha, Maruthi and Gulyal at moisture content of 10.47 per cent, 10.40 per cent and 10.13 per cent (d.b), respectively. The mean values for grain size were highest for Maruthi (5.97 mm) and followed by Gulyal (5.74 mm) and Asha (5.42 mm). The average sphericity varied from 0.790 to 0.921. The true density and bulk density were highest for Gulyal (1446 kgm⁻³ and 811.7 kgm⁻³) and followed by Asha (1441 kgm⁻³ and 806.7 kgm⁻³) and Maruthi (1430 kgm⁻³ and 797.7 kgm⁻³), respectively. The porosity was found to be 44.8 per cent for Maruthi, 44.0 per cent for Asha and 43.8 for Gulyal. The surface area and volume were highest for Maruthi (1.118 cm² and 0.111 cm³) and followed by Gulyal (1.037 cm² and 0.099 cm³) and Asha (0.923 cm² and 0.083 cm³), respectively. The angle of repose was found to be 21.09°, 20.33° and 20.15° for Maruthi, Asha and Gulyal, respectively. The protein content was found to be highest in Asha (22.45 %) and followed by Gulyal (22.36 %) and Maruthi (21.04 %). The fat content was found to be highest in Maruthi (1.81 %) and followed by Gulyal (1.67 %) and Asha (1.65 %). The ash content and fibre content was found to be highest in Asha (3.78 % and 1.48 %) and lowest in Gulyal (3.50 % and 1.06 %) and in Maruthi (3.60 % and 1.06 %), respectively. Whereas, the carbohydrates was found to be highest in Maruthi (58.09 %) and followed by Gulyal (57.28 %) and Asha (56.17 %).

KEY WORDS : Physico-chemical properties, Pigeonpea

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