*Biological Forum – An International Journal* **14(3): 129-134(2022)**

**ISSN No. (Print): 0975-1130**
**ISSN No. (Online): 2249-3239**

# Evaluation of Dolichos bean (*Lablab purpureus* var. *typicus*) germplasm for yield and quality

***Harini M.[1], Ramar A.[2]*, Janavi G. J.[3] and Madhan Mohan M.[4]***

*[1]P.G. Scholar, Department of Vegetable Science, HC & RI,*
*Tamil Nadu Agricultural University, Periyakulam (Tamil Nadu), India.*
*[2]Professor and Head, Department of Spices and Plantation Crops,*
*Horticultural College and Research Institute, Periyakulam, TNAU (Tamil Nadu), India*
*[3]Professor and Head, Department of Vegetable Science,*
*Horticultural College and Research Institute, Periyakulam, TNAU (Tamil Nadu),*
*[4]Associate Professor and Head, Agricultural Research Station, Vaigai Dam,*
*TNAU (TamilNadu), India.*

*(Corresponding author: Ramar A.*)*
*(Received 08 May2022, Accepted 27 June, 2022)*
*(Published by Research Trend, Website: www.researchtrend.net)*

**ABSTRACT: The current experiment was conducted at HC & RI Periyakulam in the summer of 2022 to assess the Dolichos bean's heritability, genetic variability, and genetic advance for yield, and yield-related characteristics. Due to dolichos bean genotype genetic variability and the possibility that it could be employed as parent material, it will be essential to evaluate its potential in order to put into action future crop enhancement programs. 26 genotypes of the bush-type Dolichos bean were investigated for 10 morphometric characteristics using a randomized block design with three replications. The genotype PKM LP 26 had the highest germination percentage (91.98%), followed by genotype PKM LP 11 (90.40%) and genotype PKM LP 06 (75.50%), which had the lowest germination percentage. The average plant height ranged from 44.89 -76.75 cm. The genotype PKM LP 04 (44.89 cm) recorded the minimum plant height and the genotype PKM LP 02 (76.75 cm) followed by PKM LP 27 (75.95 cm) recorded the maximum plant height. Earlier flowering was found in the genotype PKM LP 06 (38.30 days) while maximum days for first flowering was found in the genotype PKM LP 35 (53.45 days). Days to 50 % flowering ranged from 45.20-58.83 days with a mean value of 53.05 days. Genotype PKM LP 02 (6.93) recorded the highest no. of raceme plant$^{-1}$ followed by the genotype PKM LP 11 (6.53) and the lowest no. of raceme plant$^{-1}$ was found in the genotype PKM LP 19 (3.80). The highest no. of pod plant$^{-1}$ was identified in the genotype PKM LP 26 (39.66) followed by the genotype PKM LP 11(38.45) and the genotype PKM LP 15 (24.18) recorded the lowest number of pod plant$^{-1}$. Among all the genotype yield/plant was highest in the genotype PKM LP 26 (143.56 g) followed by the genotype PKM LP 11 (138.94 g). Both the number of pods produced by plant$^{-1}$ and the yield of pods produced by plant$^{-1}$ had high PCV and GCV, implying that these characteristics had greater magnitudes of variability and, as a result, more potential for development through selection. Except for germination percentage, initial flowering days, and 50% flowering days, all traits had strong heritability together with high genetic advance expressed as a percentage of the mean. The findings indicate that these features are influenced by additive gene action, therefore judicious choice based on all these phenotypical traits might be more effective.**

**Keywords:** Dolichos bean, GCV, PCV, GAM and heritability.

## INTRODUCTION

One of the most popular native legume vegetables is dolichos bean (*Lablab purpureus* var. *typicus*), which is grown for its soft green pods. It is a perennial plant with bushy, upright, or climbing habits, yet it is planted as an annual. Its cultivation is influenced significantly by regional preferences. South India prefers green pods, while eastern India prefers white pods and northern India prefers green fleshy pods. It's a multi-purpose crop that can be eaten as a pulse, a vegetable, or fodder. The Dolichos lablab bean has a diverse set of qualities that can be used in a range of situations. One of its first advantages is its adaptability. It is drought tolerant and can thrive in a wide range of conditions. Dolichos beans exist in pole and bush varieties, each with its growth characteristics.

Dolichos beans are an excellent source of protein, minerals, and vitamins (Golani *et al*., 2007). Due to their medicinal properties, lentils are employed in both traditional and modern healthcare systems (Morris

2009). The pole and bush forms of the dolichos bean come in a very broad variety of plant and pod features due to its Indian heritage. The dolichos bean has proven challenging to raise because of its low production, photosensitive nature, unpredictable growth habit, flowering habit, and consumer trends based on color, size, pod form, and aroma (Mishra *et al.,* 2019). Breeding for productivity and the characteristics that contribute to it for any crop is influenced by polygene, environmental factors, and the level and type of genetic variability. PCV and GCV, which together reveal relative variation in different characteristics, which used to assess the level of variability. Therefore, to obtain an overall and accurate perspective, a quantitative assessment of the yield and its components is essential. The assessment of heritability examines how effectively a characteristic is passed down from one generation to the next generation. According to Chauhan *et al*. (2021) variation occurs between genotypes both chemo-typically and morphologically this variation may be due to its genetic nature. Low-degree environmental interactions affect highly heritable features related to yield, and traits related to yield in the selection program. Though genetic advances aid in the development of efficient selection techniques, heritability indicates the amount of quantitative trait inheritance. Genetic advances and heritability analyses enhance selection. The objective of the recent study was to assess the genetic advance, heritability, and genetic variability for several attributes among 26 Dolichos bean genotypes.

## MATERIALS AND METHODS

During the year from 2021 to 2022, the experimental study was conducted at the Horticultural College and Research Institute in Periyakulam, Tamil Nadu, India, at the Western Block (10.13°N latitude, 77.59°E longitude) with an average altitude is 356 meters above sea level (Table 1). The experimental material comprised 26 genotypes of crops taken from various parts of Tamil Nadu and Kerala. During the summer, the selected genotypes were sowed in RBD with three replications. Each genotype was planted with a 60 × 30 cm spacing. To record observation and biometrical parameters as well as quality traits, five plants were chosen from each genotype and replication. Throughout the crop period, standard agronomic practices and prescribed plant protection measures were followed.

From randomly selected five plants from each genotype, morphological observations such as plant type, pod color, seed color, and flower color were recorded. The genotype was characterized according to the documented descriptors. Five plants were chosen randomly from the total area of the plot, tagged, and observation was recorded growth, yield, and flowering characteristics were recorded at various stages: germination percentage, earlier flowering, days to 50% flowering, and the racemes/plant. Among the yield parameters were days taken for pod formation, number of pods per plant, pod length (cm), pod breadth (cm), number of seeds per pod, and pod yield per plant (Kg). By using (Panse & Sukhatme 1954) approach, analysis of variance was employed as a strategy to separate overall variation from those resulting from treatment and replication. The genotypic and phenotypic variance was calculated using the Burton method (1953). The method provided by Johnson *et al.* (1955) allowed for the calculation of genetic advance as a percentage of the mean and heritability.

**Table 1: Sources of Dolichos bean genotypes used for the study.**

| Sr. No. | Germplasm | Source of germplasm |
|---|---|---|
| **1** | PKM LP 01 | Theni local |
| **2** | PKM LP 02 | Appipatti local |
| **3** | PKM LP 03 | Chinnamanur local |
| **4** | PKM LP 04 | Bodinayakanur local |
| **5** | PKM LP 05 | Uthamapalayam local |
| **6** | PKM LP 06 | Mayiladumparai local |
| **7** | PKM LP 07 | Cumbum local |
| **8** | PKM LP 08 | Kamatchipuram local |
| **9** | PKM LP 11 | HC&RI, Periyakulam |
| **10** | PKM LP 12 | Pollachi local |
| **11** | PKM LP 13 | Erode local |
| **12** | PKM LP 15 | Karur local |
| **13** | PKM LP 16 | Namakkal local |
| **14** | PKM LP 19 | Walajapet local |
| **15** | PKM LP 23 | Kadapa local II |
| **16** | PKM LP 24 | Chittoor local II |
| **17** | PKM LP 25 | IIHR, Bangalore |
| **18** | PKM LP 26 | IIHR, Bangalore |
| **19** | PKM LP 27 | IIHR, Bangalore |
| **20** | PKM LP 28 | IIHR, Bangalore |
| **21** | PKM LP 29 | IIHR, Bangalore |
| **22** | PKM LP 30 | Madurai local |
| **23** | PKM LP 31 | Kandamanur local |
| **24** | PKM LP 32 | Kanavilaku local |
| **25** | PKM LP 34 | NBPGR Regional Station, Kerala |
| **26** | PKM LP 35 | Kadamalaikundu |

## RESULTS AND DISCUSSION

The Dolichos bean's 26 genotypes differed considerably in 4 qualitative parameters. The bloom colors range from white to pink to purple; all genotypes have a bushy growth habit. Most pods were green or light green. Each genotype pod can be consumed whole as a green vegetable. The seed was either white, brown, or black**.** All ten yield and yield-attributing characteristics under evaluation progressively significant variation in the proposed study's analysis of variance (ANOVA) (Table 3). Based on the mean performance the genotype PKM LP 26 (91.98%) was recorded with a maximum germination percentage followed by the genotype PKM LP 11 (90.40 %) and the genotype PKM LP 06 (75.50 %) recorded the minimum germination percentage. The average plant height ranged from 44.89 -76.75 cm (Table 2).

**Table 2: Morphological characters of different Dolichos bean germplasm.**

| Genotypes | Plant type | Flower color | Pod color | Seed color |
|---|---|---|---|---|
| PKM LP 01 | Bush | White | Light green | Light brown |
| PKM LP 02 | Bush | White | Green | Brown |
| PKM LP 03 | Bush | White | Light green | Brown |
| PKM LP 04 | Bush | White | Light green | Light brown |
| PKM LP 05 | Bush | White | Green | Brown |
| PKM LP 06 | Bush | White | Light green | Brown |
| PKM LP 07 | Bush | White | Light green | Brown |
| PKM LP 08 | Bush | White | Green | Brown |
| PKM LP 11 | Bush | White | Light green | Light brown |
| PKM LP 12 | Bush | White | Green | Brown |
| PKM LP 13 | Bush | White | Green | Brown |
| PKM LP 15 | Bush | White | Green | Light brown |
| PKM LP 16 | Bush | Purple | Green | Light brown |
| PKM LP 19 | Bush | White | Light green | Brown |
| PKM LP 23 | Bush | White | Green | Brown |
| PKM LP 24 | Bush | White | Light green | Light brown |
| PKM LP 25 | Bush | White | Green | Mottled color |
| PKM LP 26 | Bush | Pink | Light green | Mottled color |
| PKM LP 27 | Bush | White | Light green | Creamy white |
| PKM LP 28 | Bush | White | Green | Light brown |
| PKM LP 29 | Bush | White | Green | Brown |
| PKM LP 30 | Bush | White | Light green | Light brown |
| PKM LP 31 | Bush | White | Light green | Brick red |
| PKM LP 32 | Bush | White | Light green | Brown |
| PKM LP 34 | Bush | White | Green | Brown |
| PKM LP 35 | Bush | White | Green | Brown |

**Table 3: Mean performance for yield and yield attracting traits in 26 genotypes of Dolichos bean.**

| Germplasm | Germination percentage % | Plant Height (cm) | Days to the first flowering | Days to 50 % flowering | No. of racem e/ plant | Pods /plant | Pod length | Pod Width | No. of seeds/po d | Pod yield/plant |
|---|---|---|---|---|---|---|---|---|---|---|
| PKM LP 01 | 90.40 | 64.00 | 40.13 | 46.23 | 4.63 | 26.13 | 6.36 | 1.18 | 3.19 | 81.25 |
| PKM LP 02 | 83.30 | 76.75 | 43.40 | 57.29 | 6.53 | 36.00 | 7.83 | 1.68 | 4.62 | 126.29 |
| PKM LP 03 | 81.20 | 50.25 | 39.20 | 45.20 | 5.13 | 26.00 | 6.85 | 1.31 | 4.33 | 90.28 |
| PKM LP 04 | 79.10 | 62.30 | 42.30 | 54.15 | 4.50 | 27.00 | 6.13 | 1.22 | 3.23 | 75.60 |
| PKM LP 05 | 81.60 | 55.49 | 41.23 | 51.42 | 5.90 | 27.56 | 7.35 | 1.30 | 4.35 | 98.20 |
| PKM LP 06 | 75.50 | 65.40 | 38.40 | 48.32 | 4.13 | 26.85 | 5.80 | 1.80 | 3.21 | 85.33 |
| PKM LP 07 | 85.70 | 44.89 | 44.33 | 54.25 | 4.40 | 26.38 | 6.80 | 1.36 | 4.46 | 93.67 |
| PKM LP 08 | 87.30 | 70.55 | 41.56 | 51.50 | 6.93 | 37.15 | 8.05 | 1.56 | 4.56 | 129.58 |
| PKM LP 11 | 88.80 | 73.80 | 42.30 | 46.26 | 6.33 | 38.45 | 8.56 | 1.53 | 4.51 | 138.94 |
| PKM LP 12 | 83.90 | 69.35 | 46.40 | 58.80 | 5.26 | 30.51 | 7.05 | 1.24 | 4.46 | 105.45 |
| PKM LP 13 | 79.98 | 48.87 | 45.63 | 51.53 | 5.60 | 35.40 | 7.15 | 1.29 | 4.30 | 128.31 |
| PKM LP 15 | 84.09 | 66.00 | 45.69 | 52.33 | 4.43 | 24.18 | 5.86 | 1.09 | 3.33 | 79.47 |
| PKM LP 16 | 82.29 | 55.75 | 46.16 | 54.46 | 5.76 | 30.18 | 6.56 | 1.20 | 3.43 | 104.28 |
| PKM LP 19 | 86.50 | 65.25 | 42.83 | 53.63 | 3.80 | 25.44 | 6.14 | 1.06 | 3.21 | 83.15 |
| PKM LP 23 | 77.70 | 57.00 | 44.23 | 55.20 | 5.16 | 32.85 | 7.10 | 1.45 | 3.40 | 113.48 |
| PKM LP 24 | 76.60 | 60.74 | 50.30 | 55.09 | 4.93 | 27.37 | 6.68 | 1.43 | 3.46 | 130.97 |
| PKM LP 25 | 78.50 | 58.75 | 46.60 | 54.33 | 5.52 | 34.83 | 6.39 | 1.48 | 3.30 | 120.11 |
| PKM LP 26 | 91.98 | 70.07 | 42.52 | 56.50 | 6.13 | 39.66 | 8.39 | 1.58 | 4.53 | 143.56 |
| PKM LP 27 | 85.50 | 75.95 | 43.33 | 53.10 | 6.39 | 35.60 | 7.73 | 1.63 | 4.30 | 132.90 |
| PKM LP 28 | 79.30 | 67.45 | 40.60 | 52.26 | 6.06 | 30.95 | 7.64 | 1.32 | 3.42 | 103.43 |
| PKM LP 29 | 84.20 | 64.29 | 44.86 | 54.13 | 5.33 | 28.85 | 7.03 | 1.42 | 3.59 | 101.87 |
| PKM LP 30 | 79.40 | 53.25 | 42.43 | 53.33 | 5.42 | 29.76 | 6.71 | 1.38 | 3.23 | 99.94 |
| PKM LP 31 | 86.70 | 65.30 | 47.33 | 56.36 | 5.35 | 27.31 | 6.77 | 1.35 | 3.46 | 94.38 |
| PKM LP 32 | 84.30 | 48.25 | 46.20 | 54.40 | 5.40 | 31.21 | 6.45 | 1.39 | 3.52 | 107.21 |
| PKM LP 34 | 87.80 | 56.75 | 43.13 | 53.53 | 5.60 | 28.32 | 6.57 | 1.27 | 3.43 | 100.23 |
| PKM LP 35 | 89.40 | 67.30 | 53.43 | 58.83 | 4.63 | 32.89 | 6.75 | 1.38 | 3.46 | 115.21 |
| **Mean** | 83.57 | 62.06 | 44.48 | 53.05 | 5.35 | 30.64 | 6.95 | 1.38 | 3.78 | 107.77 |
| **Sem** | 1.27 | 1.80 | 0.70 | 0.905 | 0.08 | 0.46 | 0.09 | 0.01 | 0.06 | 1.52 |
| **CD@5%** | 3.62 | 5.12 | 2.00 | 2.572 | 0.24 | 1.32 | 0.25 | 0.05 | 0.17 | 4.33 |

The genotype PKM LP 04 (44.89 cm) recorded the minimum plant height and the genotype PKM LP 02 (76.75 cm) followed by PKM LP 27 (75.95 cm) recorded the maximum plant height. Earlier flowering was found in the genotype PKM LP 06 (38.30 days) while maximum days for first flowering was found in the genotype PKM LP 35 (53.45 days). Days to 50 % flowering ranged from 45.20-58.83 days with a mean value of 53.05 days. Genotype PKM LP 02 (6.93) recorded the highest number of raceme plant$^{-1}$ followed by the genotype PKM LP 11 (6.53) and the lowest number of raceme plant$^{-1}$ was found in the genotype PKM LP 19 (3.80). The highest number of pod plant$^{-1}$ was identified in the genotype PKM LP 26 (39.66) followed by the genotype PKM LP 11(38.45) and the genotype PKM LP 15 (24.18) recorded the least number of pod plant$^{-1}$. The genotype PKM LP 11(8.56cm) recorded the maximum pod length and minimum pod length was observed in the genotype PKM LP 15 (5.86cm). The genotype PKM LP 02 (1.68 cm) recorded the maximum pod width and the minimum pod width was recorded in the genotype PKM LP 19 (1.06 cm). The genotype PKM LP 08 (4.65) identified the maximum no of seeds per pod and the minimum seed /pod was recorded in the genotype PKM LP 01 (3.19). Among all the genotype yield/plant was highest in the genotype PKM LP 26 (143.56 g) followed by the genotype PKM LP 11 (138.94g).

**Genetic variability, heritability, and genetic advance**

Table 4 displays the heritability values, and estimated GAM, mean, range, GCV, and PCV (genotypic and phenotypic coefficients of variation) for the characteristics under investigation. A small difference between the GCV and PCV values for the characteristics suggests that they have had a high amount of genetic variability and, as a result, have a better chance of being selected. These characteristics show considerable genetic variability and are less affected by the environment. Table 3 presents the estimations of various genetic parameters. The yield and number of pods produced by plant$^{-1}$ both showed high GCV and PCV, indicating that these characteristics had a greater order of magnitude of variability and, as a result, more opportunity for improvement through selection. Singh *et al.* (2015) verified the prior findings for the pod plant$^{-1}$ and the plant yield in 24 genotypes of the dolichos bean.

High PCV and GCV for green pod yield/plant were reported by Chattopadhyay & Dutta (2010) and Chaitanya *et al*. (2014), respectively. Moderate PCV and GCV are indicated by the plant height, racemes/ plant, pod length (cm), number of seeds/pod, and green pod width. This suggests that both additive and non-additive gene activity may contribute to the reported traits. These results were confirmed using the findings of Chaitanya *et al*. (2014), Hadavani *et al*. (2018), and Sahu & Bahadur (2018) for a number of seeds /pod in the Dolichos bean. For germination percentage, early flowering, and days to 50% flowering, PCV and GCV were low. These findings were supported by Savithiri *et al.* (2018) and Chaitanya *et al.* (2014), respectively.

Apart from germination percentage, days for 50% flowering, and early flowering, the current study revealed significant heritability and high genetic progress as a percentage of the mean. According to the findings, these traits are influenced by additive gene action; as a result, careful choice based on such morphological parameters will be more effective. In terms of pod width, pod length, and the number of seeds per pod, the current findings were equivalent to those of Savitha (2008) and Rai *et al*. (2008). The results for pod width (cm), pod weight (g), and pod length (cm) in Dolichos bean genotypes were identical, based on Magalingam *et al*. (2013). Kujur *et al*. (2017) showed similar results for early flowering, tender pod length, and earlier flowering and pod width.

**Table 4: Estimation of genetic parameters for 10 characters in 26 dolichos bean.**

| Characters | Mean | Range | PCV | GCV | Heritability (%) | Genetic advance as % of the mean |
|---|---|---|---|---|---|---|
| **Germination Percentage %** | 83.57 | 75.50-91.98 | 5.71 | 5.06 | 78.61 | 9.24 |
| **Plant height cm** | 62.06 | 44.89-76.75 | 14.54 | 13.64 | 88.04 | 26.37 |
| **Days to first flowering** | 44.48 | 38.30-53.43 | 8.28 | 7.81 | 88.97 | 15.19 |
| **Days to 50 % flowering** | 53.05 | 45.20-58.83 | 7.03 | 6.38 | 82.38 | 11.94 |
| **No. of raceme/ plant** | 5.35 | 3.80-6.53 | 14.81 | 14.54 | 96.43 | 29.42 |
| **Pods /plant** | 30.64 | 39.66-24.18 | 23.54 | 22.30 | 96.73 | 28.97 |
| **Pod length (cm)** | 6.95 | 5.86-8.56 | 10.63 | 10.39 | 95.54 | 20.93 |
| **Pod Breadth (cm)** | 1.38 | 1.06-1.68 | 12.89 | 12.67 | 96.57 | 25.65 |
| **No. of seeds/pod** | 3.78 | 3.19-4.56 | 14.62 | 14.35 | 96.40 | 96.40 |
| **Pod yield/plant(g)** | 107.77 | 79.47-143.56 | 20.30 | 20.14 | 96.73 | 96.73 |

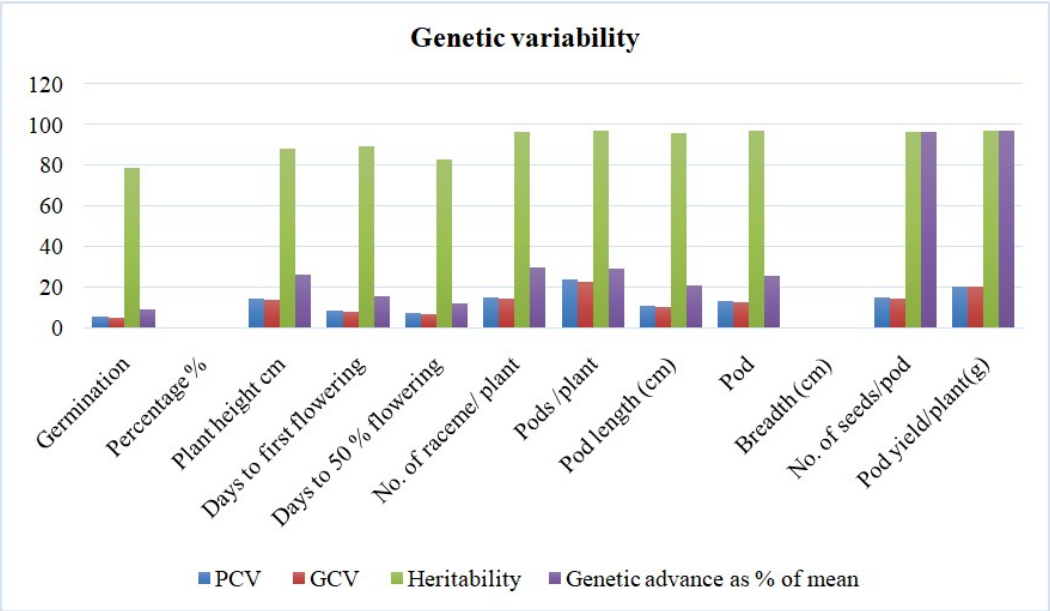


**Fig. 1.**

## CONCLUSION

PKM LP 26 followed by PKM LP 11 had the maximum green pod plant$^{-1}$ and the highest green pod yield per plant, respectively, @ 5 percent CD value. Hence, it can be concluded that PKM LP 26 is the best performance among taken up for trail. In the conclusion based on the estimations of genetic variability, individual plants could be carried out selection for characters *viz*., Pod/plant, pod yield/plant, and pod weight as they recorded high values of heritability and genetic advance.

## FUTURE SCOPE

The genotypes identified as high yielding should be tested in different agro-climatic conditions for 2-3 years and those found suitable could be recommended for commercial cultivation. These genotypes may also be utilized in breeding for yield improvement.

**Acknowledgment.** Sincere thanks to the Department of Vegetable Science HC & RI Tamil Nadu Agricultural University, Periyakulam, Tamil Nadu for providing facilities to carry out research work.
**Conflict of Interest**. None.

## REFERENCES

Burton, G. W., & Devane, D. E. (1953). Estimating heritability in tall fescue (*Festuca arundinacea*) from replicated clonal material 1. *Agronomy journal*, *45*(10), 478-481.

Chaitanya, V., Reddy, R. V. S. K., & Kumar, P. A. (2014). Variability, heritability and genetic advance in indigenous dolichos bean (*Dolichos lablab* L. var Typicus) genotypes. *Plant Archives*, *14*(1), 503-506.

Chauhan, S., & Kundu, S. (2021). Estimation of Genetic Variability, Heritability, and Genetic Advance for Yield and Yield Attributing Traits in Dolichos Bean (*Lablab purpureus* L.). *International Journal of Environment, Agriculture and Biotechnology*, *6*, 4.

Chattopadhyay, A., & Dutta, S. (2010). Characterization and identification of selection indices of pole type dolichos bean. *Vegetable crops research bulletin*, *73*, 33.

Golani, I. J., Mehta, D. R., Naliyadhara, M. V., Patel, R. K., & Kanzariya, M. V. (2007). Genetic variability, correlation, and path analysis for green pod yield and its characters in hyacinth bean. *The Orissa Journal of Horticulture*, *35*(1), 71-75.

Hadavani Janaki, K., Mehta, D. R., Raval, L. J., & Ghetiya, K. P. (2018). Genetic variability parameters in Indian bean (*Lablab purpureus* L.). *International journal of pure and applied bioscience*, *6*(4), 164-168.

Johnson, H. W., Robinson, H. F., & Comstock, R. E. (1955). Estimates of genetic and environmental variability in soybeans 1. *Agronomy Journal*, *47*(7), 314-318.

Kujur, P. K., Vijay, B., & Pushpanjali, P. (2017). Study on genetic variability, heritability, and genetic advance in dolichos bean (*Lablab purpureus* L.) genotypes. *Trends in Biosciences*, *10*(13), 2418-2421.

Magalingam, V., Yassin, M., & Kumar, R. (2013). Genetic variability and character association in dolichos bean. *SAARC Journal of Agriculture*, *11*(2), 161-171.

Mishra, M., G.S. Sahu, A. Mohanty, P. Tripathy, B. Pradhan and Mallikarjun, K. (2019). Evaluation of Yield and Yield Attributing Characters in Pole Type of Dolichos Bean (*Lablab purpureus* L.). *Int. J. Curr. Microbiol. App. Sci., 8*(08): 2074-2079.

Morris, J. B. (2009). Morphological and reproductive characterization in hyacinth bean, *Lablab purpureus* (L.) sweet germplasm with clinically proven nutraceutical and pharmaceutical traits for use as a medicinal food. *Journal of dietary supplements*, *6*(3), 263-279.

Panse, V. G., & Sukhatme, P. V. (1954). Statistical methods for agricultural workers. *Statistical methods for agricultural workers.*

Rai, N., Asati, B. S., Singh, A. K. and D. S. Yadav, (2006). Genetic variability, character association, and path

coefficient study in pole- type French bean. *Indian J of Hortic., 63*(2): 188-191.

Sahu, S., & Bahadur, V. (2018). Genetic analysis of dolichos bean (*Lablab purpureus* L.) genotypes for horticultural traits. *J. Pharmacogn. Phytochem*, *7*(4), 3112-3116.

Savitha, B. N. (2008). Characterization of Avare (*Lablab purpureus* L. Sweet) local collections for genetic variability. *Unpublished M.Sc. thesis. Dharwad, UAS*.

Savithiri, N., Beaulah, A., Thingalmaniyan, K. S., Rajeswari, S. and Kumar, R. (2018). Study on Genetic Variability for Yield and Quality of Different Genotypes of Yard Long bean (*Vigna unguiculata* sub sp. s*esquipedalis* (L.) Verd.). *Int. J. Curr. Microbiol. App. Sci., 7*(9): 3613-3617.

Singh, S., Singh, P. K., Singh, D. R., Pandey, V. B., & Srivastava, R. C. (2015). Genetic variability and character association study in dolichos bean. *Indian Journal of Horticulture*, *72*(3), 343-346.

Verma, A. K., Jyothi, K. U., & Rao, A. V. D. (2015). Variability and character association studies in dolichos bean (*Lablab purpureus* L.) genotypes. *Indian Journal of Agricultural Research*, *49*(1), 46-52.

**How to cite this article:** Harini M., Ramar A.*, Janavi G. J., Madhan Mohan M. (2022). Evaluation of Dolichos bean (*Lablab purpureus* var. *typicus*) germplasm for yield and quality. *Biological Forum – An International Journal*, *14*(3): 129-134.