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LEAF VARIANT IN WINGED BEAN

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THE winged bean, *Psophocarpus tetragonolobus*, is a promising unexploited food crop of tropic. Attempts are being made all over the world to identify and isolate the germplasm for breeding purposes. It has been reported that the winged bean in different parts of Asia exhibited wide differences in many physical features: leaf-shape and size, flower colour, pod length, shape and colour, seed shape size, seed colour, etc[1]. With the growing interest in the winged bean several new types have been recorded in Asian countries. The present note describes the plant type for leaf character segregated in a line IIHR/Sel 21.

During the studies on *P. tetragonolobus* (IIHR/Sel 21) a new plant type was noticed. While evaluating the germplasm of IIHR/Sel 21, a few plants with variation in leaf shape and size, and pod length were observed. These plants were isolated and evaluated for different characters during the subsequent season.

The parent line IIHR/Sel 21 was obtained from the National Bureau of Plant Genetic Resources, IARI, New Delhi. The line is characterized by the trifoliate leaf. The shape of the leaflet is nearly cordate and is broad (figure 1).

These new variants were evaluated for certain morphological and yield characters. The data are presented in table 1. A significant variation was noticed in leaf shape (figure 2). Measurements revealed no difference in the lengths of the leaf and the leaflet. However, the breadth of leaflet exhibited significant difference. As regards pods, 21.19 cm pod length was observed in parent line, while the length of pods was 16.76 cm in variant plants. However, there was no significant difference in number of seed/pod and weight/100 seeds in the present variety and variant plant types. The leaf shape and pod size seem to be associated with each other and further studies are needed to confirm this.

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Table 1 *Data on morphological and yield characters*

	Parent IIHR/Sel 21	Variant
Leaf length including petiole (cm)	16.54	15.37
Petiole length (cm)	6.96	6.49
Lamina		
Length	9.62	8.88
Breadth	5.07	2.58*
Pod length (cm)	21.29	16.76**
No. of seeds/pod	9.25	8.20
Weight per 100 seeds (g)	38.44	36.89

F value: * 63.90, highly significant at 1% level; ** 6.17, significant at 5% level.

Figures 1 and 2. 1. A plant of parent variety IIHR/Sel 21. **2.** A leaf variant segregated in a progeny of IIHR/Sel 21.

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EFFICACY OF ODORIFEROUS ORGANIC COMPOUNDS ON THE GROWTH OF KERATINOPHILIC FUNGI

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THE essential oils and chemically related compounds represent a group of volatile substances, which are chiefly the products from the seed plants. The antimicrobial activity of these products has been reported earlier[1–5]. The inhibitory effect of essential oils against soil-inhabiting dermatophytes has also been reported[6–8]. The antimicrobial activity in the essential oils of plants may be due to their components like aliphatic acids and aldehydes[9]. The isolated substances from higher plants also possess systemic activity and less phytotoxicity as compared to the systemic antimicrobial substances[10]. The compounds showing such activity can be employed as surface applicants as a preventive measure for dermal diseases caused by various keratinophilic and related dermatophytes. Recently, the influence of organic volatile compounds on the growth of keratinophilic fungi was reported[11]. The present study was undertaken to test the efficacy of essential oils of seven medicinal plants viz. *Juniperus macropoda* Boiss. of Pinaceae; *Sessafras officinale* Nees. of Lauraceae; *Citrus sinensis* Osbeck of Rutaceae, *Vetiveria zizinoides* Stapf of Graminae; *Syzygium aromaticum* (Linn.) Merr & Perry of Myrtaceae; *Allium sativum* Linn. Liliaceae and *Eucalyptus citriodora* Hook of Myrtaceae (the last three are commonly called as clove, garlic and eucalyptus respectively), against the mycelial growth of 4 keratinophilic fungi viz. *Nannizzia incurvata* Stock. strain (+); *N. incurvata* Stock. strain (−); *Malbranchea aurantiaca* Sigler & Carmichael and *Botryotrichum keratinophilum* Kushwaha & Agrawal.

The essential oils were obtained from the dried wood of *J. macropoda* and *S. officinale*, fresh rind of the fruits of *C. sinensis*, roots of *V. zizinoides*, dried flower buds of clove, bulbs of garlic and leaves of eucalyptus, by the water and steam distillation methods[12], and dried over an anhydrous calcium chloride in a desiccator.