RECORD OF A NEW DWARF GENOTYPE OF *DALBERGIA SZEMAOENSIS* PRAIN AS A LAC HOST

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Abstract

Dalbergia szemaoensis was introduced from China to evaluate it as a host for Indian lac insect *Kerria lacca* for intensive lac cultivation. A new dwarf genotype from the raised population was found advantageous for lac cultivation and being multiplied at large scale for further studies.

Introduction

Dalbergia szemaoensis Prain, a deciduous tree species of Chinese origin, resembles much with *D. lanceolaria, D.oliveri, D. hemsleyi* and their allies, is known to be a good lac host in China (Anonymous, 1984).

With a view to evaluate this exotic lac host species for Indian lac insect *Kerria lacca* (Kerr.) the plants were raised through seeds. During the course of development one plant showing dwarf characters with regard to plant growth attributes, invited the attention to evaluate this new genotype for intensive lac cultivation.

Seeds of *D.szemaoensis* procured from China were sent to Indian Agricultural Research Institute, New Delhi for quarantine. After receiving back, the seedlings were raised successfully in the well prepared nursery bed and transplanted at the farm of Indian Lac Research Institute, Namkum, Ranchi. A dwarf genotype was selected. This genotype was further multiplied through stem cuttings. After two years of planting, plant growth attributes, i.e., plant height, basal diameter (girth) of plant shoots, number and length of inoculable shoots were recorded prior to lac inoculations. Data were recorded for lac yield attributes and lac yield, i.e., larval mortality, sex ratio and stick lac yield for both the strains of lac insects, viz., *rangeeni* and *kusmi* inoculated during Oct./Nov. and Jan./Feb. and harvested during June/July to obtain *baisakhi and jethwi* crops, respectively.

The dwarf genotype of *D. szemaoensis* has been recorded for the first time as a lac host of both the *rangeeni* and *kusmi* strains of the Indian lac insect, *Kerria lacca* (Kerr.) (Fig.1). The data recorded for plant growth, lac yield and yield attributes have been shown in the table given below.

Table-1 :Performance of *rangeeni* and *kusmi* strains of lac insects on dwarf genotype of *D. szemaoensis*

Attributes		Crop season	
		Baisakhi	*Jethwi*
I) *Plant growth attributes* :			
Height (cm)	-	66.0	88.0
Girth (cm)	-	1.5	2.5
Inoculable shoots/bush (No.)	-	11.2	19.7
Total shoot length/bush (m)	-	4.8	10.6
II) *Lac yield attributes* :			
Male percentage	-	29.4	25.2
Larval mortality (%)	-	28.8	22.0
Average Lac yield/plant(g)	-	105.0	75.0

The differences in plant growth attributes (Table-1) prior to lac inoculation for *jethwi* and *baisakhi* crops are due to difference in plant age at the time of lac inoculation. The larval mortality and male percentage were observed to be higher in *baisakhi* than that in *jethwi* crops. This might be due to the difference in the strains of lac insect and seasonal influence. An average stick lac yield of 75.0 g and 105.0 g was observed with *kusmi* and *rangeeni* lac insects during *jethwi* and *baisakhi* crops respectively. The higher stick lac yield in *baisakhi* crop than in *jethwi* might be due to longer

life period of the lac insect in the former than that in latter. Further studies will be undertaken after multiplication of the dwarf genotype through stem cuttings.

Acknowledgements

The authors are thankful to Dr. S.C. Agarwal, Director, Indian Lac Research Institute, Namkum, Ranchi for encouragement and providing necessary facilities. Thanks are also due to Sarvashree K.A. Nagruar and D.D. Prasad for their technical assistance.

Reference

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