

PRELIMINARY STUDIES ON TRAILING OF VANILLA  
(*VANILLA PLANIFOLIA*)

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*Vanilla planifolia* (Orchidaceae), a native of Mexico is the major source of natural Vanillin which is extracted from their dried and cured pod-like fruits known as "beans". Though vanilla is a lucrative crop, its commercial cultivation has not become popular in India. Lack of information on the various aspects of its cultivation is one of the major limiting factors. More over the flowers need hand-pollination to ensure adequate setting of the fruits for which the plants must be trailed conveniently, but only limited information is available on this in India at present.

Macmillan (1962) suggested low trees, trellies or fence for trailing vanilla. Khan (1963) recommended to trail the vines erect to a height of 4' and then trailing them horizontally. He also reported that there is a definite tendency in the vines to maintain an empty vegetative growth if they are not subjected to the coiling or hanging treatment which is essential to promote flowering and fruiting.

The present studies were undertaken at the central Horticultural Research Station, Ambalavayal to find out a suitable method of trailing the vines for securing proper growth and better yield.

Materials and Methods

The experiment consisted of 3 treatments (given below) laid out during the year 1960-61 at the Central Horticultural Research Station, Ambalavayal, in randomized-block design with 7 replications.

T<sub>1</sub> . . . Trailing the vines erect on dead wood posts to a height of 6' and then trailing horizontally on wooden trellies.

I•• . . . Trailing the vines on live supports to a height of 4' and then trailing horizontally on wooden trellies.

T<sub>3</sub> . . . Trailing the vines to a height of 4' and then trailing to horizontal trellies in loops (coil).

Each treatment consisted of 6 vines planted at a spacing of 9' x 6' in plots of 27' x 12'. Rooted cuttings of uniform length raised at the station were planted. Limb cuttings of *Pithecolobium alba* were used as standards under T<sub>3</sub>

**Table 1**  
**Plant characters**

	Years				
	1960-61	1961-62	1962-63	1963-64	Combined
	Mean length of vines (cm)				
T <sub>1</sub>	83.33	266.2	555.58	840.79	437.70
T <sub>2</sub>	65.17	184.6	350.51	754.81	338.79
T <sub>3</sub>	(56.58)	190.9	472.60	750.64	370.20
	S E of means				28.53
	Mean number of leaves				
T <sub>1</sub>	24	39	57	81	50
T <sub>2</sub>	19	36	47	75	44
T <sub>3</sub>	20	35	45	73	42
	S E of means				2
	Leaf area (Sq. cm.)				
T <sub>1</sub>	32.50	62.40	86.50	55.68	59.27
T <sub>2</sub>	27.50	54.90	75.90	50.64	52.24
T <sub>3</sub>	33.20	52.20	71.90	50.07	51.84
	Mean girth of vines (cm)				
T <sub>1</sub>	1.60	2.00	3.00	2.91	2.38
T <sub>2</sub>	1.50	1.90	2.80	2.69	2.22
T <sub>3</sub>	1.50	1.90	3.00	2.71	2.28
	Total Number of vines flowered				
T <sub>1</sub>			8	29	15
T <sub>2</sub>				14	14
T <sub>3</sub>			1	16	17

**Table i**  
**Total Yield of pods**

Treatment	Year						Total 1963-68
	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	
T <sub>1</sub>	124	932	1077	346	299	510	3288
T <sub>2</sub>		437	799	178	23	59	1677
T <sub>3</sub>	15	420	1120	235	129	97	2016

and T<sub>3</sub>. Casualties were replaced 10 months later. Growth characters and yield were recorded.

### Results and Discussion

Data on various plant characters (Table 1) have shown that plants trailed erect to a height of 6' on dead wood posts and then trailed horizontally on Wooden trellies (T<sub>1</sub>) had better vegetative growth and started flowering earlier.

The plants under T<sub>1</sub> had longer vines and produced more number of leaves with more leaf area. The girth of the vines was also higher under this treatment. Flowering was earlier under this treatment which might be due to an early vegetative growth.

There was considerable difference between the yield of pods obtained under the treatments (Table 2).

Vines under T<sub>1</sub> started bearing earlier and gave more number of pods during the period of studies. Plants trailed in loops (T<sub>2</sub>) were found to be superior only during the year 1964-65. The total number of pods harvested under T<sub>1</sub> during the experimental period was 3288 as against 1677 and 2106 under T<sub>2</sub> and T<sub>3</sub> respectively indicating the superiority of trailing vines erect on dead wood posts to a height of 6' and then trailing horizontally on wooden trellies. However this method require frequent replacing of posts and control against white ants in addition to the difficulty in pollinating the flowers from ground.

### Summary

A field experiment was conducted at the Central Horticultural Research Station, Ambalavayal for 8 years, since 1960-61, to find out a suitable method of trailing vanilla vines. It was observed that trailing the vines on dead wood posts to a vertical height of 6' and then trailing them horizontally on wooden trellies was better than trailing the vines on Plumeria standards to a height of 4' and then trailing or looping horizontally on wooden trellies.

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## സംഗ്രഹം

അമ്പലവയൽ ഫലഗവേഷണ കേന്ദ്രത്തിൽ 8 വർഷങ്ങൾ തുടർച്ചയായി നടത്തിയ പരീക്ഷണങ്ങളിൽനിന്നും വാനില ചെടികൾ 6 rarasl ഉയരം വരെ ലംബമായി മരത്തൂണുകളിൽ പടത്തിയിട്ടു പിന്നെ താഴ്ന്നുസമാന്തരമായി മരത്തിൽ പടരാൻ അനുവദിക്കുന്നതാണ് ഏറ്റവും മെച്ചമെന്നു തെളിഞ്ഞു.

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