



SHORT COMMUNICATION

Role of *Vitex negundo* L. as a natural repellent, a powerful discutient and a fungicide of rural Jharkhand, India.

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Abstract: *Vitex negundo* L. is a shrub or a small tree growing throughout Jharkhand. It is grown on the boundaries of agriculture fields and houses in rural Jharkhand. The plant is an established source of drugs such as β -Sitosterol (Leaves and root) p-hydroxy benzoic and 5-hydroxylsophthalic acid (Leaves). It is widely used by the village folks as a repellent, a powerful discutient and fungicide.

Key words: *Vitex negundo*; β -Sitosterol; p-hydroxy benzoic discutient.

Introduction

The state of Jharkhand is a home of many a rare and important plants of great economic, agricultural and therapeutic uses. A common yet very significant of them is *Vitex negundo*, locally called as “sandvar” (Haines, H.H. 1921; Hooker, J.D. 1972). The plant is extensively used in agricultural activities, thatching materials hedges and for therapeutic uses (Majumdar and Biswas, 1971; Paria, 2006; Sarma and Sarkar, 2001). It is especially useful in rheumatism. Rheumatic patients are benefited by bathing in water boiled with the leaves. The whole plant is an astringent, cephalic, stomachic, promotes growth of hair, used in asthma, bronchitis, consumption, eye diseases, inflammations, lecoderma, spleen enlargement and painful teething. In the present study its attributes as a repellent, discutient and a fungicide will be looked into.

Materials and Methods

Vitex negundo is a popular plants and was collected for the study from the neighboring villages of Ramgarh town. Survey work was carried out to study its utility among the villagers. Fresh and disease free leaves of the plants were collected and dried in the shade. The leaves were then kept in containers of rice, wheat and pulses. Respective controls in the form of rice, wheat and pulses (Cicer) containers without *Vitex* leaves were maintained. The plant was properly identified and standard herbarium was prepared and kept in the college laboratory.

Resutls and Discussion

Vitex negundo L., Sp. Pl. 638. 1753; Clarke in Hook. f., Fl. Brit. India 4: 583. 1885; Prain, Beng. Pl. 2: 833. 1903 (Rep. ed. 2: 622. 1963) & in Rec. Bot. Surv. India 3: 261. 1905; Haines, Bot. Bihar and Orissa 2: 746. 1961 (Rep. ed.); Gandhi in Sald. and Nicol., Fl. Hassan 494. 1976.

Large shrubs; bark grey; young branches 4-angled. Leaves 3-5 foliolate; leaflets oblong-lanceolate, up to 11 x 2.5 cm, glabrous, dark green above, tomentose beneath, acuminate or acute at apex, acute or obtuse at base, central leaflets larger, lateral nerves up to 15

pairs; petiolules tomentose, usually central one longest, up to 1.5 cm long, lateral one subsessile or shortly petioluled. Flowers in terminal or rarely axillary tomentose cymose panicles; bracts up to 2 mm long, caduceus. Calyx hairy, up to 3 mm long. Corolla pale bluish-purple. Drupes up to 3 mm in diam., black when ripe, 4-seeded.

Table 1: Efficacy of *Vitex* leaves as a repellent

Sr. No.	Number of leaves	Container capacity	Shelf life (in weeks)	Condition of the grains
1.	15	5 lts	2	Healthy
2.	15	5 lts	3	Healthy
3.	15	5 lts	4	Healthy
4.	15	5 lts	8	Healthy
5.	15	5 lts	16	Healthy
6.	15	5 lts	32	Healthy

It was observed that the leaves of *Vitex negundo* acted as a natural repellent in warding off insect, pests as well as fungal population from the storage jars of cereals and pulses. Grains were stored in three Lts. capacity plastic cans. It was noted that 15 leaflets were sufficient to check the growth of insects and fungus. The stored grains were prone to insect attack when fewer leaflets were used as repellents. On the otherhand, greater number of leaflets acted as effective deterrent to cheek the onslaught. Apart from this fresh *nugundo* leaves when tied during the evening hours at the entrance post of the hamlets deterred the entries of mosquitoes and night flies. Also concoctions prepared from the leaves (mustard oil base + warm water base) went a long way in alleviating scars and wound marks from faces and skin of patients.



Fig. 1



Fig. 2

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