

### A Review on an important plant-*Tila* (*Sesamum indicum*)

Nishaphogat<sup>1\*</sup> and Naveen Antil<sup>2</sup>

<sup>1</sup>Dept of Dravyaguna, G.B. Ayurvedic College, Brahamanwas, Rohtak, Haryana, India

<sup>2</sup>Dept of MoulikaSindhanta, S.D. Major Ayurvedic College, Farukhabaad, U.P., India

#### Abstract

Sesame is a condiment which is used in every house hold for culinary, religious and medicinal purposes. The seeds of *Tila* (*Sesamum indicum* Linn.) have *Katu, tikta, kashaya, madhura rasa, snigdhasguna, Katuvipaka, UshnaVirya, Vatahara karma*. *Tila* belongs to Pedaliaceae family, grows all over India. It is having proteins, Moisture, Fats, Carbohydrates, Oxalic acid, Calcium, phosphorus etc. *Tila* is having *Katu, Tikta, Kashaya, Madhura Rasa, Snigdha Guna, Ushnaa Virya, Katu Vipaka*. *Tila* is mentioned in *Charkokta Swedopaga Mahakashaya, Purishveranjaniya Mahakashaya and Sushrutokta Mudgaadi gana*. It's useful part is seed, leaves, roots etc. It's important formulations are *Narayana Taila, Nirgundi Taila, Shadbindu Taila* etc. It is used as an adulterant in Olive oil and Almond oil. The present article aims in projecting a detailed review of the plant regarding its morphology, chemical composition and pharmacological properties.

#### Keywords

*Tila*, Morphology, Chemical composition, *Rasapanchaka*, Therapeutic uses



**Greentree Group**

Received 18/11/16 Accepted 12/12/16 Published 10/01/17

## INTRODUCTION

Sesamum is a flowering plant in the genus Sesamum, also called benne. It is widely naturalized in tropical regions around the world and is cultivated for its edible seeds which grow in Pods or buns. The world harvested 4.2 million metric tons of Sesame seeds in 2013, with India and China as the largest producers.

Botanical nam : *Sessamum indicum* Linn<sup>1</sup>.

Family name : Pedaliaceae

Botanical Synonym : *Sessamum orientale*

## VERNACULAR NAMES<sup>2</sup>

### Indian Languages

1. Hindi : *Tila*
2. Kannada : *Ellu*
3. Gujarati : *Tal*
4. Sindhi : *Tir*
5. Konkani : *Pilli*
6. Oddia : *Khasa*
7. Malayalam : *Chitelu, Ellu*
8. Marathi : *Til*
9. Tamil : *Ellu*
10. Telugu : *Gubbul*
11. Bengali. : *Tila*
12. Punjabi : *Kunjad, Til*

### Foreign languages

English : *Gingelly*  
Brazil : *Gergelim*

French : *Benne*  
Arabic : *Simsim, Samsam*  
Persian. : *Kunjad*  
German : *Sesam*  
Decan : *Bariktel*  
Egypt : *Semseme*

## HABITAT

Sesame has many species, most being wild and native to sub-saharan Africa. Sesame indicum, the cultivated type, originated in India and is tolerant to drought like conditions, growing where other crops fail<sup>3</sup>.

## DESCRIPTON OF THE PLANT

### Morphology

#### a) Family Characters (Pedaliaceae)<sup>4</sup>

Herbs, rarely under shrubs .

Leaf- Opposite or upper alternate, entire, toothed, incised or pedatified.

Flower- Irregular, hermaphrodite.Solitary (rarely fasciled or racemose), usually axillary.

Fruit- Hard, indehiscent or a 2(rarely 3-4) valved capsule.

#### b) Genus Characters (Sesamum)

Erect herbs

Leaves- opposite below and alternate above. Entire, toothed, lobed or divided.

Flowers- Axillary, solitary or few & fascicled, shortly pedicellate)

**c) Species character<sup>5</sup>**

Erect 0.3-0.9m high, more or less foetid and glandular, usually also pubescent.

**Leaves :** Simple above, lanceolate or oblong or upper most linear and alternate, lower opposite often lobed, intermediate leaves usually ovate or toothed.

**Flowers :** Purple and whitish with purple or yellow mark, suberect or drooping. Sepals-narrow, lanceolate, hairy. Capsule-2.5cm long, oblong, erect, dehiscent from above downwards.

**Seeds :** Three varieties of seeds are known-black, white, red.

**CHEMICAL COMPOSITION****Table 1** Showing Chemical constituents of *Tila*<sup>6</sup>

	White Variety (whole seeds)	Black variety (whole seeds)
Moisture	5.4	5.2
Fat	50.2	49.8
Protein	19.8	20.0
Crude fibre	3.2	3.3
Carbohydrates	14.9	14.7
Mineral matters	4.8	5.2
Oxalic acid	1.72	1.80
Calcium	1.06	1.21
Phosphorus	0.47	0.62

**RASAPANCHAKA****Table 2** Showing the *Rasa Panchaka* of *Tila*<sup>7</sup>**THERAPEUTIC USES<sup>8</sup>****RASA PANCHAKA**

<b>RASA</b>	<i>Katu</i>
	<i>Tikta</i>
	<i>Kashaya</i>
	<i>Madhura</i>
<b>GUNA</b>	<i>Snigdha</i>
<b>VIRYA</b>	<i>Ushna</i>
<b>VIPAKA</b>	<i>Katu</i>
<b>DOSHAKARMA</b>	<i>Vatahara</i>

**MATERIALS**

A review of various literary books of *ayurveda* and Internet media

**Table 3** List of Books and Resources

<b>SAMHITHA/ NIGHANTU</b>	<b>Gana/Varga</b>
<i>Charaka</i>	<i>Swedopagamahakashaya &amp;purishviranjaniamahaka shaya</i>
<i>Sushruta</i>	<i>MudgadiGana</i>
<i>Vagbhata</i>	<i>Simbidhanyavarga</i>
<i>DhanvantariNighantu</i>	<i>Suvarnadihvarga</i>
<i>MadanapalaNighantu</i>	<i>Dhanyadivarga</i>
<i>ShaligramaNighantu</i>	<i>TailaVarga</i>
<i>Raja Nighantu</i>	<i>SalyadiVarga</i>
<i>NighantuAdarsha</i>	<i>TiladiVarga</i>
<i>BhavaprakasaNighantu</i>	<i>DhanyaVarga</i>
<i>KaiyadevaNighantu</i>	<i>DhanyaVarga</i>
<i>SodhalaNighantu</i>	<i>TailaVarga</i>
<i>PriyaNighantu</i>	<i>ShatpushpadiVarga</i>

**Table 4**

Sr.No.	Part Used	Disease
1	Seeds	Burns and Scalds
2	Leaves and Roots	Greying of Hairs
3	Seed Oil	Leucoderma
4	Seeds	Piles
5	Whole plant (decoction) with sugar	Cough
6	Whole plant kshara	Constipation
7	Whole plant Kshara with milk and Honey	Renal stones
8	Seeds	Ammenorhoea, Dysmenorrhoea
9	Seed oil	Gonorrhoea
10	Leaves	Dysentery

**PART USED<sup>9</sup>:**

Root, Leaf, Seed, Oil

**DOSAGE<sup>9</sup>:**

Powder: 5-10 gm/day

**SUBSTITUTES AND****ADULTERANTS<sup>9</sup>**

Sesamum oil is used as substitute and adulterant to Olive oil and Almond oil.

**CONCLUSION:** The above review reveals that the plant belongs to pedaliaceae family.

It is having a wide range of medicinal value like antidiarrhoeal, wound healing property, used in Amenorrhoea, dysmenorrhoea, piles, leucoderma, burns and scalds etc. The phytoconstituents includes moisture, fats, carbohydrates, calcium, phosphorus etc. *Tila* is having *katu, tikta kashaya, madhura rasa, Katu vipaka, ushna virya*. Its dose is 5-10gms/day, Its useful part is Roots, Leaves, Seeds.

**REFERENCES**

1. Vaidyaratnam P.S. Varrier, Indian Medicinal Plants, Vol 2, Orient Longman, Reprint 2006, p-104
2. K.R.Kirtikar, B.D.Basu, Indian Medicinal plants, Published by Lalit Mohan Basu, Allahabad, 3<sup>rd</sup> reprint 2003, 2<sup>nd</sup> Edition, Vo III, p-1857.
3. [www.wikipedia.org](http://www.wikipedia.org).
4. K.R.Kirtikar, B.D.Basu, Indian Medicinal plants, Published by Lalit Mohan Basu, Allahabad, 3<sup>rd</sup> reprint 2003, 2<sup>nd</sup> Edition, Vo III, p-1858.
5. Anonymous, Wealth of India, Vol 9, Raw materials, Ph-Re, National Institute of Science and communication and information resources, Council of Scientific and Industrial research, New Delhi, India, p-279.
6. Anonymous, Wealth of India, Vol 9, Raw materials, Ph-Re, National Institute of Science and communication and information resources, Council of Scientific and Industrial research, New Delhi, India, p-278.
7. Sri Bhavamishra, Bhavaprakasha Nighantu, Commentary by Prof. K. C. Chuneekar, Edited by Dr.G.S.Pandey, Chaukambha Bharati Academy, Varanasi, Revised and Enlarged edition-2010, p-639.
8. K.M.Nadakarni. Medicinal Plants of India, Reprint publication, Deharadun; 2004, p-356
9. Lavekar GS, Sharma PC, Yenle MB, Dennis TJ. Data Base on Medicinal Plants Used in Ayurveda & Siddha, Vol.5. Central Council for Research in Ayurveda & Siddha, New Delhi; 2008, p-417.