Agriculture Crops, Plants, and Trees Revealed in the Śrī Rudram

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Abstract

Lord Rudra is the deity mentioned in all four Vedic texts at multiple places and in multiple forms. Also, Rudra is highly admired in Vēdas, Purāṇas, and mythology. There is a detailed section in praise of Rudra in the Kṛṣṇa Yajurveda (KYV) and Śukla Yajurveda (SYV) Saṃhitās and it is termed as the ‘Śrī Rudram’. The Mantras/liturgies in the Śrī Rudram describe agriculture crops, plants, trees and botanical and agriculture terminology. In Śrī Rudram, one wild grass, seven cereal crops, four legume crops, one oilseed crop, two creepers and 11 trees are revealed. These plants/trees and their derivatives are the key for the ritualistic activities and their significance is described. Yajña is the subject matter of entire Vēda. The general requirements to perform Yajñas and Yāgas are detailed. The crops mentioned in the Śrī Rudram are being cultivated even today for food and fodder. The present article elucidates the botanical facets of the Śrī Rudram with Mantras and their implications.

Trees and forests augment manifold the beauty of the earth. They are the very basis of human life and the biosphere. Plants are one of Earth’s greatest resources. They are sources of food, medicines and materials with vast economic and cultural importance. They stabilize ecosystems and form the habitats that sustain the planet’s animal life. In Vēdic texts, plants and trees have often been considered as God themselves. The Rṣis in the Vājasanēya Saṃhitā (VS), show immense respect towards the trees and say one should have reverence and devotion towards all eatables, grains, medicinal herbs, trees, forests and vegetation. One should hold trees/plants in high esteem because they are an indivisible part of our lives. Here below are the important verses extracted from the YV that are in praise of plants, trees and forests.

||पृथ्वियांसंभवनस्तपत्तीशतशीशिक्रहस्तवलश्च \nविविधशितिश्चितेर्तिज्ञानःप्रणिनाः \nयमहालोमगुणाः चिछन्ननौरायंस्तृवीरः||

|| प्रथिव्यां सयवनासपति शतावलिं श्रवहस्यवलंश्च ।
विविधाश्चितिश्चितेब्जज्ञानाः प्रणिनाः ।
यमहालोमगुणाः चिछन्नानोरायंस्तृवीरः ||

The Yajurveda classified trees into two categories, called yūpyamulu and ayyūpyamulu. The yūpas are obtained from
the trees Palāśa (Butea monosperma), Bilva (Aegle marmelos), Khādira (Acacia catechu), Uduṃbara (Ficus racemosa) and Nyagṛdhā (Ficus benghalensis) to tie animals in Yajña and are called the yūpyamulu. The rest of the trees are called as ayūpyamulu. My Salutations to huge trees and these trees should grow with innumerable branches, flowers and fruits.

[[sūpippalābhyaṣṭvādasasahihbya uddivag sbbhāmāntārakṣam pṛṇa pṛthīvīmuparēṇa dhṛgumha tē tē dhāmānyūṣmāst |]– TS 1-3-6.

My Salutations to the herbaceous plants (medicinal plants), that are being kept at the top of the yūpa for the plants to develop more flowers and fruits and to fully ripe.


My salutation to the stately trees with green tufts of leaves and pervasively present in huge trees that are useful in various ways.

In Vedic texts, plants and trees have often been considered as God themselves. The Ṛṣis in the Vājasaneyā Samhītā (VS), show immense respect towards the trees and say one should have reverence and devotion towards all eatables, grains, medicinal herbs, trees, forests and vegetation.
sacred and all Tirthankaras and Buddhas are known to have attained enlightenment under specific tree (Edwardes, 1922). The worship of trees in India can be traced to the Indus Valley Civilization, as clearly indicated in the Indus Valley Seals.

Trees are considered as Dēvatas (deities). Dēvata means one who keeps giving incessantly. Trees have always been beneficial to us and they possess the divine qualities that qualify them to be addressed as Dēvatas. Trees in Indian mythology and folklore are widely considered as sacred and worshipped across the country for their benevolence. Indians believed that certain trees are the abode of gods and goddesses. This is emphasized in the Śrī Rudram Mantras at many places. Lord Rudra is considered as ‘Vānaspati’, means ‘forests and head of forests’, indicating that He is in the form of trees/forests.

Yajña is the subject matter of the entire Vēda. Yajñas and Yāgas are being performed as spiritual and scientific approaches for the welfare of the people, benefit of the society and for world peace. It is almost impossible to perform Yajñas and Yāgas without using plants or trees and their related products. Therefore, the plants, herbs, shrubs and the trees revealed in the YV are the vital elements in performing Yajñas, Yāgas, Hōmas and Iṣṭis (Boddupalli and Ramasstry, 2015; 2018; Boddupalli, 2019). For this purpose, we pray Lord Rudra in the Śrī Rudram and plead Him to provide the requirements to perform Yajñas- as Yajñēna kalpatām (TS 4-7-5 and VS 18-1), Yajñēna kalpētām (TS 4-7-9) and Yajñēna kalpatām (TS 4-7-10 and VS 18-2). Many a times, Vēda Saṃhitās do provide the mantra, but the very minute details and particulars are well explained in the Brāhmaṇas, Śrauta and Grhya Sūtrās or Purāṇa. This means, the Yajñas and Yāgas are proposed in the Vēda Saṃhitās and the Śrauta Sūtrās (Kashikar and Dandekar, 1958) describe in detail the procedures and on the requirements and other aspects of the same. Similarly, at many places in the Śrī Rudram, the term ‘Vrksa’ is mentioned, but the details regarding the name and utilization of the plant/tree products are provided in the Śrauta Sūtrās or in the Brāhmaṇa texts.

Rudra and forms in Vēdas

Rudra is a deity of the Vedic period. He finds mention in the Rgveda (RV).

[\textit{\text{वृक्षे नो निरूपं यार्यमयुरित्रं| भुक्षा मरुतो जुषांता नामभिर्वाये सुव्रितम स्तोतम रुद्रया मिल्हुसे साजोशाह}}] – RV 5-41-2.

There is a detailed section in praise of Lord Rudra in the Krṣṇa Yajurveda (KYV) and Śukla Yajurveda (SYV) Saṃhitās. The name ‘Rudra’ is mentioned in all seven Kāṇḍas of the Krṣṇa Yajurveda Taittiriya Saṃhitā (KYV-TS).

He provides people with the best education, grants wisdom, eradicates all
sorrows, and ensures a comfortable life for humans (Sundarama Sastry, 1969, 2012; Prasad Sastry, 2011). He treats the physical and mental illnesses of humans and cattle, alike and removes ignorance (Raghunathachari, 1982). The mere utterance of His name, ‘Om Namaśśivāya’ (TS 4-5-8), can purify anything (Shanmukha Sarma, 2012). This famous ‘pancākṣari mantra’ occurs in the eight anuvāka at the very center of the Rudra Praṇa. The 16th chapter in the Śukla

Yajurveda Saṃhitā (SYV) and the 5th and 7th Prapāthakas of the 4th Kāṇḍa of the KYV-TS are dedicated to the ‘Rudra’ in its entirety. The name ‘Rudra’ occurs 98 times in the RV, 113 times in the KYV-TS, 22 times in the SYV, 4 times in the SV and 45 times in the AV. In the Śrī Rudram alone, the name ‘Rudra’ occurs 18 times and the name ‘Śiva’ occurs 14 times in the Namaka Praṇa (Table 1).

Rudra has two major forms, Ghora or terrible form and Śiva or auspicious form. Quite often the name Śiva and Rudra are used interchangeably. Hence, Rudra is one side and Śiva the other side of the same coin. They are not two, but the same. The Taittiriya Brāhmaṇa text which interprets the Rudram states: “Rudra is verily the fire. He has two forms; one terrible, the other, auspicious.

<table>
<thead>
<tr>
<th>Kṛṣṇa Yajurveda Taittiriya Saṃhitā (KYV-TS)</th>
<th>Kāṇḍa 01</th>
<th>Kāṇḍa 02</th>
<th>Kāṇḍa 03</th>
<th>Kāṇḍa 04</th>
<th>Kāṇḍa 05</th>
<th>Kāṇḍa 06</th>
<th>Kāṇḍa 07</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rudra</td>
<td>28</td>
<td>25</td>
<td>17</td>
<td>30</td>
<td>26</td>
<td>19</td>
<td>12</td>
<td>62</td>
</tr>
<tr>
<td>Śiva</td>
<td>04</td>
<td>01</td>
<td>03</td>
<td>43</td>
<td>08</td>
<td>-</td>
<td>03</td>
<td>62</td>
</tr>
</tbody>
</table>

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If man does Yajñā/sacrifice to Rudra by chanting the Śrī Rudram, that man pacifies the terrible form of Rudra”. Hence Rudra is considered as a deity who teaches the supreme knowledge (Mokṣa Gyāna) to all and whose energy flows in everything.

Formation of Śrī Rudram

The earliest hymns paying homage to Lord Rudra is the Śrī Rudram found in the Yajurveda (TS 4-5, TS 4-7 and VS 16). The Rudrādhyāya (colloquially Rudram or Śrī Rudram) occurs in all four Yajurveda Saṃhitā texts with minor variations. Conventionally, Vēdas are 3 in number – the Rgveda, Yajurveda and Sāmaryveda. Yajurveda is in the center of the three Vēdas. The Kṛṣṇa Yajurveda Taittiriya Saṃhitā (KYV-TS) is divided into seven Kāṇḍas and the 4th Kāṇḍa forms the center of the TS. The Śrī
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Rudram is in the center of the 4th Kāṇḍa. It is believed that those mantras that are traditionally significant are placed in the center in order to protect them. These Yajurveda hymns that have gained particular importance are the ‘Rudra Namakaṁ’ (TS 4-5-1 to 4-5-11) and the ‘Rudra Camakaṁ’ (TS 4-7-1 to 4-7-11), which constitute the ‘Śatarudrīya’ or the ‘Śrī Rudram’ or Rudrapraśna’. Rudram occurs in all the original 100 branches (Śākhas) of the Yajurveda, thus giving rise to the name ‘Śatarudrīya’.

As Śrī Rudram is prominent in all the hundred branches (śākhas) of Yajurveda, it is called the ‘Śatarudrīya’.

Also, the term ‘Śatarudrīya’ is revealed at three instances in the KYV-TS.

The popular name ‘Namaka Praśna’ is due to the repeated utterance, 187 times, of the word “Namah or Nam” (salutation). Following this, the ‘Camaka Praśna’ is chanted wherein the words “Come” (meaning ‘and me’), repeated 338 times, hence popularly named ‘Camakam’.

The Mahā Mrtyunjaya Mantra, is first revealed in the RV, and is preserved in the TS [1-8-6(11)].

While chanting the Śrī Rudram, it is customary after reciting the 11th Anuvāka of the Namaka Praśna, the additional eight Mantras that are chanted which contain the famous Mahā Mrtyunjaya Mantra, and the other Mantras are revealed in the TS, but elsewhere. The following are the other seven Mantras:

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Botanical facets in Śrī Rudra mantras

As mentioned in the formation of Śrī Rudram, the 11 Anuvākas of the TS 4-5 is called as Namaka Praśna. The 11 Anuvākas of the TS 4-7 is termed as Camaka Praśna. In this article, the mantras that are connected to the botany and plant vegetation are provided. The botanical and agricultural terminology provided in the Śrī Rudram is explained in detail in conjunction with the literature (Macdonell and Keith, 1982). The plants and trees mentioned in the Camaka Praśna are more in number when compared with the Namaka Praśna. Cereal and legume crops, trees and their derivatives that are required to perform Yajñas and Yāgas are revealed in the Camaka Praśna of the Śrī Rudram. Plants, trees, and crops mentioned in the Śrī Rudram are listed in table 2.

Namaka Praśna - TS 4-5

[naṁr̥ṣekṣebhyo harikṣeṣebhyo namah || – TS 4-5-2(2).

Vṛksēṣebhyah = for trees, Rudra in tree form; Harikṣeṣebhyah = green-coloured trichomes (hair-like structures) on the leaves.

My Salutations to the Lord Rudra who is in the trees tufted with green leaves. I bow my head to the Rudra who lives in the trees with green-coloured trichomes (hair-like structures) and leaves.

This can be explained that some trees containing trichomes (kēsa or hair-like structures) on both sides of the leaves, i.e., dorsal and ventral surface of the leaf. Both the leaves and the trichomes (hair-like structures) are containing the chlorophyll
(hari or harita) and hence they are green in colour.

|नमःसप्तिष्ठरायतिरिष्ममर्द्धेनापत्येऽनमः||
|[] namaḥ saspiṅjarāya tviṣiṁatē pathīnāṁ patayē namaḥ || – TS 4-5-2(3).

Saspiṅjarāya = tender grass in the colour of red and yellow
My Salutations to the Rudra, whose hair is like tender grass with mixed colour of red and yellow and the great radiating person.

|नमोरोहितायस्मपत्येऽवृक्षाणापत्येऽनमः||
|[] namō rōhitāya sthapatayē vrksāṇām patayē namaḥ|| – TS 4-5-2(9).

Rōhitāya = Red or Ruby colour; stapatayē = Lord Rudra; vrksāṇām = for Trees
My Salutations to the ruby-coloured Lord Rudra, He who is the protector, guardian, ruler and the governor of all trees in the Universe.

Here, the red-tree can be attributed to the red-sander or Raktachandani (Pterocarpus santalimus) (Fig. 1) belongs to family the Fabaceae.

|नमोभुवन्त्यर्विक्षुतिरिष्मधेनापत्येऽनमः||
|[] namō bhuvantayē vārivakṛtāyausā dhīnāṁ patayē namaḥ || – TS 4-5-2(11).

Ōṣadhi = an annual plant or a herb or a plant with medicinal properties. Also, a plant that dies immediately after it produces seeds or a herb that lasts for one year or season.

My Salutations to the Lord Rudra, who nourishes the earth, the bestower of wealth and the protector of plants.

|नमोजंग्वन्ययायिवुद्धिययच||
|[] namō jaghanyāya ca budhniyāya ca || – TS 4-5-6(4).

Jaghanyāya = posterior side of cows; Budhniyāya = root of a tree. The buttress roots of huge trees or the aerial roots of huge Ficus trees.
My Salutations to the Lord Rudra, who is present in the posterior side of cows, as such in calves and in the roots and branches of the trees.

Here, one can observe the large buttress roots formed in huge trees during its growth on the surface of ground. These roots can be seen from trees like Ficus species and others.

|नमोवन्यायायकक्षयायच||
|[] namō vanyāya ca kakṣyāya ca || – TS 4-5-6(9).

Vanyāya = those in the forests; Kakṣyāya = those trees that are not having the trunk. This means the shrubs, plants, and creepers.

My Salutations to Him, who is in the form of trees in the forests and the creepers in the bushes and in the shaded areas.

|नमोव्रक्षयेब्योहरिक्षेधयः||
[namō vrksyebhyō harikēśebhyah || – TS 4-5-8(7).]
Figure 1. Raktachandan (Pterocarpus santalinus): (a) entire tree, (b) wood, (c) flowering stage, (d) fruiting stage, (e) a log of red sander and (f) red sander wood pieces.
**Vṛ̢kṣābhyaḥ**—for trees; **harikēśēbhyaḥ**—green hair-like structures, botanically called the ‘trichomes’.

My Salutations to Lord Rudra, who is in the form of trees and in the green-hair-like structures, the trichomes, present on the leaves of the trees. This infers that the Lord is present in smallest of the life and largest structures like trees in this Universe.

### Table 2. Agriculture crops, plants, and trees disclosed in the Śrī Rudram.

<table>
<thead>
<tr>
<th>Category</th>
<th>Botanical Name</th>
<th>Family Name</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Wild Grass</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Šaḍpa (Darbha)</td>
<td><em>Desmostachya bipinnata</em></td>
<td>Poaceae</td>
<td>TS 4-5-8(16)</td>
</tr>
<tr>
<td><strong>Cereal Crops</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Vṛ̢hi (Rice)</td>
<td><em>Oryza sativa</em></td>
<td>Poaceae</td>
<td>TS 4-7-4</td>
</tr>
<tr>
<td>2. Yava (Barley)</td>
<td><em>Hordeum vulgare</em></td>
<td>Poaceae</td>
<td>TS 4-7-4</td>
</tr>
<tr>
<td>3. Gōdhūma (Wheat)</td>
<td><em>Triticum aestivum</em></td>
<td>Poaceae</td>
<td>TS 4-7-4</td>
</tr>
<tr>
<td>4. Priyaṅgu (Indian millet)</td>
<td><em>Setaria italica</em></td>
<td>Poaceae</td>
<td>TS 4-7-4</td>
</tr>
<tr>
<td>5. Aṇu (Proso millet)</td>
<td><em>Panicum miliaceum</em></td>
<td>Poaceae</td>
<td>TS 4-7-4</td>
</tr>
<tr>
<td>6. Śyāmāka (Barnyard millet)</td>
<td><em>Echinocloa frumentacea</em></td>
<td>Poaceae</td>
<td>TS 4-7-4</td>
</tr>
<tr>
<td>7. Nivāra (Wild rice)</td>
<td><em>Oryza rufipogon</em></td>
<td>Poaceae</td>
<td>TS 4-7-4</td>
</tr>
<tr>
<td><strong>Legume Crops</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Māṣa (Black gram)</td>
<td><em>Vigna mungo</em></td>
<td>Fabaceae</td>
<td>TS 4-7-4</td>
</tr>
<tr>
<td>2. Mudga (Green gram)</td>
<td><em>Vigna radiata</em></td>
<td>Fabaceae</td>
<td>TS 4-7-4</td>
</tr>
<tr>
<td>3. Khalva (Bengal gram)</td>
<td><em>Cicer aritinum</em></td>
<td>Fabaceae</td>
<td>TS 4-7-4</td>
</tr>
<tr>
<td>4. Masurā (Lentil)</td>
<td><em>Vicia hirsuta</em></td>
<td>Fabaceae</td>
<td>TS 4-7-4</td>
</tr>
<tr>
<td><strong>Oil Seed Crop</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Tila (Sesame)</td>
<td><em>Sesamum indicum</em></td>
<td>Fabaceae</td>
<td>TS 4-7-4</td>
</tr>
<tr>
<td><strong>Creepers</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Urvārūka (Cucumber)</td>
<td><em>Cucumis sativus</em></td>
<td>Cucurbitaceae</td>
<td>TS 1-8-6(1)</td>
</tr>
<tr>
<td>2. Soma (Somalata)</td>
<td><em>Sarcocesta acidum</em></td>
<td>Asclepiadaceae</td>
<td>TS 4-7-4</td>
</tr>
<tr>
<td><strong>Trees</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Śrī Gandha (Sandalwood)</td>
<td><em>Santalum album</em></td>
<td>Santalaceae</td>
<td>TS 1-8-6(1)</td>
</tr>
<tr>
<td>2. Khādiṛa (Catechu tree)</td>
<td><em>Acacia catechu</em></td>
<td>Fabaceae</td>
<td>TS 4-7-4</td>
</tr>
<tr>
<td>3. Varāṇa (Varuna)</td>
<td><em>Crataeva magna</em></td>
<td>Capparaceae</td>
<td>TS 4-7-4</td>
</tr>
<tr>
<td>4. Udurūbara(Cluster fig)</td>
<td><em>Ficus racemosa</em></td>
<td>Moraceae</td>
<td>TS 4-7-4</td>
</tr>
<tr>
<td>5. Vikaṇkata (Indian plum)</td>
<td><em>Flacouritia indica</em></td>
<td>Flacourtiaceae</td>
<td>TS 4-7-4</td>
</tr>
<tr>
<td>6. Śāmī (Indian desert tree)</td>
<td><em>Prospis cineraria</em></td>
<td>Fabaceae</td>
<td>TS 4-7-4</td>
</tr>
<tr>
<td>7. Raktachandana (Red sander)</td>
<td><em>Pterocarpus santalinus</em></td>
<td>Fabaceae</td>
<td>TS 4-5-2(9)</td>
</tr>
<tr>
<td>8. Bilva (Bael)</td>
<td><em>Aegle marmelos</em></td>
<td>Rutaceae</td>
<td>TS 4-5-8(7)</td>
</tr>
<tr>
<td>9. Palāṣa or Parṇa</td>
<td><em>Butea monosperma</em></td>
<td>Fabaceae</td>
<td>TS 4-5-8(7)</td>
</tr>
<tr>
<td>10. Aśvat’ha (Peepal tree)</td>
<td><em>Ficus religiosa</em></td>
<td>Moraceae</td>
<td>TS 4-5-8(7)</td>
</tr>
<tr>
<td>11. Nyagrōḍha (Banyan tree)</td>
<td><em>Ficus benghalensis</em></td>
<td>Moraceae</td>
<td>TS 4-5-10(10)</td>
</tr>
</tbody>
</table>
Just as hair are innumerable in number and that protect the skin and the head of the human beings, leaves are also numerous and protect the tree and plants.

The importance of this mantra is that being in the form of trees like Plāksa (F. virens), Parṇa (B. monosperma), Bilva (A. marmelos) (Fig. 2), Aśvatṭha (F. religiosa), and other huge trees. Lord Rudra helps in performance of Yāgas in this world, and being in the form of Kalpaka tree in the upper world, He grants all enjoyments. Hence, Lord Rudra will be worshipped by those desirous of these benefits.

The leaves are enormous on the trees and they prepare food material by accumulating the energy from the Sun rays and nourish the entire tree. And hence, the reference to trees which is associated with the use of wood and leaves in various Yajñas and Yāgas. The reference is also to the Kalpa vṛkṣa tree, which is Lord Rudra Himself, who fulfills the wishes of all His devotees. The reference is also to the ‘Tree of Vēda’, whose branches are the Śākhas (branches) of the Vēdas. Thus, a comparison of Lord Rudra to be a Tree and its green leaves is appropriate.

||नमःकार्तिकाययक्षस्यवद्याष्ट्रपदायम्याम्||
|| namaḥ kātyāya ca gahvarēṣṭhāya ca || – TS 4-5-9(6).

My Salutations to Lord Rudra!

Kātyāya = creepers with thorns; gahvarēṣṭhāya = poisonous mountain caves.

To the Lord who is in a place not accessible because it is full of creepers and plants with thorns and in the rugged and rough mountain caves. Here, several creepers and plants that are having thorns can be given as examples - Capparis decidua, Ziziphus mauritiana, Prosopis cineraria, Bombax ceiba etc.

Lord Rudra’s weapons like Triśūla and others are made out of an important and highest quality wood comparable to that of a Nyagrōda (F. benghalensis). It has been described that Lord is seated in a banyan tree in Kailasa, which is 100 Yojanas tall and 175 Yojanas wide (Yojana is a Vedic measure of distance that was used in ancient India. One Yojana is about 12–15 kilometers in length) and that banyan tree is the refuge of those anxious to get Moksha.
Figure 2. Bael or Bilva (*Aegle marmelos*): (a) entire tree showing the wood and the crown, (b) flowers close up, (c) tree in fruiting stage and (d) bael fruit slices.
My Salutations to the Lord Rudra, who is present in the dried tree wood and also in the green-moist tree wood.

Paramāyā = in the green leaves; Parṇaśadyāyā = in the heaps of dried leaves.

My Salutations to the Lord Rudra, who is present in the leaves and in the heaps of dried leaves.

Paramē vṛkṣa āyudham nidhāya kṛttim vasāna ā cara pinākam bibhradā gahi || – TS 4-5-10(10).

My Salutations to the Lord Rudra, the bestower of all desired objects to worshippers! Please be granter of auspiciousness, well-disposed and kind to us. As an indication of this, please leave all your terrible weapons in the superior banyan tree in Kailasa out of our sight and come before us, wearing tiger-skin and holding your bow in hand as a decoration.

Here, Lord Rudra’s weapons like Trīśūla and others are made out of an important and highest quality wood comparable to that of a Nyagrodha (F. benghalensis). It has been described that Lord is seated in a banyan tree in Kailasa, which is 100 Yōjanas tall and 175 Yōjanas wide (Yōjana is a Vedic measure of distance that was used in ancient India).

One Yōjana is about 12–15 kilometers in length) and that banyan tree is the refuge of those anxious to get Moksha. Here it is prayed that the weapons be left in that tree.
Figure 3. Sandalwood (*Santalum album*): (a) entire tree, (b) wood close up, (c) sandalwood logs, (d & e) flowering stage, (f) wood pieces, (g) wood pieces and sandalwood powder, (h) fruiting stage, and (i) dried fruits.
The essence of this Mantra signifies the fact that just as the ripened Urvārūka (Fig. 4) (cucumber fruit = Cucumis sativus) separates on its own from the stem, in the same way I would like to liberate myself from the cycle of life and death.

Camaka Praśna - TS 4-7

[Kṛṣiḥ = agriculture/ploughing (Macdonell and Keith, 1982); Vṛṣṭhi = rain; Jaitram = successful; - these three together can mean good yielding land; audbhidyam = growth of the plant, creeper etc.; (1) Vibhu = superior grains, (2) Praḥu = more superior grains, (3) Bahu = much Superior grains, (4) Bhūyaḥ = much more superior grains, (5) Pūrṇam = filled grains, (6) Pūrnataram = fine-filled grains, (7) Aksūṭiḥ = not destructed grains. These seven words indicate progressive increase in growth of food grains, the second indicating a higher growth than the first and so on; the seventh indicating the highest growth; Kūyavāḥ = Yava of not good quality; Annam = reputed food; Aksūṭ = relief from hunger; Vṛṣṭhi (Rice) = Oryza sativa; Yava (barley) = Hordeum vulgare; Māṣa (black gram) = Vigna mungo; Tīla (sesame) = Sesamum indicum; Mudga (green gram) = Vigna radiata; Khaḷaṛ (Bengal gram) = Cicer arietinum; Gōdhūm (wheat) = Triticum aestivum; Masurū = Vicia hirsuta; Priyaṅgu (Indian millet) = Setaria italica; Āru (proso millet) = Panicum miliaceum; Śyāmākā (Indian barnyard millet) = Echinochloa frumentacea; Nīvāra (wild rice) = Oryza rufipogon.

The 4th Anuvāka of the Camaka Praśna starts with ‘energy’ so much needed for day-to-day living. It then lists various sources of energy and the means to procure them (agriculture, conquest, etc.). It asks for the abundance of those sources. It indicates the requirements for the success of agriculture, growth of the plants, and creepers. For the reputed food, the Annam, revealed the major, minor food grains, legumes, and an oil seed crop that would give relief from hunger. Here, seven cereal crops, four legume crops, and one oil seed crop are revealed (Fig. 5). It prays for the condition in which one never has to go hungry (aṣṭiḥ) and the condition in which one never runs out (aṣṭiḥ) of any item required in a given day. One also gets the message that having food and drink with many more people is more elevating for the nourishment of the body and mind. All these actions are energy-imbibing (eating, drinking, etc.) to be done with a sweet and pleasant manner of speaking, which will definitely reflect in the subtle portion of the food which goes to the mind.
Figure 4. Urvāru (Cucumis sativus): (a) ucumber field, (b) flowering stage, (c) cucumber fruit intact with the plant, (d) cucumber fruits, and (e) seeds.

The *Yajurveda* records 12 types of food-grains in the above-mentioned mantra. It is very interesting to note that most of these cultivated grains are known as ‘dhānya’ in the *Bṛhadāraṇyaka Upaniṣad* (BU 6-6-13) as all these grains are most essential for sustaining life. According to this Upaniṣad the 10 cultivated grains are - rice, barley, sesameum, beans, millet, panic seeds, wheat, lentils, and pulses. Here is the Mantra below:

```
das grāmyaṇi dhānyaṇi bhavanti prīhī yavāstilamāṣa anupriyamgavō gōdhūmāśca masūrāśca khalvāśca khalakulāśca tāṃpiṣṭamādhani madhuni ghṛta upaśīmcacyājasya juhoti || – BU 6-3-13.
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kṛṣṭapacyam ca mēkṛṣṭapacyam ca mē...|| – TS 4-7-5.
```

- Grain plants grown in one time ploughed field.
Agriculture in the Sri Rudram

<table>
<thead>
<tr>
<th>Crop</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vrihi</td>
<td>Oryza sativa</td>
</tr>
<tr>
<td>Yava</td>
<td>Hordeum vulgare</td>
</tr>
<tr>
<td>Gōdhūma</td>
<td>Triticum aestivum</td>
</tr>
<tr>
<td>Priyaṅgu</td>
<td>Setaria italica</td>
</tr>
<tr>
<td>Ānu</td>
<td>Panicum miliaceum</td>
</tr>
<tr>
<td>Śyāmāka</td>
<td>Echinochloa frumentacea</td>
</tr>
<tr>
<td>Nīvāra</td>
<td>Oryza rufipogon</td>
</tr>
<tr>
<td>Māṣa</td>
<td>Vigna mungo</td>
</tr>
<tr>
<td>Mudga</td>
<td>Vigna radiata</td>
</tr>
<tr>
<td>Khalva</td>
<td>Cicer arietinum</td>
</tr>
<tr>
<td>Masurā</td>
<td>Vicia hirsuta</td>
</tr>
<tr>
<td>Tila</td>
<td>Sesamum indicum</td>
</tr>
</tbody>
</table>

07 Cereal crops
04 Legume crops
01 Oil seed crop

Figure 5: Cereal, legume and oil seed crops revealed in the Śrī Rudram.
The Yajurvēda records 12 types of food-grains in the above-mentioned mantra. It is very interesting to note that most of these cultivated grains are known as ‘dhānya’ in the Bṛhadārāṇyaka Upaniṣad (BU 6-6-13) as all these grains are most essential for sustaining life.

According to this Upaniṣad the 10 cultivated grains are - rice, barley, sesame, beans, millet, panic seeds, wheat, lentils, and pulses.

\[अक्रशपच्यः\] \[akṛṣṭapacyaṃ\] - Grain plants grown in an unproductive or unploughed field.

This means that the left out seeds of the previous crop in the field will germinate soon after the rains and along with the crop, weeds also would germinate and grow simultaneously.

\[इद्धम्वस्त्रिद्विगुणाश्रमन्त्रम्\] \[iddhāmaśca mē barhiśca mē vēdiśca mē dhiṣṣṭyāśca mē srucaśca mē camasāśca mē grāvāṇaśca mē svāravaśca ma uparavaśca mēdhiṣaṇeḥ ca mē drōṇakalaśaśca mē vāyavyāni ca mē pūtabhṛcṣca ma ādhaṇāyaśca ma āgniḍhram ca mē havirdhānam ca mē grāhāsaḥ mē sadaśca mē purōḍaśaḥ mē pacatāśca mēvabhṛthaśca mē svagākāraśca mē \[||\] – TS 4-7-8.

The requirements to perform Yajñas and Yāgas are detailed in this Anuvāka. For this purpose, Idhmaśca = the faggots or kindling fire or Samidhas collected from different trees; Barhiśca = a bunch of holy grass or Darbha grass (Desmostachya bipinnata); Vēdiśca = Yajña fire-altar; Dhiṣṣṭyāśca = Priests for performing Yajña; Srucaśa = wooden ladles [Sruc - made out of Parṇa (Butea monosperma), Sruva, made of Khādira wood, (Acacia catechu), Jhūu made out of Parṇa (Butea monosperma) and others]; Chamasāśca = wooden cups made of Nyagōda wood (F. benghalensis) for storing and drinking of Soma juice; Grāvāṇaśca = stones for pressing out the Soma juice; Svāravaśca = wooden knives to cut Darbha grass and Soma shoots (Sarcostemma acutum) (Fig. 6); Uparavaśca = pits dug in havirdhāna positioning apart a portion of the sacrificial material or the grains intended for it; Adhiṣṣavāṇa = Adhiṣṣavāṇa phalaka made of Khādira wood, (Acacia catechu) to press the soma shoots (Sarcostemma acutum); Drōṇakalaśa = a large vessel made of hard wood like Vikaṅkata (Flacourtia indica) or Varaṇa (Crateva magna) to store the Soma juice; Vāvyāyāni = Praises (Śuktas) of Vayu deity; Pūtabhṛta = mud vessel; Ādhaṇāyaśca = a vessel in which the Soma shoots are kept and cleaned; Āgniḍhra = the priest who sits in the North-side of the Yajña altar and the same priest who kindles the sacrificial fire, ‘Yajñāgni’, using the instrument ‘Āgnimanthana’. He is an assistant of Brahman. His main function is to pronounce “Astu Śravat” in response to the Adhvaryu’s “aśravaya”. He holds the ‘Sphya’ (made of Khādira wood, Acacia catechu) with his hand turned southwards; Havirdhānam = place kept for keeping the Havis; Grāhaśca = houses for the wives of the Yajñā priests; Sadaśca = seats for the Sāma Veda singers; Purōḍaśa = rice cakes specially prepared
for *Yajña havis; Pacatāśca* = place and vessels for cooking the *havis*; *Avabhṛtaśca* = a purification bath taken at the end of the *Yajña* for protection; *Svagākāraśca* = with the intent of dispatch the essence of the *havis*-offering to the intended deity.

[ヨ ゴ ルドゥ オガノ イ オプ ソ オ チヨ シ シ ウ ヨ オ ルドゥ ヴィシュバ ブウナ ウイ ゥ シ ッ タスミ ルナ ルヤ ナモ アスツ]| |

[ヨ オ ルドゥ エグナ オ フ ー オプ ダ ポ オ シ ッ ディ シ ウ ヨ ルドゥ ヴィスバ ブウナ ヴィブステサ マイ ルドゥ ヤ ナモ アスツ]| |

TS 5-5-9(39).

I bow to Lord Rudra who is omnipresent in fire, in water, in trees and in plants and pervaded in the entire universe.

**Conclusions**

Lord Rudra, the Vedic deity, is mentioned in all four Vēdas. The *Yajurveda* hymns that have gained particular importance are the ‘Rudra Namakaṁ (TS 4-5)’ and the ‘Rudra Camakaṁ (TS 4-7)’ which constitute the ‘Śrī Rudram’. The Rudra Namaka and the Rudra Camaka Mantras reveal botanical and agriculture terminology, names of plants and trees. In Vēdas and in particularly the ‘Śrī Rudram’, the significance of trees is emphasized and given utmost importance due to the various special qualities they possess. *Yajña* in itself is seen as the very essence of the *Vēda*. The general requirements of *Yajña*, in the form of preparation of *Yajña* Vēdi, Samidhas, plant-derived oblations,
Yajña implements and others are clearly indicated in the Camaka Praśna of Śrī Rudram (TS 4-7-8). The plants and trees mentioned in the Camaka Praśna are more in number as compared with the Namaka Praśna. The general requirements to perform Yajñas and Yāgas are detailed in one of the Anuvāka’s of Chamaka Praśna. In Śrī Rudram, one wild grass, seven cereal crops, four legumes, one oilseed crop, two creepers and eleven trees are revealed. Even today, these crops are being cultivated by our farmers for the utilization by mankind and cattle on day to day basis as food and fodder, respectively. The different qualities of cereal grains and their progressive increase in growth of food grains are detailed in the Camaka Praśna (TS 4-7-4).

The study of trees mentioned in the Holy Scriptures of different nations is a fascinating subject. Mythological significance of these trees is certainly not without reason and relevance, though this relevance might have undergone a number of transformations over the centuries. As old civilizations gave place to new, many ideas and ideologies change. But in case of tree/plant life and its myriad forms, few have been chosen for prominence in religious observances and they seem to have survived over the centuries and are still looked upon with awe and reverence (Bhatla et al., 1984).

Acknowledgements
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