Plant Wealth as Revealed in the Śrī Rudram

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Abstract

Lord Rudra is the deity mentioned in all four Vēdic texts at multiple places and in multiple forms. Also, Rudra is highly admired in the Vedas, Purāṇas, Epics and later Sanskrit texts. 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 oil seed crop, two creepers and eleven 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 Veda. The general requirements to perform Yajñas and Yāgas are also detailed in the Śrī Rudram. 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.

1. Introduction

Trees and forests augment manifold the beauty of the earth. They are the very basis ofhuman life and the biosphere. Plants are one of Earth's greatest resources. They are sources offood, medicines and materials with vast economic and cultural importance. They stabilizeecosystems and form the habitats that sustain the planet's animal life. In Vedic texts, plants andtrees have often been considered as God themselves. The Rsis in the Vājasanēya Samhitā (VS), show immense respect towards the trees and say one should have reverence and devotiontowards 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 someimportant are

mantras/liturgies extracted from the YV that are in praise of plants, trees and forests:

 पृ<u>थि</u>व्यासंभ<u>व</u>वनंस्पते<u>श</u>तवंल्शोविरोह<u>स</u>हस्रव ल्शावि<u>व</u>यगुँरुहे<u>म</u>यंत्वायग्ग्स्वधितिश्तेतिजानःप्र णिनायमहृतेसौभगायाच्छिन्नोरायस्सुवीरः।|

[| pṛthivyā sam bhava vanaspatē śatavalśō vi rōha sahasravalśā vi vayagum ruhēma yam tvāyaggsvadhitistētijānaḥ praṇināya mahatē saubhagāyācchinnō rāya ssuvīraḥ ||] — TS 1-3-5.

My Salutations to huge trees and these trees should grow with innumerable branches, flowers and fruits.

The Yajurveda (TS 1-3-5) classified trees into two categories. They are called *yūpyamulu* and *ayūpyamulu*. The yūpas are

obtained from the trees Palāśa (Butea monosperma), Bilva (Aegle marmelos), Khādira (Acacia catechu), Udumbara (Ficus racemosa) and Nyagrōdha (Ficus benghalensis) to tie animals in Yajña and are called the yūpyamulu. The rest of the trees are called as ayūpyamulu.

2. |सुपिष्पुलाभ्यस्त्वौषधीभ्यउद्दिवग्ग्स्तभानान्तरि क्षंपृणपृ<u>थि</u>वीसुपरेणदृगु<u>ँह</u>ते<u>ते</u>धामा"न्युश्मसी||

[| supippalābhyastvauṣadhibhya uddivagg stabhānāṃtarikṣam pṛṇa pṛthivīmuparēṇa dṛgumha tē tē dhāmānyuśmasī ||] – **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.

3. |नमोवृक्षेभ्योहरिकेशेभ्योनमस्तारायनमः|| [| namō vṛkṣēbhyō harikēśēbhyō namastārāya namah||] – TS 4-5-8 and VS 16-20-20.

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

4. |नमो<u>व</u>क्षेभ्<u>यो</u>हरिकेशेभ्यः रोहितायस्थपतये<u>व</u>क्षाणांपतयेनमः॥

[| namō vṛkṣēbhō harikēśēbhyaḥ ... rōhitāya sthapatayē vṛkṣāṇām patayē namaḥ |] – **TS 4-5-2** and **VS 16-20**.

My salutations to Rudra who is the provider and is omnipresent in the scared trees like Palāśa (*Butea monosperma*), Bilva (*Aegle marmelos*), Aśvat'tha (*Ficus religiosa*), Nyagrōdha (*Ficus benghalensis*) and also present in general trees.

The hymns of the Vedas contain references to sacred trees and plants on account of their being associated with certain deities and also because of their potent medicinal properties (Dymock *et al.*, 1893). The ritualistic, magical, medicinal and secular

significance of trees is well documented (Sudarsana Sarma, 1989; Boddupalli and Ramasastry, 2018; Boddupalli, 2019). Sthala Vrksās (derived from Sanskrit, i.e. sthala place; vrksa - tree) or sacred trees are found all over in India. Trees have been praised in all Hindu Scriptures, like the Rāmāyana, Mahābharata, Purāṇas etc., and many rituals related to trees have even continued to modern times. Many trees find place with stories of Lord Krishna; like the kadamba (Neolamarckia cadamba) is always seen with him in most of his pictures. It is said that Lord Vișnu lives in peepal (Ficus religiosa), Goddess Lakshmi in neem (Azadirachta indica), Lord Siva in bargad and others. Even the Jain and the Buddhist scriptures have named many trees as 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 considered as *Dēvatas* are (deities). *Dēvata*means one who keeps giving incessantly. Trees have always 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/liturgies at many places. Lord Rudra is considered as 'Vanaspati', means 'forests and head of forests', indicating that He is in the form of trees/forests.

Yajña is the subject matter of the entire Veda. Yajñas and Yāgas are being spiritual and scientific performed as 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 Istis (Boddupalli and Ramasastry, 2015 and 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 kalpantām(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, Veda Samhitās do provide the Mantra, but the very minute details and particulars are well explained in the Brāhmanas, Śrauta and Grhva Sūtrās or Purāṇas. This means, the Yajñas and Yāgās are proposed in the Veda Samhitās 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 Brāhmana texts.

1.1. Rudra and Forms in Vedas

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

| तेनोमित्रोवरुणोअर्यमायुरिंद्रऋभुक्षामरुतोजुषंत |नमोभिर्वायेदधतेसुवृक्तिंस्तोमंरुद्रायमीळ्हुषेसजोषाः| [| tē nō mitrō varuṇō aryamāyuriṃdraṛbhukṣā marutō juṣaṃta | namōbhirvā yē suvṛktim stōmam rudrāya mīlhuṣē sajōṣāḥ ||]— RV 5-41-2.

There is a detailed section in praise of Lord Rudra in the Kṛṣṇa Yajurveda (KYV) and Śukla Yajurveda (SYV) Samhitās. The name 'Rudra' is mentioned in all seven Kāndas of the Krsna Yajurveda Taittirīva Samhita (KYV-TS). He provides people with the best education, grants wisdom, eradicates all sorrows and ensures a comfortable life for humans (Sundararama Sastry, 1969 and 2012; Prasad Sastry, 2011). He treats the physical and mental illnesses of humans and cattle, alike and removes ignorance (Raghunathachari, 2003). The mere utterance of His name, 'Ōm Namaśśivāya' (TS 4-5-8), can purify anything (Shanmukha Sarma, This famous 'pancākṣarī mantra' occurs in the eight anuvāka at the very center of the Rudra Praśna. The 16thchapter in the ŚuklaYajurvedaSamhita (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 Praśna. The frequency of occurrence of the names, 'Rudra' and 'Siva' in the KYV-TS is presented in 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 *Taittirīya*

Brāhmaṇa text which interprets the Rudram states: "Rudra is verily the fire. He has two forms; one terrible, the other, auspicious. If man does Yajña/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 ($M\bar{o}kṣajñ\bar{a}na$) to all and whose energy flows in everything.

1.2. Significance of Śrī Rudram

The prominence of *Śrī Rudram* is beautifully explained in the following verse: |विद्यासु श्रुतिरुत्कृष्टा रुद्रैकादशिनी श्रुतौ|तत्र पञ्चाक्षरी तस्यं शिव इत्यक्षरद्वयम्||- Abhinava Sankara Bhaṣyam

[|vidyāsu śrutirutkṛṣṭā rudraikādaśinī śrutau tatra pañcākṣarī tasyaṁ śiva ityakṣaradvayam ||]

Among the sources of learning, the Vedas are the supreme; in the Vedas, *Rudra Ekādaśi* is supreme; in the *Rudram* the *Pañcākṣarī* yajus mantra (Namakaṁ 8th anuvaka, 11th mantra)*Namaśśivāya* is supreme; in the *Namaśśivāya* mantra the two letters *Śiva*stands supreme and ultimate.

Vedas are infinite. Veda itself is *Śiva*, and *Śiva* is Vedam.

| वेदंश<u>िश</u>वश्शिवो<u>वे</u>दः||[|vēda śśiva śśivō vēdaḥ |]

The *Vāyu Purāṇa* extends *Śrī Rudram*greatness and significance in the below famous verse:

|नमकं चमकं चैव पुरुषसूक्तं तथैव च| नित्यं त्रयं प्रयुञ्जानो ब्रह्मलोके महीयते||

[|namakam camakam caiva puruṣasūktam tathaiva ca| nityam trayam prayuñjāno brahmaloke mahīyate||]

The meaning of this mantra is that reciting and applying the *Camakam*, *Namakam* and *Puruṣa Sūktam* as a daily routine prayer, he will be honoured in the *Brahmaloka*.

1.3. 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 Samhita texts with minor variations. Conventionally, Vedas are three in number - the Rgveda, Yajurveda and Sāmaveda. Yajurveda is in the center of the three Vedas. The Krsna Yajurveda Taittirīya Samhita (KYV-TS) is divided into seven Kāndas and the 4th Kānda forms the center of the TS. The Śrī Rudram is in the center of the 4th Kanda. 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 Namakam' (TS 4-5-1 to 4-5-11) and the 'Rudra Camakam' (TS 4-7-1 to 4-7-11), which constitute the 'Satarudrīyam' or the 'Śrī Rudram' or 'Rudrapraśna'. 'Rudram' in a11 the original 100 branches(Śākhas) of the Yajurveda, thus giving rise to the name 'Satarudrīyam'. Traditionally, during Rudrābhişekam along with Namakam and Camakam, Puruşa *Sūktam* is also recited.

The word Śatarudrīyam is derived from the grammatical root word (dhātu) - शतरुद्र+छ - शतं रुद्राः देवताः यस्य - means 'the chapter in which the hundred Rudras are deities'.

|शतेशाखासुपठ्यतेरुद्रीयं - शतरुद्रीयम्||

[| śatēśākhāsu paṭhyatē rudrīyaṃ śatarudrīyam ||]

As Śrī Rudram is prominent in all the hundred branches (śākhas) of Yajurveda, it is called the 'Śatarudrīyam'. Also, the term 'Śatarudrīyam' is revealed at three instances in the KYV-TS as following:

- 1) | यज'मानं च ध्यायेच्छतरुद्रीयं' जुहोति|| [| yajamānam ca dhyāyēt śatarudrīyam juhōti ||] TS 5-4-3(1).
- 2) | अन्येशत<u>र</u>ुद्रीयग<u>्</u>ँहृत्वा|| [| anyē satarudrīyagum hutvā ||] **TS 5-5-9(40)**.
- 3) | शिवान्यायच्छंतर्हीयंजुहोति|| [| śivānyā yacchatarudrīyam juhōti ||] TS 5-7-3(11).

The popular name 'Namaka Praśna' is due to the repeated utterance, 187 times, of the word "Namah or Namo" (salutation). Following this, the 'Camaka Praśna' is chanted wherein the words "Ca me" (meaning 'and me'), repeated 338 times, hence popularly named 'Camakam'.

The *Mahā Mṛtyumjaya Mantra*, is first revealed in the RV, and is preserved in the TS.

|त्र्यंबकंयजामहेस<u>ुग</u>न्धिपु<u>ष्टि</u>वर्धनम्<u>|उर्वारुकमिंव</u>बन्ध नान्<u>म</u>त्योर्मुक<u>्षीय</u>मा□मृता["]त्||

[| tryambakam yajāmahē sugandhim puṣṭivardhanam | urvārukamiva bandhanānmṛtyōrmukṣīya māmṛtāt ||]— RV 7-59-12 and 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 Mrtyumjaya Mantra*, and the other Mantras are revealed in the TS, but elsewhere. The following are the other seven Mantras:

1) |यो<u>रु</u>द्रो<u>अ</u>ग्नौयो<u>अ</u>प्सुयओषधी<u>ष</u>ुयो<u>रु</u>द्रोविश<u>्वा</u>भुवना <u>विवेशतस्मैरुद्राय</u>नमो<u>अ</u>स्तु||

[| yō rudrō agnau yō apsu ya ōṣdhīṣu yō rudrō viśvā bhuvanāvivēśa tasmai rudrāya namō astu ||]— TS 5-5-9(39).

2) |तमुष्टु<u>हि</u>यःस्<u>विषुःस</u>ुधन<u>्व</u>ायोविश्वस<u>य</u>क्षयंतिभे<u>ष</u>ज स्य|यक्ष्व<u>ाम</u>हेसौम<u>न</u>साय<u>र</u>ुद्रंनमोभि<u>र्दे</u>वमसुरंदुवस्य ||

[| tamu ṣṭuhi yaḥ sviṣuḥ sudhanvā yō viśvasya kṣayati bhēśhajasya | yakṣvā mahē saumanasāya rudraṃ namōbhirdēvamasuraṃ duvasya ||]— RV 5-42-11.

He who holds a beautiful and powerful shaft and a strong bow, He who is the source and repository of all medicines, praise Him alone. To gain the favor and goodwill of that supreme and effulgent God Rudra, let us worship Him, honor and adore Him by salutations.

अयं<u>मेहस्तो</u>भगवा<u>न</u>यं<u>मे</u>भगवत्तरः|अयंमेंविश्वभेष जोयंशिवाभिमर्शनः||

[| ayam mē hastō bhagavānayam mē bhagavattaraḥ | ayam mē viśvabhēṣajōyam śivābhimarśanaḥ ||]— RV 10-60-12.

Due to its contact with the Lingam, this right hand of mine is fortunate. Indeed this hand of mine is a panacea for all human beings for all ills.

4) | येतें<u>स</u>हस्र<u>्रमयुतं</u>पा<u>शा</u>मृत<u>्यो</u>मर्त<u>यांयहन्तवे|तान्य</u>ज्ञस्य माययासर्वानवयजामहे||

[| yē tē sahasramayutam pāśā mṛtyō martyāya hamtavē | tān yajñasya māyayā sarvānavayajāmahē ||]— **TA 10-57**.

Oh Death in the form of Rudra. Those countless nooses of yours by which Youdestroy all mortal creatures, we shall loosen them by the efficiency of our worshipof you.

5) | मृत्य<u>वे</u>स्वाह<u>ां मृ</u>त्य<u>वे</u>स्वाहा"|| [| mṛtyavē svāhā mṛtyavē ssvāhā ||]— **TA 10-58**.

This offering of fire is offered to death, this offering of fire is offered to death.

6) | प्राणानांग्रन्ध्रिरसिरुद्रोमांविशान्तकः| तेनान्नेना"प्या<u>य</u>स्व|

[| prāṇānam graṃdhirasi rudrōmā viśāṃtakaḥ | tēnānnēnāpyāyasva ||]— **TA 10-74.**

Lord Rudra, who is everywhere, and to the Rudra let not death (premature) come near me. He who lives in the junction of the soul and senses, I pray to you who destroy everything, to be within me, and due to that be satisfied, with the food that I take as offering.

7) | नमोरुद्रायविष्णवेमृत्युर्मेपाहि|| [| namō rudrāya viṣṇavē mṛtyrmē pāhi ||] – **TA 10-75**.

My salutations to Rudra and Viṣṇu and they protect me from untimely death.

Among these eight Mantras, three Mantras are revealed in the RV, four Mantras in the TA and one Mantra from the TS. These Mantras are brought together and merged after the 11th Anuvāka of the Namaka Praśna and together are described as 'Rudra Namaka'. By chanting these Mantras, we are praying Lord Rudra to protect us from untimely death. Similarly, after the 11th Anuvāka of the Camaka Praśna, a Śānti Mantra that is routinely recited is obtained from the 3rdKānda of the TS [3-3-2(4)]. With this, the chanting of the 'Śrī Rudram' is completed. The three Mantras that are adopted from the RV into the Śrī Rudram are provided with the YV swara. The additional Mantras might have been appended by the Rsis.

2. 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 indetail 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.

2.1. Namaka Praśna - TS 4-5

|नमों<u>व</u>्क्षेभ्य<u>ो</u>हरिकेशेभ्यनमः||[| namō vṛkṣēbhyō harikēśēbhya namaḥ ||]- **TS 4-5-2(2)**.

Vṛkṣēbhyaḥ = For trees, Rudra in tree form;

Harikēśēbhyaḥ = 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 ($k\bar{e}\dot{s}a$ 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.

|नमः<u>ेस</u>स्पिञ्जरा<u>य</u>त्विषीमतेपथ<u>ी</u>नांपत<u>ये</u>नमः||

[| namaḥ saspiñjarāya tviṣīmatē pathīnaṃ patayē namaḥ ||]— TS 4-5-2(3).

Saspiñjarāya = tender grass in the colour of red and yellow.

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

|नमोरोहितायस्थपतयेवक्षाणांपतयेनमः।|

[| namō rōhitāya sthapatayē vṛkṣāṇām patayē namah||]— TS 4-5-2(9).

Rōhitāya = Red or Ruby colour; **stapatayē** = Lord Rudra; **vṛkṣāṇām** = 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 Raktachandan, *Pterocarpus santalinus* (Fig. 01)belongs to family the Fabaceae.

|नमोभ<u>ुव</u>न्तयेवारिवस<u>्क</u>तायौषधीन<u>ां</u>पत<u>ये</u>नमः||

[| namō bhuvantayē vārivaskṛtāyauṣadhīnam 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 one 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.

|नमोज<u>घ</u>न्याय<u>च</u>बुद्गियायच ||[| 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 its 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.

|नमोवन्याय<u>च</u>कक्ष्यायच ||[| namō vanyāya ca kakṣyāya ca ||] TS 4-5-6(9).

 $Vany\bar{a}ya$ = those in the forests; $Kaksy\bar{a}ya$ = 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.

|नमो<u>व</u>्धेभ्योहिरकेशेभ्यः||[|namō vṛkṣyēbhyō harikēśēbhyaḥ ||]- **TS 4-5-8(7)**.

Vṛkṣyēbhyō = 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.

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 Plākṣa (Ficus virens), Parṇa (Butea monosperma), Bilva (Aegle marmelos, Fig. 02), Aśvat'tha (Ficus 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 and 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 Veda', whose branches are the *Śākhas* (branches) of the Vedas. Thus, a comparison of Lord Rudra to be a Tree and its green leaves is appropriate.

|न<u>म</u>श्शष्प्याय<u>च</u>फेन्यायच||[| nama śśaṣpyāya ca phēnyāya ca ||] - **TS 4-5-8(16)**.

Śaṣpa = Darbha grass (*Desmostachya bipinnata*); **Phēnyāya** = He is present in the froth of the river.

My Salutations to Lord Rudra who is in the grass and the river froth!

The term **Śaṣpa** is mentioned in the YV Saṃhitās [TS 4-5-8(16) and VS 21-29] and in RV Brāhmaṇa (AB 8-5-3 and AB 8-8-4), YV Brāhmaṇa [SB 12-7-2(8) and SB 12-9-1(2)]. Sāyaṇāchārya (1970) in his commentary on *Taittirīya Saṃhita* mentioned that *Śaṣpa* means a just born **Darbha** grass (*Desmostachya bipinnata*) grows on the banks of the Ganga River. It also denotes 'young' or a 'sprouting grass' (Macdonell and Keith, 1982).

|नमःकाट्यायचगहवरेष्ठायच|| [| namaḥ kātyāya ca gahvarēṣṭhāya ca ||]— TS 4-5-9(6).

Kātyāya = creepers with thorns; *gahvarēṣṭhāya* = Poisonous mountain caves. My Salutations to Lord Rudra!

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.

|न $\underline{\mathbf{H}}$ १शुष्क्यांयचहरित्यांयच ||[| nama śśuśkyāya ca harityāya ca ||] \mathbf{TS} 4-5-9(9).

śśuṣkyāya = Dried tree wood; *harityāya* = moist-green tree wood.

My Salutations to the Lord Rudra, who is in the dried tree wood and also in the moistgreen tree wood.

|नमः पुर्ण्यायचपर्णश्रद्यायच || [|namaḥ parṇyāya ca parṇaśadyāya ca $\|$] – TS 4-5-9(12).

Parṇyāya = in the green leaves; Parṇaśadyāya = 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.

|मीढुष्ट<u>मिशवंतमशिवोनस्स</u>ुमनाभव<u>|पर</u>मे<u>व</u>क्षआयुधं<u>नि</u> धायकृत्तिंवसानआचरपिनाकंबिभ्रदागिही|

[$|m\bar{i}dhustama$ śivatama śivō na ssumanā bhava | 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 Please worshippers! 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 *Triśūla* and others are made out of an important and highest quality wood comparable to that of a **Nyagrōdha** (*Ficus 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 $Y\bar{o}jana$ 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.

|ये<u>व</u>क्षेष<u>ुंस</u>स्पिञ्ज<u>रा</u>नीलग्रीवाविलोहिताः||

[| yē vṛkṣēṣu saspiñjarā nīlagrīvā vilōhitāḥ ||] - TS 4-5-11(5).

 $Vrks\bar{e}su$ = in the Trees; $Saspiñjar\bar{a}$ = tender grass that in reddish-yellow colour.

My Salutations to the Lord Rudra and other Rudras present in the trees. Like on earth, there are Rudras of different colours, living in trees as their lords. This mantra refers to them. And also the Rudras present in the grasses that are in reddish-yellow colour.

|त्र्यंबकंयजामहेस<u>ुग</u>न्धिपु<u>ष्टि</u>वर्धनम्<u>|उर्वारु</u>कमिं<u>व</u>बन्ध नान<u>्म</u>त्योर्मुक<u>्षीय</u>मामृता["]त्||

[| tryambakam yajāmahē sugandhim puṣṭivardhanam | urvārukamiva bandhanānmṛtyōrmukṣīya māmṛtāt ||] — TS 1-8-6(11).

My Salutations to Lord Rudra, as the scent, colour etc. are all superior as mentioned by Upanishad in '*Divyagandha:*, the **Sri Gandha tree** (*Santalum album*, Fig. 03)', '*Divyarasa:*' etc., has been used here. Also, in this Mantra it is an invocation made with a request to release the clutch of '*Mṛtyu*' (death).

The essence of this Mantra signifies the fact that just as the ripened **Urvāruka** (Fig. 04) (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.

2.2. Camaka Praśna - TS 4-7

2.2.1. Agriculture Crops and Grain Filling |कृषिश्चमेवृष्टिश्चमेजैत्रचम्औद्भिद्यंचमे......विभुचमे प्रभुचमेबहुचमेभूयश्चमेपूर्णंचमेपूर्णतरंचमेक्षितिश्चमेक् यवाश्चमेन्नेचमेक्षुच्चमेत्रीहयश्च मे यवा श्चम मे माषा श्च

मे तिला"श्च मे मुद्गाश्च मे खुल्वा"श्च मे गोधूमा"श्च मे मुसुरा"श्च मे प्रियङ्गवश्च मेणवश्च मे श्यामाका"श्च मे नीवारा"श्च मे|

[| kṛṣiśca mē vṛṣṭiśca mē jaitram ca ma audbhidyam ca mē vibhu ca mē prabhu ca mē bahu ca mē bhūyaśca mē pūrṇam ca mē pūrnataram ca mēkṣitiśca mē kūyavāśca mēnnam camēkṣucca mē vrīhayaśca mē yavāśca mē māṣāśca mē tilāśca mē mudgāśca mē khalvāśca mē gōdhūmāśca mē masurāśca mē priyaṅgavaśca mēṇavaśca mē śyāmākāśca mē nīvārāśca mē ||] – TS 4-7-4.

Kṛṣiḥ = Agriculture / ploughing (Macdonell and Keith, 1982); Vṛṣṭiḥ = rain; Jaitram = successful; - These three together can mean good yielding land; audbhidyam = growth of the plant, creeper etc.; (1) Vibhu = Superior grains, (2) Prabhu = More superior grains, (3)Bahu = Much Superior grains, (4) Bhūyaḥ = Much more superior grains, (5) Pūrņam = Filled grains, (6) *Pūrṇataram* = Fine-filled grains, (7) Akşitih = 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; $K\bar{u}yav\bar{a}h = Yava of not good quality;$ **Annam** = reputed food; **Aksut** = relief from hunger; Vrīhi (Rice) = Oryza sativa; Yava (Barley) = $Hordeum\ vulgare;\ M\bar{a}sa$ (Black gram) = Vigna mungo; Tila (Sesame) = Sesamum indicum; Mudga (Green gram) = Vigna radiata; Khalva (Bengal gram) = Cicer arietinum; Gōdhūma (Wheat) = Triticum aestivum; Masurā = Vicia hirsuta; Privangu (Indian millet) = Setaria italica; Anu (Proso Panicum miliaceum; Śyāmākā millet) (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 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. 05). It prays for the condition in which one never has to go hungry (aksut) and the condition in which one never runs out (aksitih) 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.) are 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.

The Yajurveda records twelve 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 6-3-13) as all these grains are most essential for sustaining life. According to this Upaniṣad there are ten cultivated grains and are - rice, barley, sesamum (tila), green gram, aṇu, priyaṅgu, gōdhūma, masurā, khalva and khalakula. So these are of rich carbohydrates, proteinaceous pulses, beans and lentils, and also containing major and minor millets. Here below is the Mantra:

|दशग्राम्याणिधान्यानिभवन्तित्रीहियवास्तिलमाषाअ
णुप्रियंगवोगोधूमाश्चमस्राश्चखल्वाश्चखलुकुलाश्चता
निपष्टान्दधनिमधुनिघृतउपसींचत्याज्यस्यजुहोति||
[| daśa grāmyāṇi dhānyāni bhavaṃti vrīhi
yavāstilamāṣā aṇupriyaṃgavō gōdhūmāśca
masūrāśca khalvāśca khalakulāśca

tāmpiṣṭāmdadhani madhuni ghṛta upasīmcatyājyasya juhōti ||]-**BU 6-3-13.**

2.2.2. Agriculture Fields

|कृष्ट<u>प</u>च्यंचमेकृष्ट<u>प</u>च्यंचमे...||[| kṛṣṭapacyam ca mēkṛṣṭapacyam ca mē...||] – **TS 4-7-5.**

| कृष्टपच्यं[| kṛṣṭapacyam ||] - Grain plants grown in one time ploughed field.

| □कृष्टपच्यं[| akṛṣṭapacyam ||] - 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.

2.2.3. Major Requirements of Yajña

|<u>इ</u>ध्मश्चमे<u>ब</u>र्हिश्च<u>मे</u>वेदिश्च<u>मे</u>धिष्णियाश्च<u>मे</u>सुचश्चमेच<u>म</u> साश<u>्चमे</u>ग्रावाणश्च<u>मे</u>स्वरंवश्चमउप<u>र</u>वाश्चमे<u>धि</u>षवणेचमे द्रोणकल्शश्चमेवायव्यानिचमेपूत्भृच्चमआधवनीयश्च<u>म</u> आग्नी"ध्रंचमेह<u>वि</u>धानिचमे<u>ग</u>्हाश्चमेसदश्चमेपुरोडाशा"श्च मेपचताश्चमेवभुथश्चमेस्वगाकारश्चमे||

[| idhmaśca mē barhiśca mē vēdiśca mē dhisniyāśca mē srucaśca mē camasāśca mē grāvāņaśca mē svaravaśca ma uparavāśca mēdhisavanē ca mē drōnakalaśaśca vāyavyāni mē pūtabhrcca ca ma āgnīdhram ādhavanīyaśca ma mē havirdhānam ca mē grhāśca mē sadaśca mē purodāśaśca mē pacatāśca mēvabhrthaśca 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; Dhiṣṇiyāśca = Priests for performing Yajña; Srucaśca = wooden ladles [Sruc - made out of Parṇa (Butea monosperma), Sruva,

made of Khādira wood, (Acacia catechu), Juhu made out of Parna (Butea monosperma) and others]; *Chamasāśca* = wooden cups made Nyagrōdha wood benghalensis) for storing and drinking of Soma juice); $Gr\bar{a}v\bar{a}na\acute{s}ca$ = stones for pressing out the Soma juice; Svaravaśca = wooden knives to cut Darbha grass and Soma shoots (Sarcostemma acidum, Fig. 06); *Uparavāśca* = pits dug in havirdhāna positioning apart a portion of the sacrificial material or the grains intended for it; Adhişavana = Adhişavanaphalaka made of Khādira wood, (Acacia catechu) to press the soma shoots (Sarcostemma acidum); Drōnakalaśa = a large vessel made of hard wood like Vikankata (Flacourtia indica) or Varana (Crateva magna)] to store the Soma juice; Vāvavvāni = Praises (Sūktas) of Vayu mud deity; Pūtabhrta vessel; $\bar{A}dhavan\bar{t}va\dot{s}ca = a$ vessel in which the Soma shoots are kept and cleaned; $\bar{Agn\bar{i}dhra}$ = the priest who sits in the North-side of the Yajña altar and the same priest who kindles the fire. 'Yajñāgni', using sacrificial the instrument 'Agni-manthana'. He is an assistant of Brahman. His main function is to pronounce "Astu Śrausat" in response to the Adhvaryu's "āśrāyaya". He holds the 'Sphya' (made of Khādira wood, Acacia catechu) with his hand turned southwards; *Havirdhānam* = place kept for keeping the Havis; Grhāśca = houses for the wives of the Yajña priests; **Sadaśca** = seats for the Sāma Veda singers; $Pur\bar{o}d\bar{a}\dot{s}a$ = rice cakes specially prepared for Yajña havis; **Pacatāśca** = place and vessels for cooking the havis; Avabhrtaśca = a purification bath taken at the end of the Yajña for protection; $Svag\bar{a}k\bar{a}ra\acute{s}ca$ = with the intent of dispatch the essence of the *havis*-offering to the intended deity.

|यो<u>रु</u>द्रो<u>अ</u>ग्नौयो<u>अ</u>प्सुयओषधी<u>ष</u>ुयो<u>रु</u>द्रोविश<u>्वा</u>भुवना<u>वि</u>वे शतस्मै<u>रुद्राय</u>नमो<u>अ</u>स्तु||

[| yō rudrō agnau yō apsu ya ōṣdhīṣu yō rudrō viśvā bhuvanāvivēśa tasmai rudrāya namō astu ||] – 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.

3. Conclusions

Lord Rudra, the Vēdic deity, is mentioned in all four Vedas. The Yajurveda hymns that have gained particular importance are the 'Rudra Namakam' (TS 4-5)' and the 'Rudra Camakam' (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 Vedas and in particularly the Śrī significance of trees is the Rudram. emphasized and given utmost importance due to the various special qualities they possess. Yaiña in itself is seen as the very essence of the Veda. 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 the Śrī Rudram (TS 4-7-8). The plants and trees mentioned in the Camaka Praśna are more in number when compared with the Namaka Praśna. The general requirements to perform Yajñas and Yāgas are detailed in one of the Anuvāka's of Camaka Praśna (TS 4-7-8). In Śrī Rudram, one wild grass, seven cereal crops, four legumes, one oil seed crop, two creepers and eleven trees are revealed (Table 2). agriculturally relevant crops are depicted in

Fig. 05. 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 plant species that are mentioned in the *Śrī Rudram* are listed in Table 2.

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 give 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).

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Table 1: Frequency of occurrence of the names 'Rudra' and 'Śiva' in the Kṛṣṇa Yajurveda Taittirīya Saṃhita (KYV-TS).

Kṛṣṇa Yajurveda Taittirīya Saṃhita (KYV-TS)										
	Kāṇḍa 01	Kāṇḍa 02	Kāṇḍa 03	Kāṇḍa 04	Kāṇḍa 05	Kāṇḍa 06	Kāṇḍa 07	Total		
Rudra	28	25	17	30	26	19	12	157		
Śiva	04	01	03	43	08	-	03	62		

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

Category	Botanical Name	Family Name	Reference
Wild Grass			
1. Śaṣpa (Darbha)	Desmostachya bipinnata	Poaceae	TS 4-5-8(16)
Cereal Crops			
1. Vrīhi (Rice)	Oryza sativa	Poaceae	TS 4-7-4
2. Yava (Barley)	Hordeum vulgare	Poaceae	TS 4-7-4
3. Gōdhūma (Wheat)	Triticum aestivum	Poaceae	TS 4-7-4
4. Priyaṅgu (Indian millet)	Setaria italica	Poaceae	TS 4-7-4
5. Aņu (Proso millet)	Panicum miliaceum	Poaceae	TS 4-7-4
6. Śyāmāka (Barnyard millet)	Echinochloa frumentacea	Poaceae	TS 4-7-4
7. Nīvāra (Wild rice)	Oryza rufipogon	Poaceae	TS 4-7-4
Legume Crops			
1. Māṣa (Black gram)	Vigna mungo	Fabaceae	TS 4-7-4
2. Mudga (Green gram)	Vigna radiata	Fabaceae	TS 4-7-4
3. Khalva (Bengal gram)	Cicer arietinum	Fabaceae	TS 4-7-4
4. Masurā (Lentil)	Vicia hirsuta	Fabaceae	TS 4-7-4
Oil Seed Crop			
1. Tila (Sesame)	Sesamum indicum	Fabaceae	TS 4-7-4
Creepers			
1. Urvāruka (Cucumber)	Cucumis sativus	Cucurbitaceae	TS 1-8-6(1)
2. Soma (Somalata)	Sarcostemma acidum	Asclepiadaceae	TS 4-7-4
Trees			
1. Śrī Gandha (Sandalwood)	Santalum album	Santalaceae	TS 1-8-6(1)
2. Khādira (Catechu tree)	Acacia catechu	Fabaceae	TS 4-7-4
3. Varaṇa (Varuna)	Crateva magna	Capparaceae	TS 4-7-4
4. Uduṃbara (Cluster fig)	Ficus racemosa	Moraceae	TS 4-7-4
5. Vikaṅkata (Indian plum)	Flacourtia indica	Flacourtiaceae	TS 4-7-4
6. Śamī (Indian desert tree)		Fabaceae	TS 4-7-4
7. Raktachandan (Red sande	er)Pterocarpus santalinus	Fabaceae	TS 4-5-2(9)
8. Bilva (Bael)	Aegle marmelos	Rutaceae	TS 4-5-8(7)
9. Palāśa or Parņa	Butea monosperma	Fabaceae	TS 4-5-8(7)
10. Aśvat'tha (Peepal tree)	Ficus religiosa	Moraceae	TS 4-5-8(7)
11. Nyagrōdha (Banyan tree)	_	Moraceae	TS 4-5-10(10)

Figure 01 - **Raktachandan** (*Pterocarpus santalinus*) - (**a**) Entire tree, (**b**) Wood, (**c**) Flowering stage, (**d**) Fruiting stage, (**e**) A log of Redsander and (**f**) Redsander wood pieces



Figure 02 - **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



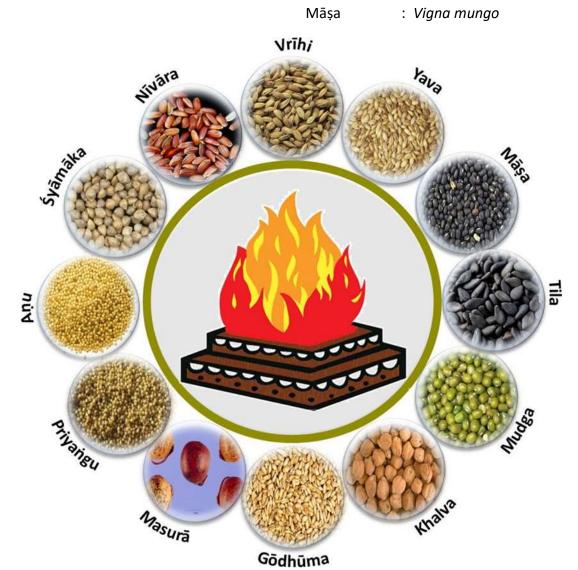
Figure 03 - **Sandalwood** (*Santalum album*) - (**a**) Entire tree, (**b**) Wood close up, (**c**) Sandalwood logs, (**d&e**) Flowering stage, (**f**) Wood pieces, (**g**) Wood pieces and sandalwood power, (**h**) Fruiting stage and (**i**) Dried fruits



Figure 04 - **Urvāru** (*Cucumis sativus*) - (**a**) Cucumber field, (**b**) Flowering stage, (**c**) Cucumber fruit intact with the plant, (**d**) Cucumber fruits and (**e**) Seeds



Figure 05: Cereal, legume and oil seed crops revealed in the Śrī Rudram.



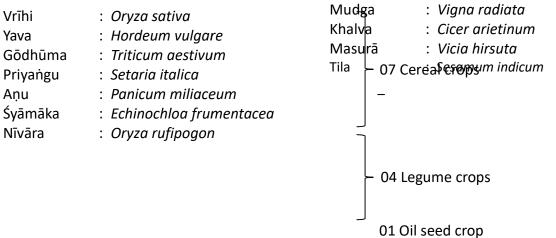


Figure 06 - **Soma** (*Sarcostemma acidum*) - (**a**) Soma plant, (**b**) Flowering stage, (**c**) Flowers close up, (**d**) Fruiting stage and (**e**) Seed dispersal stage

