

Conceptual study

Globalization of forgotten Trunadhanya's and adopting them in daily diet

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ABSTRACT:

The concept of *Ahara* and *Aharavargas* has been explained in *Ayurvedic* classics with great details. *Trunadhanyavarga* is one among, a group of grains produced by grass like plants widely grown around the world as cereal crops. These millet grains are nutritionally superior to many cereals and have medicinal value because of their high fiber content, higher amount of protein including all the essential amino acids, good cholesterol and the same amount of calcium and iron. Because of their *Doshagna* and *Rogagna* karma these grains are ideal for combating the obesity, diabetes, cancer and cardiovascular diseases. Gradually the people stopped cultivating these cereal crops and got attracted towards new crops. The nutritional importance of *Trunadhanyas* has been highlighted in this article and an attempt is made to recultivate, reintroduce and reuse them in daily diet with best cooking preparations.

KEY WORDS: *Upavishtaka*, *Garbhavyapadas*, IUGR.

INTRODUCTION:

Millets are one of the oldest foods known to humans. They are drought resistant crops grown in dry land and are known to be cultivated 10 thousand years ago in Asia¹. Gradually the people of India stopped cultivating these millets and got attracted towards the new crops which are borrowed from foreign countries. Millets are a group of highly variable small seeded grasses, widely grown around the world as cereal crops or grains. In Ayurveda they were known as *Trunadhanyas* – a group of grains produced by grass like plants². So the research says the health of people was healthy when they were consuming these millets. Now a days because of modern lifestyle, junk foods and fast foods man has got surrounded by lifestyle disorders. Here in this paper an attempt has been made to review the available literature for *Trunadhanyas* (i.e. *kangu*, *kodrava*, *shyamaka*, *neevara*, *madhulika*, *vajranna*etc) which may prove healthy and hence steps can be taken to encourage Indian as well as global farmers to re cultivate these crops and people to reintroduce them in daily diet.

AIMS AND OBJECTIVES OF THE STUDY

- To review available literature of *Trunadhanyas*.
- To encourage re cultivation of Indian millets and reuse them in daily diet.

MATERIALS AND METHODS

- Bruhatrayees with their commentaries.
- Supportive texts of contemporary science.
- Reference from internet and journals.

DISCUSSION :

Kudhanyas or *trunadhanyas* in our classics

Actually in *CharakSamhita* *kudhanya* term is not mentioned. But *Chakrapani* has included some species in *kudhanya*³. They are *Koradusha*, *Shyamak*, *Hasti Shyamak*, *Neevar*, *Toyaparni*, *Gavedhuka*, *Prashantika*, *Shyamak*, *Priyangu*, *Mukunda*, *Zintirmukh*, *Varuka*, *Varaka*, *Shibir*, *Jurnavha*⁴. *Chakrapani* has commented that *Koradusha* means *Kodrava*. It is mentioned as *Shleshma pittaghna*. But in *Raktapitta*

Nidan it is mentioned as *Pitta prakopaka*. He has explained that in *Raktapitta*, *Kordusha* do *Pittaa prakopa* due to combination with *Nishpav*, *Kanji* etc.

Gangadhar has explained *Koradusha* as *Kangu* and *Shyamak* as *Shyamaghasasyabeeja*. He has explained *Karyakaranbhav* for each *Karya*. He has also revised quote from *SushrutSamhita*. Y.Sen has also explained *Koradusha* as *Kodrava* same as *ChakrapaniHasti shyamak*. He has also explained that *shyamak* are of three types – *Shyamak*, *Hastishyamaka* and *Jalashyamak*. He has also said that these all are *Trunadhanya*. He has also revised quotes from *SushrutSamhita*.

SushrutSamhita –

In *SushrutSamhita* in *KudhanyaVarga*, *GunaKarma* of *Kodrava*, *Neevar*, *Shyamak*, *Shantanu*, *Priyangu*, *Nandimukhi*, *Mukundak* and *Venuyava* are mentioned⁴.

AshtangSangraha –

In *AshtangSangraha* there are named as *Trunadhanya* and their general qualities are also mentioned. Also *Guna karma* of *Priyangu*, *Neevar*, *Uddalak*, *Madhulika*, *Yava*, *Venuyava*, *Godhuma* and *Nandimukhi* are mentioned⁵. While commenting on it *Indu* has also explained *Koradusha* as *Kadrava*.

AshtangHrudaya

In *AshtangHrudaya Sutrasthana* 6, these are named as *Trunadhanya* same as *AshtangSangraha*. They are mentioned as having qualities like sheet, *Laghu*, *Vatavruddhikar*, *Lekhan* and *Kaphapitta shamak*. Also qualities of *Priyangu*, *Yava*, *Anuyava*, *Vanshayava*, *Godhuma* and *Nandimukhi* are mentioned.

Table 1. :Ayurvedic Properties of Trunadhanya

Name	Rasa	Guna	Veerya	Vipaka	Doshakarma	Dhatukarma
Kangu (Italian millet)	Kashaya, Madhura	Guru, Ruksha	Sheeta	Katu	Kaphahara Vaatakhara	Bruhmana Bhagna sandhanakara
Kodrava (Kodo millet)	Kashaya, Madhura	Laghu, Ruksha	Sheeta	Katu	Kaphapittahara Vaatakhara	Shoshana Graahi
Shyamaka (Barnyard millet)	Kashaya, Madhura	Laghu, Ruksha	Sheeta	Katu	Kaphapittahara Vaatakhara	Shoshana
Neevara (Wild rice)	Kashaya, Madhura	Ruksha	Sheeta	Katu	Kaphapittahara Vaatakhara	Shoshana
Madhulika (Finger millet)	Kashaya, Madhura, Tikta	Laghu	Sheeta	Katu	Tridosahara Vaatakhara	
Vajranna (Pearl millet)	Madhura	Ruksha	Ushna	Madhura	Kaphavaatahara	Balya Pumsatvahara Durjara
Gavedhuka (Job's tear)	Kashaya, Madhura	Laghu, Ruksha	Sheeta	Katu	Kaphahara	Karshyajanaka

Table 1. : Nutritional Value(contents) of Trunadhanya

Name	Protein (g)	CHO (g)	Fat	energy	Ca	P	Fe	Vit. A	Thia	Rib.	Nia	F.A.
Kangu	12.3	60.9	4.3		31	290	2.8	32	0.59	0.11	3.2	15
Kodrava	8.3	65.9	1.4	309	27	188	0.5		0.33	0.09	2	23
Shyamaka	6.2	65.5	2.2	307	20	280	5		0.33	0.1	4.2	
Neevara												
Madhulika	7.3	72	1.3	328	344	283	3.9	42	0.42	0.19	1.1	18.3
Vajranna	11.6	67.5	5	361	42	296	8	132	0.33	0.25	2.3	45.5
Gavedhuka	10.3- 12.1	72.7- 74.3			0.005- 0.006	0.3- 0.5						

Millets i.e. *Trunadhanaya's*

are unique due to their short growing season. They can develop from planted seeds to mature, ready to harvest plants in as little as 65 days⁴. So the Indian as well as global farmers are encouraged to re cultivate these crops. Adoption of these millets in daily diet can be modified. Instead of using normal rice, *vajranna* rice can be used once in two or three days. Instead of using normal rice *dosa*, *raagidosa* can be preferred. Other formulations like foxtail upma (*navaneuppittu*) *ragi* roti are to be prepared and can be used in daily diet. In such a way we can introduce the new formulations by using these millets along with the explanations of their richness in nutritive values. We can share such cooking procedure

videos in social networks like you tube so that the Indian people realize the importance of our own food and starts reusing them in daily diet, & other country people starts attraction towards these nutritive cooking formats and adopt them in their daily diet. This is one way to popularize & globalize the *Trunadhanaya's*.

One new step is took in Karnataka to reintroduce these millets & popularize them. i.e. "*siridhanya mela*"⁶. By explaining the benefits of these millets the articles are also shared, so that they started getting importance & getting popularized. Like that one organization should be made, re cultivation should be encouraged, nutritive values should be popularized all through the worldwide.

RESULTS:

Kangukodravaneearashyamakaadihimamlaghu

Trunadhanyampavanakrullekhanamkaphapittahrut || A.H.SU.6/11

Sakoradoshahshyamakahkashayamadhurolaghu |

Vaatalahkaphapittagnahsheetahsangraahishoshanah |16

Hantishyamakaneearatoyaparnigavedhukah

Prashantikaambhahshyamakalohityaanupriyavah ||17

Mukundozhintigarmutivarukavarakaastatha |

Shibirotkatajurnahvahshyamakasadrushagunaih || CH.SU.27/18

These are having *shita*, *laghu guna shita veerya* and having *kaphapittahara* properties. These can be used as *pathya* in *pittakaphaja vyadhi's*.

In comparison with the grains like rice, wheat & jawar, the millet grains are nutritionally superior to man cereals and have medicinal value because of their high fiber content, higher amount of protein including all the essential amino acids, good cholesterol and the same amount of calcium and iron. Because of their *Doshagna* and *Rogagna* karma these grains are ideal for combating the obesity, diabetes, cancer and cardiovascular disorders.

The fiber in millet is in two forms – soluble & insoluble fractions. The soluble fiber fraction delays gastric emptying & helps in slow digestion & slower release of glucose. Thus the blood glucose level rise slowly. The insoluble fraction is an inert component metabolically, absorbs water & helps in bowel movement, preventing constipation⁷. Millets with

high dietary fiber take longer to chew & thus our eating time increases. since the brain registers that it is full only after 20 minutes, the increased eating time gives the body a chance to know that the stomach is full and reduces our chances of overeating. As the fiber content moves in the intestine, it picks up wastes & add bulk to the stool ingredient.

CONCLUSION:

Trunadhanyavarga, one among *Aharavarga* explained by our *Acharyas* have got much nutritive values & beneficial in health improvement. So here is an small attempt to understand these *Trunadhanayas* & their nutritive values. So that they can be reintroduced, re-cultivated & reused in daily diet by the people through worldwide.

FURTHER SCOPE OF THE STUDY :

Through “*Siridhanyamela*” already research is going on these positive & neutral millets. Individual research can be carried out on individual *Dhanya* & can popularize and globalize the importance.

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