



## ORIGIN AND HISTORY OF GODHUMA (WHEAT): IN INDIAN PERSPECTIVE

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**ABSTRACT:** Indian social framework is the result of long evolutionary process involving assimilation and absorption of various tribes, ethnic groups of their cultures with indigenous that drifted into India in different phases of history. 'Godhuma' (wheat) originally from the Levant region of the Near East and accompanied mankind since remote ancient times. This study is aimed at to decipher its antiquity in India based on information from all sources. The present author accrued data on presence of 'Godhuma' (wheat) in India from various credible sources such as archeobotany, paleobotany, mythology, ancient religious texts, ancient Sanskrit scripts and epics, socio-religious events, ancient and modern-traditional recipes, ethnobotany, etymology, numismatics, philately, etc. It evolved partly by nature and partly by human manipulation from its primitive form (Einkorn wheat) into main cultivated ones such as bread wheat (*T.aestivum* L.) and durum wheat (*T.turgidum* L. var. durum). It spread to the Old World since ancient period and New World in recent period. Particularly in India, wheat spread over in pre-Harapan, Harapan and even later periods. Some forms vis-a-vis species appear evolved in Indian Himalayan region. It revealed various views on the antiquity and scientific history of wheat in Indian context. It was not readily accepted by ancient Indians. All pervasive examination of various evidences indicated that it gained importance in later period of time. It is fully absorbed and integrated in cuisine and culture in modern India.

**Key words:** - Godhuma, Wheat Origin, History, India.

### INTRODUCTION :

'Godhuma' (wheat) is an exotic but ancient crop in India being grown since pre-historic times. Any crop has a social and cultural heritage, particularly so if it is a staple. Cultural heritage is transmitted from generation to generation. It is constantly recreated by communities and groups in response to their environment, their interaction with nature and their history. In India, wheat today occupies the second important position among the food crops, in both area and production. It is a dominant crop in north-western Indian states, the vast Indo-Gangetic plains being the most suitable provider of climate for it. This Indian region is said to be 'wheat bowl of India'. India is the 4<sup>th</sup> major producing country and also by area, it ranks 4<sup>th</sup>

in the world (FAO, 1982). The cumulative impact of crop introduction in the long past has affected our habits to an extent that majority of our food sources we utilize today owe their origin too far off countries or regions outside India.

Agriculture has remained as the backbone of India from the dawn of history. The Indian agriculture needs to be studied from three approaches *viz.*, mythological, historical and scientific. Mythological approach brings in the element of purity of mind to the cultivator and makes him realize that he is producing food not only for him and his family members but also for the entire society. Thus he is the feeder of a nation. The other two approaches are linked to each other. The historical development of agriculture in ancient India cannot be appraised

properly unless the literary and hard evidences are understood in their right perspective and chronologically established. Natives or farmers raise various crops since the remote past. Their attempts to cultivate crops can be confirmed on scientific basis including literary bases. On many occasions, researches are carried out selecting a single discipline. Data is accumulated with time but we mostly do not pay attention to collate evidences from different disciplines of studies. An all-prevalent examination of evidences help clarify and confirm the results obtained more accurately on a firmer ground. With this viewpoint in mind, present author is presently engaged to focus and highlight especially some exotic plant species of crop on Indian territory (cf. Patil, 2019). It is, therefore, thought worthwhile to investigate the much used exotic crop *viz.*, wheat in the said perspective. The literary surveys are provided under Results in tabular forms. The literature consulted and evidences borrowed are as those enlisted under references.

There is a considerable body of information from archaeobotany, palaeobotany, ethnobotany, ancient Indian literature, etymology, philology, etc. These need to be analysed and evaluated from botanical *vis-à-vis* historical standpoint. The present author has made a humble attempt to study these sources of information to know the state of knowledge about origin, domestication, introduction and utility in past and present time.

#### ENUMERATION AND INFORMATION

##### ARCHAEOBOTANY AND PALEOBOTANY

Sr . No .	Archaeobotanical, Paleobotanical Evidence & Period	Records	References
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Sr . No .	Archaeobotanical, Paleobotanical Evidence & Period	Records	References
1.	India 3 <sup>rd</sup> millennium BC.	Earliest direct date for wheat in India based on direct radiocarbon dating.	Liu <i>et al.</i> , 2016.
2.	Harappan civilization in Kuchchh, Gujarat, different phases of Harappan (Early, Mature, Late, Historic, Medieval)	Charred seeds of bread wheat ( <i>T.aestivum</i> ) and dwarf wheat ( <i>T.sphaerococcum</i> ) found; a centre for domestication of monsoon-adopted crops.	Pokharia <i>et al.</i> , 2011.
3.	(i) Kashmir (India) ca. 2600-1500 BC. Neolithic culture	<i>T.aestivum</i> , <i>T.compactum</i> , <i>T.sphaerococcum</i>	Saraswat, 1992
	(ii) Bihar ca.2000-1200 BC. Neolithic culture	<i>T.aestivum</i> , <i>T.sphaerococcum</i>	Saraswat, 1992
	(iii) Indus valley (India) ca.2500-1200 BC. Harappan culture	<i>T.dicocum</i> , <i>T.aestivum</i> , <i>T.compactum</i> , <i>T.sphaerococcum</i>	Saraswat, 1992
	(iv) Gangetic plain ca.2000-800 BC. Chalcolithic culture	<i>T.aestivum</i> , <i>T.compactum</i> , <i>T.sphaerococcum</i>	Saraswat, 1992
	(v) Rajasthan, Madhya Pradesh, Maharashtra ca.2200-800 BC. Chalcolithic culture	<i>T.aestivum</i> , <i>T.compactum</i> , <i>T.sphaerococcum</i>	Saraswat, 1992

Sr . No .	Archaeobotanical, Paleobotanical Evidence & Period	Records	References
	(vi) Northern plains ca.1100-200 BC. Iron age Culture.	<i>T.aestivum</i> , <i>T.compactum</i> , <i>T.sphaerococ cum</i>	Saraswat, 1992
	(vii) Peninsular India ca.1000-50 BC. Iron Age culture	<i>T.aestivum</i>	Saraswat, 1992
		The earliest Neolithic cultures to advanced Iron Age of Early historical period around beginning of Christian era.	
4.	Harrapan sites in northern and southern region of India, Early 3000-2600 BC., Mature 2600-2000 BC. & Late 2000-1200 BC.	<i>T.dicocum</i> , <i>T.aestivum</i> , <i>T.compactum</i> , <i>T.sphaerococ cum</i> Records of West Asian Wheat Crop in Harappan sites upto southern Indian part notable and indicate well-knit trade contacts, socio-economical and cultural integration kept evolving in these periods.	Pokharia and Srivastava, 2013
5.	(i) Early Harappan sites 3200-2600 BC.	Hexaploid-type free-threshing wheat	Fuller <i>et al.</i> , 2011 a,b

Sr . No .	Archaeobotanical, Paleobotanical Evidence & Period	Records	References
	(ii) North-east in Aravali hills in Rajasthan, mid to late 3 <sup>rd</sup> millennium BC.	Hexaploid-type free-threshing wheat	Fuller <i>et al.</i> , 2011 a,b, Kajale 1998, 1996; Pokharia, 2007
	(iii) Southern Deccan. Start of 2 <sup>nd</sup> millennium BC.	Hexaploid-type free-threshing wheat	Fuller <i>et al.</i> , 2011 a,b, Kajale 1998, 1996; Pakharia, 2007
	6.	(i) Chirand, Saran District, Bihar c.3500 BC.	<i>T.sphaerococ cum</i>
	(ii) Ter, District Osmanabad, Maharashtra Towards Christian era c.200 BC.	<i>T.sphaerococ cum</i> Earliest ancient wheat in India.	Vishnu-Mittre, 1974
	(iii) Sonegaon 1340-1290 BC., & Inamgaon 1370-1025 BC.	<i>T.sphaerococ cum</i> Earliest ancient wheat in India.	Vishnu-Mittre, 1974
7.	Punjab, Indus Valley	<i>T.sphaerococ cum</i>	Marshall, 1931.
8.	(i) Atranjikhhera, Eatah District, Uttar Pradesh. c.2000-50 BC.I-IV	<i>T.compactum</i>	Chowdhury, 1977.
	(ii) Atranjikhhera Eatah District, Uttar Pradesh. c.1200-600 BC. Harappa period-III.	<i>T.aestivum</i> , <i>T.sphaerococ cum</i>	Chowdhury, 1977

Sr. No.	Archaeobotanical, Paleobotanical Evidence & Period	Records	References
	(iii) Atranjikhhera, Etah District. Uttar Pradesh. c.500-50 BC. Harappan period-IV	<i>T.aestivum</i> , <i>T.sphaerococcum</i>	Chowdhury, 1977
9.	Nevadatoli-Maheshwar Madhya Pradesh. 1600-1450 BC.	<i>T.aestivum</i>	Sankalia <i>et al.</i> , 1958; Sankalia, 1959.

**ANCIENT WHEAT-BASED INDIAN RECIPES**

Sr. No.	Name of Recipe	Ancient Script	Reference
1.	Apupa (Pupa)	Rigveda	Satvaleker, 1940
2.	Puplika	Charak Samhita	Sharma and Vaidya, 1941
3.	Samita, Gaudika, Ghratpura (Havishpura)	Sushruta Sutra	Bishagratna, 1963.
4.	Apupa (Pupa), Samyava	Astadhayayi of Paninya	Basu, 1891
5.	Murmura	Brahma Purana	Sharma, 1971
6.	Kasara, Mandaka, Mandallaka, Patrika, Pahlaka, Polika (Povalika), Sohla (Sohli), Udumbara, Vestika	Mansollasa	Shigondekar, 1939
7.	Divalika, Pheneka	Angavijja	Muni, 1957
8.	Pupa	Khadira Grih sutra	Rudrakshrand, 1913
9.	Kasara	Bhavisyatta Kaha	Dulal and Gune, 1933
10.	Khajjaka	Upasak Dashansa	Gore, 1953

Sr. No.	Name of Recipe	Ancient Script	Reference
11.	Sevika	Shilabhadra Katha, Katha Koshprakarana	Suri, 1949
12.	Angarpolika	Matsya Purana	Akhtar, 1972
13.	Lochika	Natya Shastra	Shulka Shastri, 1972

**WHEAT-BASED RECIPES OF MODERN INDIANS**

Sr. No.	State & Names of Recipe
1.	Punjabi Food Articles: Paratha, Poori, Panjeeri, Tandoori, Roti, Missi Roti, Nan, Chapati, Bhattoora, Kheer, Pinni, Atte-ka-Halwa, (E.reference: 1 to 5).
2.	Ladakh Food Articles: Tagi Kiseer (Giziri), Kaptsey (Makhori), Tagi Tsabkhur, Sephe Tagi, Chubtsos, Lama Pakthuk, etc. (cf,Dorjey Angchok, 2009).
3.	Himachal Pradesh: Rot, Gulgulae, Mithdoo (Sancholu), Seera, Babroo, Beduan, Patande, Dhandor, Siddu. (cf. Sharma and Singh, 2012; E-Reference-6).
4.	Madhya Pradesh: Jalebi, Budkul, Doodh-jalebi, Dal Bafla, Chakki ki Shaak, (E-Reference 7, 8).
5.	Bihar: Litti Chokha, Khaja, Thekua, Balushai. (E-Reference, 9).
6.	Rajasthan: Dal-Bati, Shahi-Churma, Gulpapdi (Kasar Burfi), Lapshi. (Nerurkar, 2018).
7.	Uttar Pradesh, Bihar and Zarkhand: Baati Chokhe (E-reference, 18).

**ETHNOBOTANY OF GODHUMA**

Sr. No.	Locality & People	Local name for Wheat	Traditional Utility	Reference
1.	Phagi tehsil, District Jaipur Rajasthan. Bramhabhatas, Gurjar	Gehun	Leaf juice to treat anaemia.	Sen & Batra, 1997

Sr . No.	Locality & People	Local name for Wheat	Traditional Utility	Reference
2.	Kanpur region, Uttar Pradesh. Native people	Gehun	Poultice of flour of grains to remove pus from abscess.	Pandey, 2003
3.	Jodhpur, Jaisalmer, Bikaner & Barmer district, Rajasthan. Native people	Genhu	Paste of roasted seeds to cure gastric problems of goats.	Suresh Kumar <i>et al.</i> , 2004
4.	Jalgaon District, Maharashtra. Rural folks	Gahu	Wheat flour used as poultice for relief in case of tumours.	Pawar & Patil, 2008.
5.	Buldhana District, Maharashtra. Native folks.	Gahu	Extract of seedlings used to treat fever and acidity.	Patil <i>et al.</i> , 2011.
6.	Imperial territory of Sultans of Delhi during 1206-1555).	Wheat	Grains preserved for long spells of time from 20-100 years using leaves of lettuce, pomegranate and chestnut tree.	Naqvi, 1984.

#### ANCIENT LITERARY EVIDENCES

Sr . No.	Ancient Manuscript & Period	Remark	Reference
1.	Valmiki Ramayana (Events of Treta Yuga) 1500-500 BC.	<i>T.aestivum</i> ('Godhum') 31/6/16 Sloka	Amirthalingam, 2013; Patil, 2018a

Sr . No.	Ancient Manuscript & Period	Remark	Reference
2.	Yajurveda 1200 BCE-1000 BCE	<i>T.aestivum</i> ('Godhum')	Patil, 2017; Singh, 2008
3.	Atharveda 900 BCE	<i>T.aestivum</i> ('Godhum')	Patil, 2017; Singh, 2008
4.	Brahmanas (All Combined) 900 BCE-700 BCE	<i>T.aestivum</i> ('Godhum')	Patil, 2017; Singh, 2008
5.	Upanisadas (All Combined) 800 BCE-300 BCE	<i>T.aestivum</i> ('Godhum')	Patil, 2017; Singh, 2008
6.	Kalpasutras (All Combined) 500 BCE-500 BCE	<i>T.aestivum</i> ('Godhum')	Patil, 2017; Singh, 2008
7.	Jatakas 100-200 AD.	<i>T.aestivum</i> Mathri, a preparation of wheat flour	Jatakas I-VII, 1877
8.	Charak Samhita 3 <sup>rd</sup> Century AD.	<i>T.aestivum</i> . Varieties <i>viz.</i> , 'Madhulika' and 'Nandimuukhi'	Charak, 1941
9.	Susrut Samhita/Sutra 3 <sup>rd</sup> Century AD.	<i>T.aestivum</i> Varieties <i>viz.</i> , 'Madhulia' and 'Nandimuukhi'	Susrut, 1963
10.	Bhavprakash Nighantu 1558	<i>T.aestivum</i> Three varieties <i>viz.</i> , 'Mahagodhum' (large grained), 'Madhuli' (small grained) and 'Nandimukh' (beardless grained)	Bhav Misra, 1969.

Sr. No.	Ancient Manuscript & Period	Remark	Reference
11.	Matsya Purana (268:6-30)	<i>T.aestivum</i> Mentioned as an inferior food	Vasu (Ed.), 1972.
12.	Itsing, a Chinese traveller in 671-695 AD.	<i>T.aestivum</i> Western India with abundant wheat varieties viz., 'Madhulika' and 'Nandimukhi'	Takakusu, 1896
13.	Garuda Purana 1 <sup>st</sup> millennium (4 <sup>th</sup> -11 <sup>th</sup> Century, First version)	<i>T.aestivum</i> 'Godhuma'	Patil, 2018(b)
14.	Kurma Purana 8 <sup>th</sup> Century CE	<i>T.aestivum</i> , 'Godhuma' used in Sradh ceremony	Sensarma, 1984
15.	Linga Purana 1000 AD	<i>T.aestivum</i> 'Godhuma'	Tarakratna, 1997 B.S.; Sensarma, 1992
16.	Yajnavalkya-Samhita C.100 AD-200 AD.	<i>Triticulen vulgare</i> 'Godhuma'	Sensarma, 2003.
17.	Visnu-Samhita C.300BC-600 AD.	<i>Triticum aestivum</i> 'Godhuma'	Sensarma, 2006.

#### INDIAN NAMES FOR 'GODHUMA' (WHEAT)

Sr. No.	Language	Name
1.	Bengali	Gom, Gam, Gium
2.	Hindi	Gehu, Gehun, Gehub, Gium, Gehun, Genhy, Kunak, Kunak
3.	Gujarati	Ghau
4.	Kannada	Godhi
5.	Kashmiri	Kunukh
6.	Konkani	Govu

Sr. No.	Language	Name
7.	Malayalam	Gendum, Gotumpu, Kotampu, Kotampam
8.	Manipuri	Gehun
9.	Marathi	Gahu
10.	Oriya	Gahama
11.	Punjabi	Kamak
12.	Sanskrit	Godumai, Godhuma., Godumah, Rasala, Saman, Sumana, Bahudugdha, Apua, etc.
13.	Tamil	Godumi, Kodumai, Godumbayarisi, Cepam, Kotumai, Alari, Ankunam, Kotiman, Kotumpai, Tamilam, Irakalam, Makakali, Mileccai, etc.
14.	Telgu	Godumalu, Godhumulu
15.	Urdu	Gehun

Source: (E-Ref.13&14), Watt, 1889-1893.

#### DISCUSSION AND CONCLUSION:

##### ROUTES AND INTRODUCTION OF WHEAT:

The occurrence of wheat was first recorded by Powell in 1868 in the then undivided Punjab state of Hindustan (India). It was but clearly distinguished by Percival (1921) as *T.sphaerococcum* distinct from *T. compactum*. In its eastward journey, mutations in *T.sphaerococcum* occurred in Indus plains extending from localities of now in Pakistan (cf. Singh, 1959; Zeven, 1980). It later reached to the Gangetic plains in northern India. It also followed another route to southern part of India. Several varieties of *T. sphaerococcum* were cultivated by the ancient Indian farming communities (Singh, 1959). It was continued in parts of Punjab (India) until early forties of the 20<sup>th</sup> century (Singh, 1946, 1959; Ellerton 1939). Recovery of wheat from Harappa and Mohenjo-Daro in Indian subcontinent (Indus Valley) and Mesopotamia and Egypt is indicative of a sign of contemporary civilization in West Asia and India. It is doubtless that wheat was introduced in India from West Asia. The earliest date for its presence in Indus Valley is third millennium BC.

(Liu *et al.*, 2016). The archaeobotanical and paleobotanical evidences (Table-1) clearly suggest that after its introduction in Indus valley in Harappan period, it migrated towards Gangetic plain and also in Kashmir valley and later in Southern peninsular India (Saraswat, 1992). Presently, it is an iconic cereal crop in India and has intertwined with Indian culture so that no compartment of Indian life is left untouched today. It now exhibits abstract as well as concrete relationships with the Indians. This subject matter is dilated later. Agriculture in those days was largely a matter of subsistence. On account of modern methods of irrigation system and intensive agriculture, *T. sphaerococcum* gradually depleted and better yielding cultivars of other species gained importance in Indian agriculture. Later researches regarding cultivars of wheat are on record e.g. Pandey *et al.* (2005) summarised wild relatives *Aegilos comosa*, *A.umbellulata* of *T. aestivum* and also for wild relatives of *Triticum*. Green evolution in India with particular emphasis of wheat needs, however, no special mention on this line of wheat development.

**WHEAT AND NUMISMATICS:** After 15<sup>th</sup> August 1950, India introduced new coins for reasons such as: (i) motifs and symbol of sovereignty adapted to represent Indian independence, (ii) to introduce metric system and related impact of Indian coinage, (iii) changes due to metallic value of coins and (iv) coinisation of currency notes for cost-benefit. Plants are depicted on them e.g. the one rupee coin was/is in circulation especially related in the years 1976, 1982, 1985 and 2000 wherein two stalks of wheat are depicted (E-Ref.17).

**WHEAT AND PHILATELY:** Central Government of India issued a commemorative postage stamp on the “Indian Green Revolution 1968”, especially on ‘Wheat Revolution’ and its significance to Indian agricultural revolution and economic well-being. It depicted three stalks of

wheat, the histogram showing the growth in the production of wheat in respect of the years 1951 and 1968, besides the ‘Indian Agricultural Research Institute, New Delhi’. Its denomination is 20 Paise (E-Ref.12).

**DIETARY CHANGES IN RESOURCES:** Table-2 includes ancient wheat recipes in India as also Table-3 informs briefly traditional Indian food preparations still in vogue in different states. These certainly indicate complexity and variety of Indian cuisine. The Indian subcontinent, before invasion of foreign people, consisted of dietary staples of rice, millets, barleys and few legumes. After Indian independence in 1947, a stage reached in India that the Indians have to depend on foreign food aid. Therefore, one of the priorities for the Indian government was to develop high-yield strains of grains that could feed the inhabitants of India. Green Revolution sufficed the need of Indians, nay it increased in such a way that India is now one of the world’s foremost exporters of rice and wheat. This revolution, however, marginalized some of the local crop species and their varieties. These were once ‘functional food’ sources and now reached to a state when we refer them as ‘forgotten foods’. In ancient times, although wheat was established, and was made known as ‘food grains’, it was not readily accepted. It is mentioned as inferior grain by Charak and Susrut (3<sup>rd</sup> century AD.) in their medical treatises. Even, Dhanvantari (10<sup>th</sup> century) called it ‘a food of condemned or degraded people’ (cf. Prakash, 1961)’. It is also mentioned so in Matsya Purana.

The traditional food recipes were in vogue in an ancient times. Some of these are still current even in modern India. In Jatakas – I-VII (1877) an ancient preparation called ‘Mathri’ is mentioned. It is a saltish small cake prepared with wheat flour fried in clarified butter. In Sanskrit, it is known as ‘Divalika’ and in Hindi (modern period), it is named as ‘Mathri’ or

'Divale' (Muni, 1957). It is consumed today in Punjab and Rajasthan. Some have been modified. The traditional recipes are particularly consumed on some special social occasions such as social ceremonies, festivals, rites, rituals worships and various forms of religious acts. This is amply documented in Table-3. The dietary changes have also accepted in later ancient phase of Indian culture because of impact from Indian philosophy. For example, "Pujitam hyshanam niyam balamurj ch yachhunti|

Apujtam tu tadbhuktam ubhayam nashyedidam| |"

(Manusmriti: 2.51-52, 57).

It means: "Food should always be worshipped and taken with the utmost reverence. The sight of food should delight one's heart and fill it with joy. It should always be cherished whatever the situation" (Jha, 1920).

**SOCIO-RELIGIOUS EXPRESSIONS:** (i) Lohri is celebrated as a harvest festival of Punjab in India. It is a celebration of the winter crop, especially main winter crop in Punjab is wheat. During January this golden crop is at its prime lush across the fields in this state. The Punjabi people take rounds around the bonfire and throw peanuts, popcorn, sweets and revari into the holy fire and also sing songs while dancing. This is done to please the deity of fire and prayer for a bountiful harvest of crops as Lohri marks the end of winter season. Some people also pray to the Sun deity Surya as Lohri is observed a night before Makar Sankranti (usually on 13<sup>th</sup> of January each year) that marks beginning of longer day as the sun changes its course (E-Ref.12).

(ii) Teej or Kajal Teej, a festival celebrated by Banjara people commences on the 3<sup>rd</sup> day of moonlit (Shuddha) half of Shravan month. Naik (headman of the Banjara community) and the 'panchas' (five representative persons from community) permit the girls to sow Teej. First,

wheat grains are soaked at Naik's home. Unmarried girls and boys reach Ber tree (*Ziziphus mauritiana* Lam.). Girls circumambulate seven times around this tree while the boys try to obstruct them. While completing the seven rounds, the girls also dig out some soil. They bring the soil and put it in a small bamboo basket and sow wheat grains. A festival known as 'Thamoli' is celebrated on the 7<sup>th</sup> day from wheat sowing by distributing some 'Prasad'. On the 9<sup>th</sup> day, earthen idols of 'Kajali-Gangaur' and 'Lord Krishna' are prepared, placed in front of each other and worshipped. The girls sing and dance throughout night. They worship these idols before sunrise. The sapling (seedlings) of wheat sown are placed on the 'Pagdi' of Lord Krishna's idol. After sunrise, the 'Teej' is immersed in water. While on their return, they ask for money from elder persons (Deogaonkar and Deogaonkar, 1992).

(iii) The weddings in Sindhi people in India involves a number of rituals. Ghari puja is observed at the brides and grooms' house separately. The priest performs puja. He hands over a handful of wheat grains to the bride or groom. Married woman grind this wheat to flour. The purpose of this ritual is to signify prosperity of the household (E-Ref.15). In the Hindu tradition, 'Karwa Chouth' is celebrated and participated by the married woman on the 4<sup>th</sup> day after the full moon in the month of Kartik. It is a popular celebration in the north-western Indian region. The observance falls at the beginning of the wheat planting season. Big 'karwas' or earthen pots are used to store wheat grains. The fasting activity is often linked to Hindus prayer for a bountiful harvest ahead. The married woman thereby seek the health, safety and longevity of their husbands. They start fasting on this day from sunrise and end when the moon starts to shine at night. They do not enjoy food or drink (even water) throughout the day. They view the reflection of moon



through a sieve or in a water-filled vessel. They turn toward their husband and gaze upon his face (E-Ref.16).

Symbolism based on colours has been observable in Hindu religion and culture e.g. yellow (turmeric, green (leaves) and white (wheat flour), etc. (E-Ref.10). Probably, it is notable in case of wheat as white is thought representing purity, cleanliness, peace and knowledge and hence it is also appropriated in ceremonies, rituals and festivals in India.

**PLACE OF ORIGIN:** De Candolle (1886) opined Mesopotamia as the original home of wheat in very early prehistoric times. He further stated that there is a strong evidence in favour of India being the home of some of the forms of Wheat. India, in his opinion, possesses perhaps as comprehensive a series of time honoured forms of wheat as can be shown for any other country (cf also Watt, 1885-1893). Archaeobotanical and paleobotanical evidences from Indian territory (cf. Table-1) amply lend support to such an inference. *Triticum sphaerococcum* Percival is endemic and still found in India. Vavilov (1926) explained multiple origin. The soft wheat, according to him, flourished in the mountains of Afghanistan and the South-Western Himalaya. Thus the cradle of origin of wheat swings from Mesopotamia to Indian Himalayan region. Its mention in Yajurveda, Atharveda and subsequent ancient Sanskrit scripts are indicative of a fact that wheat was domesticated even before Vedic Period in India.

Some forms in India gained names based on colour e.g. Safed gehoon (White wheat), Lal (Red wheat), Surkh (Frick red) etc. They are named after some localities e.g. Lalia (from Muzuffarpur), Lal Pissia (from Etawah), Kathialalia (from Fyzabad), White pissi (from Bilaspur), etc. These local varietal names certainly suggest development of some forms of wheat in India.

**CLASSIC UTILITIES AND ETHNOBOTANY:** Wheat is used extensively throughout India.

Wheat grains are used in different forms of flour: (i) Maida: It is fine white flour. (ii) Atta: It is a coarser ordinary form. (iii) Suji: It is a granular meal obtained by moisturizing the grains overnight and then grinding it. Their employment depends upon the kind of preparation e.g. bread, cake, chapaties, etc. The flour is also medicinally important and used in burns, scalds, itching eruptions, erysipelas, etc. Bran poultice is employed to treat certain dyspeptic condition. It is employed in stiffening bandages and also as demulcent. Wheat straw constitute a source of fodder for domestic animals (Watt, 1889-1893). Apart from socio-religious events, wheat has percolated in such a way that it mingled with indigenous knowledge of the Indians (Table-4). Indians appropriated it as local utilities which are additional reports different from classic utilities.

**ANTIQUITY OF WHEAT IN INDIA:** The author seeks attention to the mantras (hymn) 12-1-4 of 12<sup>th</sup> Kand of Atharveda. It states:

“Yasyashastra Pradishah Pruthivya  
Yasyamannam Krushtayah |  
Ya Bibharti Bahudha Prandejat No  
Bumirgoshyavapyanne Dadhatu | |  
| | 12-1-4 | | .

It means: The land (earth) having architects, farmers, four directions, the land producing Bhum Gahu (wheat), grains; the land which provides animals, plants, serve feeding, protects; that land should offer us food, cows, horses, etc. There is another mantras viz., 18-4-21 of the same Kand. It states:

“Apupavananna Vanshch Sidatu |  
Lokkrut Prithikruto Yajamahe Ya Davanam  
Hutbhaga it stha | | ”

It means: ‘Apupa’ is food article made from wheat flour (called ‘Anarase’). The ‘Yadnya’ (hom) should be provided with ‘Apupa’. We worship gods who widen the path of the best people and they have arrived here for the ‘Yadna’ (cf. Ambika, 2016).

We know Atharveda is one of the four ancient Sanskrit Scripts dating (probably, 900 BCE. Apupa is also mentioned in Rigveda (Probably, 1500-1200 BC.) which is the most ancient script in the world. These literary sources mentioning the food article named 'Apupa' provide express evidence for the occurrence of wheat in Indian territory (cf. Table-2).

**ETYMOLOGY:** The English name 'wheat' stemmed from the old German crop name 'weizzi' which is recorded in at least back to the 8<sup>th</sup> century AD, as 'weiz(z)e', 'weiz', 'hweti' and 'wete'. The old German root of the crop name 'hwaitja' is 'hwita', which simply means 'white'. This connection is also found in current German language (as 'weizen/weiss'), English ('wheat/white') and Danish ('hvede/hvid'). 'Godhuma', the Sanskrit name for wheat is thought derived from the Chinese 'ku t'ou me', meaning the first (best) of the cereals. The word 'sveta' (white) is not applied to wheat. This is an interpretation of Mahdihassam (1984).

Wheat is said to be reached China in 2400 BC. (Liu, 1927) and followed the Silk Road running from Turkestan through Sinkiang, skirting Mongolia to reach north China. The route of wheat reaching India is different from the one for China. For India, the route started from Afghanistan, through the Khyber pass to cross the plains of Punjab and the basin of Ganga and Yamuna, skirting the Himalayas to enter upper Burma, crossing the Yunnan and the Szechuan to reach the Yangtze valley. Hard evidence of presence of wheat in India is provided by Saraswat (1992) when the wheat reached India before China. It, therefore, appears that origin of Sanskrit name 'Godhuma' from Chinese name 'ku t'ou me' appears not plausible. They have probably originated independently in both cultures. Witzel (2009) opined that "behind the Late Bronze Age data of Rigveda, we can thus detect an ancient population that already possessed its own indigenous agricultural terms.

We can connect this substrate with the preceding agricultural communities of the Indus Civilization (2600-1900), and even with its predecessors (C.6000-2600 BCE), both of which had adopted the typical W.Asian wheat/cattle/caprid package). This clearly indicates that origin of the word 'Godhuma' is not derivable from the Chinese name for wheat. The cognate forms of 'Godhuma' appear in the Greek, Hittite, Iranian and Pamirian languages, then in Sanskrit and Indo-Aryan languages, and even in the Gypsy and found their way into certain Semitic languages such as Ugaritic and Akkadian (cf. Gy.Wojtilla, 1999). A glimpse of local names for wheat in different Indian languages (Table-6) suggests that mostly the Sanskrit name has been adapted by the Indians in past or even today. Some of them are slightly or greatly torsioned. It is interesting to note that Sanskrit name for wheat 'Godhuma' is a derivative of Iranian 'Gantuma' or 'Ganduma'. The Sanskrit word 'Godhum' (i.e. go-cow; duma-smoke) is thought to have influenced Dravidian names such as 'Godi' (Kannada) and 'Koti' (Tamil) (Witzel, 2009).

Indians have experienced from a state of 'no wheat', to introduction and domestication of wheat, wheat as condemned food, taxonomic diversification of wheat, increase in production and area of wheat cultivation, green revolution, marginalization of some indigenous millet species and so on. A day, however, reached when we say that 'India is the 4<sup>th</sup> major wheat producing country and also ranks similarly in area of its cultivation'. Ancient literary evidences (Table-5) certainly indicate that how the wheat was integrated with the then Indians during Vedic, post-Vedic, epic and later periods of time. It also suggests that it was accepted widely by the Indian communities and hence spread in all parts of our country. Some of the north-western states in India are now regarded as 'wheat bowl of India'. Nay, it is embedded in Indian socio-

religious events. It is venerated as symbol of prosperity. It also appeared on Indian currency and commemorated on Indian postal stamps on special national events and occasions. Indians celebrate festivals associated with wheat grains. It occupied the second important position in food grains after the indigenous rice. It has now become a major source of food security for the Indians and also aid in 'hidden hunger' of 'have-nots'. After Indian freedom, it sufficed Indians for bread and dignity. The prehistory of agricultural botany in India is at present sketchy. The present author, therefore, appeal to botanists to join hands to study archaeobotany, paleobotany, ethnobotany, folk medicines, etymology, paleobotany, etymology, food recipes and all compartments of human life and discuss in collaborative way to reveal real history and progress in Indian continent.

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