

Research Paper

A Historical Study of Agriculture System in Vedic India

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ABSTRACT

The goal of this study is to assess agriculture and its relevant parts such as processes, land, irrigation, manure, crops, and on so. The history of civilization proves that agriculture and civilization are intimately related to each other. From the ancient period to nowadays, agriculture has been considered one of the primary sources of income in the Indian economy. When the Aryans abandoned the nomadic life and settled down on the bank of *sapta-sindhu* (seven rivers) since then they adopted agriculture as a main means of food production. Here is remarkable in this context that at the first phase of the *Rgvedic* period neither Aryans were taken it as an industry, or nor a way of profit. Their organic agricultural systems were eco-friendly and food grains were favorable to health. Chronologically at that time agriculture grew proportionately with the increase of the Aryan population and it had considered a primary source of earning. Besides, it became one of the chief industries in that society. In Vedic society agricultural system is regarded as a sacred activity. At every stage of the agricultural system, Aryan farmers repeatedly prayed to their adorable good and goddess for getting maximum food grains, prosperity, development, and protection of crops. As no canonical history was written at that time, that's why these subjects are written in this article from a historical perspective.

Keywords: agriculture, Aryans, civilization, food grains, irrigation

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1. Introduction

Generally all we know very well that hunting, cultivation, and gathering were only made of the economy during the early phase of human history. Since ancient times agriculture has been continuously playing an important role in the Indian economy. The agriculture system may be begun as early as 9000 BC. Aryans were originally a nomadic race. Abandoning the nomadic life, they settled permanently on the bank of *sapta-sindhu*. The climate of the *sapta-sindhu* was cold and that land, being fertile was suitable for agriculture. Gradually, the Aryan civilization became completely dependent on agriculture and they recognized it as an individual source of income. It is the truth that the Vedic economy was dependent on the village economy or

the rural economy and that rural economy was totally dependent on agriculture. As no canonical history books were written during that era, we have totally depended on the Vedic literature to learn about the Aryan agriculture system. The Veda is the manifestation of the spiritual knowledge of Aryans. Although these scriptures are the medium of expression of the spiritual consciousness of the Aryan sages, the lifestyle, financial system, society, culture, and politics i.e. of Aryans have been again and again reflected in it. In that society religion of Aryans and cultivation were closely allied and agriculture was considered a holistic livelihood. The term '*krishi*' in Vedic literature mentioned agriculture, which means an act of ploughing. The Vedic sagas were aware of the necessity of

agriculture. In *Rgveda* agriculture is said to be the means of honor and prosperity¹. They proclaimed with a clear voice in *Atharvaveda* that the land is my mother and I'm her son². Even, about seventy-five hymns of the four Vedas deal with aspects of agriculture. Hence, the paper intends to discuss the agricultural processes and several aspects of the Vedic era.

2. Research Objectives

The present study attempts to set forth the developments of agriculture in Vedic civilization. When we work on it then some relevant questions arise in our minds. The questions are, (1) to find out the significance and development of an agricultural system in Aryan society, (2) to explore processes and methods of this work, (3) to disclose the agricultural parts of Aryans, (4) to publish the agricultural tools and its uses at the Vedic phase. This article is written to solve those questions on historical perspectives, which are mentioned above.

3. Research Methodology

As a methodology, this paper would be exactly written based on historical, analytical, and descriptive methods. To make a corpus of this paper data was collected from primary sources like *Rig-Veda*, *Sama-veda*, *Yajur-veda*, *Atharva-veda*, *Upanishada*, *Manusmriti*, etc. and from secondary sources such as various journals, criticism of Vedic scriptures, ancient Indian history-related books.

4. Literary Reviews

Many eminent scholars have been engaged to know the nature of the agricultural system, its methods, and its relevant tools. Of those, such articles like 'History of Agriculture System in India: A Legal Perspective' by Bheemabai Mulage, Development of Agriculture in Ancient India by Dr. Dhananjay Vasudeo dwivedi are very remarkable for the study of this area. Moreover, a group of scholars has emphasized the Vedic agriculture while studying the subject of ancient Indian economy and Vedic economical life. Of those, such *Economical Life in Ancient India* by Maganlal A. Buch (1924), *Light on Early Indian Society and Economy* by Ram Saran Sharma (1967), *Agrarian System In Ancient India From Earliest Time To 600 A.D.* by Pwarneswari Dwivedi, First volume of *A History of Agriculture In India* by M. S. Randhawa (1980) i.e. are very memorable and significant. In all those research works they had tried to drown a systematic knowledge about several aspects of the Aryan agricultural system and its importance from the perspective of the ancient Indian economy. But, this matter has not been specifically highlighted above all those works. This lacuna helps us to plan this framework.

¹ *Rgveda* 10/117/7

² *Atharvaveda* 12/1/12

5. Results

Vedic economy was developed based on agriculture and was established as the main industry. Because of being agriculture was considered a primary source of Aryan civilization, Aryan life, and livelihood were largely controlled by agriculture. Observing their agriculture process shows that agriculture processes were not harmful to nature and climate. Besides, because of accepting the organic agricultural system, that food grains were benefit-able for health. Nowadays more chemicals are used for maximum production, which is very harmful to our health. That's why, keeping in view human health, many institutions are experimentally producing food grains by adopting Vedic agricultural methods. So we have no doubt that Vedic agronomy, though ancient, is still very relevant today.

6. Discussion

Among the five requirements of human society, food is one of them. We have no assumption that anyone can not be alive without food. The land is the factory of food and agriculture is the process of production. As well as, it has been considered that agriculture is the ancient, simple but prime method of earning wealth from fertile land. That's why, that agriculture is the backbone of society. No doubt that the achievement of the agriculture sector always indicates the prosperity and development of any kind of society or notion. Due to the favorable geographical atmosphere for agriculture, agriculture has been recognized as the primary and indispensable source of income in India since ancient times. In the Vedic era, agriculture played a primary and crucial role in the Aryans' economical life. Because of being the main profession of Aryans, it took a great place in the central national industry, determining the general economic and social structure of the community in Vedic society. As regards this context C. Kulkarni rightly stated that "in any case, the references in the *Rgveda* and other works clearly show that agriculture was the main occupation of that age and that it was quite advanced."³

Although, at the early stage Aryans were nomads and animal husbandry was the main livelihood. With the production of crops came stability in the life of Aryans. If we carefully read the *Rgveda*, then we easily notice the dynamics of Aryan life and their kinship with animals in practical life. Afterward the Vedic sages, at several places in Vedic scriptures, stated the significance of cultivation through various hymns. Even, they enunciated that 'the fertile land is the great place of planting'⁴. A hymn in the *Rgveda* depicted that most of the common people in Vedic society depended on the agricultural profession⁵. Likewise, *Atharvaveda* was clearly recognized as the main source of

³ Kulkarni, C., *Vedic Foundations of Indian culture*, Kulkarni, p.160.

⁴ *Yajurveda* 23/46

⁵ *Rgveda* 4/57/9

livelihood for the Aryans⁶. Therefore, R. N. Dandekar rightly said that "agriculture and cattle-rearing were vigorously practiced and these eventually paid good dividends"⁷. In a hymn of *Rgveda*, a saga advised a loser in gambling to give up the habit of gambling and practice agriculture⁸. In the society of that era, agriculture was considered as a profession of high status. The 'Prthivi sukta' of *Atharvaveda* described the agricultural land, of which any farmer could feel proud. Throws light on this *sukta*, it can be assumed without difficulties that in that society agriculture was considered as a topmost sacred, honest, and wealthy source of income livelihood. Even, the deities have also been engaged in cultivating the fields. According to *Rgveda* gods *Asvins* is the first person, who teaches the Aryan about the method of plowing⁹. So, doubtlessly the credit of the pathfinder of agriculture for the first time goes to *Asvins*. In light of this record, we can easily assume that the Aryans as well as their deities loved agriculture. Before cultivating the land for the production of food grains, the Aryan people offered the immolation to the 'lord of field', who is called 'ksetrapala' or 'ksetrapati'¹⁰.

As it was known to all that the agriculture system was totally dependent on the *vaisya* class of society. But, owing to having personal and national significance on a broad scale, the people, who belonged to other classes were always allowed to take up this occupation as their livelihood. *Manu* also emphasizes in his *smriti* the importance of agriculture as a primary source of income for mankind, as well as concerned about, before sowing the seeds, one should be careful in selecting good seeds¹¹. Even, for protecting the crops from being stolen, he strongly warned those people who were involved in the work crop theft would be always punished by the king¹². *Brahaspati*, who is another author of *smritisashtra*, declares about crop theft that if the act of crop theft is proven, those accused should pay completely ten times as much to the owner of the crops¹³. So, above all this reference proves that stealing food grains was considered a punishable bad crime among all the punishable crimes in Aryan society. Besides, by this punishable act, the cultivators also secured from stealing the food grains.

⁶ *Atharvaveda* 8/10/24

⁷ Dandekar, R. N., *Exercises in Indology*, (Select Writing III), p.35.

⁸ *Rgveda* 10/34/7

⁹ *Ibid* 1/117/21

¹⁰ *Ibid* 4/57/1-2

¹¹ *Manu Smriti* 10/71

¹² *Ibid* 10/293.

¹³ *Brahaspati Samriti* 2/6

6.1. The Divinity of Crops

As Agriculture was being the primary profession in that era, the Aryans encouraged this work and prayed to goddesses to get more and more crops. From the indication of the several types of food grains in Vedic literature, it can be assumed that the Aryans has sufficient knowledge about the sowing, harvesting, and utilization of different types of crops. In the different places of *Rgveda*, the terms 'yava', and 'dhana' has been used, which mentions barley and corn. In the early phase of *Rgveda*, barley and corn were the main crops, and both crops were extensively cultivated by the Aryan people. As regards this matter, one renowned scholar A.C. Das truly stated in the book '*Rgvedic Culture*' that "barley and paddy (*yava* and *dhanaya*) must have been the staple crops of the Vedic Aryans from the very beginning."¹⁴. Perhaps the staple food in the Aryan civilization was barley and the second food was corn. But, the absence of any indication of the crops of 'vrihi'(a class of rice), it can be easily assumed that *vrihi* was unknown to the Aryans. From the first time mention of *vrihi* in *Atharvaveda*, it can be inferred that this crop was known to be used by the Aryans during that period¹⁵. Even, in *AtharvaVeda* 'vrlhi' and 'yava' are both characterized as healing balms¹⁶. In the period of *Taittiriya Samhita*, paddy was primarily divided into three categories like *krrishna* (black rice), 'ashu' (paddy that grows quickly), and *mahavrihi* (large grain paddy)¹⁷. Apart from this, there is mentioning another class of rice, called 'sathi'. It takes sixty days to produce this paddy, that's why it is called 'sathi'. Mainly this paddy grain is a class of *ashu*. The word 'tandula' especially 'rice grain', is also mentioned very often in the *Atharvaveda*. *Yajurveda* arranges a detailed list of cultivated crops such as - *vrlhi* (rice), *yava* (barley), *mudga*, *masa*, *tila*, *anu*, *khalva*, *godhuma*, *nivara*, *priyamgu*, *masura*, *syamaka*¹⁸. Among the food grains which are mentioned in the above hymn in *Yajurveda*, most food grains are consumed as food items in our society even today. In the period of the sutra literature, we also get sufficient information about the cultivated crops like *yava* (barley), *vrlhi* (rice), *tila* (sesamum), *priyamgu* (panic seed), *syamaka* (millet), *godhuma* (wheat), *sarshapa* (mustard), and certain varieties of beans, such as *masa*, *mudga* and *kulattha*¹⁹. In this context, K.P. Singh rightly assessed that "among the agricultural produces *vrlhi*, *mahvrlhi*, *yava*, *hayana*, *nivara*, *syamaka*, *masa*, *mudga*, *tila*, *godhuma*, *asu*, *namba*, etc. were common to the people of sutra period"²⁰.

¹⁴ Das, A.C., *Rgvedic Culture*, p.266-67.

¹⁵ *Atharvaveda* 6/140/2, 8//7/2

¹⁶ *Ibid* 8//7/20.

¹⁷ *Taittiriya Samhita* 1/8/10/1

¹⁸ *Yajurveda* 18/12

¹⁹ *Apastamba Srauta Sutra* 16/19/13-14 ; *Baudhayana Srauta Sutra* 24/5

²⁰ Singh, K..P., *A Critical study of Katyayana SrautaSutra*, p.157.

According to Atharva veda, *tila's* oil (sesamum oil) was used as edible oil during that period²¹. Two types of *tila* like black and white were cultivated by the Aryans²². Among the process of food grain, *godhum* (wheat) was too much gotten priority by the Aryans. Masura was counted as the pulse²³. Although sugarcane (*ikshu*) is mentioned in the Vedic literature, there is no single evidence that can prove that it was cultivated or not. Likewise, perhaps cotton was not known to the Vedic Aryans. At first, the term '*karpasa*' (cotton) was used in the book of *Asvalayana Srauta Sutra*²⁴. But, it is notable that there have clear references referred to spinning and weaving in the earliest Vedic Texts.

Land, manure, plough, water i.e. and a piece of proper knowledge about it are required for agriculture. Besides, seasonal scenes are also needed for this work. 'Aryans have been closely observed with an eye to their agricultural and pastoral value, such as their surface configuration, nature of the soils, facilities for the supply of water, and the general natural fertility or possibilities under cultivation'²⁵. Not only has ascribed the significations of agriculture but also in Vedic literature represented the several parts and parcels of agriculture.

6.2. Variations of Season

Seasons, no doubt, are one of the indispensable parts of agriculture. A farmer can produce more food grains in the field if he has proper knowledge about seasonal crops. However, it can be assumed based on references to different seasons in Vedic literature that the Aryans had sufficient knowledge of seasonal crops. In *Rgveda*, the word '*ritu*' is used in the sense of season²⁶ and three seasons like spring, summer, and autumn are mentioned²⁷. Six seasons like *grishma*, *hemanta*, *shishira*, *vasanta*, *sharad* and *varsha* have been mentioned in *Atharvaveda*²⁸. In that society, different crops were cultivated at different seasons. According to *Taittiriya Samhita*, 'barley ripened in summer, being sown in winter, rice is ripened in autumn, being sown in the rains, while beans and sesamum ripened in winter and the cool season'²⁹. In this context, eminent scholar Dr. Ram Gopal remarks that "crops were often harvested twice a year. Rice, millet, sesamum, mudga, masa, cotton, and common flax were the important *kharif* crops that were generally harvested in autumn. The *rabi* crops included wheat, barley, and mustard which were sown in autumn and

harvested in spring"³⁰. In that era, rain and summer both have been considered important seasons for cultivation. That's why *Chandogya Upanisada* notified the people that because of being a religious vow, two seasons as such summer and rainy seasons should not be neglected³¹.

6.3. Definition of Fields and its Types

Ancient Indian kinds of literature referred to that land as mainly divided into three categories such as residential land, agricultural land, and grazing land. Proper division of land is one of the crucial issues from the point of view of agriculture. Because the maximum food grains production and the success of agriculture basically depend on the right selection of land. Aryans were very advanced in case of agriculture profession. They had proper knowledge regarding the determination of fertile and barren land. According to Vedic literature, lands were divided into two categories, such as fertile (*urvara*) and sterile fields (*khila* or *khilya*)³². The land that is capable of maximum food grains production is called fertile land. On the other hand, the land which was unsuitable for more crop production or which produced food grain without cultivation or was to be left uncultivated between the cultivated fields was called barren land (*khila* or *khilya*). Pischel believes that *khilya* means broad lands, which were used for the pasturing of the cattle of the community, and were not divided into cultivated fields³³. Oldernberg also takes the term (*khilya*) to mean the land which lay between cultivated fields³⁴. At that period land was measured with roads³⁵.

6.4. Processes and Tools of Agriculture

The first requirement for the farming system is tilling the agricultural land. Because sowing the seeds on the land is not possible without tilling the land. Having multi-values, the work of tilling in the agricultural system is the first duty of a farmer. Through this work, on the one hand, as land becomes more fertile, on the other hand, the harmful rubbish and insects of crop are destroyed. In Vedic literature, the plow is therefore given special importance oxen was used to pull the plough. According to the *Satapatha Brahmana* 'Vedic agriculture system was carried out through four sequential processes namely *krishanta* (tilling), *bapanta* (sowing), *lulanta* (harvesting), and *mrrinanta* (threshing)'³⁶. Again, in a mantra of *Rgveda*

²¹ *Atharvaveda* 1/7/2

²² *Mahnarayana Upaanshad* 19/1

²³ *Vajasaneyi Samhita* 18/2

²⁴ *Asvalayana Srautasutra* 6/4/17

²⁵ Aiyar, A.K.. Y. N. *Agriculture And Allied Arts In Vedic India*, p.1.

²⁶ *Rgveda* 1/49/3

²⁷ *Ibid*, 10/90/6.

²⁸ *Atharvaveda* 6/55/2

²⁹ *Taittiriya Samhita* 8/2/10/2

³⁰ Ram Gopal, *India of Vedic Kalpasutras*, p .134.

³¹ *Chandogya Upanisada* 2/14/2, 2/15/2

³² *Rgveda* 3/31/15

³³ Pischel, *Vedische Studien*, 2, 205; See also Macdonell, *Vedic Index*, Vol.I, p.216.

³⁴ Oldenberg, *Rgveda Noten*, I, p.385, 386; See also Macdonell, *Vedic Index*, p.216.

³⁵ *Rgveda* 3/38/3

³⁶ *Satapatha Brahmana* 1/6/1/3

recognized that 'after a good plowing the crop seeds were sown on plowed land'³⁷. Besides, another place of *R̥gveda* declared that the land was repeatedly plowing to increase the fertility of the agricultural land³⁸. After harvesting the crops were bundled³⁹ and kept in a clean place, called *khala*⁴⁰.

At the end of the Rigvedic era, Aryans were well acquainted with various agricultural instruments and their proper uses. In Vedic literature, *Shir*⁴¹, *Shila*⁴² and *langal*⁴³ these three words have been used to refer to the plough. Eminent scholar M. S. Randhawa while describing plough in that era said that "the *langala* was of a lace-pointed type, having a smooth handle, whereas the *sira* was a heavy plough"⁴⁴. In the Vedic period, ploughs were drawn by two⁴⁵, or six⁴⁶, or eight⁴⁷, or twelve⁴⁸, or twenty-four⁴⁹ oxen. From the use of a different number of oxen, it is easy to inform that ploughs of that era were of different shapes and heavy. In this context, an eminent historian Narayana Chandra Bandyopadhyaya stated in his book 'Economical Life and Progress in Ancient India' that 'multiple oxen were used for ploughing barren land and for the deep ploughing of agricultural land'⁵⁰. Moreover, he also stated that 'oxen and bullocks were utilized not only for ploughing but also for drawing wagons and carrying loads'⁵¹. Ramsaran Sharma also similarly said that more than two oxen were used to tillage the barren land⁵². A hymn of *R̥gveda* referred to the ploughing of a plough by a talented man⁵³. Moreover, similar information is found not only in *R̥gveda* but also in the *Shatapatha Brahmana*⁵⁴ and *Yajurved*⁵⁵. In the

Atharvaveda *Indra* is said to be the lord of the plough⁵⁶. Coulter of plough was made from the wood of the *khadira*⁵⁷ (cutch tree) or iron⁵⁸. In those days a spade or shovel was used to dig the agricultural land, called '*khaniitra*'⁵⁹. The matured crops were cut with a sickle, named '*datra*'⁶⁰ and '*sri*'⁶¹. In *R̥gveda*, a person who threshed and secured food grains was called '*dhanyakrrit*'. After threshing food grains it was measured with a vessel, called '*urdara*'. And the wooden container that was used to feed the domestic animals was called '*carahi*' or '*droana*' or '*ahab*'⁶². After threshing the crops, it was kept in a barn, which is called '*sthivi*'. Hence, we have no doubt that Vedic agriculture system was methodically developed and so refined.

6.5. Rain and Irrigation

Rain or irrigation is a crucial component for the development and prosperity of agriculture. To get more good crops agricultural land needed sufficient water at the right time. Because too much water can able to destroy crops, likewise lack of water cause of crops to fail. Irrigation, being an indispensable part of agricultural activities, has been extensively discussed in Vedic literature. In the Vedic period, the source of water used for agriculture was divided into two branches, such as natural (*swyamja*) and artificial (*khaniitrima*)⁶³. Rain and streams like rivers were known as the sources of natural water. On the other hand, canals, wells, and tanks were considered sources of artificial water. From the various hymns in Vedic literature that pray to god for rain-fall, it is easy to assume that the Vedic agricultural system mainly depended on rainwater⁶⁴. Likewise, the *vristi sukta* of *Atharvaveda* also described the great necessity of rainwater for agriculture⁶⁵. At a place of *R̥gveda* has been referred to as water irrigation from a well⁶⁶. According to *R̥gveda* wells were divided into two classes such as permanent wells and artificial wells. Fixed wells had sufficient water throughout the year⁶⁷. We assumed that perhaps those permanent wells were not man-made. On the other hand, Aryans used to dig impermanent wells to keep the rainwater⁶⁸. In Vedic literature, there have about thirty-one names of rivers, of which the name of twenty-five rivers

³⁷ *R̥gveda* 10/101/3

³⁸ *Ibid* 1/176/3.

³⁹ *Ibid* 8/78/10, 10/101/3.

⁴⁰ *Ibid* 10/48/7.

⁴¹ *R̥gveda* 4/57/8, 10/101/3-4; *Atharvaveda* 6/30/1, 6/91/1; *Shatapath Brahmana* 7/2/2/2, 4-5, 2/6/3/2

⁴² Macdonell, *Vedic Index*, Part 2, p.499.

⁴³ *R̥gveda* 4/57/8, 10/101/4; *Atharvaveda* 2/8/4, 3/17/3,6

⁴⁴ Randhawa, M. S., *A History of Agriculture In India*, Volume 1, p.317.

⁴⁵ *R̥gveda* 10/106/2

⁴⁶ *Atharvaveda* 6/91/1

⁴⁷ *Taittiriya Samhita* 5/2/5/2

⁴⁸ *Ibid* 1/8/7/1.

⁴⁹ *Kathak Samhita* 12/2

⁵⁰ Bandyopadhyaya, N. C., *Economical Life And Progress In Ancient India*, p.128-129.

⁵¹ *Ibid*, p.300.

⁵² Sharma, R.S., *Prachin Bharat Me Bhautick Pragati Ebang Samajik Sanrachana*, p.56.

⁵³ *R̥gveda* 10/101/4

⁵⁴ *Shatapatha Brahmana* 7/2/2/4

⁵⁵ *Yajurveda* 12/6/7

⁵⁶ *Atharvaveda* 6/31/1

⁵⁷ *Ibid* 3/17/3.

⁵⁸ *Ibid* 5/6/6.

⁵⁹ *R̥gveda* 1/179/6

⁶⁰ *Ibid*, 1/166/12, 8/67/10, 8/78/10; *Atharvaveda* 10/9/24

⁶¹ *R̥gveda* 1/58/4, 4/20/5, 10/101/3

⁶² *Ibid* 10/101/7.

⁶³ *Ibid* 4/49/2.

⁶⁴ *Ibid* 5/83/10.

⁶⁵ *Atharvaveda* 10/75/15

⁶⁶ *R̥gveda* 1/85/10

⁶⁷ *Ibid*, 10/101/5.

⁶⁸ *Ibid* 10/101/7.

are found in the *R̥gveda*⁶⁹. After the rainy season, those rivers' water was used to irrigate the agricultural land through canals. *Atharvaveda* clearly mentioned irrigation of agricultural land by digging the canals⁷⁰. Hence, it seems that they were aware of uncertain rainfall. Therefore, they used different artificial sources of water for irrigation.

6.6. Crops Protection

One of the important duties of a farmer is to protect the mature food grains along with caring. Apart from the bad atmosphere, Bards, wild animals, and pastes are considered the other enemy of agriculture and crops. As they can able to bring harm to crops, and even, have the power to wholly destroy food grains. For the Vedic people, the way of agriculture was not smoother. In that era, Aryans considered those as enemies or evils, who harmed the food grains. To several hymns of Vedic literature have been prescribed regarding this issue. Of *R̥gveda* it is stated that locusts, insects, and birds i.e. enemies reached damage to crops⁷¹. As locusts can destroy food grains over a long-range area in a short period, therefore their rank of it is first among the harmful crop pastes. Basically this category of insects attacks in flocks. For example, in *Chandogya Upanishada* is described that once upon a time the notion of *Kuru* was fully destroyed by this pest⁷². As the birds are destructive to crops, therefore farmers are more aware in Vedic literature that the birds should not fly over the planting land⁷³. Hence, the apple to adorable deities for protecting the crops is repeatedly echoed in Vedic literature. For example, in several hymns of *Atharvaveda*, the Aryan farmers pray to the god of *Asvins* to protect the food grains from enemies⁷⁴. Moreover, in *R̥gveda*, over rainfall and drought are considered more dangerous for food grains than pests⁷⁵. Regarding this context, it is also notable that in those days food grains were grown in those lands where sunlight was sufficient. Because Aryans believed that various pests that were eaten more crops were killed by sunrise. In the book '*Vedic Sahitya Aur Samaskriti*', eminent Vedic scholar Baladev Upadhyay correctly assessed and said that 'the Vedic cultivators' life ware not smooth. They had worried to protect the crops from the attack of destructive climate and insects like nowadays⁷⁶.

⁶⁹ *Ibid*, 10/75/5.

⁷⁰ *Atharvaveda* 3/13/3.

⁷¹ *R̥gveda* 10/68/1

⁷² *Chandogya Upanishda* 1/10/1

⁷³ *R̥gveda* 10/68/1

⁷⁴ *Atharvaveda* 6/5/0

⁷⁵ *R̥gveda* 5/83/10

⁷⁶ Upadhyay, B., *Vedic Sahitya Aur Samaskriti*, p. 431.

6.7. Manure

Manure makes the land more fertile and helps us to get maximum production from fields. In other words, it can be said that manure is the food of plants. The terms '*sakan*', '*shak*', '*shok*' i.e. in vedic literature has referred to manure in Vedic literature. In a hymn of *R̥gveda* '*Ribhus* are shown as extracting the *sakrit* (dung) from the sheds⁷⁷'. Similarly, according to *Atharvaveda*, 'cows have stated the feeders of the people as providing manure to their crops⁷⁸'. *Shatapatha Brahmana* also announced that 'dry cow dung (*karlra*) was used for making the fields more productive⁷⁹'. During the Vedic era, dung, garbage i.e. was heaped up at a particular place away from the village or cowshed, which produced manure, and maid-slavers were employed to spread it on the agricultural land for makes more fertile⁸⁰. But if the amount of dung was less, then the farmer would spread it on land instated of maid-slaves. Even, here it should be notable in Vedic scriptures that no other comical fertilizers were used in agriculture for more production except dung. But, in that era, sacrificial ashes are considered as better manure than dung. Because a part of the smoke and flyashes produced by sacrifice (*yajna*) get mixed in the atmosphere and falls on the vegetation during the rainfalls. And another part of the smoke and flyashes produced by sacrifice (*yajna*) spread everywhere into earth through wind and fall on the vegetation. In this way, this organic fertilizer is spread everywhere by rainwater and streaming air and helps to nourish the plants. As this organic manure is produced in less time, with less cost and less labor, that's why it has been considered the best manure than cow dung⁸¹.

7. Conclusions

To conclude, on the above discussion it can be said that the Aryan civilization was aware of the methods of agriculture, the selection of different crop seeds according to various seasons, agricultural tools, etc. In that period, agriculture was the mainstay of the rural economy, and the notion was economically dependent on that. Besides, agriculture also played a leading role in development of trade and commerce in that era. Because various food grains were cultivated for it. So, there does no doubt that at that time agricultural system widened the means of the nation's economy. Even, in that religious-based society, all the offering materials for sacrifices (*yajna*) were mainly produced from agriculture. On the other hand, Vedic agriculture is natural agriculture free from all poisonous fertilizers, and natural law was also adopted in crop production. Even, the goal of Vedic agriculture is mainly to

⁷⁷ *R̥gveda* 1/161/10

⁷⁸ *Atharvaveda* 3/14/4

⁷⁹ *Shatapatha Brahmana* 2/1/1/7

⁸⁰ *Atharvaveda* 12/4/9

⁸¹ Vedshrami, V., *Vedic Sampada*, p. 443.

re-enliven Natural Law in agriculture. That's why this agriculture system was eco-friendly. With the green revolution in 1960 A.D., we have been cultivating several crops in a short period. The key to this revelation is to bring radical change in the sector of agriculture by using high technology, high-yielding variety seeds, several fertilizers, various pesticides, and mechanized agricultural instruments. But, as a result of this progressive agricultural system, it is possible to cultivate maximum food grains in a short time, which is harmful to health, and on the other side, the environmental components are also being polluted by it. Therefore, to protect the environmental components and avoid toxic crops nowadays Vedic farming methods are being used experimentally in agriculture.

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