CHAPTER IV

AGRICULTURE
Agriculture forms the principal source of human food—the foremost primary necessity. From the primitive stage of human civilization, agriculture has been claiming the greatest attention of men. In fact, the story of agriculture is the story of human civilization and the invention of grain farming may be considered as one of the most significant achievements in human society. In India, the development of agriculture dates back to the Vedic times when majority of people subsisted on it. Likewise the epics of India are replete with allusions to this economy and such references may form the basis of substantial discussion, tracing the type, form and spatial organization of agriculture as flourished during the time of epics.

(a) General Facts

The Sanskrit Word 'Kriśi' derived from the root 'Kris' is used in the Vedas and Sāṁhitās to indicate agriculture. In the Rāmāyaṇa too this word recurs. The operation of tilling soil in the Vedic age meant cutting of furrows in the field with the wooden plough drawn by bulls, sowing of seeds in the furrows, reaping the corn with the sickle, laying of the bundles of corn on the thrashing floor, thrashing and finally winnowing. The Rigveda and Satapatha Brāhmaṇa refer to systematic farming, ploughing, sowing, reaping and thrashing. Thus, careful ploughing, timely sowing and increasing fertility of the soil were the main characteristic features of the agriculture during the Vedic period. Agriculture seems to have made a real headway
at a later stage. The Rāmāyana informs that the agriculture as
the science and art of raising plants for the human use was
known as 'Amrīta'. So, it is evident that the Aryans knew well
the art of farming and they were well-versed in the mixed
farming.

In a predominantly agricultural country like India where
the cultivators are poor and backward in all respects, the
responsibility for the development of agriculture lies mostly on
the state. Traditionally in India, the kings have been the
guardians of agriculture since the remote historical times and
as such the Rāmāyanic period monarchs protected the fields and
contributed largely to the development of agriculture by adopting
sound planning policies. The king being the master of the land,
was supposed to have a complete knowledge of the agriculture —
a subject included among the eight fold administrative items of
the state and he used to take the sixth part of the agricultu-
ral produce as agriculture tax for the facilities provided by
the state to the cultivators. It was the duty of the king to
keep agriculturists free from six calamities i.e. fire, flood,
edemic or endemic deseases, famine, pestilance and human
agencies. Agriculture was the major industry of the Aryans
during the Rāmāyanic age. Along with trade and cattle rearing,
agriculture was one of the item to be included in the science
of 'Vārtā' — a special branch of learning. Vārtā was also
devoted to the systematic knowledge of materialistic interests
of the people, their economic welfare and also for the
preservation and development of these activities.
Factors Affecting the Agriculture

Agricultural peculiarity of a country is interrelated by various factors, therefore, conformity and disconformity are evidenced in agricultural conditions of the different regions. The effect of physical environs are clearly visualized on the factors affecting agricultural conditions during the Rāmāyanic age, consequently, the Aryans had considered those areas suitable for cultivation which were fertile. The people of the epic period were well-acquainted with the knowledge of physical factors affecting the agriculture e.g. relief features, soil structure and its fertility and various climatic conditions. The Rāmāyana refers to the possibilities of the better crops due to timely tilling and the availability of adequate rainfall. Similarly, visualising the different aspects of cultural traits, it is evident that the kings were responsible to the welfare of the farmers and advancement of agricultural activities by the administrative policies.

Northern part of India became the core of Aryan settlements during the Rāmāyanic age due to the fertility of alluvial soils deposited by the Ganges and its tributaries. An imperceptible slope of land, adequate rains and suitable temperatures made the Ganges valley geographically better suited to agricultural development. Magadha, Kosala and Vatsa janapadas are said to be rich in agricultural products. Thus, it is clear that the people of the epic age were fully aware of the fertility of the soil.
General Land use

A characteristic feature of ancient land policy in India was the division of all available land of a village for different uses. The Rāmāyaṇa mentions the following four types of land uses which in other words imply the types of land based on human use:

1. Habituation lands which include houses and towns,
2. Agricultural lands,
3. Pasture lands and

The forests in the Rāmāyaṇic age must have been more extensive than they are at present. The pastures must have included large spaces needed for cattle ranches. The Rāmāyaṇa mentions the land which was not under plough as 'ūsāra' (waste land) and Irina (barren land). The Aryans knew well that the seed sown in a barren soil is fruitless. The king was supposed to have a detailed knowledge of land, its fertility and its barreness and thus to determine the productive areas more likely to be attacked by the enemies. There are references of white, pale and ochre soils.

The Rāmāyaṇa refers to the agricultural villages as 'grāmas', the pastoral villages as 'ghoṣas', the larger provincial towns and the big markets for agricultural produce as 'nagaras' and the smaller mofussil towns dealing as trade centres for the neighbouring villages as 'pattanas'. The villages had their fields on the outskirts. The inhabitants of Ayodhyā had their fields just in the suburbs and the town is
mentioned as full of cultivators\textsuperscript{20}. The vicinity of the town must have intensively encouraged the agriculture as the town provided marketing facilities to the farmers to sell the produce of their land\textsuperscript{21}.

\textbf{Agricultural Implements}

The Vedic literature gives us the picture of well organised rural economy in which agriculture carried on with the plough and bullocks played an important part. The ploughman or cultivator of the soil was called as 'kīnāśa' or 'kīśāna' who is today popularly known as 'kīśāna'\textsuperscript{22}. There are several references in Vedic literature to various types of ploughs which were drawn by six, eight or even twelve bullocks. Sometimes even twenty-four oxen were yoked\textsuperscript{23}. Such ploughs, most probably, must have been so effective as a modern tractor for purpose of deep ploughing. \textit{Vālmīki} has pointed out various implements used in agricultural processes in those days such as Kaṭhinakāja (leather bag), Kalasā (Pitcher), Kuthāra (axe), Kuddāla (spade), Kshurē (knife), Khaṇitra (spade), Piṭaka (basket), Pāla (the wooden blade of a plough pointed with an iron tip), Lāṅgala (plough) and Mala (plough)\textsuperscript{24}.

\textbf{(b) Means of Irrigation}

Water is the basic requirement for life. At a very early period, the ancient Indians recognised the paramount importance of irrigation lest the vagaries of nature and uncertainty of rainfall lead to ruining of crops resulting in famine conditions. Irrigation serves a dual purpose in agricultural economy - first
it provides protection to crops against destruction and damage by failure of rain and secondly, it increases the yield of crops.

Indian agriculture has been called a gamble with the rains because of the uncertainty and irregularity of the monsoon. With the failure of the monsoon, there is a lock-out in agricultural industry. The farmers depended mainly on rain for the cultivation in the Rāmāyanic age but to overcome the difficulties created by the uncertainty and uneven distribution of rainfall, drought and famine, artificial irrigational facilities were provided to the cultivators by the kings of that age. The rivers, canals, wells, tanks and lakes were the chief sources of irrigation. The canals, wells and tanks were constructed by Yantrakas (engineers). The northern part of the country during the Rāmāyanic age was mainly irrigated by canals and wells while the ponds and lakes were prominent in Peninsular India.

In the Rāmāyanic age, there might have been two kinds of crops as in present day - the dry crops depending on rain and the wet crops depending on wide-spread irrigational channels and rivers. The fields of Kosala which were irrigated and did not only depend on rain, were termed as 'Adevanātrika and wet crops grew well all over the land with the help of the irrigational facilities. The perennial Sarayū must have ensured an unfailing supply of water for irrigation and domestic purposes.

Rivers and Canals

Besides rainfall, the rivers must have been another natural source of irrigation in ancient India as they are today.
Although, the river valley projects like those of the modern
days are not indicated clearly in the Rāmāyaṇa, yet the great
epic refers to the perennial streams of India on which the dams
were constructed for irrigational facilities\textsuperscript{29}. The Aryans made
no efforts to dam the rivers that were not perennial\textsuperscript{30}. The
reference in the Rāmāyaṇa that Kārtavīrya Arjuna, the powerful
ruler of Māhismatī, blocked the Narmadā river like a dam with
his thousand arms\textsuperscript{31}, confirms the idea of building a dam across
the river. Vālmīki has referred to the dams made of sand\textsuperscript{32} which
were subjected to damage during the rains\textsuperscript{33}. The facility of
lift irrigation was also practised from the perennial streams
during the Rāmāyaṇic age. The description of the charming fields
adorned with rows of crops along both sides of the sumagadhi
(modern Son)\textsuperscript{36} proves that these fields were irrigated by the
water-lifting machines. Canals were taken out from the rivers
and tanks and were termed as 'Kulyā'\textsuperscript{35} in the Rāmāyaṇic age.

The canals were the most important sources of irrigation
in the Northern India. Canal network entailed less financial
strain on the king and ensured regular supply of water even to
the poorest farmer. The following geographical factors were
responsible for canal irrigation -

(i) the perennial rivers of the north, with the sources in
the perpetual snows of the Himalayas;

(ii) the gradual slope of the plains enabling the canals to
be taken out from the upper courses of the rivers easily
irrigated the land in their lower valley;
(iii) the absence of rocky ground in the plains facilitated easy cutting of canals and
(iv) the fertile soil which gave the greatest return to irrigation.

It is notable here that the Rāmāyana refers to the northern India as the best agricultural part of the country through which the Gaṅgā flows. Even today the Ganga-Yamuna doab is the most fertile and agriculturally advanced part of the country which must have been so in the Vedic period as well as in the period of the Rāmāyana.36

Wells and Tanks

Handicaps of agriculture in ancient India were fully recognised and sufficient attempts were made to remove them. Wells, tanks, reservoirs and larger irrigational works were enjoined as a public duty from which no king could obtain exemption. The Rāmāyana mentions the need of wells and tanks in waterless tracts for agricultural purposes.37 The kingdom of Kosala had not only depended for agricultural products on rain water directly absorbed by the soil but also utilised the rain-water accumulated in numerous tanks. The Rāmāyana indicates that tanks and lakes dominated the southern part of India e.g. Paṁpā, Paṅcāpsara and Mataṅga sarasa etc.38 This confirms that agriculture not merely depended on rainfall but agriculturists used well the provisions of irrigational facilities provided by the kings.
Agricultural Crops

There were two types of crops in the Rāmāyanic age i.e. Kṛṣṭapacya and Akṛṣṭapacya. Kṛṣṭapacya were those crops which were cultivated and Akṛṣṭapacya included self-growing and ripening crops without tilling the land e.g. Mīrā, Śārvān etc.

Different types of crops and their rotations were known to the Aryans. The food crops mentioned in the Rāmāyana, were paddy, barley and wheat, which are even today regarded as auspicious on ceremonial occasions. Barley and rice have an important place in Hindu rituals and rice and wheat are still the chief food of majority of Indians. Besides, sugarcane and spices were cash crops in the epic age (Fig. 4.1).

Sāli (Paddy)

Paddy became the most important crop in the Rāmāyanic age and it was used in various forms by the Aryans. The unhusked grains of rice (akshata) were used in various religious performances. Besides, various forms of rice are also referred in the Rāmāyana e.g. Tándula (the husked rice), Pāyasa (boiled rice with milk and sugar), Lējā (parched rice), Odan or Bhakta (boiled rice) and Krisara (a mixed preparation of rice, beans and sesame) etc.

Sāli was comparatively a larger variety of paddy and was the principal staple crop of kharif season. It was sown in the beginning of the rainy season and harvested in autumn. The autumn rice was called Sāli, because it was first sown in small plots away from water. When the plant grew about one to
two feet, it was transplanted in the water-logged fields in the month of September and harvested in December. The poet in the description of autumn season refers to ripe sprouts in the paddy fields.  A paddy field was known as 'Kalānakshetra'. The Rāmāyana clearly mentions that the lands near the banks of the rivers were the main paddy producing areas. Ayodhya, Kiskindha and Bharadvaja Ashrama are mentioned as having abundant supply of paddy and rice. This clearly shows the sufficient production of paddy in the surrounding areas of Ayodhya, Kiskindha and Bharadvaja Ashrama. Thus, we may confer that northern part of the country, especially the plains of the alluvial soil deposited by Ganga and Sindhu and their tributaries, were the main paddy producing areas in the Rāmāyanic age. Besides, the coastal region of southern India was also favourable for the cultivation of paddy.

We can suppose that there was no dearth of rains in the plains in the epic age as there is at the present day and the abundance of rains in the plains of northern India in those days was favourable for the cultivation of paddy in the rainy season. The rains as already pointed out, were never regular in coming and the successful cultivation of paddy depended, as still does, on the regularity of these rains. The Aryans, therefore, irrigated their lands by water, diverted from perennial rivers through artificial channels (canals) or lifted from wells by means of stone-wheels (Asma cakra) to which buckets were attached. This mode of irrigation by water, brought through channels or lifted from wells was, probably, applied in the dry
season, when rainfall sometimes was too scarce and scanty for
the cultivation of paddy crops.

In the Ṛṣāyana age, there were only two kinds of rice
i.e. white rice and wild rice (Ṛvaṇa). Ṛvaṇa appears to be
inferior grain and was especially eaten by the ascetics living
in the forests.

Ṛvaṇa (Barley)

Barley must have been the staple crop of the Aryans from
the very beginning and it is believed that it was one of the
principal corn of the world. It is said that it was first
produced by the Gods on the fertile banks of the Sarasvatī.\(^53\).
Sawana is of the opinion that the Indus basin, the sarasvatī
valley and partly the Ganga-Yamuna doab were the chief barley
producing areas during the Vedic period\(^54\). According to the
Ṛṣāyana\(^55\), the Ganga-Yamuna doab and Pacific region were the
principal barley producing areas. It was spring-crop sown in
autumn season and harvested in spring season. It did not
require much rain for its cultivation. A few showers of winter
rain were sufficient for it. It was often cultivated under
irrigation when rain water was not available at the beginning
of the corn formation. New barley grains were offered in the
First fruit sacrifice (Ṛgrāyana)\(^56\). The principal rite of this
ceremony was the offering of the new produce to the gods and the
manes, presumably as a mark of gratitude towards them.
Goshûma (Wheat)

It is noteworthy that the word 'goshûma' (wheat) is not mentioned in the Rigveda. Probably, it was neither known nor cultivated during the Rigvedic times and must have been introduced from elsewhere in a later age, for we find it mentioned in the Yajurveda Sâhhitâs and the brâhmanas\(^5\). Wheat did not become an important crop during the epic age but it is evident that it was chiefly rabi crop, sown in autumn season and cultivated mainly in the fertile areas where water supply from irrigation was available\(^5\).

Other Cereals

Among other cereals chîdraka (a special variety of grain), Mûdga (Mûgs-kidney beans), Nêsa (Urda-s bean), Cañaka (gram), Kulettâ (a kind of pulse) and Til\(^5\) (sesamum) were important during the Râmâyânic age. Sesamum was important oil seed, sown with other cereals and was also used in offerings. The above mentioned grains which were cultivated and had natural growth in the forests, were used in the Yajña.

Cash Crops

Among cash crops, sugarcane and spices\(^6\) were the most important. Sugarcane and its products - guda (molasses), sarkarâ (sugar) and khândava (sugarcandy)\(^6\) were extremely popular during the Râmâyânic age. The main areas of its cultivation were the fertile alluvial plains of the northern India\(^6\) because sugarcane grew well in alluvium and light clay and there, the
cane cultivation could be done without the aid of manures. Besides, the plains also provided the ideal climatic conditions for its growth.

Food was dressed with various spices and condiments to increase its flavour and tastes. Generally, seasoning of food by clarified butter, oil and spiccs was common in the society. We find that the cultivation of spices flourished in the coastal region of India. Dry ginger, cumin and ptychotis ajowan were the main spices of those times.

Cotton (Karpas) originally belongs to India and from there it dispersed to the several countries of the world. It was the most important commercial crop in ancient India. India was self-dependent in raw cotton during the epic period and it was cultivated in Satlej-Gang basin and black loamy soils of the Peninsular India, where the climatic conditions were favourable for its cultivation. Besides cotton, silk and hemp were also important fibre crops during the Ramayanic age.

(d) Natural Calamities

Climate played an important role in affecting the agricultural activities of ancient India. Climatic vagaries have long been a menace to the agricultural development of India. Disability to the economy is caused by famine, droughts, uneven spatial and seasonal distribution of rainfall. The Ramayana mentions that the people during the reign of Rama were free from famines. There was neither a drought nor famine to be
seen in Ayodhyā in the reign of the king Nārāyaṇa\textsuperscript{72}. The fact that the king was considered to have a clear conception regarding six calamities of agriculture and the methods to counteract them in those days, indicates that famine and flood were not unknown phenomena in the Rāmāyanaic age.

There are many references to famines having occurred before the reign of Rāma. These famines were produced by drought damaging the agricultural crops. The Rāmāyana refers to that in the reign of Dasaśratha, a severe and dire drought occurred in Ayodhya territory and it is said that when Nīyātṛaṇya (a Brāhmaṇa well versed in the Vedas) entered the kingdom, the God of rain sent down a shower all of a sudden, bringing great joy to the world\textsuperscript{72}. Besides, due to disappearance of Indra, a great drought continued for ten years without break in the past\textsuperscript{73} as a consequence of which the world became unproductive, the forests, tanks, lakes and rivers dried up and all living being faded and decayed. The performance of an Ayāmedha restored the prosperity of the earth\textsuperscript{74}. From these references it may be pointed out here that the Aryans sincerely believed that it was Indra-worship that gave them regular rains in abundance and made their country immune from the visitations of such dire calamities as famines and droughts. Moreover, the Rāmāyana mentions of crop destruction by hailstones\textsuperscript{75}. From the above description, it is evident that the rainfall was sometimes so plentiful as to cause floods and sometimes very meagre, as a result of which agricultural crops were affected adversely.
It is also referred to the Kāmāyana that crops were destroyed by insects. Locusts are said to rush into paddy fields. The king had to guard against the usual damage done to crops by pests and insects.

(e) Economic Basis of Agriculture

The economic basis of the Kāmāyana India was principally formed by two component organs i.e. agriculture and stock-raising. The agriculture was regarded as a quite honourable pursuit during the epic age. To find in the Kāmāyana that agriculture was not the incompatible occupation of the Vaiśya castes only, but it was open to all other castes. There is a reference of a Brāhmaṇa named Trijata, residing near Ayodhya, who it is said to earn his living by digging the earth with spades and ploughs and manifestly no stigma is associated with his action. For Kshatriyas, agricultural activities were not regarded as disgraceful. Janaka, the king of Mithilā, is described as ploughing the sacrificial field and finding out Sītā while engaged in clearing the weeds and grass of the fields. This indicates the importance of agriculture among the ruling classes. The word Sītā in Sanskrit, originally conveyed the sense of the furrow of a plough share as is clear from its renderings in the Vedas and later Sāhītās. Thus, agriculture was dignified occupation in the society and was not a concern of less intelligent member of the society but of those young men who considered it a grave occupation and knew well the classification of soils and seeds.
The Vedic literature presents before us a picture of systematised agricultural operations and agricultural ceremonies, made conspicuous mark in the religious life of the people of that age. Certain religious ceremonies were performed in honour of sitī, the goddess of agriculture, before the farmers brought their oxen under yoke and started sowing the seed. It was customary to offer sacrifices to the 'ksetrapati' (lord of the field)²². Jyāyana sacrifice²³ was a religious ceremony for partaking in the first fruits of the harvest, in different seasons such as in spring by offering rice and barley, in autumn by rice and millets. The aim of this ceremony was to please deities for averting any harm in eating the new grains or fruits. The farmers of the Rāmāyana age considered that the deep ploughing with timely and adequate rainfall is a work of religious importance and shall result in the greater possibilities of good harvests²⁴. The king had the prerogative to collect 'bali' on the agricultural produce, but the prerogative arose from his sovereignty and not necessarily from his ownership of land²⁵. As already pointed out, the Aryans of the epic age had developed devices to avert agricultural misfortunes such as famine, flood etc. by performing sacrifices to Indra, the rain god. The Rāmāyana also marks out the importance of the Sun, as the main source of rains²⁶.

In this way, these religious activities brought homogeneity not only on micro-regional but also on macro-regional basis as well. These systems penetrated so deeply into the
society that they became traditions among the Indians in the subsequent periods.

(4) **Agricultural Prosperity**

During the reign of *Dasaśratha* and *Rāma*, the Kingdom of Kosala is said to be a most flourishing state full of food-grains. According to the *Kāmāyaṇa*, the soils of Kayadha and Vastsa (the land lying between the Saryā and Yamuna rivers) Janapadas were very fertile and the whole regions were prosperous from the viewpoint of agricultural produce. *Kisukiṭha* and the cities of Kerala, *Pāṇḍya* and *Cola* Janapadas are said to be full of abundant foodgrains which proves that these Janapadas were more productive due to better climatic conditions and fertility of the soil. During the reign of *Rāma*, the agriculturists kept their fields well ploughed because clouds rained at proper time, therefore, the earth was covered with copious crops. The kingdoms were prosperous and happy and the country furnished a plentiful supply of foodstuffs. The art of cultivation during the Kāmāyanic age was more advanced than that of the Vedic period. Although, the references to the actual process of cultivation and the crops are scanty in the great epic yet the highly developed culinary art and evidences of that age testify to the cultivation of miscellaneous varieties of foodstuffs. While considering the agricultural prosperity during Vīra's reign, the earth is termed as 'Sarva-kāmadugna', thereby, acknowledging the prosperity of an all round the country through the development of agriculture.
Concludingly, it may be said that during the Kāmāyanic age, agriculture was naturally the primary mainstay industry of the country and formed a pivot of the economy. Needs of agriculture were classified and the efforts were made by the administrative machinery to fulfil them. It may be also pointed out that land, the source of all raw materials for industry and still more important for food stuffs, had been carefully considered in its lay-out, utilisation and exploitation. The art of cultivation, division and development of land were largely known to the people of the Kāmāyanic age and it seems that the principle of equi-marginal utility or the doctrine of maximum satisfaction was applied to the division and utilisation of land.
REFERENCES


3. Rigveda, X.17.7 and Sātapatha Brāhmaṇa, I.6.13 respectively.

4. "वनं नानं तुभूति पादेन पुष्पिकील्ले।" Rāma. VII.74.17.

5. "झ्वायुणम अयं भूमिः स्वस्त दन का नना।" Rāma. IV.18.6.

6. (A) Rāma. II.100.48.

(B) Vyas, S.N. (1946), 'Agriculture in the Rāmāyana Age', The Poona Orientalist, Vol.11, Nos. 3-4, p. 23.

7. Rāma. III.6.11; VII.74.32.

8. Rāma. II.100.44.

9. "हरिवल से दमिता: सत्यं धृतं गोरिल्ल जीवित।
वातायां सामपुत्तात ताल नाते केलय लुमेणेत।" Rāma. II.100.47.

10. Rāma. II.43.16.

11. Saxena, D.P. (1972), 'Indian Agriculture During the Vedic Period', Proceedings of Symposium on Land Use in Developing Countries, Aligarh Muslim University, Aligarh, p.76.

12. Rāma. I.32.10; II.50.8 and II.52.101 respectively.


14. Rāma. II.20.52; II.100.68; III.40.3; VII.86.14.


16. "वाक्यं निःस्फल मत्यथ वीजमुप्तमिन्दोपरे।" Rāma. III.40.3.

17. Rāma. II.100.68.
18. Rām. II.91.42; VII.14.27.
19. (a) Rām. II.1.46; II.37.4; II.63.15; IV.40.25.
   (b) Vyas, S.N. (1946), op.cit., p.24.
20. Rām. II.33.17 and I.6.7 respectively.
23. Saxena, V.V. (1972), op.cit., p.79.
24. Rām. I.4.23; I.40.27; I.63.13; II.32.29,31, II.36.25; 
   III.4.27; III.47.41; VII.17.33.
25. "त्यासैः स दिपुलिकिर्ते पर्यथायेऽन्न चर्चा!" Rām. II.112.12.
27. Rām. I.14.16 and VII.36.4 respectively.
28. Rām. III.100.45.
29. Rām. VII.18.38.
30. Rām. II.9.59; II.10.23.
31. Rām. VII.32.4-5, 15.
32. Rām. III.69.50.
33. Rām. II.103.5; VI.128.4.
34. Rām. I.32.10.
35. Rām. I.53.3.
36. Saxena, V.V. (1976), op.cit., pp.77-78.
37. Rām. II.80.11-13.
39. Rām. VII.84.3.
40. Rām. I.73.23; II.17.6; II.20.17; II.25.30,37; VI.10.9; 
   VI.128.39; VII.32.73.
41. Rām. I.5.17; III.16.17; VII.91.19.
42. Rām. I.16.15; I.53.3; II.20.18; II.75.30.
43. Rām. I.53.2; II.3.9; I.15.17; II.17.5; II.20.18; II.43.13; II.91.36; VI.112.20; VI.120.30; VII.41.13.
44. Rām. II.69.10.
45. Rām. II.20.18; II.75.30.
46. Rām. III.16.17; IV.30.47.53.
47. Rām. IV.30.47.53.
49. Rām. I.32.10.
50. Rām. I.5.17; IV.26.27 and II.91.35 respectively.
52. Rām. II.91.35 and II.61.3 respectively.
55. Rām. II.50.47 and III.16.16 respectively.
59. Rām. II.32.20; II.91.68; VII.91.19-20.
60. Rām. I.83.20 and II.91.67 respectively.
61. Rām. I.53.3; II.91.73 and VII.92.12 respectively.
62. Rām. I.53.2; II.91.56.

64. Rām. III.35.23.

65. Rām. II.91.67,72-73.


67. Rām. II.30.12; V.53.9; V.58.152; VI.86.7.

68. Rām. I.74.7; I.77.12; II.4.30; II.6.7; II.7.7; II.9.44; II.17.4; II.20.19; II.32.16; II.37.9.14; II.38.9; II.68.15; III.47.27; III.52.14,17; VI.111.107; VII.108.12; VII.109.4.

69. Rām. V.48.48; V.53.152.

70. Rām. I.1.90.

71. Rām. II.11.10.


73. "दक्षिणायनाद्वृत्तय दक्षे लोके निर्नायनम्।" Rām. II.117.9.

74. Rām. VII.36.4-6.

75. Rām. III.34.9.

76. जलभा त्वं तद्वर्त भसले तद पावस्म।" Rām. VII.7.3.

77. Rām. II.100.47.

78. Rām. II.32.29.

79. Rām. I.66.13-14; VII.93.7.


81. Rigveda, I.127.6.

82. Saxena, D.P. (1972), op.cit., p.79.

84. Cf. Rām. I.9.9; II.43.16; II.87.9.
86. Rām. II.105.13.
87. Rām. I.3.5; I.6.7; II.50.9; II.75.16; Val.41.20; VII.93.13.
88. Rām. I.32.10 and II.32.101 respectively.
89. Rām. IV.33.13 and III.33.25-26 respectively.
90. Rām. II.100.44.
91. Rām. VII.41.10; VII.79.10; VII.59.13.
92. Rām. VI.128.72.
93. Rām. VII.39.7 and VII.59A.8 respectively.
95. "तीन लालु युगान्तल तह लक्षणाब्रोज से !
रलविविहर उत्तुनानि मूलानि व फलानि व।." Rām. VII.34.7.