

AGRARIAN EXPANSION IN NORTHERN INDIA in EARLY MEDIEVAL PERIOD

(c. A. D. 800-1200)

Syeda Sadaf ,

Doctorate in History, A.M.U, Aligarh, 202002

Email Id. syedasadaflohani@gmail.com

ABSTRACT

The present paper aims to study the phenomenon growth of agrarian expansion in Northern India during early medieval period (c. A. D.800-1200). Agriculture was the chief occupation of the primitive people. In fact cultivation of soil was one of the first forces in the development of civilization. The whole study is based on primary source of information. Primary source of information which is used is mainly in form of literary and epigraphic evidences. Secondary source of information is also used to corroborate the ideas gleaned from the primary sources. Since India remained mainly an agricultural country till the new economic policy of 1991 which started increasing the share of industrial output to the GDP leading to a remarkable shift from agricultural to industrial activities. From the study it is clear that the early medieval period (c. A. D. 800-1200) was by no means an exception to the historical nature of Indian economy which was primarily driven by agricultural activity. Northern India during early medieval period witnessed the multiplicity of monarchical polity, which further enhanced the process of agrarian expansion.

Keywords

Early Medieval Period, Northern India,

Agrarian Expansion

Introduction

In plain terms ‘agriculture’ is culture of the soil (Latin, agricultura)¹. The science or art of cultivating soil, growing and harvesting of crops, domestication of animals and rearing of livestock is simply known as agriculture.² But, in recent perspective this would be too narrow interpretation of the term as the growing of crops and the cattle rearing are as much part of agriculture as the original cultivation of the soil. The comprehensive meaning of agriculture is the service and practice of farming.³ Agriculture comprises not only the domestication of plants and animal useful to man, but also the operations involved in marketing them.⁴ The term ‘agrarian’ seems to be used by modern social scientists in a way that describes all socio-economic structures, policies, projects, problems, public measures and laws, which have to do with distribution and tenure of farm or agricultural land and with the social, economic and political status of those, who either live on agricultural land or are dependent on agriculture for their livelihood.⁵ The Vedic synonym for agriculture is the Sanskrit term *krsi*, literally the act of ploughing.⁶ Patanjali opines that the term *krsi* includes not only ploughing, but also the feeding of ploughman, managing the seeds and bullocks and also doing subsidiary agricultural activities like digging of land, sowing and reaping of crops, winnowing etc.⁷

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- 1 The term ‘agriculture’ is derived from Latin ‘Agricultura’. ‘Agri’ the land and ‘cultura’ meaning to cultivate. The word ‘culture’ is Middle French and again comes from the Latin ‘cultura’ which is borrowed from the Latin word *colere* meaning to till or cherish. (Barnhart et.al.1977, source: www.healthyag.com/def_agri.html)
 - 2 Majid Hussain, *Systematic Agricultural Geography*, Jaipur, 1999, p. 45.
 - 3 G. C. Chauhan, *Economic History of Early Medieval Northern India*, Atlantic Publishers and Distributors, New Delhi, 2003 p. 84.
 - 4 Majid Hussain, op. cit. p. 45.
 - 5 G. C. Chauhan, op. cit., p. 1.
 - 6 S. P. Raychaudhary, Lallanji Gopal, B. V. Subbarayappa, ‘Agriculture’, D. M. Bose, et.al. *A Concise History of Science in India*, Indian National Science Academy, New Delhi, 1971, p. 352.
 - 7 G. C. Chauhan, op. cit., p. 85.

Objectives

The present study is meant to fulfil the following specific objectives.

1. To define the meaning of the term Agriculture as well as to discuss change in the concept of the term agriculture over the period of time.
2. To analyse the Process of agrarian expansion during the period of study.

METHODOLOGY

Historical and analytical method is used in the present study. The entire study is mainly based on primary source of information. Secondary data is also used to supplement the information gleaned from primary sources.

DISCUSSION

Agrarian Expansion

A large number of early Indian land grants also refer to the agriculturists as *krsakah* or *kutumbinah*, the members of the cultivating class.⁸ The cultivators have a respectable place in society and their vocation was also considered an honorable one.⁹ Sena inscriptions, ranging from eighth to thirteenth century clearly reveal the fact that slowly and steadily agricultural community became prominent in the society.¹⁰ R. S. Sharma considers that in a feudal society agricultural activities were most important, trade secondary in value, service to be contemptible and begging a course accepted in gloom.¹¹ Some of the inscriptions of early medieval northern India also mention cultivators as a distinct class apart from the officials,

8 S. M. Devi, *Economic Condition of Ancient India*, Delhi, Ramanand Vidya Bhawan, 1987, p. 1.

9 Ibid.

10 Puspa Niyogi, *Agrarian and Fiscal Economy in Eastern India*, Kolkata, 2011, p. 110.

11 R. S. Sharma, *Early Medieval Indian Society a Study in Feudalisation*, Kolkata, 2001, Reprint, 2007, p. 271

brahmanas and others.¹²

Process of Agrarian Expansion

Agriculture has always been the principal occupation of Indian people. From very early times it has been regarded as an important branch of ancient Indian economics (*varta* or livelihood)¹³, the other being trade and cattle rearing. Kamandaka, the author of *Nitisara* provides due significance to *varta* and considered it as a safe back up plan for difficult circumstances.¹⁴In fact, India remained mainly an agricultural country till the New Economic policy of 1991 gradually started increasing the share of industrial output to the GDP leading to a shift from agricultural to industrial activities. However, the period under review was by no means an exception to the historical nature of Indian economy which was primarily driven by agricultural activity. The early medieval period of Indian history is remarkably characterized for the proliferation of political powers mostly regional and none of them acquired centralized status on a traditional line. In an agricultural country like India, the multiplicity of the monarchical polity has a clear association with the expansion of agrarian settlements, which provides the principal resource base to them.¹⁵ Agriculturists even enjoyed the privilege of offering food and drinking water to the most respected people of the society. Lakshmidhara on the authority of several *Dharmashastras* considers nothing offensive in it.¹⁶ Even the brahmanas and the kshatriyas for whom agriculture was normally a 'forbidden land',

12 Puspa Niyogi, *Agrarian and Fiscal Economy*, op. cit., p. 110.

13 See e.g., *Arthashastra*, I. 4. p. 8. In the later period Kamandaka says that the means of subsistence of a Vaishya are cattle-rearing, cultivation and trade (Kamandakiya *Nitisara*, II,20. CF. S. K. Maity, *Economic Life of Northern India in the Gupta Period (c. A.D. 300-550)*, Calcutta 1957, p. 71.

14 *Nitisara*, edited by T. Ganapati Shastri, Trivendrum, 1912, Text, Canto I, *prakarana* I, v. 12. Canto II, *prakarana* iii,v.14. CF. Rashmi Upadhyaya, 'A Processual Model of State Economy as Gleaned by *Nitisara* of Kamandaka', *Indian Historical Studies*, Vol. X, No. 2, April 2014, p.111.

15 Ranbir Chakravarti, 'Agricultural technology in Early India (c. A.D. 500-1300)', p. 231. *Medieval History Journal*, Vol. 11, No. 8, 2008, p. 231.

16 *Krtyakalpataru, Niyatakalakanda*, pp. 262-63. CF. S. M. Devi, op. cit., p.1.

were permitted to follow the occupation of agriculturists in times of emergency.¹⁷ Kashyapa encourages the people of all castes to practice agriculture as he considers it a noble profession for all irrespective of their status in society.¹⁸

The agrarian expansion in early medieval India is evident through a large number of grants of lands to religious classes and secular beneficiaries for the purpose of cultivation, which has evoked diverse and contesting explanations among historians.¹⁹ The conditional holding of land by lords on some kind of service tenure, particularly noticeable among Rajputs, resulted to a greater extent to expand the process of agrarian development.²⁰ Most of the land grants were located in hitherto uncultivated and forest tracts. It was natural for donees to develop their respective granted areas into cultivable plots. An important point derived by the scholars, from this type of land grants is that, the practice brought virgin land to cultivation in Bengal and elsewhere.²¹ This obviously is done on the basis of the use of terms *khila*, *aprahata*, *avanirandhra* and *bhumicchidranaya*, which indicate grant of uncultivated land.²² The Nidhanpur copper plates of Bhaskarvarman mention the land grants to more than two hundred brahmanas in the Sylhet region, now in Bangladesh, during the seventh century.²³

17 Kautilya does not favour the king's policy of conferring land upon the brahmanas and the ksatriyas in preference to the sudras and the vaishyas in the newly settled areas, (*Arthashastra* of Kautilya, II, 1) Manu is also not in favour of the brahmanas becoming cultivators, (*Manusmrti*, X. 83-84). CF. S. M. Devi, *ibid.*, pp. 1-2.

18 G. Wojtilla, *Kasyapiyakrsisukti: A Sanskrit Work on Agriculture*. CF. Y. L. Nene, 'Ancient Classics on Indian Agriculture' in Y. L. Nene (ed.), *Glimpses of The Agricultural Heritage of India*, Asian Agri-History Foundation, Andhra Pradesh, p. 137.

19 Ranbir Chakravarti, *op. cit.*, p. 232.

20 D. D. Kosambi, *An Introduction to the Study of Indian History*, Bombay, Popular Prakashan, 1956, pp. 345-55. Also see B. D. Chattopadhyaya, 'Origin of Rajputs : The Political, Economic, Social processes in Early Medieval Rajasthan', *The Making of Early Medieval India*, Delhi, O U P, 1994, pp. 57-88.

21 R. S. Sharma, *Urban Decay in India (c.300-c.1000)*, New Delhi, 1987, p. 169. See also D. D. Kosambi, *op. cit.*, pp. 291-96.

22 R. S. Sharma, *Urban Decay*, p. 169. Sharma wrote that the inscriptions of fifth to seventh century frequently mentions these terms. (R. S. Sharma *Indian Feudalism*, Delhi, Macmillan, 1965, Second edition, 1980, pp. 30-32).

23 *Kumarupasaranavali*, pt. II, pp. 19-32. CF. R.S. Sharma, *Urban Decay*, p.170.

That a huge bulk of brahmana population was settled in the region is shown by the grants of four hundred *patakas* of land to six thousand brahmanas in the tenth century.²⁴ It is estimated that this donated land measured six thousand acres.²⁵ Although the terms of the grant show that this block of land was settled. The grant was made in accordance with the stated object of bringing virgin land under cultivation (*bhumichhidranaya*).²⁶ The settling down of so many brahmanas resulted not only in strengthening state authority in the area of Sylhet but also to develop it agriculturally.²⁷

R. S. Sharma has rightly pointed out that the donation of land in backward areas created obvious possibilities for the expansion of agriculture.²⁸ Quoting some references from *Harshacharita* Sharma tried to suggest that donation of land in forest areas seems to have been instrumental in diffusing improved methods of cultivation.²⁹ Considering the land holdings possessed by the brahmanas as an essential adjunct of agrarian expansion, Kosambi says “the new Brahmins--- knew of seeds, crops, cattle breeding.”³⁰ Enterprising brahmanas were given useful employment in the native tracts where they could spread new methods of cultivation.³¹ A new expertise was brought by the priestly and the other beneficiaries who migrated from the middle Gangatic plains or similar advanced area in search of better livelihood. For instance, they introduced the knowledge of calendar,³² which could give a

24 R. S. Sharma, *ibid.*

25 *Ibid.*, p. 170, fn.15.

26 *Ibid.*

27 *Ibid.*

28 *Ibid.*

29 R. S. Sharma, *Indian Feudalism*, pp. 34-35.

30 D. D. Kosambi, *op. cit.*, pp. 314-15.

31 R. S. Sharma, *Indian Feudalism*, p. 222.

32 Sharma writes that these priestly class taught the primitive people not only the use of plough and manure but also fostered agriculture by giving them knowledge of seasons and planets, especially of the recurrence of rains. He further writes that tribal get calendar, art, literature etc. as they came closer to brahmanas through land grants (*ibid.*, pp. 222-223).

good idea of rainy, sowing seasons etc.³³ Kosambi also points out new village settlements in 'hitherto' unclear territory. He emphasises the supremacy of villages since the period of imperial Guptas³⁴. The early middle ages in Indian history is perceived as a period of transition from ancient or classical age to the medieval by some scholars.

The inscriptions from Gupta period onwards mention the existence of cultivating groups called *kutumbin*.³⁵ The term might be derived from the Prakrit root *kud*.³⁶ It is significant to note that *kudi* means both land measurement as well as a container for bringing water either from well or from some reservoir. The *kutumbins* were clearly regarded as cultivating class.³⁷ The origin of many cultivating classes such as *kurmis* and *kories* of Bihar and Uttar Pradesh and the *kunbis* of Maharashtra and Gujarat may be traced out from the term *kutumbins*. It becomes quite apparent that from Gupta period onwards agriculture started gaining popularity and thus acquired a position of prominence.

The period under review, undoubtedly, witnessed a great spurt in agrarian expansion. Society in general paid immense importance to the work of agriculture. The overall importance paid to agriculture may also be inferred from the law books which prescribe strong punishments including death sentence for those who damage agricultural fields and provide harm to irrigation works.³⁸ This suggests that agricultural offences were considered most heinous crimes, in order to safeguard agricultural fields from wrong doers. Kautliya in *Arthashastra* generally proposes fine for such kind of acts.³⁹ By the time of Manu destruction

33 R. S. Sharma, *Urban Decay*, p. 170.

34 D. D. Kosambi, *An Introduction to the Study of Indian History*, pp. 295-96.

35 R. S. Sharma, *Early Medieval Indian Society*, pp. 29-30.

36 The term '*kud*' does not have the Sanskrit origin as suggested by R. S. Sharma (*ibid.*, p. 30).

37 *Ibid*

38 R. S. Sharma, *Early Medieval Indian Society*, p. 271.

39 *Ibid*.

of plants came to be regarded as state offence, and the provision was made by him for its punishment.⁴⁰ Alberuni's account also testifies the importance paid to agriculture.⁴¹

Agrarian expansion to some extent was due to the decline of ancient towns in which soldiers, administrators, artisans, merchants, brahmins and others were concentrated.⁴² Inscriptions reveal the evidences of brahmana migration from towns to the rural areas.⁴³ This could be regarded as a corollary towards the growth of rural economy leading to the agrarian expansion. Grossly exaggerated number of villages given in *Aparajitapraccha*, *Skanda Purana* and other early medieval texts indicate the increase in rural settlements.⁴⁴ *Skanda Purana* enumerates the number of village as many as seventy regions.⁴⁵ The number, size and population of a village, however, seems to be exaggerated but there is little doubt about the explosion in rural settlements in early medieval period, when the status of a king was determined according to the number of villages possessed by him.

The agriculturists were universally honoured. It appears that despite the prohibition by the sacred texts, the brahmanas and the ksatriyas were attracted towards this beneficial profession and tried to stick to it not only in emergency, but also in normal days.⁴⁶ The law-makers, in spite of their disfavour, permitted agriculture for these castes on certain conditions. *Brihaspati* prescribes that if one gives the 1/6th share due to the king, 1/20th to the gods, and

40 G. P. Majumdar, *Upavana Vinoda (A Sanskrit Treatise on Arbori- Horticulture)*, p. 6.

41 Alberuni records that cow slaughter was prohibited as cow is the animal which serves in agriculture in the works of ploughing and sowing, along with other uses. (E. C. Sachau, *Alberuni's India*, Vol. II, Chapter. LXVII, pp. 151-153.)

42 R.S. Sharma, 'Transition from Antiquity to the middle Ages', K.P. Jayaswal Memorial Lecture Series, Vol. 9, Patna 1992, p. 18. Also see, R. S. Sharma, *Early Medieval Indian Society*, p. 31.

43 Ibid.

44 The number of villages in various regions has been quoted and discussed in B.N.S. Yadava, *Society and Culture in Northern India in the Twelfth Century*, Allahabad, Central Book Depot, 1973, pp. 234-35.

45 Ibid.

46 S. M. Devi, op. cit., p. 2.

1/30th to the brahmanas, there is no degradation in the tillage.⁴⁷ In such cases share was meant to be given to the brahmanas not only on the basis of birth but also on profession of agriculture pursued by them.⁴⁸

It appears that cultivation was not prohibited for those brahmanas who had deviated from their caste profession. In this respect inscriptions furnish some interesting evidences. Many inscriptions use the phrase *karishyat-karshayata va*⁴⁹, which meant agriculture was pursued by the brahmana donee no matter he preferred cultivating the lands by himself or got it cultivated by others. There is no sign that the donee could cultivate fields in crisis only. There was nothing considered as derogatory in it, rather there were positive references of the brahmanas and the kshatriyas being engaged in cultivation.⁵⁰ Hence, it can be safely concluded that though there might have been some law prohibiting the members of the two higher castes from following agriculture as means of their livelihood, but probably it had its effect only upon a small section of society, who were piously devoted to their studies and enhancement of knowledge. While population started increasing and people began to lose interest in *yajnas*, it might have been recognised that the prohibition on the brahmanas against cultivation was causing some hardship.⁵¹ Scholars suggest that earlier agriculture was approved for vaishyas by lawgivers but later on a large part of the shudra population started serving as landless labours. It may be observed that almost people of all *varnas*, in some way or the other, were engaged in agriculture. Brahmanas also invented moral and religious

47 *Krtyakalpataru*, p. 195 and *Grhyatanakara*, p. 431. CF. S. M. Devi, *ibid.*, pp. 2-3.

48 *Ibid.*, p. 3.

49 *Ibid.*

50 *Ibid.*, p. 4.

51 *Ibid.*

propaganda to safeguard agriculture.⁵² Thus, the economy of early medieval northern India could be considered truly agriculture centric or an agrarian economy.

In early India the land was not allowed to remain fallow for an indefinite period. People were prompted to make it productive, and for the encouragement of agricultural settlement the rulers donated quite large plots of cultivable land. These were revenue free royal donations, possibly in view of the fact that the donee might be able to make land productive.⁵³ The establishment of irrigational works in many parts of early medieval northern India gave a further impetus to the growth of agriculture, even in dry and barren areas. The land was gradually brought into cultivation by religious establishments.⁵⁴ The bushes and jungles were cleared for cultivation with the help of iron implements and more and more land was brought under cultivation. The importance of agriculture was recognized in both religious as well as secular societies during this period. In *Harshacharita* it is noted that when Harsa started his *digvijaya* campaign, a pack of soldiers were engaged in clearing the forests, drying the marshy land and preparing roads.⁵⁵ Further Prabhakaravardhana is credited for getting the forests cleared, the pits filled up and the roads constructed for the movement of army.⁵⁶ It may be presumed that such incidents may have occurred several times and consequently a large part of the forest land was cleared up partly owing to constant internecine wars and foreign invasions. The period, under review, also witnessed the problem of increasing population and the capture of sea-borne trade mostly by the Arabs forcing people to depend more and more

52 R.S. Sharma, *Early Medieval Indian Society*, p. 271.

53 S.K. Maity, *Economic Life of Northern India in the Gupta Period*, Calcutta, 1957, pp. 71-72.

54 *Ibid.*, p. 72.

55 *Harshacharita* (Fuhrer), p. 287. Cf S. M. Devi, *op. cit.*, p. 5, fn. 2.

56 *Ibid.*, fn. 3.

on agricultural activities.⁵⁷

The caste system during the early medieval period was less elastic than that, which existed in the days of Kautilya, but at the same time most part of the country had already been cleared requiring less toil in tilling.⁵⁸ The inflexibility of the caste was a bonus for agricultural activities. Agriculturists could avail the services of the members of the sudra caste. There was also a phenomenal increase in the number of slaves. Kautilya⁵⁹ refers to five kinds of slaves but this number increased to fifteen different kinds in the time of Narada.⁶⁰ These slaves could have been utilized for ploughing the untilled land of the members of the twice-born castes. Hired ploughmen have been mentioned by Kalhana.⁶¹ Alberuni testifies that the brahmanas employed the shudras for their various household performances.⁶² The Puranic statement that in Kali age agriculture turned out to be the common occupation for all people irrespective of their *varna-jati* rankings (*kaliyuge krsi khalu samanyavritti*), may be appreciated in context of agrarian conditions of the early medieval period.⁶³ Hsuen Tsang, as well as some medieval texts represent shudras as agriculturists.⁶⁴ This has wide implications as R.S. Sharma has pointed out. It probably recognises that the shudra could take up the profession of an agriculturist; which is in sharp contrast to the Vedic notion that serving the upper *varnas* (*dvijatisusrusha*) had been the only prescribed and fitting function for them.⁶⁵ It is possible that with the spread of agriculture into hitherto uncultivated tracts many tribal groups which

57 The capture of oceanic trade by Arabs is also considered responsible for the growth of agrarian expansion (Ibid).

58 Ibid., p. 5.

59 *Arthasastra* of Kautilya, III, xiii.

60 S.M. Devi, op. cit., p. 6.

61 *Rajatarangini*, iv, 226.CF. Ibid.

62 Ibid.

63 Ranbir Chakravarti, op. cit., pp. 232-233.

64 R.S. Sharma, *Early Medieval Indian Society*, p. 197.

65 Ranbir Chakravarti, op. cit., p. 233.

became sedentary agriculturists were brought under the shudra category.⁶⁶ Undoubtedly while a major instrument of agrarian expansion was the issuance of copper plate charters, the main beneficiary of this institution was the priestly community.⁶⁷ From some early medieval texts it is evident that brahmana who was earlier forbidden to become agriculturist was allowed to follow the occupation of agriculture. Thus, the *Parasaramriti* not only considers agriculture as an occupation for all four *varnas*, but also recommends it for a brahmana who was engaged in his six fold duty (*shatkarmanirata*).⁶⁸ *Brihat Parasara* too considers agriculture as a suitable vocation for brahmanas (*kartavyam karshanam dvijaih*).⁶⁹ Eventually, it will not be exaggerative to suggest that during the early medieval period agriculture superseded, cattle keeping (*pashuposhana*), trade (*kritavikrita*) and royal service (*rajasevana*).⁷⁰ The purpose of the text is obvious that if agriculture was the best of occupations, then it should be accessible to the highest *varna*.⁷¹

R.S. Sharma assigns urban contraction as another factor contributing to agrarian expansion by writing that from the fourth to eighth century there are several references of brahmana migration from town areas to country side in western India.⁷² The larger yield and great agrarian expansion did result through the evolution of hundreds of states particularly in those areas that never witnessed the rise of full-fledged states. A state presupposes an assured source of income which would enable it to maintain a good number of marginalized staff. This could not be possible unless the agrarian base was strong enough to pay for the priests,

66 Ibid.

67 Ibid.

68 Ibid.

69 Ibid.

70 Ibid.

71 Ibid.

72 R. S. Sharma, *Urban Decay in India*, p. 172.

officers, army men etc.⁷³

Various medieval texts also suggested an enormous increase in agricultural production.⁷⁴ The importance attached to agriculture in this period is indicated by the fact that several texts were composed on it such as *Krisiparashara* of Parasara,⁷⁵ *Kashyapa's Krshisukti* (A Treatise on Agriculture by Kayshapa),⁷⁶ *Vrikshayurveda* (The Science of Plant Life) by Surapala,⁷⁷ *Lokopakara* (For The Benefit of People),⁷⁸ *Upavana-Vinoda* of Sarangadhara⁷⁹ etc. *Brhat Samhita* of Varahmihira a book of astrology also contains a mine of information on agriculture and allied activities.⁸⁰ Varahmihira suggests the method of calculating the rainfall pattern. This calculation was based on the observation of farmers. Their findings classified rainfall into good, bad, and moderate, which helped the people to expand agriculture.⁸¹ *Brhat Samhita* also contains information regarding the health and growth of agriculture and plants,

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- 73 R.S. Sharma, 'How Feudal was Indian Feudalism', *The Journal of Peasant Studies*. Special Issue on Feudalism and Non-European Societies, XII (2-3), 1985, p. 36.
- 74 Ibid., pp. 36-37. R.S Sharma provides the same kind of information in his *Urban Decay* also. He writes that the increase in number of varieties of cereals like rice, wheat and lentils etc. and other agricultural products is noteworthy.
- 75 *Krsiparasara* is an important source of early medieval period, providing the first-hand knowledge of agricultural science. It may be composed around 950-1100 A.D. and related to the region of Bengal or probably to the north India. (G. P. Majumdar and S. C. Banerji (Eds. and Trans.), *Krsi-Parasara*, The Asiatic Society, Calcutta, 1960).
- 76 *Kasyapiyaksisukti* is written in a very simple language probably around c.A.D.800. It was translated in English in 1985 by G. Wojtilla and was published in Hungary. (G. Wojtilla, *Kasyapiyaksisukti: A Sanskrit Work on Agriculture, II*. (English Translation) *Acta Orientalia Academiae Scientiarum Hung.* Tomas, 1985, XXXIX: 85-136. See also Ayachit, S.M.(Tr.) *Kashapiyaksisukti* (A Treatise on Agriculture by Kashyapa), *Agri-History Bulletin* No.4. Asian Agri History Foundation, Secunderabad, 2002.
- 77 *Vrikshayurveda* is a Sanskrit text composed around c.A.D.1000 by Surapala.(Nalni Sadhale, (Tr.) Surapala's *Virkshayurveda* (The Science of Plant Life by Surapala), *Agri-History Bulletin* No.1, Asian Agri-History Foundation, Secunderabad , 1996).
- 78 *Lokopakara* which means for the benefit of common people was composed by Chavundaraya II, a scholar and court poet of King Jaisimha II, the western Chalukya King, in 1025 A.D.(Y. L. Nene (ed.), *The Glimpses of the Agricultural Heritage of India*, Asian Agri-History Foundation, Secunderabad, 2007.)
- 79 *Upavana-Vinoda* is a chapter of Sarngadhara-Paddhati composed by Sarngadhara a courtier of king Hammira of Sakambhari-desa or modern Bundelakhanda around thirteen century A.D. (G.P. Majumdar (Tr.), *Upavana-Vinoda* (A Sanskrit Treatise on Abori-Horticulture), Indian Research Institute, Calcutta, 1935).
- 80 *77Brhat Samhita* of Varahmihira belongs to the beginning of sixth century A.D. R. S. Sharma, *Making of Early Medieval India*, p. 285 and fn.1.
- 81 Ibid., p. 290.

which also helped in agrarian expansion.⁸²

Technological innovations also contributed to agricultural expansion during the period. Apart from the use of *araghatta* (the water wheel), early middle ages witnessed several changes in agricultural pattern also. The increase in number of varieties of cereals including rice, wheat and lentil as well as in fruits, legumes, vegetables etc. is striking. The increasing number of crops can be drawn not only from *Amarkosa*⁸³ but more so from the *Prayagamuktavali*.⁸⁴ According to the *Sunya Purana* more than fifty kinds of paddy were produced in Bengal.⁸⁵ It will thus appear that the introduction of new crops was the direct outcome of the expansion of irrigation facilities and innovation in agricultural techniques, which contributed to the growth of agriculture as a whole.⁸⁶

Indian climate and environment impelled Indians to base their economy on agriculture. Conducive climatic conditions could support diverse multiple crops. There are references to six seasons in epigraphic sources and various terms regarding the seasons are revealed such as *vasanta* (spring), *grishma* (summer), *varsha* (rainy), *sharad* (autumn), *haimanta* (winter) and *shishira* (vernal autumn).⁸⁷ Dandin talks of the fundamental features of the seasons.⁸⁸ The literary text prescribes the sowing and harvesting of different crops in different seasons. There is no variation in the phenomenal conditions of early medieval northern India. The western parts of the country were comparatively cold and dry than the eastern parts.⁸⁹ The geographical

82 Ibid.

83 *Amarakosha* (11.4) has a whole section dealing with agricultural resources such as trees, plants, forests, gardens etc. Cf. Puspa Niyogi, *The Economic History of Northern India*, p. 24, fn.152.

84 R.S.Sharma, *Urban Decay*, p. 174, fn.47.

85 Yadava has cited several other pieces of evidence. (B. N. S. Yadava, op. cit., pp. 258-59 and fn.305).

86 R.S. Sharma, 'How Feudal was Indian Feudalism', op. cit., pp. 19-43.

87 *E I*, Vol. XX, Nos. 13, 15. Cf. S. M. Devi, op. cit., p. 7.

88 *Dvyasrayakavya*, Ch. III, vv. 167-68. Cf. *ibid*.

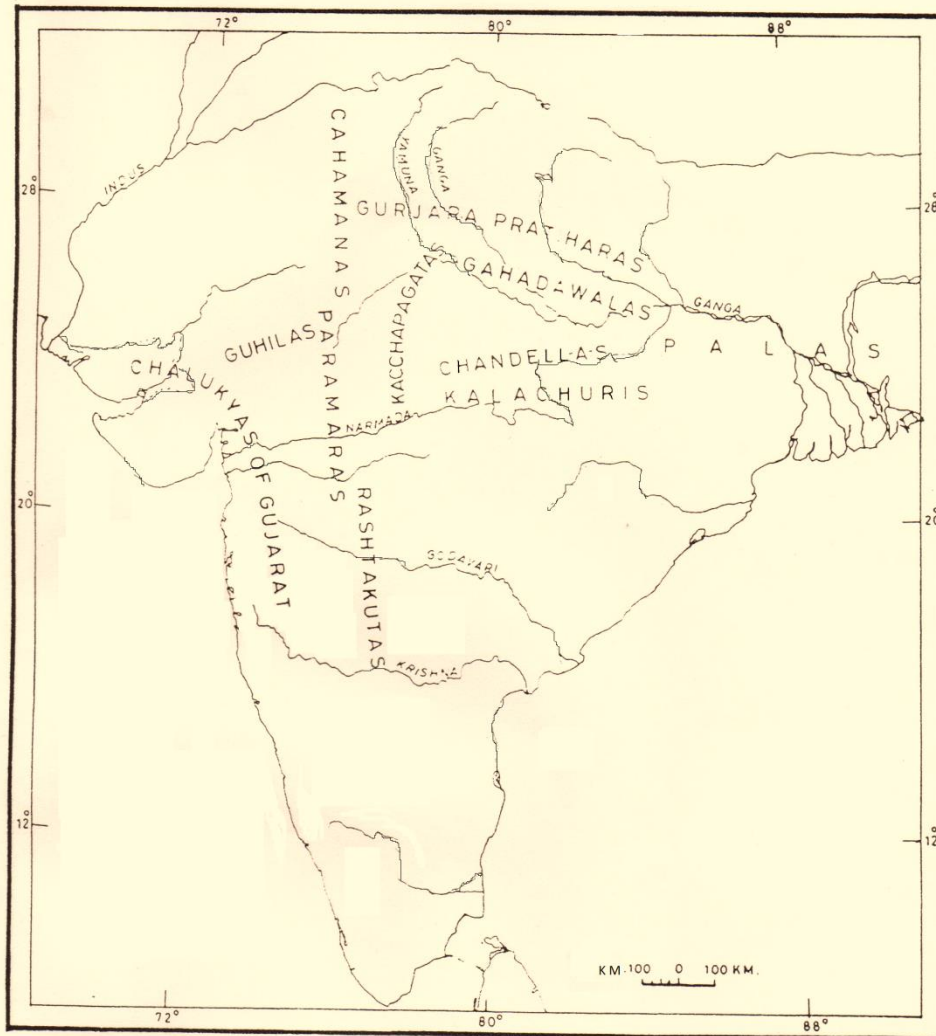
89 *Ibid*.

and climatic factors also conditioned the soil's capability of producing the crops. It is clearly perceived that climatic factors also played very vital role in the development of agriculture right from the very beginning which established it as the backbone of Indian economy.

Conclusion

The above survey, undoubtedly, reveals that the period from c. A. D 800-1200 may unequivocally be regarded as a period of great agrarian expansion, which is evident from the overall importance paid to agriculture during the period. Donation of land in backward areas by different political authorities created obvious possibilities for the expansion of agriculture during the period under study. Several factors including socio, economic, political, geographical, and climatic factors worked together to bring this phenomenon.

**POLITICAL POWERS OF NORTHERN INDIA
c. A.D 800-1200**



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