

APPRAISAL OF LAND USE AND AGRICULTURE SYSTEM IN ERSTWHILE BIKANER STATE OF RAJPUTANA

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Abstract: *Established in 1488 by Rao Bika, Bikaner the second largest Princely State in Rajputana occupies 60585 Km² areas and ruled by Rathore clan of Rajput. Presently it consist the districts of Bikaner, Ganganagar, Hanumangarh and Churu. The present study focuses the situation of land use and agriculture prevalent in those days under feudal system. The role of crucial land tenure and land revenue systems; hot desertic condition and famine; political system of Mughals and British; and long driven wars, are discussed. Besides, the post independence land reforms and development of land use and agriculture are also highlighted. 'Jagir' and 'Khalsa' were predominant land tenure system. Peasants were subject to so many taxes, cess, begar and services. Of total reporting area (1898-99 to 1906-07) net cropped area constitute just 16.4 percent, current fallow 8.8 percent and culturable waste 73 percent. Irrigation was almost unknown. Only selected rainfed crops viz. bajra, jowar, moth, guar and sesame were produced. After independence Jagirdari and Jamindari systems were abolished and land reforms were introduced. With the introduction of canal irrigation, the region witnessed remarkable development in agriculture. Peoples are settled and desertification processes are checked to a considerable level.*

Keywords: Rajputana, Khalsa, Jagir, Land Use, Agriculture, Land Tenure, Land Revenue

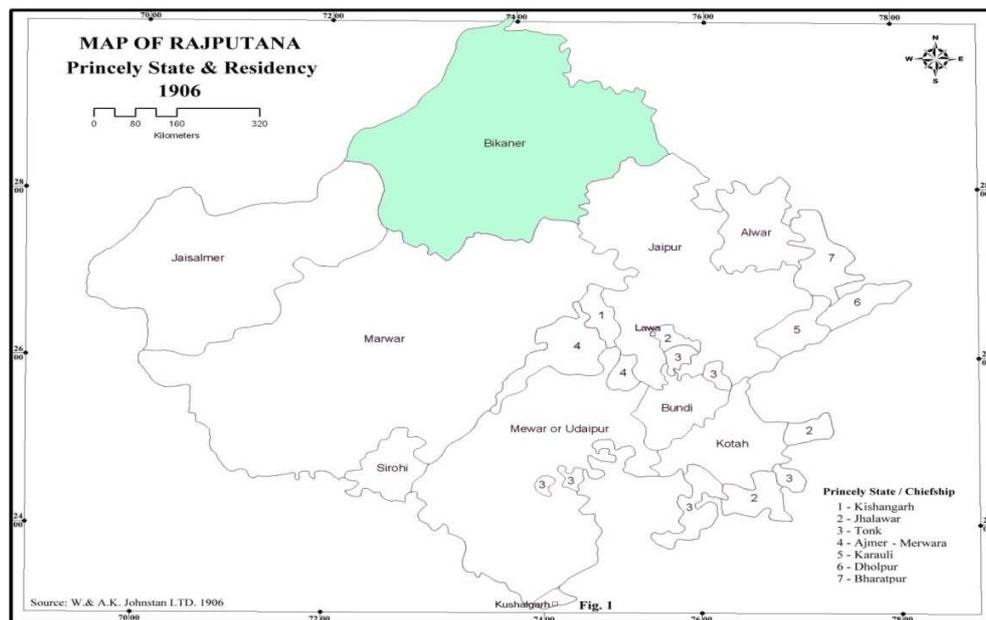
Introduction

Rulers in erstwhile princely states of Rajputana remain mainly engaged in protecting and enlarging their territory, waging wars and pleasing the Emperor. Nobles or chieftains of the princely state were important constituents and play a key role in State's affairs. In view of Randhawa (1980) many of rulers were inefficient men who strutted about on the stage of history, and in due course were lost in oblivion. Their only contributions were internecine feuds and wars and they were constantly nibbling at each other's territory. No attention was paid towards agriculture. Even no land record was maintained, excepting 'khalsa' or fiscal areas. There was no proper systems of settlement of land, land tenure and land revenue assessment. Entire land use and agriculture system was left over to *jagirdars* and *pattadar*. Cultivators were subject to so many taxes, cess, begar and services. In spite more than 70 percent population was dependent on agriculture and pastures, this sector remain almost neglected. It was only after independence and merger of princely states in greater Rajasthan, the abolition of *jagirs* taken place, settlement of land made and cultivators become owner of their land. The present study thus aims to assess land use and agriculture; land tenure, land revenue and land settlement systems prevailed during that period in Bikaner Princely State of Rajputana which presently includes Bikaner, Churu, Ganganagar and Hanumangarh districts. Land reforms taken up after independence are also discussed. Status of biophysical resources, ruling system of Maharaja, caste system and other socio-economic conditions, droughts, infrastructures and facilities available to common inhabitants are also considered to take account of the situation. *Nizamat* wise land use and cropping pattern data from 1898-99

to 1906-07 are analyzed and compared with present agricultural situation and other regional developments.

Location and Extent

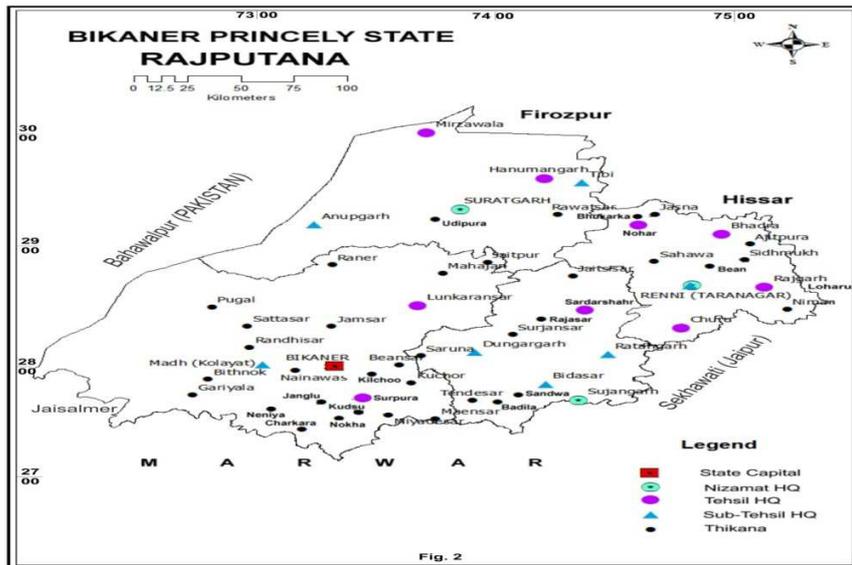
Bikaner was the northernmost and the second largest Princely State in Rajputana and holds a secondary rank among principalities with an area of 23311 sq. miles or 60585 km² (Fig.1). It was established in 1488 by Rao Bika, the sixth son of Rao Jodha of Marwar (Sehgal, 1972). The state has a length of about 416 km and a width of 468 km and lying between the parallels of 27° 11' 03" and 30° 11' 00" north latitude and 71° 54' 30" to 75° 40' 20" east longitude. It is bounded on the north and west by Bahawalpur (Pakistan); south west by Jaisalmer; south by Jodhpur (or Marwar); south east by Sekhawati district of Jaipur; east by Loharu and Hisar and north east by Ferozepur (Fig.2). The State was administered by four Nizamats viz. Bikaner, Renni, Sujangarh and Suratgarh; 11 tehsils and 8 sub tehsils (Erskine.1908). Presently the above territory is occupied by four district viz. Bikaner, Churu, Ganganagar and Hanumangarh. The southern and eastern portion of territory form part of sandy tract known as Bagar, north-west and part of north lie within Great Indian Desert while north eastern corner is the fertile section being in favourable year flooded by the Ghaggar. Most of the area is covered by sand dunes of varying heights (up to 70 meters). The only rocky hills occur in south close to the border of Jodhpur and Jaipur States. Highest among them (486 meters above MSL) is located near Gopalpura. *Kantli* is the only ephemeral river which rises in the hills near Khandela (in the Jaipur State) and after travelling about 100 km through Shekhawati it loses itself in the sand just within the border of Bikaner State in southern part of Rajgarh tehsil. In year of good rainfall, however it flows few kilometers and benefits a couple of villages.



Method and Materials

Map of Bikaner State was taken from published map of Rajputana. The administrative centres viz. *Nizamats* (district) tehsil, sub-tehsil and centres of chieftains were obtained from Gazetteers of Rajputana (Anon. 1879 and Eskine, 1908) and Imperial gazetteers of India (Anon. 1907) and plotted on the map. Recent Map of Rajasthan State on 1:1000,000 was used to update administrative unit boundaries. All the contents were digitized and final Map of Bikaner State was prepared on 1 million scale under GIS domain. Data on land use, cropping pattern,

population, caste composition were obtained from administrative reports of Bikaner State, Rajputana Gazetteers (Erskine, 1909) and Agricultural Statistics published by Govt. of India (Anon.1906). These data were converted to metric system and analyzed to show the relative status and trend. A number of published reports were consulted to cover various aspects. Recent data on land use, cropping pattern are obtained from Statistical Abstract of Govt. of Rajasthan (Anon. 2013) and district wise published reports and booklets from various organizations.



RESULTS AND DISCUSSION

Demographic status

According to James Tod (1978) sometimes between 1398 and 1526, out of total 2670 villages in *Jangaldesh*, 2200 villages were under the rule of jats. Jats were having seven territories that *Saat Patti SattavanMajh* (means seven long and fifty seven small territories. In 1881 the population of state was 509021, 831915 in 1891 and 584627 in 1901. In 1901 there were about 22.8 percent (133374) Jats in Bikaner State (Erskine, 1908). Out of total population 84 percent were hindu, 11 percent muslim, 4 percent jain and remaining others. Alakhgir was one of the important religious sects of this region. Brahmins were about 11 percent, Mahajan and Rajput 9.3 percent each and chamars 10.1 percent respectively. Rath was a peculiar caste (17700 Nos.) of this area which was not found in other parts of Rajputana. It was reported that there were about 2700 villages including 12 towns viz. Bikaner, Nohar, Bhadra, Renni (Taranagar), Rajgarh, Churu, Mahajan, Jaitpur, Beedasar, Ratangarh, Deshnok and Senthai. In 1901 the state was having 9 towns, 2101 villages and a population of 584627 persons (Bannerman, 1902). Jat population was dominant in most of the towns. In Bikaner they were having 12000 houses. In Bhadra, Rajgarh, Ratangarh, Nohar, Churu, Renni, Bidasar, Deshnokh, Jaitpur and Mahajan too they were having 1000 to 3000 houses. The population of Bikaner town was 43283 (21409 males and 21874 females) in 1881. The population consists 31602 hindus, 7359 muslims, and 4327 others. There were 7331 houses within the city and 1470 houses in suburb besides 741 shops, 13 temples and 14 mosques (Anon. 1907). The population of Bikaner town was subsequently increased to 50513 in 1891 and 53075 in 1901. Bikaner nizamats was having highest concentration of brahmin, mahajan, rajput and chamar population while Renni, Sujangarh and Suratgarh nizamats have dominancy of Jats. Rath community was mainly found in Suratgarh nizamats. In 1907-08 the State was having 18 hospital and dispensaries; 30 post offices and 38 schools (Erskine, 1908).

Land Tenure, Land Revenue, Settlement and Land Reforms

Land tenure: The land of Bikaner was divided into three groups viz. *khalsa* (crown land), *Jagir* (held by grantees) and *Sasan* or *dharmada* (carried out for religious institutions during the reign of Maharaja Ganga Singh). *Khalsa* land constitutes 32 percent of the total state area. *Jagir* were two types (i) those held by near relatives of Maharaja on revenue free basis and (ii) those held by other *jagirdars* in lieu of their past services and they use to pay *rekh* besides other cesses to the state. In 1894 a court of wards was established for the better administration of *Jagirs*. Of the 2140 villages and towns 792 were *khalsa* with an area of 19160 km² or about 32 percent of state territory. Some of the estates held by grantees were revenue free (*be-talab*) while for the rest, a fixed sum is paid yearly or certain services are performed. In the *khalsa* villages (except Tibi sub tehsil where tenure was *jamindari*) the proprietary right of land belongs to *Darbar* and the cultivator's right of occupancy depends on his ability to meet demand of revenue. Village held revenue free by *Ranis*, or near relations of chief (*Rajwis*) or connection by marriage (*Parsangis*) or by *Thakurs* whose estates are attached and they were given land for maintenance. Sharma (1993) reported 1984 *khalsa* villages out of total 3458 villages in three districts viz. Bikaner (141), Churu (128) and Ganganagar (1635) at the time of merger of the state with Rajasthan. *Sasan villages*; Land granted to temple, to Brahmin and 'Charan', are held free and practically in perpetuity. *Bhumias* who are Rajput and possess good deal of land and pay no revenue. *Jagirdar* or *Pattadar* are mainly nobles of the state and grouped into 2 classes *tazimi* and non-*tazimi*. Former are distinguished by their position in *Darbar*. At that time there were 123 *tazim* among them 4 are held superior to the rest and are styled *Sarayats*. *Pattadars* formerly serve *Darbar* with troops but later on they were subject to pay revenue in term of *Rekh*. According to final settlement in 1884 the sum payable by each *Thakur* was fixed. The *pattadar* thus pay a fixed military tribute called *Rakam* proper and *Rakhwali*. They also pay yearly revenue as 'Nazarana' or 'hukmanama' as well as 'neota' cess and certain sums on royal marriages. In *khalsa* villages formed since the Rathore conquest, there never exist (prior to 1886) anybody or person asserting any claim as joint landlords of the whole village area, the village consist of the independent cultivators. In *Jagir* villages the condition of farmers was becoming intolerable. *Jagirdars* practiced all kinds of tyranny over them.

Settlement: In 1884 it was decided to undertake summary settlement of *khalsa* villages. Regular survey was conducted only for *khalsa* area. This was completed and enforced in 1886. The first regular settlement was made in 1892-93 and brought into force in 1894-95 for a period of 10 years and subsequently extended up to 1911 (Tod, 1978). Major change was to class almost all the villages of Suratgarh Nizamat (except in Tibi) as 'Ryotwar' or 'Khatawar'. Each cultivator holding land on his own account and being personally responsible for payment of the assessment imposed on it. Another change was made in unoccupied waste which in *khatawar* villages was declared to belong to *Darbar* but usable by the cultivator for grazing on payment of fee called 'bhunga' whereas in other villages the cultivating body was given joint landlord claim to it. Lastly *Chaudhary* of both class of villages reverted to position of official collector of revenue but under a close supervision than before. They receive 5 percent commission on collection as well as customary dues from villagers. No settlement had taken place in *jagir* areas till 1941.

Land Revenue: Before 1884 there was no uniform system of assessment of revenue. The prevailing systems were per *bigha* sum paid by cultivator, division of produce (*batai*), apportionment (*Kankut*) and lump assessment (*ijara*). Formerly the *chaudhary* was in a position to an official collector of the revenue due from various holdings. He was responsible for the amounts payable by individual resident cultivators but not for a lump fixed for the village. After summary settlement each village was assessed at a lump sum for the payment of

which *Chaudhary* became responsible jointly, the responsibility of each being measured by his share in the *Chaudhar* of the village. The methods to assess the land revenue were very orthodox, oppressive and irrational. Major source of revenue were khalisa or fiscal land, dooh or tax on smoke, angah (body tax on human and animal, property tax), town and transit duties, pusdeti or plough tax, malbah (original tax per plough used in agriculture, corn tax on one fourth of produce) and sayer or impost.

The method for assessment of rent on jagir lands was in form of *Latai* (standing crops yield was estimated) and *Batai* (assessment of the share of jagirdar was made after the crop harvested and grain winnowed in the thrashing floor). The assessed share of jagirdar was delivered at his door which varies from 1/3 to 1/6 of produce. During the reign of Maharaja Ganga Singh a regular system of payment of land revenue in cash, was introduced and the revenue rates were fixed. The levies to be paid by tenants were *Malba* or *Pachhotra*, *Nanwa*, *Karad*, *Begar*, *Khutabandi* or *Pancharai*, *Shradha* levy. In 1870 the fiscal revenue of State was 6.5 lakh i.e. 2.5 lakh held from grants, 2 lakh from custom duty, 1.5 lakh from khalsa villages and one lakh from misc. Misc. revenue derived from salt, opium, liquor, hemp drugs (*bhang*, *ganja* and *charas*) and stamps. Taxes from *afeem- ka- sauda* and *menhh-ka-sauda* collected from those who gambled about the price of opium and amount of rainfall. The same was Rs. 580321 in 1883-84 during the reign of Maharaja Dungar Singh and in 1887-88 Rs. 727437. In 1899-1900 the revenue increased to 24.9 lakh and subsequently increased to 32 lakh.

Resumption of jagirs and land reforms: Before independence there was no tenancy law and one could be thrown away from the land one cultivated at the pleasure of jagirdar. After enactment of the Rajasthan Land Reforms and Resumption of Jagirs Act, 1952 the tenants of jagir land become khatedar tenants of the state with transferable and inheritable rights. 'Jamindari' and 'biswedari' estates were abolished under the Rajasthan Zamindari and Biswedari Abolition Act 1959. Passing of Rajasthan Tenancy Act 1955 and Rajasthan Land Revenue Act, 1956 kept provision of two types of tenant viz. khatedar and gair-khatedar. Thus all the cultivators who were holding land as tenants or sub-tenants or tenants of khudkasht, become khatedar tenants on 15 Oct. 1955. Due to resumption of Jagir, settlement operation were again undertaken in 1959 and completed in 1963. Other measures taken up to ameliorate condition of cultivators were appointment of revenue courts, preparation and maintenance of land records, survey and settlement, consolidation of holdings, land utilization, agricultural loans, relief of agricultural indebtedness and imposition of ceiling on land holdings. Thereafter Rajasthan entered the era of planned development through five year plans.

Land Use, Agriculture and Irrigation

Agriculture system was simple. For kharif crops only one ploughing was given and seed sown at the same time by drill (*por*). Rotation of crops was unknown in area of sandy tract. Very little attention was paid for weeding in the kharif. About 71.5 percent population was dependent on pastoral and agriculture and the actual worker in these groups numbered 51.5 percent of male and 38 percent of female population of the State. In 1898-99 the area of khalsa land was 19160 km². Out of this 16995 km² was reporting area. Area not available for cultivation constitute 309 km² leaving an area of 16686 km². Net cropped area constitutes 2425 km² or 14 percent of khalsa land in 1903-04. Analysis of land use statistics from 1899-99 to 1906-07 (Erskine, 1908) reveal 16.37 percent as average net cropped area and 10 percent current fallow out of the area for which return exist. Cultivable waste excluding fallow constitute 72.95 percent while area not available for cultivation 1.84 percent respectively (table 1). Irrigated area (mainly through canal) comes to 0.44 percent. Percentage of net cropped area varies year to year from 11.94 percent to 24.43 percent depending on rainfall. Nizamat wise land use for the year 1901-02 is given in table 2. Analysis of cropping pattern statistics from 1898-99 to 1906-07 (Erskine, 1908) reveals bajra as dominant crop constituting an average of 32.4

percent of total cropped area. The average of gram, barely, wheat, jowar, sesame and mustard comes to 3.1, 6.1, 1.5, 1.4, 3.5 and 0.9 percent respectively (Table 3). Other crops (mainly guar, moth, moong, taramira, cotton, tobacco etc.) contribute 51.1 percent of total cropped area. Bajra constitute 577 km² or 24 percent, gram 65 km², sesame 55 km², barley 47 km² and jowar 29 km². Out of total cultivated area in 1903-04 irrigated area was 395 km² or 2 percent. It includes 381 km² from canal and 11 km² from wells and other sources. Up to 1897 with the exception of few fields irrigated with western Jamuna canal and Sirhind canal, artificial irrigation was unknown in this region. Whole of Mohilla tract is a fertile oasis (Tod, 1978). The country of mohilla was conquered by Rao Jodha and given to Bida (brother of Bika). From Rajgarh to Nohar and Rawatsar, the region has good soil having water near the surface for irrigation. The same situation exists between Bhatner to the bank of Ghaggar.

Table 1: Land use in Bikaner State 1898-99 to 1906-07 (Area in)

Year	Area (Km ²) for which return exist	Area not available for cultivation (percent)	Cultivable waste excluding other fallow (percent)	Current fallow (percent)	Net cropped area (percent)	Total irrigated area (percent)
1898-99	16816	1.87	71.24	2.46	24.43	0.37
1899-00	16782	1.87	71.83	5.16	21.14	0.26
1900-01	16782	1.87	73.07	5.59	19.47	1.36
1901-02	16782	1.87	65.41	20.78	11.94	0.40
1902-03	17185	1.85	75.00	9.24	13.91	0.16
1903-04	16995	1.82	74.66	9.25	14.27	0.32
1904-05	16977	1.82	75.20	10.07	12.91	0.28
1905-06	16948	1.81	75.69	10.40	12.10	0.10
1906-07	16909	1.81	74.49	6.64	17.06	0.67
Average	16908	1.84	72.95	8.84	16.37	0.44

Source: Rajputana Gazetteer, The Western Rajputana States and Bikaner Agency, Vol. III-B, 1908

Table 2: Nizamat wise Land Use in Bikaner State 1901-02 for Khalsa areas (Area in ha)

Land Use category/ Nizamat	Bikaner	Suratgarh	Reni (Taranagar)	Sujangarh	State Total
Forest	00	00	00	00	00
Area not available for cultivation	11161 (6.34)	13376 (1.09)	5456 (2.38)	1424 (3.52)	31417 (1.84)
Culturable waste	125458 (71.29)	862446 (70.33)	90588 (39.46)	15158 (37.48)	1093650 (65.40)
Current fallow	19053 (10.83)	264063 (21.53)	53683 (23.38)	10709 (26.48)	347508 (20.78)
Net cropped area	20306 (11.54)	86458 (7.05)	79855 (34.78)	13152 (32.52)	199771 (11.95)
Total cropped area	20306 (11.54)	86458 (7.05)	79855 (34.78)	13152 (32.52)	199771 (11.95)
Area cropped more than once	00	00	00	00	00
Irrigated area	39 (0.02)	6420 (0.52)	280 (0.12)	30 (0.07)	6769 (0.40)
Total area	175977 (10.52)	1226343 (73.33)	229582 (13.73)	40444 (2.42)	1672346 (100.00)

Source: Agricultural Statistics of India for the year 1900-01 to 1904-05, Vol. II

Table 3: Cropping pattern in Bikaner State (1898-99 to 1906-07)

Crop/year	1898-99	1899-00	1900-01	1901-02	1902-03	1903-04	1904-05	1905-06	1906-07	Average
Bajra	44.2	23.1	36.5	75.1	63.1	23.8	15.8	1.2	8.3	32.4
Gram	0.3	N	4.9	0.2	4.0	2.7	5.3	5.4	5.3	3.1
Barley	0.6	12.6	4.1	0.2	5.6	1.9	4.0	13.2	12.9	6.1
Wheat	0.1	0.5	7.2	1.6	N	0.6	0.1	1.0	2.7	1.5
Jowar	0.2	6.2	0.7	1.2	1.6	1.2	0.7	0.3	0.4	1.4
Maize	N	N	N	0.1	0.1	N	N	-	N	N
Til	0.7	18.9	1.3	6.2	1.5	2.3	0.3	0.1	N	3.5
Mustard	-	-	-	0.1	1.3	0.7	1.6	4.1	0.7	0.9
Cotton	N	-	N	0.1	N	N	N	N	N	N
Tobacco	N	1.4	0.1	N	N	N	N	N	N	0.2
Others	53.9	37.2	45.2	15.3	22.8	66.8	72.2	74.7	69.7	50.9
Total Cropped Area (ha)	329969	1459	199581	199771	238297	241564	214613	204460	287463	100.0

Note: Figures are in percent to total cropped area.

Source: Rajputana Gazetteer, The Western Rajputana States and Bikaner Agency, Vol. III-B, 1908

Impact of Ruling System on Agriculture and Economy

During Mughal period the agriculture was ruined due to the agrarian crisis, long drawn wars, jagirdari crisis, recurring famines etc. Mughals have awarded land revenue collection rights in return for military services; those who held these grants were known as '*Mansabdars*' (Agnihotri, 2010). The association of Rajput rulers with the Mughals benefitted the business community of this region as they were involved with Rajput rajas in their administrative functions. This weakness of Rajput states opened the way for the entry of Marathas. The Rajput rulers paid huge sum of money to Marathas to buy peace and availed the services of bankers to raise money for tribute to Marathas. There was also significant expansion in the system of revenue farming (*Ijara*) during this period and even 'khalsa' lands were put on '*ijara*' which attracted a large number of mahajans and *sahukars* (Singh, 2014). The parasitic state apparatus had an adverse effect on production incentives in agriculture which was reinforced by the effect of 'built-in depressants within the village (Meddison, 1971).

Present Land Use and Cropping Pattern

Analysis of land use data of 2009-10 (Anon. 2013) for four districts viz. Bikaner, Churu, Hanumangarh and Ganganagar constituting erstwhile Bikaner state reveal that out of total 64909.5 km² area, forest constitute 2.76 percent, area not available for cultivation 7.56 percent, barren and uncultivable land 0.05 percent, permanent pasture 1.43 percent, tree crops and groves 0.09 percent and culturable waste 12.89 percent respectively. Net area sown constitute 59.98 percent, current fallow 8.72 percent, other fallow land 6.52 percent, and double cropped area 13.12 percent respectively. Net and gross irrigated area constitutes 19.26 percent and 32.04 percent of the total reporting area and 26.41 percent and 42.6 percent of the total cultivated land. Out of 1188717 ha net irrigated area 83.07 percent is served by Gang, Indira Gandhi Nahar and Bhakhra canals, 16.91 percent by wells and 0.02 percent by other sources. So far the cropping pattern is concerned; guar, bajra and moth are most dominant crops constituting 27.17, 15.02 and 13.46 percent of the total cropped area during 2009-10. Other rainfed crops are moong 1.4 percent, sesame 0.31 percent. Main irrigated crops are wheat 10.5 percent, barley 1.21 percent, rice 0.61 percent, gram 10.78 percent, groundnut 2.33 percent, mustard 7.32 percent and cotton 7.24 percent respectively. Besides; castor, sugarcane, chilies, linseed and potato are also produced.

Conclusion

Bikaner, the second largest Princely State in Rajputana was established in 1488 by Rao Bika, It was offshoot of Marwar State. The region was rightly called '*Jangaldesh*' being a part of the Thar Desert with hot arid climate, very poor biophysical resources, very poor and highly suppressed pastoral/farming community, and virtually no development. In feudal system, the state was ruled by Maharaja with all powers. The rulers of this State were rajputs while the ruling class was mainly Jats. Caste was playing an important role in all the matters. Major beneficiaries were kins of the royal family, thakur, chieftains, jagirdars and business community. Rulers were mainly busy in wars and appeasing the emperor. During Mughal period agriculture was ruined due to the agrarian crisis, long drawn wars, jagirdari crisis, recurring famines etc. The famines of 1891-92, 1896-97 and 1899-1900 have given a big jolt to human and livestock populations which reduced by 29.7 percent and 36 percent respectively. There were no initiatives or planning to manage such disasters. It was Maharaja Ganga Singh only who had done remarkable work in bringing the canal and other developments. There was no proper system of land tenure, land revenue and land settlement. Cultivators were subject to so many taxes, cess, begar and services. Limited agricultural data was only available for Khalsa villages which constitute only 32 percent area of entire State. Of this reporting area was 88.7 percent. Average net sown area was about 16 percent, fallow 10 percent and culturable waste 73 percent. Bajra, gaur, moth and sesame were dominant crops. Land reform measures and developments were taken after 1955 after merger of this princely state to Rajasthan after the independence. Canal irrigation introduced through, Gang Canal, Bhakhra and IGNP canal system. The region is now has 60 percent net sown area including 19 percent net irrigated area through canals and wells and 13 percent double cropped area. A number of irrigated crops like wheat, mustard, groundnut, cotton and rice are produced. A large area has been afforested, population settled, drinking water made available and other infrastructure facilities developed.

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