Chapter VIII

# LAND, AGRICULTURE AND LIVESTOCK

## I: Boundaries of the Administrative Village

We have already noted that the administrative village or mouja (lit., survey unit) was the basic terrtorial unit recognized for village administration since at least the Mughal period. Its boundaries, however, were not always indisputably fixed before the Survey of 1820-26. The surveyors found that there were disputes about the boundaries of many villages, and frequently they took a violent form. There were disputes about the boundaries of Radhvanaj also. Details about two disputes of Radhvanaj, one with Antroli and the other with Undhela, are recorded in the Land Register. It does not mention the arguments put forward by the disputants in either dispute, but the mode of settlement of each dispute is described. The dispute between Radhvanaj and Undhela related to the inclusion of a field of about three acres in one village or the other. The headmen and the Matadars of the two villages agreed before the surveyor Mr. Key to make Hariba, a Rathod Rajput lady of Radhvanaj, as the arbitrator. In order to give her verdict she had to walk, taking her son in her hand and swearing by God, along one or the other boundary of the field as she pleased. She gave her verdict in favour of including the field in Radhvanaj, and it was agreed that if anybody injured her within five days from the day of the settlement of the dispute, the field would belong to Undhela.

The dispute between Radhvanaj and Antroli was related to the alignment of a cart track between the borders of the two villages. The headmen of the two villages entrusted the dispute for arbitration to a panch (lit., a group of five) composed of the headmen of five neighbouring villages, four of which were Ratanpur, Vansar, Khumarvad and Undhela and the fifth one is not mentioned in the record. The panch decided to retain the 'original' alignment of the road.

The records refer to a third boundary dispute of Radhvanaj, one with the adjoining village Sandhana about the inclusion of a field in one village or the other, but it was not solved. The surveyors included the field in Radhvanaj and also noted its ambiguous position.

It is difficult to make much meaning of the information about the disputes mentioned in the records, except that it shows, firstly, how arbitration played an important role in settling village disputes, that there were two ways of arbitration, and that even a woman could be an arbitrator. Secondly, boundaries of administrative units were a matter of serious concern to the villagers. The boundaries of administrative units did not coincide with the boundaries of economic and social relationships of villagers, but this does not mean that the former were not important. Their exact significance will be shown in later discussion. Thirdly, the settlement of such disputes by the British shows how they carried Pax Brittanica to the village level. The boundaries determined by the surveyors in 1825 have remained unaltered till now.

II: Cultivable and Uncultivable Land

Within the boundaries defined by the surveyors, there were 423 plots of land which were measured and numbered, and in addition there were sixteen wells, eleven roads and cart-tracks, a village-site, a village-tank, and seven ponds, which were not numbered and the area of which was not measured but estimated. Including the numbered and the non-numbered plots, the total area of the village was 1387 acres and 9 gunthas (1 acre = 40 gunthas). All the figures for area of land in the early nineteenth century records are mentioned in bighas, but I have converted them in acres and gunthas to facilitate comparison with the later figures. It should be noted that all the figures regarding area of land mentioned in the Tables in this monograph are in acres and gunthas, unless otherwise specified.

Out of the total area of land in the village, there were 71 acres and 20 gunthas of uncultivable waste land, which included the village-site, the village-tank, six ponds, and eleven roads and cart-tracks. There was also other waste land, not in the form of separate plots as above but located in the form of wells, cart-tracks and drains within the boundaries of plots of cultivated land. The area of this waste land was 4 acres and 18 gunthas. Thus, the total area of uncultivable waste land, which may briefly be called non-agricultural land, was 75 acres and 38 gunthas. Its classification is shown in Table 4.

Table 4: Agricultural and Non-agricultural Land in Radhvanaj in 1825

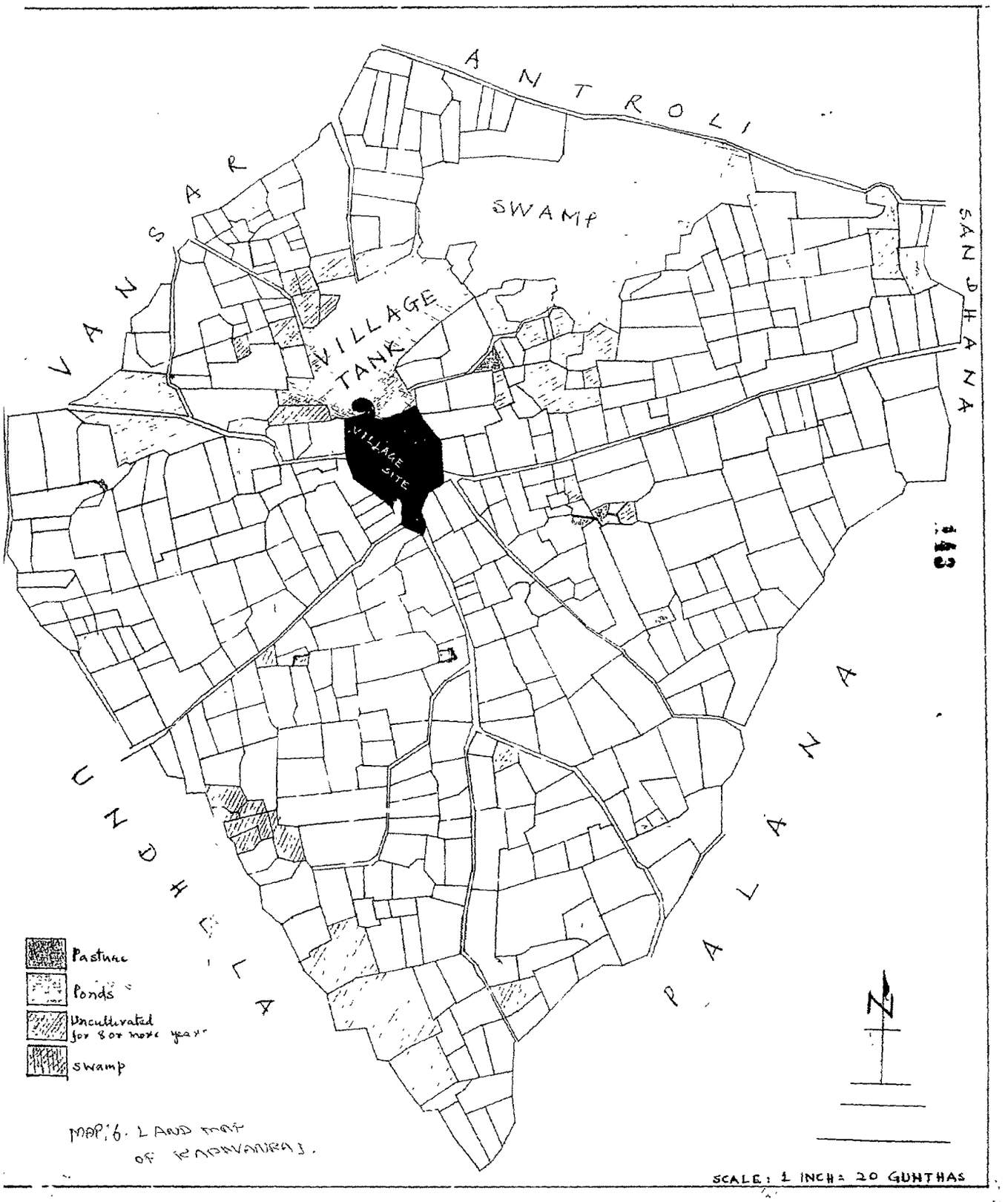
| Description | : | area |
|---|---|---|
| A. Non-agricultural | | |
| Village-site | | 36-38 |
| Village-tank | | 19-14 |
| Six ponds | | 02-28 |
| Eleven roads and cart-tracks | | 12-20 |
| | | 71-20 |
| Wells, cart-tracks and drains | | 04-14 |
| Total | | 75-38 |
| B. Agricultural | | 1311-11 |
| Total Land in Radhvanaj | | 1387-09 |

Out of the total area of 1311 acres and 11 gunthas of agricultural land, 971 acres and 11 gunthas were cultivated in 1825, and it seems this land was under continuous cultivation for many years before 1825. The rest of the land, 340 acres and 8 gunthas, was classified as cultivable by the surveyors but had remained uncultivated for periods varying from one year to more than ten years. The figures for land that had remained uncultivated for various periods of time are shown in Table 5.

Table 5: Uncultivated Agricultural Land in Radhvanaj in 1825

| Uncultivated for years | Area |
|---|---|
| 1 | 64-33 |
| 2 | 28-24 |
| 3 | 01-34 |
| 4 | 18-22 |
| 5 | 11-28 |
| 6 | 00-00 |
| 7 | 00-00 |
| 8 | 06-04 |
| 9 | 00-00 |
| 10 | 31-20 |
| More than 10 | 177-03 |
| Total | 340-08 |

Some of the agricultural land, particularly most of the land that had remained uncultivated for one year had remained uncultivated on account of scarcity of rain in 1825. Some might have remained uncultivated simply because there was nobody to cultivate it or it was not necessary. However, a great deal of land classified as cultivable by the surveyors was virtually uncultivable at that time. It has been mentioned in Chapter I that before 1838 A.D. flood waters in the Charotar tract used to log up in low lying areas. In Radhvanaj the entire area on the north-eastern and south-western sides of the village-tank was low lying (see Map 6). The village-tank did not have high banks on all sides at that time as it has today; the adjoining area was actually an extension of the tank. Most of the 236 acres and 4 gunthas of land that had remained uncultivated for eight or more than eight years was situated around the tank. It included a large stretch of




MAP 6. LAND MAP OF RADHVANAJ.

MAP 6= LAND MAP OF RADHVANAJ

land, of 100 acres and 16 gunthas, to the north-east of the tank, which was actually known as 'swamp' (saran). There was another large stretch of land, of 23 acres and 5 gunthas, to the south-west of the tank, which was known as 'pasture' (gochar), and a small plot of 3 acres known as 'jungle'. In fact, all these three plots were included in the category of kharabo or waste land in the Kalambandhis of 1823-24 and 1824-25. Similarly there were several other small plots of land which were known as 'swamp' or 'pasture'. The surveyors considered all this land as cultivable in the sense that it could be cultivated if flood waters were drained away by digging drains or if trees and bushes were cleared from the pastures. It should also be noted that some cultivable land was not cultivated because the peasants had set it apart for growing trees, so essential for fuel, dwellings, tools and implements, and carts and carriages. Thus, 214 acres and 27 gunthas of land which, according to the surveyors, had remained uncultivated for eight or more than eight years, was virtually uncultivable.

Table 6 shows the revised classification of the area of cultivated, uncultivable, and uncultivated cultivable land in the village.

Table 6: Classifications of Cultivable and Uncultivable Land in 1825

| Description | : | Area |
|---|---|---|
| A. Cultivable | | 1096-25 |
| i) Cultivated in 1825 | | 971-04 |
| iii) Uncultivated in 1825 (see T.5, uncultivated for 1 to 5 years) | | 125-21 |
| B. Uncultivable | | 290-25 |
| i) Non-agricultural (see T.4) | | 75-38 |
| ii) Potentially cultivable (see T.5, uncultivated for 8 or more than 8 years) | | 214-27 |
| Total | | 1387-10 |

The cultivable and uncultivable lands are shown on Map.6. It is noticable that most of the potentially cultivable land was located around the tank, which means floods were the most important cause of land remaining uncultivated in Radhvanaj.

The area of potentially cultivable but uncultivated land was larger before the survey of 1825 and much larger before the British took over the administration, because the Desai of Nadiad had induced Patidars from other villages to settle in Radhvanaj and bring its potentially cultivable land under plough. Some people already resident in the village also brought some potentially cultivable land under plough, encouraged by low rates of revenue levied by the British administration on such land. The Kalambandhis show that about 16 acres were brought under plough between 1823 and 1824 and 8 acres more between 1825 and 1826.

III: Soil Types and Irrigation

The soils found in the village were of two main varieties, goradu (light brown) and kyari (black), each graded into aval (first grade), doyam (second grade) and soyam (third grade). The characteristics of goradu and kayari soils have already been described in Chapter I. The total area of land belonging to the various soil types in Radhvanaj is shown in Table 7.

Table 7: Classification of land according to soil types in Radhvanaj in 1825.

| Soil Type | Cultivable | | Uncultivable | Total |
|---|---|---|---|---|
| | Cultivated | Uncultivated | | |
| Goradu: | | | | |
| Grade 1 | 131-00 | 1-08 | - | 132-08 |
| Grade 2 | 249-08 | 12-37 | 2-21 | 264-26 |
| Grade 3 | 559-25 | 79-10 | 48-14 | 687-09 |
| Total | 939-33 | 93-15 | 50-35 | 1084-03 |
| Kyari: | | | | |
| Grade 1 | 9-39 | 3-34 | - | 13-33 |
| Grade 2 | 21-01 | 28-12 | 153-13 | 202-26 |
| Grade 3 | 0-11 | - | 10-19 | 10-20 |
| Total | 31-11 | 32-06 | 163-32 | 227-09 |
| Total Agricultural Land | 971-04 | 125-21 | 214-27 | 1311-12 (See T.4) |

It can be seen that only about 2% of the total agricultural land in the village was kyari. Not only was the total area of kyari land very small but most of the available kyari land was also uncultivable due to its location around the tank and consequent liability to floods. The area of kyari land under actual cultivation was only 31 acres and 11 gunthas. This shows that wet-land crops,

particularly rice, played an insignificant role in the agricultural economy of Radhvanaj.

About 185 acres of land in the village was considered irrigable by the surveyors, but only about 50 acres were actually irrigated. There were two modes of irrigation, by well-water and by tank-water. The latter was easy and inexpensive, but it could be helpful only if the land was situated near a deep pool of water. The water was raised from the pool by a device called zampalo and then lowered into a canal leading to the field. The area of tank-irrigated land was insignificant in Radhvanaj because of the existence of a wide belt of flood-hit land between the tank and the cultivable land.

Well-irrigation was expensive firstly because the consturction of a well was expensive. Two main kinds of wells, kaccha and pakka were known in Central Gujarat. A pakka well was constructed with bricks or circular tiles, whereas a kaccha well was only a deep hole in earth without any such construction. The kaccha wells were very rare in Charotar on account its low water-table. The pakka wells, particularly those built with bricks, were very expensive. After its construction, a well had to be maintained carefully and repaired from time to time. The mode of irrigation was also expensive because it involved the use of a large leather jar, ropes, wooden fixtures, and at least one pair of bullocks. It has already been mentioned that there was one well on the village-site, whose water was used mainly for drinking. There were fifteen wells in the fields of the village, out of

which two were in ruined state, the constnuction of three was about to be completed, and eleven were in good useable condition.

The existence of such a large number of pakka wells shown not only the highly developed material culture of the village but also its relation with such specialized craftsmen as well-diggers, brick-layers, masons, and clay-makers, all of whom lived in other villages and towns.

IV: Crops

The Kalambandhis show that the following twenty-two crops were grown in Radhvanaj: (a) CEREALS: bajri common or pearl millet (Penicillaria spicata), kodra, Kodu millet (Paspalum scrobiculatum), bavto, (Panicum frumentaceum), Juwar, Indian millet (Sorghum vulgare), cheno, (Panicum miliaceum), banti, (Elensine coracana), dangar, paddy (Oryza sativa), ghau, wheat (Triticum aestivum), jav, barley (Hordeum haxastichon); (b) PULSES: math, (Phaseolus aconitifolius), mag, green gram (Phaseolus radiatus), chola, (Latin name?), adad, (Phaseolus pradiatus), val, (Dolichos lablab), chana, Bengal gram (Cicerarietinum), tuver, red gram (Cajanus indicus), gavar, cluster bean; (c) OILSEEDS: tal, gingelly or sesamum seed, (sesamum indicum), erandi, castor seed (Ricinus comminis); (d) OTHERS: tamaku, (Nicotiana tabacum), kapas, cotton (Gossypium herbaceum), san, Bombay hemp (Crotalaria juncea).

We have already seen that irrigation was not widely practised in Radhvanaj. Most of the crops were cultivated

during the monsoon of kharif season. The most common monsoon crop was bajri, the staple grain of the people and the principal artice of their food, and it was cultivated usually along with a pulse crop, mag, math, gawar, chola, adad, or val. In Radhvanaj the pulse most commonly mixed with bajri was math. Cruikshank has given an excellent description of the cultivation of bajri and pulses, which I quote below:(1)

Bajeree and kuthol (the latter being a pulse crop of mug, mut, goowar, chola, urad, wal, and sun), grown on oobeere or pandhur (not irrigated) goraroo soil of the uwul, or best sort, require 10 or 12 cart loads of manure for a beega of land every 2nd or 3rd year; but in kooweetur, or well land, where the intention is to raise also a second or after crop by irrigation, the supply must be repeated annually. The ground receives two ploughings after the first fall of rain, is smoothed with the sumar, a board drawn over the surface, and afterwards harrowed. The seed (5 seers of bajeree, with 3 seers of kuthol intermixed) is sown in July by means of the drill plough, and the ground is again smoothed over with the sumar. Weeding takes place after about 25 days, and the rampree (an iron blade) is drawn horizontally between the ridges to clear away stubble and weeds that may have escaped notice. When the crop becomes a month and a half old, the ridges are ploughed between, and the sumar is again used, although the bajeree may be the height of 2 feet: the advantage derived from this proceeding is that two or three new shoots spring from the root, each bearing a head of grain, and the check to the growth of the parent stalk renders it also more productive. The grain ripens generally early in October, when it is cut and stacked, but if left too long before reaping, sustains injury. The threshing takes place at any time after the grain is thoroughly dried, and is performed by several bullocks, tied together abreast, walking round a pole, to which the nearest is fastened, trampling over the heap of heads of bajeree, until the seed

is entirely worked out of them. The kurbee, or stalk of the bajeree, is inferior to that of the jowar, but is nourshing forage for bullocks. The kuthol crop comes forward about a month later, after the bajeree is entirely cleared away; but when the intention is to raise a rubbee crop of wheat or barley on the same land, it is not intermixed with the bajeree which is then sown singly. The stalk and leaves of the kuthol produce are the finest forage: a great quantity of it is reaped in a green state to meet the daily consumption of the Ryots' cattle, and it makes up very much for the want of grass, which is at all times scanty when the soil is of the goraroo description.

Bavto and kodra were next to bajri and pulses in impotance. They were grown on inferior goradu soil and formed the staple food mostly of the pporer class in the society. Chena and banti, most inferior grains, were consumed mostly by the poorest in the society, and could be grown without manuring and ploughing.(2) Juwar was grown mostly by richer peasants as a fodder crop in Central Gujarat. Wheat, barley and paddy were grown in very small quantities, due to erratic rain and lack of irrigation facilities. Most of the paddy grown in Radhvanaj, as in many other villages in Charotar, was of an inferior variety called sathee or vankalo, which could be grown without manuring or ploughing.(3) It is noteworthy that plough and non-plough cultivation existed side by side in the agriculture of the Charotar villages.

Although wheat and rice were not grown in large quantities in the village and were not principal articles of daily food, they must have been consumed in large quantities on festival occasions. The villagers must have purchased these grains from other villages which grew them

in surplus, particularly from the neighbouring tracts of Daskosi and Bhal (see Chapter I for the description of tracts). The quantity of cotton grown in the village was also insignificant. I have already mentioned the lack of information about the organisation of weavers' occupation. If the villagers spun the cotton required for their clothing they must have got cotton from other villages in Charotar or from the cotton-tracts of Mal and Kanam. I do not know whether sesamum and castor seeds and hemp, necessary for certain daily requirements of their life, were grown in sufficient quantity. Tobacoo was a new crop in Radhvanaj, but it was grown in large quantities in the richer Patidar villages.

There is hardly any doubt that there was considerable specialisation in the cultivation of crops in villages in Gujarat, firstly, between the various agricultural tracts, and secondly, between villages in the same tract. The list of prices of commodities included in the survey records of every village shows that a market existed for every item of agricultural produce in the villages of Central Gujarat. It is no wonder that a Bania shop was found in almost every village, and some villages like Radhvanaj could provide business for more than one Bania.

V: Bullocks, Ploughs, Carts and Carriages

In the column 'ploughs' in the Census Register the following four figures are found entered against the names of the heads of households: 0, ½, 1, 1½. These figures by themselves would be puzzling, because there cannot obviously be one half plough, but they make meaning when read along

with the figures in the column 'bullocks and male calves'. If a household kept a pair of bullocks it was said to have 'one plough'; if it kept one bullock it was said to have 'half plough'; and if it kept three bullocks it was said to have 'one and a half plough'. If a cultivator kept one bullock, he and another cultivator keeping one bullock would enter into an agreement called sundhal, according to which one would use the other's bullock when necessary, to draw a plough or a cart or some other agricultural implement. A cultivator would keep only one bullock and not a pair of bullocks because he might not have enough land to need a pair, or because he might not have enough money to buy a pair although he might have enough land to need a pair. It is also very likely that in the Census Register a household was shown to have one bullock because the other bullock had died only a little before the census. In some cases of brothers living in separate households but cultivating their land jointly, the Census Register shows one bullock or a pair of bullocks against only one of the brothers. A cultivator having three bullocks kept only one plough, but used one of the three bullocks to releive the other two when they were tired.

If the column 'bullocks and male calves' does not show a number corresponding to the number shown in the column 'ploughs' against a household, it means the household concerned had a male calf or calves in addition to the bullock or bullocks.

Table 8 shows for each caste the number of households having the various numbers of bullocks and ploughs. I will

make full use of the data about ploughs when I analyse the pattern of land ownership and tenancy in Chapter X.

Table 8: Classification of Data concerning Ploughs and Bullocks in Radhvanaj

| Caste | Households keeping | | | | Households in total |
|---|---|---|---|---|---|
| | ½ plough | 1 plough | 1½ plough | 0 plough | |
| i | ii | iii | iv | v | vi |
| Bania | - | - | - | 2 | 2 |
| Barber | 2 | - | - | 1 | 3 |
| Bharwad Shepherd | - | 1 | - | 1 | 2 |
| Bhoi | - | - | - | 1 | 1 |
| Blacksmith | - | - | - | 1 | 1 |
| Brahman | 4 | 2 | 3 | 4 | 13 |
| Carpenter | 1 | - | - | - | 1 |
| Charan Bard | - | 1 | - | 1 | 2 |
| Dhed | - | - | - | 3 | 3 |
| Jogi | 1 | - | - | 2 | 3 |
| Leather-worker | - | - | - | 7 | 7 |
| Molesalam | 3 | 3 | - | 2 | 8 |
| Muslim Mendicant | - | - | - | 1 | 1 |
| Pardeshi Koli | 3 | 7 | - | 9 | 19 |
| Patidar | 16 | 11 | 2 | 3 | 32 |
| Potter | - | - | - | 3 | 3 |
| Rabari Shepherd | - | - | - | 1 | 1 |
| Rajput | 9 | 9 | - | 8 | 26 |
| Rama Priest | 1 | - | - | - | 1 |
| Senwa | 1 | 1 | - | 2 | 4 |
| Sepoy | - | 1 | - | 4 | 5 |
| Shiva Priest | - | - | - | 1 | 1 |
| Shoemaker | - | - | - | 1 | 1 |
| Tailor | - | - | - | 1 | 1 |
| Talapada Koli | 6 | - | - | 12 | 18 |
| Total: Ploughs | 47 | 36 | 5 | 71 | 159 |
| Bullocks | 47 | 72 | 15 | 0 | 134 |
| Male calves | | | | | 16 |

Only a few observations may be made here. Firstly, the absence of a plough with a household does not mean that it was not connected with agriculture. It may be a household of a landless labourer or a non-cultivating landowner, and there was also the possibility of non-plough cultivation. Secondly, the large number of households having one bullocks shows that a number of households were linked with one another by the sundhal agreement. Unfortunately the records do not provide any information about the people involved in these agreements, but it can be stated on the basis of the data about the present situation, that sundhal agreements used to cut across caste lines. Thirdly, eleven minor castes, Bania, Potter, Blacksmith, Bhoi, Shoemaker, Rabari Shepherd, Tailor, Dhed, Leatherworker, Shiva Priest and Muslim Mendicant, whose traditional occupation was not agriculture, did not also have any plough, but some or all of the households in seven minor castes, Carpenter, Rama Priest, Charan Bard, Barber, Jogi, Bharwad Shepherd and Senwa, kept ploughs and bullocks even though their traditional occupation was not agriculture. Even among the seven castes associated with agriculture, namely, Patidar, Rajput, Molesalam, Brahman, Talapada Koli, Pardeshi Koli and Sepoy, only the Patidars were a really peasant or agricultural caste. 29 out of 32 Patidar households kept ploughs, as against 9 out of 14 among Brahmans, 18 out of 26 among Rajputs, 6 out of 8 among Molesalams, 6 out of 18 among Talapada Kolis, 10 out of 19 among Pardeshi Kolis, and 1 out of 5 among Sepoys.

The last column in Table 8 shows for each caste the number of households having a cart or carriage. There were

three kinds of carriages, eko, drawn by one bullock, damaniyuh, drawn by two bullocks, and mafo, wedding carriage drawn by two bullocks. The records do not inform how many carriages were found in Radhvanaj, but I assume that there were no carriages. A cart was used for the transportation of not only goods but also men, whereas a carriage could be used only for the transportation of men. A carriage was kept mostly for pomp and luxury. The number of carts in the village was much smaller than that of ploughs. Any farmer with a sizeable area of land needed a cart for agricultural operations and ceremonial occasions. A cart was not as indispensable an equipment for agriculture as a plough and a pair of bullocks, and it was far more expensive than a plough. Frequently, a group of brothers or a lineage segment would own a cart jointly. It could also be borrowed easily from a relative, a neighbour or a friend, of course at the expense of his obligation.

VI: Cows, Buffaloes, Goats, Sheep and Horses

It is significant that in the Census Register while there are two separate columns 'bullocks and male calves' and 'cows and female calves' there is only one column 'female buffaloes and calves' and no separate column for male buffaloes. A male buffalo was sacred on account of its association with the cult of mother-goddess in Gujarat, but it was also a fierce animal and was kept only for the purpose of breeding. There was one bull buffalo in a group of a few nearby villages. It was kept usually by a man of a lower caste named Vaghri, who would go round the villages with his bull buffalo to serve female buffaloes. Most male calves were not given enough food

in infancy in order that they could not survive.

There is also no mention of bull cows in the Census Register, because there was usually one bull cow in a group of a few nearby villages. Unlike the bull buffalo, a bull cow was not owned by any person but was allowed to roam about among herds of cows in fields and pastures. Nobody could kill or injure a bull because he was sacred on account of his association with god Shiva.

Cows and female buffaloes were kept as milch cattle. In all there were 176 buffaloes and 72 cows. Compared to the present time, the cow occupied a much more important position in the economy of the village in 1825: at the present time there are hardly a dozen cows in the village, while there are a large number of buffaloes. However, it is remarkable that the cow was less important than the buffalo even in 1825, because it is generally believed that the cow became a less important animal only after the coming of the British. If we deduct the 12 cows kept by the Rabari Shepherd from the total of 72 cows, there were only 60 cows distributed among 29 households, as against 176 buffaloes distributed among 87 households, which shows that the cow's role was less important that the buffalo's in the economy of an average villager.

Some households kept both cows and buffaloes, some kept only cows, and some only buffaloes. 96 out of 175 households in the village kept one milch animal or the other, whereas 61 households did not keep any milch animal at all.

It may also be noted that in all the castes in the village, excepting the Tailor, Carpenter, Rama Priest, Shiva Priest and Muslim Mendicant, some or all of the members of a caste kept one or more heads of milch cattle. Keeping a cow or a buffalo did not have any association with caste in this village society.

As already noted, all the 22 goats and sheep in the village were kept by a Jogi. Out of six horses in the village one was kept by a Patidar, one by a Brahmin, two by two Rajputs, one by a Charan Bard, and one by a Dhed.