

CHAPTER - II

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PROFILE OF ARAG VILLAGE AND PROFILE OF BIO-GAS PLANTS
IN THE VILLAGE ARAG.

2.1 Profile of Village.

2.2. Profile of Bio-gas Plants in the Arag Village.

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**PROFILE OF ARAG VILLAGE AND PROFILE OF BIO-GAS PLANTS IN THE
VILLAGE ARAG :**

2.1 PROFILE OF ARAG VILLAGE.

2.1:1 Location :

Arag village is situated to the east of Miraj city at the distance of 18 Kms. It is very near to the Karanataka state boundary. Arag village is in Miraj taluka, Sangli District and in the state of Maharashtra.

Geographical location of Arag village is 14.49° North Latitude and 74.43° East Longitude. South-East part of this village is plateeau and plane. South-West as well as East-North region is almost planteau. After 1972 East region of Sangli district has been declared as a drought prone area and this village is one of the part of it.

2.1:2 Total Land :

The total area of land of Arag village is 5428.20 Hectares. Out of which 681.80 hectares of land is waste land (i.e. 12.56% of land to the total land is waste land). In the year 1987-88 out of

total cultivable land only 161.00 hectares of land (i.e. 3.39 % of land to the total cultivabl land) was irrigated. Main source of irrigation is well. There are 700 wells out of which 435 wells are actually in operation. At th end of March 1988 out of 700 wells only 360 wells² were operating ' electric pumps'.

2.1:3 Cropping Pattern of Arag Village :

Before 1972 this village was famous for beetle leaf gardening but since 1972 due to scanty and uneven rainfall the ground water level had gone down. Shortage of water from wells and uneven scanty rainfall are two main reason of reducing the beetle leaf gardening in this village. The agriculture of Arag village is totally dependent on monsoon and well irrigation. Besides this no other facility is available in the village. Jawar, Bajara, Groundnuts, Chilly, Cotton, Maize, Sugar cane and all types of pulses are the main kharif crops of this village. Now a days grape cultivation is also increasing.

2.1:4 Population :

The total population of Arag village according to 1981 census is 9,637. Out of total population 4,977 is Male and 4,660 Female population. There is 936.30 female population behind per thousand

male population. Out of total population only 3714 population is working population (i.e. 38.53%) and 5923 non working population (61.47%).³

Table No. 2.1

Classification of total population according to working and non working population.

Sex	Main workers	Marginal workers	Non workers	Total
Male	2799 (29.04)	6 (0.06)	2172 (22.53)	4977 (51.66)
Female	835 (8.66)	74 (0.76)	3751 (38.52)	4660 (48.34)
Total	3634 (37.70)	80 (0.82)	5923 (61.05)	9637 (100)

(N.B. Figures in the brackets indicate percentage to the total population.)

(Source : Census of India - District census hand book (1981) compiled by - The Maharashtra census Directorate, Bombay)

- 1) There are 37.7 % Main workers of the total population.
- 2) There are 00.83 % of Marginal workers of the total population.
- 3) There are 61.05 % non workers of the total population.

* Marginal Workers : The workers who worked for less than 183 days in a year considered as marginal workers.

Table No. 2.2

Occupational Distribution of (working) population.

Sex	Cultivators	Agricultural Labourers	House Industry	Other workers
Male	1705 (46.91)	604 (16.62)	23 (0.23)	467 (12.85)
Female	296 (8.14)	487 (13.46)	18 (0.45)	34 (0.93)
Total	2001 (55.06)	1091 (30.02)	41 (0.12)	501 (13.87)

(Figures in the brackets indicate percentage to the total working population).

(Source : Census of India - District census hand book (1981) compiled by the Maharashtra census Directorate, Bombay. p. 41.)

Above table No. 2.2 explains the occupational distribution of total 3634 working population. Out of total working population 55.06 % are cultivators (46.91 % male and 8.14 % female cultivators), 30.02 % Agricultural Labourers (16.62 male and 13.46 % female), 1.12 House Industry holders and 13.87 % other workers. (12.85 % male and 0.93 % female).

In village Arag out of total population 66.21 % population⁴ is literate population (29.38 % male and 36.82 % female Population)

2.1:5 Livestock of Arag village :

The total numbers of Livestock in Arag village is 5000 which mainly consists of bullocks, cows, buffallows, sheeps, goats and calves. The number of livestock is low because of uneven and scanty rainfall.

2.2 PROFILE OF BIO-GAS PLANTS IN THE ARAG VILLAGE :

Bio-gas plants are accepted as the best alternative in the present predicamen of fuel shortage and the expensive nature of chemical fertilizers. It provides not only cooking gas but also good quality of manure to farms. The importance and utility of bio-gas plant is increasing day-by-day in rural areas. Government of India and

Government of Maharashtra are also accelerating bio-gas programme as a tool of rural development and agricultural development.

In the village Arag first bio-gas plant of KVIC model was set up in 1972 by Shri. Ramgonda Dhulappa Patil. This is the pioneer plant in the Arag village. Upto 1981 there were only 6 bio-gas plants but all of them were not in working condition. All the plants are not used due to completely worn out of steel gas holders. Since 1981 Zilla Parishad, Sangli has been implementing bio-gas programme in the village Arag very successfully. Government of India is providing subsidies as shown in table No. 2.2:1.

Shetakari Sahakari Sakhar Karkhana Ltd., Sangli has given each gas holder a subsidy of Rs. 1500/- for construction of bio-gas plants only to their members from March 1984 to March 1988, there are 70 bio-gas plants out of which only 57 plants actually are working and 13 plants are not in working position. Information regarding bio-gas plants is shown in the following table.

Table No. 2.3

CASTEWISE CLASSIFICATION OF BIO-GAS PLANT OWNERS IN ARAG VILLAGE

Caste	Capacity of bio-gas plants				Total
	2 cu.m.	3 cu.m.	4 cu.m.	6 cu.m.	
Maratha	2	17	7	3	29 (41.42)
Brahmin	-	2	-	-	2 (2.87)
Jain	1	4	4	1	10 (14.28)
Lingayat	-	9	7	-	16 (22.85)
B.C.	4	1	-	-	5 (7.14)
O.B.C.	1	4	3	-	8 (11.42)
Total	8 (11.42)	37 (52.85)	21 (30)	4 (5.74)	70 (100)

(N.B. : Figures into the brackets show percentage to the total bio-gas plants).

Table No. 2.3 explains that there are total 70 bio-gas plants out of which the plants of capacity 2 cu.m., 3 cu.m, 4 cu.m. and 6 cu.m. are 8.37, 21 and 4 respectively and percentage to the total plants is 11.42, 52.85, 30 and 5.74 respectively.

Distribution of bio-gas plants of 2 cu.m. under different caste

- 1) There are 8 bio-gas plants of capacity 2 cu.m. Out of 8 plants 2 plants are owned by Maratha caste 1 by Jain, 4 by B.C. and 1 by O.B.C.
- 2) There are 37 bio-gas plants of capacity 3 cu.m. out of which 17 plants are owned by Maratha, 2 by Brahmin, 4 by Jain, 1 by Chambhar and mahar and 4 by Dhangar, Kumbhar etc.
- 3) There are 21 bio-gas plants of capacity 4 cu.m. out of which 7 plants are owned by Maratha, 4 by Jain, 7 by Lingayat and 3 by Kumbhar, Dhangar etc.
- 4) There are 4 bio-gas plants of capacity 6 cu.m. out of which 3 plants are owned by Maratha and 1 by Jain.
- 5) There are 70 bio-gas plants in the Arag village out of which 29 (41.42 %) plants are owned by Maratha 2, (2.87) by Brahmin 10, (14.28 %) by Jain, 16 (22.85 %) by Lingayat 5, (7.14 %) by B.C. and 8 (11.42 %) by O.B.C.
- 6) The bio-gas plants of capacity 2 Cu.m., 3 Cu.m., 4 Cu.m. and 6 Cu.m. are 8, 37, 21 and 4 respectively i.e. 11.42%

52.85 % 30 % and 5.74 % to the total plants respectively.

Table No. 2.4

OCCUPATIONAL DISTRIBUTION OF BIO-GAS PLANT HOLDERS ACCORDING TO CAPACITY OF PLANTS :

Occupations	Capacity of bio-gas plants				Total
	2 cu.m.	3 cu.m.	4 cu.m.	6 cu.m.	
Farming	5	30	18	-	53 (72.72)
Landless Labourers	1	-	-	-	1 (1.42)
Farming cum Govt. or Private Servents	-	6	-	1	7 (10)
Farming cum Traders, Tailor, Potter, Goldsmith & Carpenter.	2	7	3	3	15 (21.42)
Agricultural Labourers	-	-	-	-	70

(N.B.: Figures in the brackets show percentage to the total bio-gas plant holders.)

Table No. 2.4 explains occupational distribution of bio-gas plant holders.

- 1) The bio-gas plants of capacity 2 cu.m. owned by farmers, Landless Labourers and farmer cum traders are 5, 1 and 2 respectively.
- 2) The bio-gas plants of capacity 3 cu.m., owned by farmers, farmers cum government or private servants and farmers cum traders are 30,6 and 7 respectively.
- 3) The bio-gas plants of capacity 4 cu.m., owned by farmers and farmers cum traders are 18 and 3 respectively.
- 4) The bio-gas plants of capacity of 6 cu.m., owned by farmer cum government or private servants are 3 and 1 respectively.
- 5) Out of 70 bio-gas plant holders there are 53 farmers, 1 landless labour 7 farmers cum government or private servants and 15 farmers cum traders, tailors, potters and goldsmiths.

Table No. 2.5

AVERAGE SIZE OF FAMILY, MINIMUM AND MAXIMUM SIZE OF FAMILY OF BIO-GAS PLANT HOLDERS, ACCORDING TO THE CAPACITY OF PLANTS.

Size of Family	Capacity of plants				Total N=70
	2 cu.m. N=8	3 cu.m. N=37	4 cu.m. N=21	6 cu.m. N=4	
Average size of family	5.12	8.16	10.52	15.5	8.94
Minimum size of family	2	2	5	10	2
Maximum size of family	12	23	18	20	23

(N = Number of Plant)

Table No. 2.5 explains average size, minimum size and maximum size of family of bio-gas plant holders according to the capacity of bio-gas plants.

- 1) The average size of family of the plant holders of capacity 2 cu.m. is 5.12. Minimum and maximum size of family of the plant holders is 2 and 12 respectively.
- 2) The average, minimum and maximum size of family of plant holders of capacity 3 cu.m. is 8.16, 2 and 23 respectively.
- 3) The average, minimum and maximum size of family of plant holders of capacity 4 cu.m. is 10.52, 5 and 18 respectively.
- 4) The average, minimum and maximum size of family of plant holders of capacity 6 cu.m. is 15.5, 10 and 20 respectively.
- 5) The average, minimum and maximum size of family of total 70 bio-gas plant holders is 8.94, 2 and 23 respectively.
- 6) The average size of family of bio-gas plant holders has increased according to the capacity of plants. It indicates that the capacity or size of bio-gas plant depend on average size of family. The average size of family of bio-gas plant holders of capacity 2 cu.m., 3 cu.m., 4 cu.m. and 6 cu.m. is 5.12, 8.16, 10.52 and 15.5 respectively.

REFERENCES

- 1) Grampanchayat Arag. (Information from Talathi Office Record.)
- 2) Ibid .,
- 3) Census of India - District census handbook 1981, compiled by the Maharashtra Census Directoraty, Bombay. p. 41.
- 4) Ibid., p. 41.