

CHAPTER - III

--:-

TRENDS OF DIFFUSION

--:-

.....

- 3.1 Introduction
- 3.2 Diffusion trends (blockwise)
 - A) Rethare Harnaksha block
 - B) Kasegaon block
 - C) Walwa block
 - D) Kameri block
 - E) Peth block
 - F) Bavachi block
 - G) Kuralap block
 - H) Yelur block
- 3.3 Summary

=O=

3.1 INTRODUCTION :

Diffusion is a process of spread of any item in space. The process of agricultural diffusion is the spread of new varieties of seeds and implements in space over time. Agriculture relates to the production of crops from land with the help of human labour, mechanical implements, fertilizers, irrigation and pesticides, whereas innovation is a change in the established method of agricultural practices, culture, idea etc. Agro-technological determinants like irrigation, fertilizers, high yielding varieties of seeds and agricultural implements together form a developed kind of agricultural landscape and provide a frame of parameter to measure the level of agriculture development of a region.

The favourable climatic conditions viz. deep black and fertile soils in Krishna and Warana river valley's development of irrigation facilities and co-operative societies, are gradually trying to provide credit facilities, have led Walwa tahsil as one of the prosperous tahsil of Sangli district. The assured irrigation facilities led farmers for cane cultivation and speedy adoption of improved agricultural practices. Tractor is very popular in sugarcane cultivated areas due to its multiple uses. It plays a vital role in farm technology. Keeping in view these facts in mind here an attempt is made to present the trends of adoption of tractors over a period of time in a various blocks of Walwa tahsil in general.

The field data of adoption of tractors for all the blocks from the starting year of adoption upto 1988 is considered. It is shown by a linear method.

3.2 DIFFUSION TRENDS (BLOCKWISE) :

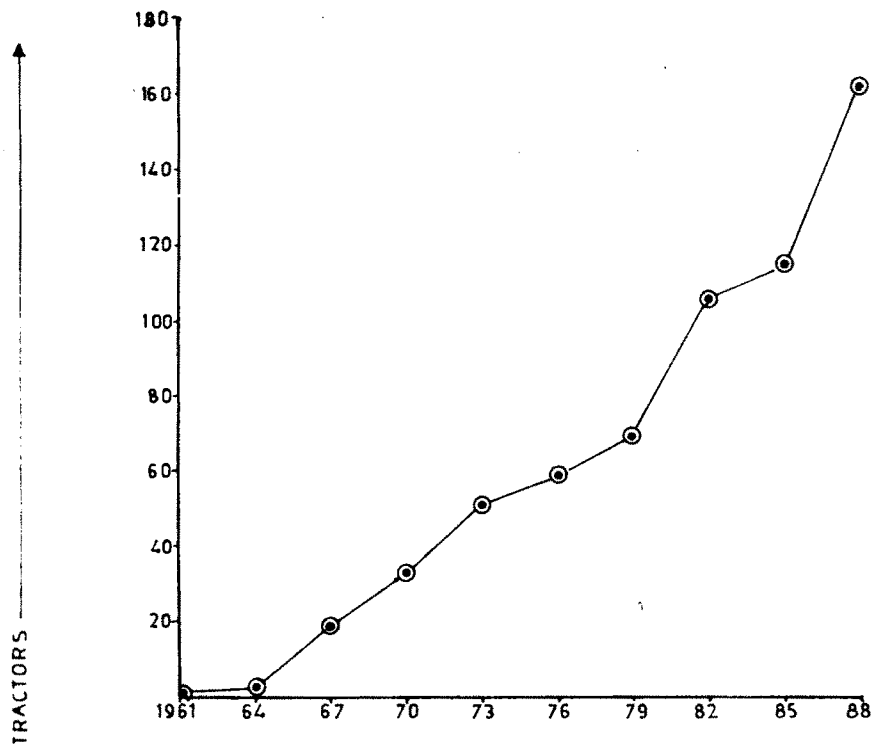
A) Rethare Harnaksha Block :

The Rethare Harnaksha block of Walwa tahsil is located in the northern part of tahsil. It has total population of 37,765 giving a density of 392 persons per sq.Km. The block is well served with different means of irrigation. The main source of irrigation are lifts and wells; irrigating about 33% of the net sown area. More than 63% of the total area is cultivated.

The adoption of tractor firstly took place in Rethare Harnaksha block in the year 1961 at Yedemachindra village. During this year the number of adopted tractor was only one; but upto 1988 it has increased upto 162. This can be attributed to fertile soil in river Krishna Valley and developed irrigation facilities, development of Krishna Sugar Factory etc. The assured irrigation facilities sponsored by Krishna Sugar Factory led to increase area under sugarcane. The line graph of actual values reveals the increasing trend of adoption of tractors since beginning (Fig.3.1-A).

TRENDS OF DIFFUSION

(A) RETHARE HARNAKSHA BLOCK



(B) KASEGAON BLOCK

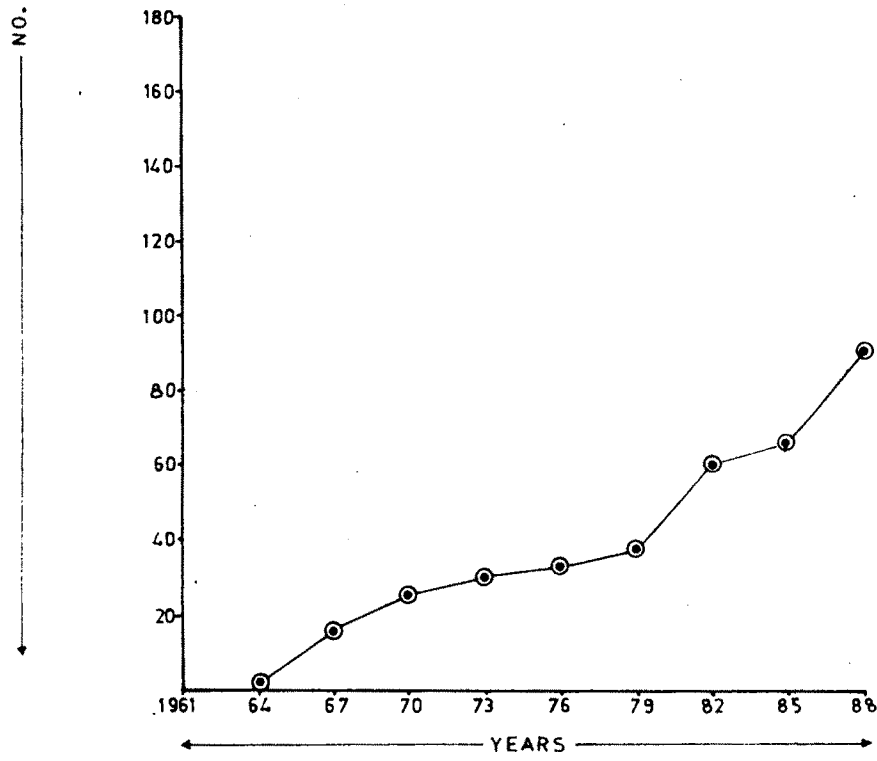


FIG 3-1

B) Kasegaon Block :

Kasegaon block located in the north western part of the tahsil covers an area of 7503 hectare including 5304 hectare as net sown land. More than 70% area of the total land is cultivated. It serves the total population of 29,191 having a density of 399 persons per sq.Km. Lift and well are main sources of water to 30.10% of net sown area.

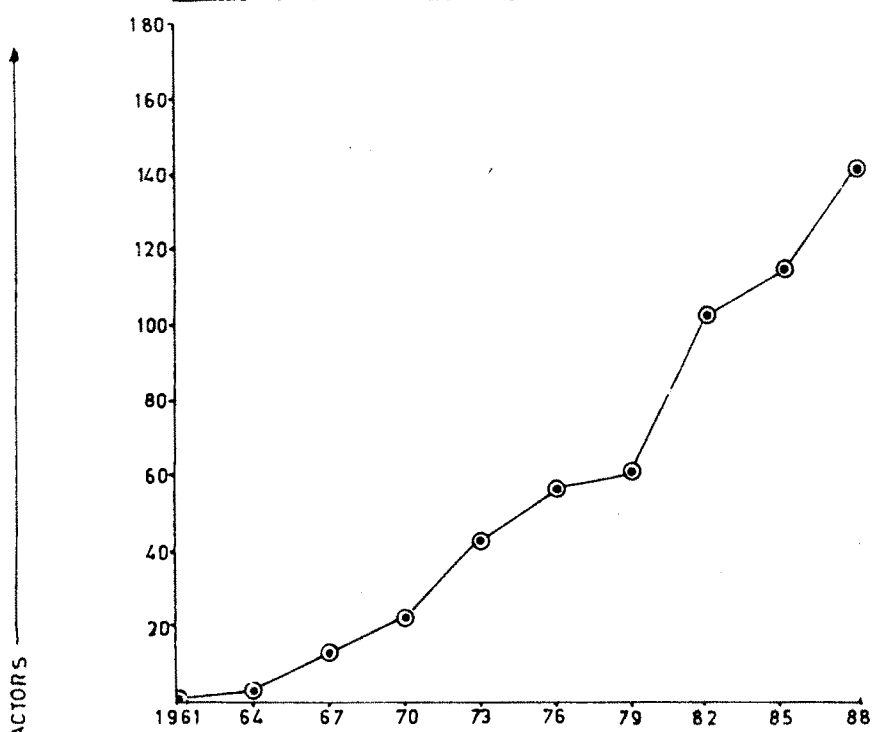
In this block the first tractor was adopted in the year 1963. Table 3.1 reveal the increase in the numbers of tractors from 1 tractor in 1963 to 91 in 1988. Increase in irrigation facilities led to increase the land under sugarcane cultivation and provide the credit facilities to peasants for adoption of tractors resulted in the diffusion of tractor in Kasegaon block. The actual number of adoption of tractors reveals the increasing trend of adoption of tractors (Fig.3.1-B).

C) Walwa Block :

Walwa block lying in northeastern part of the tahsil has total population of 38,337 giving a density of 355 person per sq.km. The Walwa block is well served with assured irrigation facilities. The average rainfall is 638.8 mm. The main source of irrigation are wells and lifts. The ample water from river Krishna irrigates about 34% of net sown area. About 85% of total area is cultivated.

TRENDS OF DIFFUSION

(C) WALWA BLOCK



(D) KAMERI BLOCK

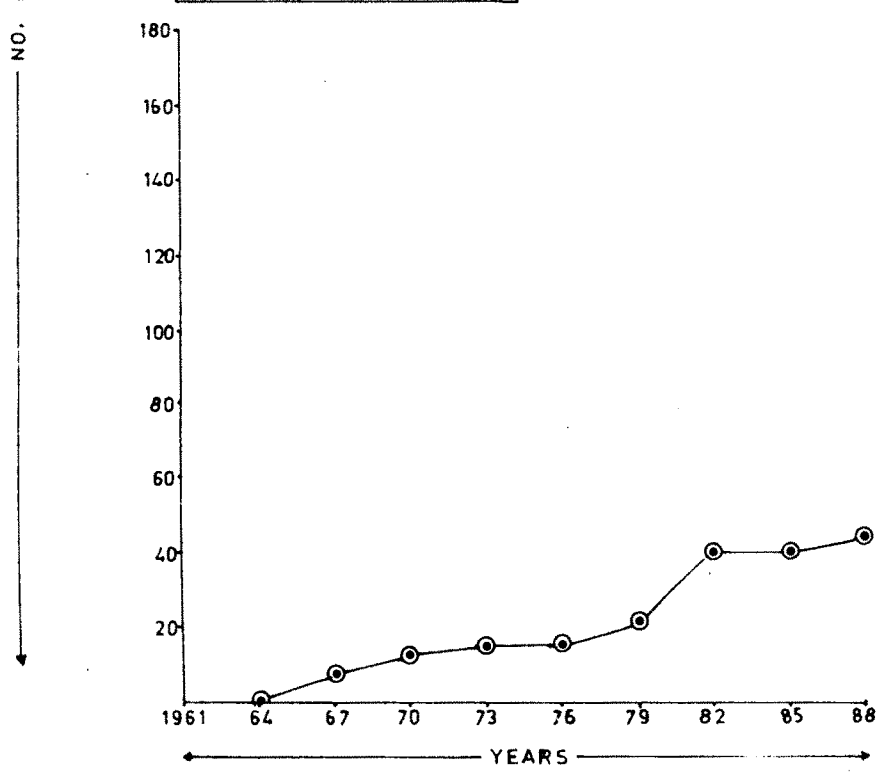


FIG 3.2

Table 3.1 shows that in year 1961 the adoption of tractor took place in this block. The adoption of tractor firstly took place in Walwa block at Shirgaon village. During this year the number of adopted tractor was only one but upto 1988 it has increased upto 142. The adoption of tractor upto 1970 was only 22 but after 1971 the rate of tractorization increased. This can be well attributed to the efforts made by Rajaram Bapu Patil Sugar Factory Ltd., Sakharale in increasing area under irrigation by sponsaring numerous lift irrigation schemes, thereby increasing the area under cash crops like sugarcane. The sugarcane has strengthened the financial position of farmers. Besides this, the credit facilities provided by sugar factory are also equally important for the rapid adoption of tractors in this block (Fig.3.2-C).

D) Kameri Block :

This block covers an area of 10,712.99 hectare including 8,352.99 hectare as a cultivated land. It has a total population of 29,507 giving a density of 289 persons per sq.km. Wells and lifts provide the water to 12% of the net sown area. The annual rainfall is low (668 mm) and highly erratic.

In this block the first tractor was adopted in year 1965 the number of tractor were only 2. The rate of adoption upto 1978 was very low but after 1978 there is remarkable increase in adoption of tractors, in 1988 it goes upto 45 (Fig.3.2-D).

TABLE 3.1 : Actual numbers of tractors of Walwa tahsil (blockwise).

Sr. No.	Year	Rethare Haranaksha	Kasegaon	Walwa	Kameri	Peth	Bavachi	Kuralap	Yelur
1	1961	1	-	1	-	-	-	2	1
2	1962	1	-	1	-	-	-	3	1
3	1963	1	1	2	-	1	-	4	1
4	1964	2	2	3	-	1	-	4	3
5	1965	10	5	6	2	2	4	8	3
6	1966	15	9	9	3	5	6	9	4
7	1967	19	16	13	8	7	8	10	7
8	1968	25	16	16	9	9	10	10	8
9	1969	26	21	19	12	9	11	14	8
10	1970	33	25	22	13	10	14	16	9
11	1971	39	26	27	15	12	18	18	9
12	1972	46	26	29	16	12	20	18	10
13	1973	51	30	43	16	13	23	19	10
14	1974	55	33	50	16	19	28	21	10

Conti..

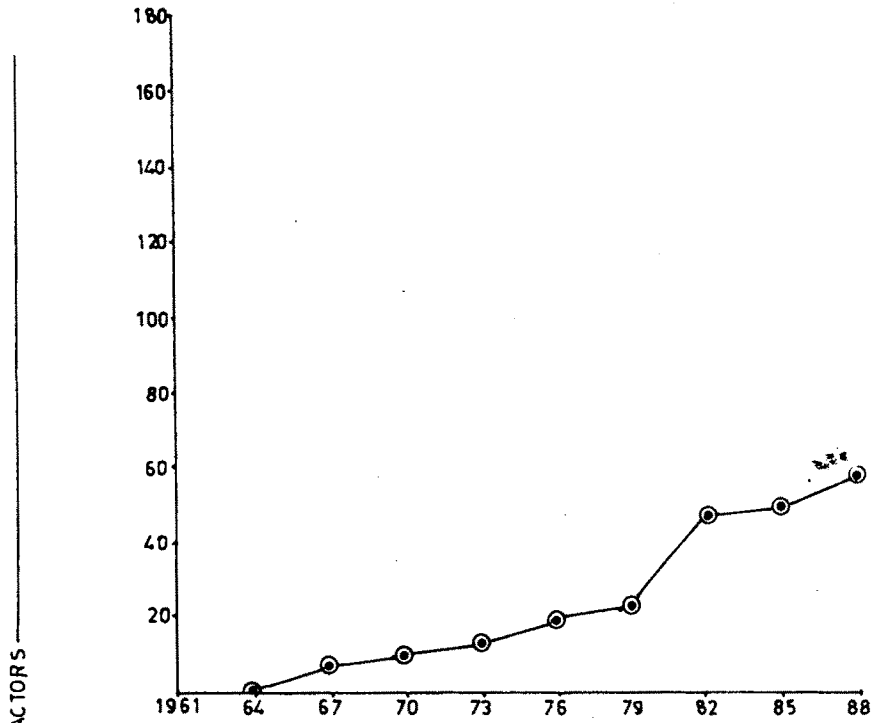
Table 3.1 conti..

Sr. No.	Year	Rethare Haranaksha	Kasegaon	Walwa	Kameri	Peth	Bavachi	Kuralap	Yelur
15	1975	57	33	56	16	19	29	21	10
16	1976	58	33	57	16	19	30	22	10
17	1977	60	35	59	16	19	32	23	11
18	1978	68	36	60	17	21	33	23	11
19	1979	69	37	61	22	23	40	26	16
20	1980	76	45	71	25	27	45	29	22
21	1981	98	55	87	39	42	65	44	29
22	1982	106	60	102	41	47	68	46	33
23	1983	114	65	112	41	49	70	48	34
24	1984	114	66	113	41	49	71	50	34
25	1985	115	66	114	41	49	71	50	34
26	1986	118	71	118	43	50	82	53	36
27	1987	154	83	138	44	56	90	62	39
28	1988	162	91	142	45	58	98	64	39

SOURCE : Compiled by the Author.

TRENDS OF DIFFUSION

Ⓔ PETH BLOCK



Ⓕ BAVACHI BLOCK

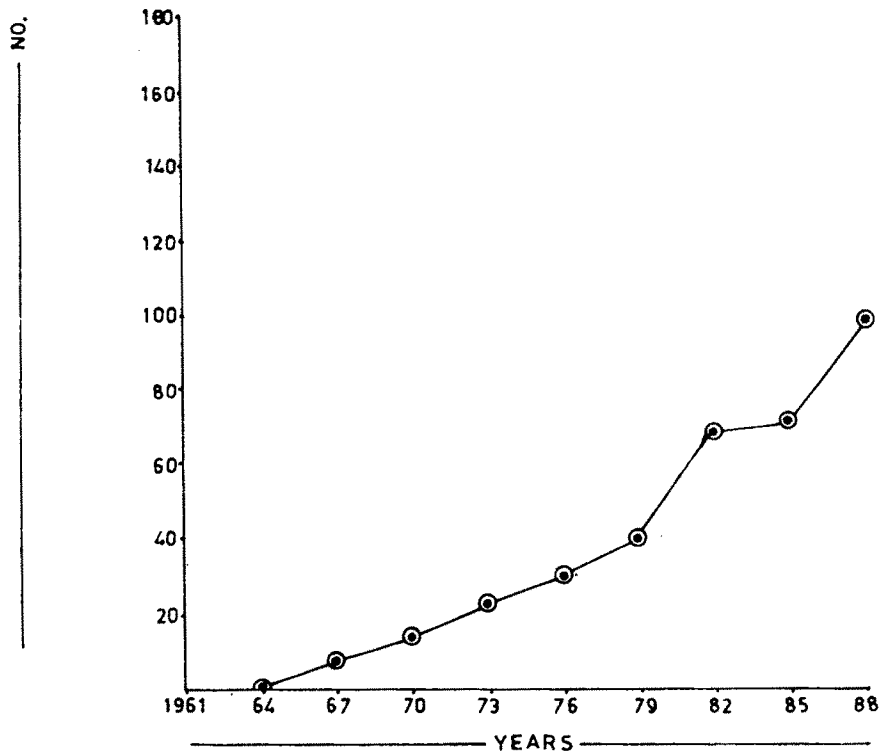


FIG 3-3

E) Peth Block :

The Peth block is located in western part of tahsil. It covers an area of about 7,494 hectare. It has a total population of 27,991 giving a density of 318 persons per sq. Km. More than 71% of the total area is cultivated. The main source of irrigation are wells and lifts, irrigating about 9% of the net sown area.

The adoption of tractor took place in Peth block in the year 1963. During this year the number of adopted tractor was only one, but upto 1988 it has increased upto 58. Mainly because of developed irrigation facilities, increased area under sugarcane cultivation and growth of sugar factories which provide the financial assistance to the farmers for adoption of tractors. It is also clear that the actual values of tractor adoption has increasing trend in this block. Table 3.1 indicates that the actual values are increasing in trend. The adoption of tractors is also represented by line graph (Fig.3.3-E).

F) Bavachi Block :

Bavachi block covers an area about 9,997.86 hectare, out of the total area about 79% is under cultivation. It serves population of 29,093 giving a density 599 persons per sq.km. The average annual rainfall is about 599 mm. The Bavachi block is well served with means of irrigation. Wells and lifts are dominant sources of irrigation which irrigates about 23.7% of net sown area.

Adoption of tractor started firstly in the year 1965. During this year number of adopted tractors was only 4; upto the year 1979 the rate of diffusion increased rapidly due to increase in area under sugarcane cultivation and availability of credit facilities. The number of tractors has increased from 4 in 1965 to 98 in 1988. This fact represented in Table 3.1 and Fig.3.3-F, reveal the increasing trend of adoption of tractors.

G) Kuralap Block :

The Kuralap block lying in South Western part of tahsil covers an area of about 7,381 hectare including 4629.12 hect. as net sown area. It supports a population of 26,963 giving a density of 375 persons per sq.km. The wells and river Warana irrigate about 15% of net sown area.

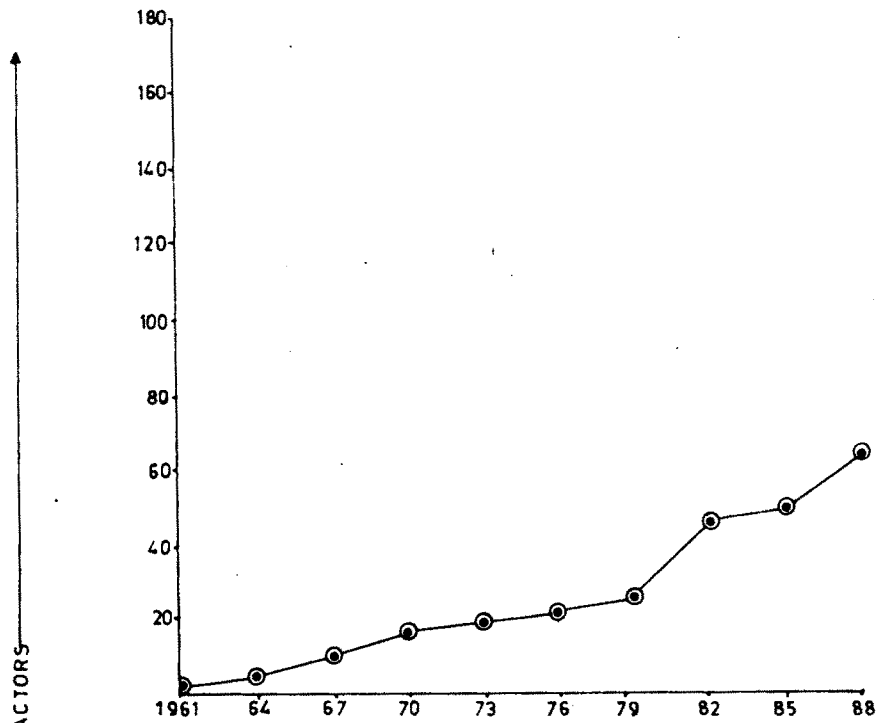
In this block adption of tractor took place in year 1961 at Aitavade Bk. During this year the number of adopted tractors was only 2. Table 3.1 reveals that the rate of adoption was very slow upto the year 1977. Adoption of tractor then slightly increased and reached upto 64 tractors in the year 1988 (Fig.3.4-G).

H) Yelur Block :

Yelur block located in between Kuralap and Bavachi block covers souther part of tahsil. The total geographical area of Yelur block is 7844.62 hect. including 7071.81 hect.

TRENDS OF DIFFUSION

Ⓒ KURLAP BLOCK



Ⓓ YELUR BLOCK

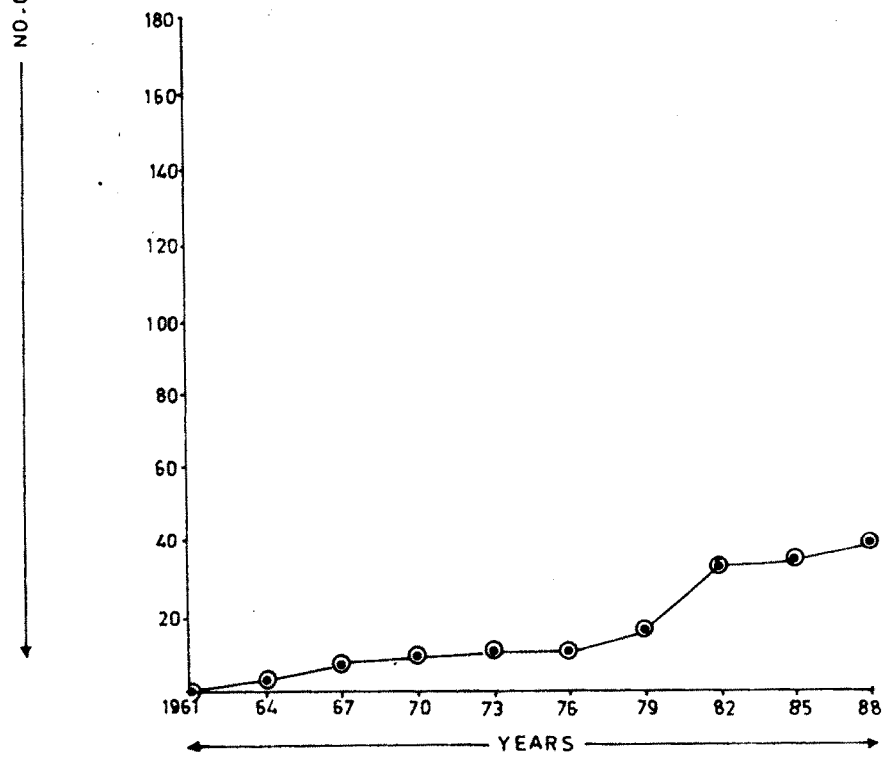


FIG. 3.4

as cultivated land. It serves a population of 28,846. The density is 379 persons per sq.km. The river Warana and wells are main sources of irrigation and which irrigates about 18% net sown area.

The adoption of tractor took place in the year 1961. During this year the number of adopted tractor was only one, which was remained same upto 1963. The rate of adoption increased after 1963 and at present there are 39 tractors (Table 3.1). This fact represented in Fig.3.4-H; the figure reveals that the adoption trend has increased considerably after 1976.

3.3 SUMMARY :

The diffusion of tractors in the tahsil as evident from the study that the first tractor was purchased in the year 1961 in Rethare Haranaksha block and introduced in Yedemachindra village. It is quite obvious from the study that the diffusion of adoption of tractor started in Rethare Haranaksha block and spread towards the Walwa, Yelur and Kuralap administrative blocks of Walwa tahsil respectively in 1961. The trend of diffusion of adoption tractors is highest in Rethare Haranaksha followed by Walwa, Bavachi, Kasegaon, Kuralap, Peth, Kameri and Yelur. In general, in the beginning the rate of diffusion was high upto 1967. It was then constant upto 1970 and latter it has shown increased trend. The four

blocks namely Rethare Haranaksha, Walwa, Bavachi and Kasegaon are progressive in adopting the tractors. The remaining four blocks viz. Kameri, Yelur, Peth and Kuralap are rather let in adoption where rate of adoption is also slow.