

CHAPTER-III / PROFILE OF MIXED FERTILIZER.

3.1 Introduction of Mixed Fertilizer :

Plants require 16 elements for completion of their life process. Out of this, three elements are obtained from Hydrospher and atmosphere. Remaining 13 elements are obtained from soil through roots. The deficiency of any one of the nutrient resulted in decrease in the crop yield. In view of this, fertilizer is defined as any material which when added in soil supply one or more essential nutrient for the growth of the plant. These nutrient elements are essential and required in balance proportion. The nutrient elements have antagonistic effects on the up take of other nutrient. In view of this, to supply the major nutrient in balance proportion fertilizers mixtures are proposed in general, Where-as particularly in India due to illiteracy among the farmers, mixed fertilizer are specially designed to have balance nutrient under our condition. In addition to balance nutrient fertilizer mixtures are economic in application, storage, and transport cost. Due to balance nutrient mixed fertilizer over-come some of the demerits of the mixed fertilizers over straight fertilizer.

"Fertilizer mixture is defined as a physical mixture which supply two or more initial nutrient elements for the crops".

"Granulated mixture means a mixture of fertilizers containing any two or more essential plant nutrients made by intimately mixing two or more fertilizer material with or without inert material, and granulating them together without involving any chemical reaction".

Methods of Preparing Fertilizer Mixture :

The fertilizer mixture may either be prepared manually by the cultivators or in the factories with the help of special equipment. The former are known as 'Farm-mixed' fertilizers while latter are termed as factors made mixture.

Farm-mixed fertilizers :

Some fertilizer materials can be brought and mixed satisfactorily on the farm without the use of special equipment. This method is economical. Mixing on the farm should be done on a cement floor. The equipment required would be shevel or phawda, a screen, a hammer to break the lumps and weighing balance or scale to measure the exact quantities of the different

fertilizers and the filler. It is desirable to mix the fertilizer on the day of application or a day before, to avoid caking.

Factory made mixture :

There are in general four different types of fertilizer mixing plants.

- i) The dry-mix plant in which all straight fertilizers are mixed in the dry form. Such plants are in extensive in India.
- ii) The plants in which ammonia is added to phosphatic and potassic fertilizers. Such plants are common in the U.S.A.
- iii) The plants in which superphosphate is manufactured from locally purchased sulphuric acid and rock phosphate. Superphosphate is utilized in the preparation of mixed fertilizers.
- iv) The plants which manufactured their own requirement of sulphuric acid to prepare superphosphate which is further used in preparing mixed fertilizer.

Grades of fertilizer mixture Approved by the state
Department of Agriculture :

As fertilizer mixtures are becoming popular the cultivators, a large number of mixed fertilizer of various grades have been introduced into the market, by private firms and co-operative societies. Therefore to standardise the grades to suit the departmental Manurial Recommendations, various state Departments of agriculture have prepared approved list of the fertilizer mixture with definite grades. Which can be marketed to cultivators. Fertilizer mixture approved for the Maharashtra state are given below :

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|-----------------------|-----------------------|-----------------------|
| 1) N.P.K.
15:15:15 | 2) N.P.K.
18:18:10 | 3) N.P.K.
9:20:20 |
| 4) N.P.K.
10:26:26 | 5) N.P.K.
20:10:10 | 6) N.P.K.
10:20:20 |
| 7) NP.K.
20:20:0 | | |

TABLE No. 3.1

Yearwise Quantity of mixed fertilizer Distributed or consumed in Kolhapur District for last Six year.

Year	Distribution total Quantity of Chemical fertilizers (in tonnes)	Distribution total Quantity of mixed fertilizers (in tonnes)
1985-86	1,75,389	1,02,294
1986-87	1,49,235	80,056
1987-88	1,56,850	82,109
1988-89	1,65,749	77,146
1989-90	1,66,094	77,228
1990-91	1,71,289	66,260

Source - District statistical Office, Kolhapur.

The above table shows that in the year 1985-86 the total consumption of the mixed fertilizers was 1,02,794 tonnes and in the Year 1990-91 it declined to 66,260 tonnes. Hence the trend shows the declined in consumption.

3.2 Profiles of the Organizations :

3.2.1 - SHETAKARI SAHAKARI SANGH LTD; KOLHAPUR.

In the pre-independence era the poor Farmers were extorted by money lenders to a great extent. To avoid the extortion of poor farmers. Tahashildar Shri. Pandurang Atmaram Rane established the Sangh in the name, "Shetakari Sahakari Sangh Ltd; Kolhapur". The said sangh was established on the auspicious day of "Vijaya Dashami" on 23rd Oct, 1939.

In the earlier days the sangh provided loans to small farmers. The people thought that the Sangh was a Government body and the promoting chairman was perhaps a Tahashildar. Hence they did not repay the loan amount.

Development in true sense started in 1942. At that time Shri. Tatyasaheb Mohite was elected as "Managing Director" of the sangh. In order to expand the business of the sangh, Shri. Mohite planned some other activities and the Sangh along with its money lending business to poor farmers, started selling cloth, utensils, Medicines, agricultural equipments, grocery, cement etc. at reasonable rates. Due to this business

the Sangh could create confidence in the minds of local people.

In the year 1954-55 the sangh started manufacturing "BULL BRAND" manure mixtures. The said "BULL BRAND" manure mixture earned lot of popularity and reposed confidence in the farmers. Initially, the said manure mixture was manufactured using man labour Later on in the year 1968 the sangh installed a modern machinery for manufacturing the said mixed manures. It was called Granulated mixed manures. This was the first factory in co-operative sectors of India. The factory is situated at village Rukadi, Tal.Karvir, Dist.Kolhapur.

The Sangh has now completed its 51st year. During the last 51 years Sangh has achieved tremendous progress. In its inception year i.e. in 1940 the sangh's Equity capital was Rs.4,564 which has now increased upto Rs.86,95,575 to the year 1990. The sangh's main production i.e. "BULL BRAND" Granulated manure mixture is sold not only in Kolhapur District but also in Sangli District, Marathawada District, Ratnagiri District etc. The sangh has achieved the sales to the tune of Rs.22,44,29,080 in this year.

3.2.2. RAYAT SEVA KRISHI UDYOG SAHAKARI SANGH LTD;
KOLHAPUR.

It is very necessary to use mixed fertilizers in agricultural field to improve food production. In earlier period the farmers were not getting such fertilizers at proper times. Though the farmers were willing to use it, they were not getting fertilizer. To solve this problem Shri.Shripatrao Shankarrao Bondre, took the lead and he established Rayat Seva Krishi Udyog Sahakari Sangh Ltd; Kolhapur. In the year 1962, The Head Office, of sangh was situated at Rankalavesh, Kolhapur. Where the production unit was also situated.

The real development of Sangh was achieved under the leadership of Shri.S.R.Patil. Though the Sangh's main production to produce the mixed fertilizer and to sell it, The Sangh also provides various types of mixed fertilizers. The Sangh were providing latest scientific and technical information regarding agriculture, to provide soil testing reports and such other collateral equipment regarding agricultural. Thus Sangh is doing so many activities.

Sangh's mixed fertilizer is known as "BULLOCK PAIR BRAND" mixed fertilizer. The said BULLOCK PAIR BRAND has gained a great popularity in Karvir Taluka.

In its inception year the Sangh was having share capital of Rs. 12,200 which was grown up to the tune of Rs. 6,55,900 in the year 1991. In its inception year the Sangh produced 646 M. Tonne mixed fertilizer which has increased to the tune of 3563 M. Tonne in the year 1991.

In order to do the benovelent work the Sangh raised its popularity. The sangh also arranged training to the farmers, free of cost soil testing, to the hold agriculturist festival, to make an exabition of sugercane, polit scheme etc. and Sangh also decleared different kinds of awards to the agriculturist.

3.2.3. SHETI PADAVIDHAR KRISHI UDYOG VIKAS SAHAKARI SANSTHA LTD; KOLHAPUR.

In the year of 1972, Central Government's Agricultural Ministry had appealed to all agricultural Graduates to take a lead informing agricultural service Centres and Graduate agriculturist Co-operative societies in order to make dynamic progress in agricultural field in India. In order to respondents this appeal Shri.Degamber Hanumantrao Jadhav formed the society by name Sheti Padavidhar Krishi Udyog & Vikas Sahakari Sanstha Limited, Kolhapur in the year of 1973. The Head Office of the society is situated

at Gangavesh at Kolhapur and producing unit of the society is situated near the society. The society is having its two branches at Gangavesh and Shahupuri, Kolhapur Mr.Jadhav is promoting Chairman of this society. The said society was registered on 16th January, 1973 and since this date the society started its business.

The main target or aim of the society is to provide best quality seeds, fertilizers, pesticides, agricultural equipment etc. at reasonable price.

The society is manufacturing the mixed fertilizer by brand name "SHETI PADAVIDHAR BRAND". The said brand name is engraved in lotus picture. Hence the said brand name is popular as "KAMAL BRAND" mixed fertilizer amongst the people. The said mixed fertilizer has earned a lot of popularity within a very short period. In inception year the society was having only 19 members but today they are having 216 members. The societies Equity capital was at Rs. 21,650 in the year 1973-74 but in year 1989-90 the equity capital invested by members was Rs.48,050 and capital allotted by the Government was Rs. 1,02,150. Thus the Equity capital had touched to Rs.1,50,000. The

society has achieved the sell of 2290 M. Tonne of 'KAMAL BRAND' mixed fertilizer. They also sell the other types of fertilizers produced by Govt, Semi-Govt, and Public limited companies.

The society today has 12 permanent employees and 10 workers on daily wages basis.

The society's field of work is Kolhapur District. Due to the financial problem the society supplies its products in limited Talukas only viz, Karvir, Radhanagiri, Panhala, Hatkanangale Taluka. The society supplies mainly mixed fertilizers primary societies in the villages, of the above mentioned Taluka.

TABLE No. 3.2

Yearwise Quantity of Mixed fertilizer Distributed
or consumed in Karvir Taluka For last four year.

(in tonnes)

year	BULL BRAND	%	BULLOCK PAIR BRAND	%	KAMAL BRAND	%
1987-88	16,000	100	2,481	100	1,295	100
1988-89	15,000	93.75	2,587	104.27	1,562	120.62
1989-90	11,000	68.75	2,841	114.51	1,804	139.31
1990-91	10,000	62.50	3,563	143.61	2,290	176.83

The above table indicates that in the case of BULL BRAND the total consumption of mixed fertilizers decreased gradually. But in the case of BULLOCK PAIR BRAND and KAMAL BRAND the total consumption of mixed fertilizers increased with time.