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## **CHAPTER - 4**

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**4.1 Data Analysis**

**4.2 Development of Mode for  
Marketing Information System**

## CHAPTER - 4

### DATA ANALYSIS

To conduct any analysis data should be accurately and precisely collected. The report generated by various departments has carefully studied in the present form, verified and data procured. After the collection of data, it has to be correctly fed into the computerised model so that the reports that are generated through it gives a wealth of information to the management and the one which is error free, meaningful and easily interpreted by the concerns.

The Kolhapur Zilla Sahkari Dudh Utpadak Sangh procures milk through village level co-operative societies. The societies get the milk from individual milk producers. Major portion of the milk is collected at chilling centre Gadhinglaj and Bidri, from where it is chilled and transported to Gokul project.

From the discussion with various departmental incharges, who were very co-operative in giving out the details of the available data, different modes of data collection was minutely studied and collected. Data collected from various department is as given under

1. Daily milk collection - Procurement Department
2. Milk and Milk product sale - Marketing Department
3. Milk deposition and Milk used - Dairy Department  
for production
4. Balance of finished products - Inventory Department

For meaningful and detail data analysis, data is collected at each and every stage of milk processing. In order to give a clear picture and for steady decision making the various data is represented in a single format. Data collected is entered accurately and stored in the computer

and reports are generated on daily basis, on monthly basis, and as required.

For comprehensive knowledge about the companies development profile past data plays an important role, hence these data has to be procured. Not only will it give an idea of company standing but also one will be able to see the companies developmental efforts and profitability. Hence the following data is collected.

1. Monthwise average milk procurement from 1991 to 1995.
2. Distribution of milk from 1991 to 1995.
3. Average Milk products production and sale from 1991 to 1995.

Various data collected from different department are produced in figures in different format is as given below.

Kolhapur Zilla Sahakari Duddh Utpadak Sangh Ltd., Kolhapur  
Milk Product 1991-92 (Food)

Production	April	May	June	July	August	September	October	November	December	Jan. 92	February	March	Total	Average
Creme	48312	25740	3465	9900	11781	67617	183051	294327	198099	20719	165776	51282	1265364	105447
Butter	20885	10359	-	-	28745	73759	130549	89915	89915	99650	81030	27240	562132	46844
Ghee	9828	9603	27216	18860	19605	11791	12215	21004	6597	20651	2908	1735	162013	13501
M.P.Good	27600	17925	-	-	-	34875	115650	192400	13550	136325	105025	43175	808525	67377
M.P.Chab.	410	-	-	-	-	50	455	341	175	-	125	125	1681	140
Shrikhand	3584	8678	1846	5632	14222	4337	9848	3414	11957	2877	2357	14082	82828	6902
Amrakhand	1234	1222	393	733	2056	823	1944	361	2210	654	812	2816	15258	1272
Table But.	3216	1300	1778	5053	5436	-	10645	10348	5779	-	-	-	43555	3630
Whole M.P.	26250	-	-	-	-	-	-	-	-	-	-	-	26250	2188
Use														
Creme	48312	25740	3465	9900	11781	61677	179289	294129	199584	210672	163478	51282	1259309	104942
Butter	-	-	53480	22200	27100	12925	10359	24109	7575	14970	3090	-	175808	14651
M.P.Good	-	-	-	-	-	-	-	-	-	-	-	-	-	-
M.P.Chab.	410	-	-	-	-	-	-	175	-	-	-	50	225	19
Table Butt.	-	-	-	-	37	-	24	101	53	-	-	-	215	18

Milk Product Sale for the year 1991-92

Production	April	May	June	July	August	September	October	November	December	Jan. 92	February	March	Total	Average
White But	10700	10000	50500	83000	23400	14880	51960	27760	-	-	-	-	272200	22683
Ghee														
15 Kg	210	3075	1305	15	45	-	15	630	-	-	-	-	5295	441
1 Kg	3080	4830	4890	8320	9360	8240	-	4920	3630	9100	1870	730	62050	5771
1/2 Kg	4160	7510	7950	12210	10380	7340	11360	12910	5320	8550	4070	1980	93740	7812
Lose	-	-	2250	1295	-	-	-	-	46	475	131	30	4227	352
Bombay	-	-	-	1500	-	-	-	-	-	-	-	-	1500	125
Total	7450	15415	16395	23340	19785	15580	11375	18860	8996	18125	6071	2740	163732	13644
M.P. 25Kg	134850	39275	42325	103225	400	-	350	63300	100	36050	54250	63000	537125	44760
1 Kg	24550	22250	2025	11675	2275	3100	26625	2850	17775	21975	10125	22675	168600	14050
1/2 Kg	50	870	1590	2280	1270	1590	550	1930	2270	820	1810	1780	16610	1384
100 Gm	2520	2650	3100	2140	3215	1420	2837	2140	1430	1330	1490	2300	26602	2217
C. B.	-	-	-	-	-	-	455	216	-	-	-	-	746	62
Total	1970	65745	49040	119120	7160	6110	30362	70436	21575	60175	67675	89830	749198	62433
B.P. 100Gm	4116	4572	2122	2610	6512	3198	4144	4030	3912	3148	2910	2724	43998	5932
250 Gm	1716	1950	894	1002	3216	1686	2052	1788	1692	1584	1050	1650	20280	1690
100 Gm	1064	1174	658	684	1232	966	1025	925	1204	884	828	1030	11677	973
Lose	-	-	-	45	-	-	-	-	-	-	-	-	45	4
Total	6896	8116	3674	4441	11320	6050	7294	6783	6978	5716	4858	5404	77530	8733
Amra. 500Gm	456	192	348	515	810	606	708	468	678	564	576	570	6791	567
250 Gm	378	438	150	359	558	342	336	420	492	300	258	414	4475	373
100 Gm	248	190	114	162	230	70	210	224	340	244	204	322	2558	853
Lose	-	-	-	-	18	-	-	-	45	-	-	-	63	5
Total	1082	1220	612	1036	1616	1080	1284	1112	1555	1108	1038	1306	13887	1158
B.P. +Amra	7978	9236	4286	5477	12936	7130	8878	7895	8533	6824	5896	6710	91417	9891
T.B. 500 Gm	1708	1637	680	3664	3686	3260	8812	5720	4150	425	160	720	34662	2885
100 Gm	1227	601	628	725	801	458	1373	312	2580	255	192	45	9197	766
Total	2935	2238	1308	4389	4487	3718	10185	6032	1263	680	352	765	43819	3651

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Byproduct Sales for the Year 1992-93

Production	April	May	June	July	August	September	October	November	December	Jan. 92	February	March	Total
Creme	-	-	-	-	-	-	-	603	-	1205	640	17780	19625
Whit. But	1000	2000	2200	3460	6141	4220	85800	69980	148820	181080	170480	419360	1094541
Chee 15Kg	355	180	-	-	47670	57165	48720	37575	25425	6645	11880	55440	291055
1 Kg	3672	1470	3480	11420	5970	3073	4480	2890	20	3630	390	1190	41685
1/2 Kg	4280	2690	6002	6600	3320	3850	6280	3340	890	5730	4260	2800	50042
Lose	-	3045	150	785	46	45	515	-	585	-	-	-	5171
Bombay	-	-	-	-	-	-	-	-	-	-	-	-	14580
Total	8307	7385	12632	19555	57006	64133	59995	43805	26920	20985	22380	59430	402533
M.P. 25Kg	18650	91250	219225	36850	2700	10225	9000	9500	7125	132000	364275	2275	903075
1 Kg	9375	13525	13225	15400	17775	13300	450755	19600	31725	12300	22975	17850	232125
1/2 Kg	2380	2970	1640	1404	1670	1190	2610	1400	2130	1970	2210	2010	23584
100 Gm	2880	1360	23125	1610	1720	1820	1500	1980	1700	1520	1710	2380	224825
C. B.	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	33285	109105	236402	44264	23865	26535	58185	32480	42680	147790	391170	24515	11812765
B.P. 100Gm	485	200	150	150	200	-	150	350	100	120	113	150	2168
250 Gm	5534	4958	3608	3436	4510	2380	4392	3850	3738	3220	3060	5530	48224
100 Gm	2460	2124	1590	1314	2280	1422	2130	1440	2058	1782	2554	3252	23406
Lose	1258	1156	890	678	1020	608	1274	802	976	1104	1220	1590	12576
Total	9737	8558	6238	5578	8050	4430	7294	6450	7137	6226	5974	10617	540
Amra. 500Gm	1176	876	696	690	966	462	846	834	702	708	786	1326	10068
250 Gm	625	486	354	402	624	252	498	468	546	474	552	1014	6304
100 Gm	336	272	194	242	228	226	212	340	340	341	394	632	3757
Lose	-	80	160	-	-	55	-	-	-	15	155	-	461
Total	2136	1724	1404	1334	1818	992	1556	1642	1588	1538	1887	2972	20594
B.P. Amra	11873	10282	7642	5913	9868	5425	9502	8092	8725	7764	7834	13589	107508
T.B. 500Gm	260	290	880	1051	711	470	1100	740	1139	1630	1260	1320	10851
100 Gm	273	103	144	213	183	322	252	180	530	412	279	342	3223
Total	533	393	1024	1264	884	792	1352	920	1669	2042	1539	1662	14074
Whole M.P.	-	-	-	-	-	-	-	-	9000	50	-	-	9050

Byproduct Sales for the Year 1992-93

Production	April	May	June	July	August	September	October	November	December	Jan. 92	February	March	Total
Creame	-	-	-	-	-	-	-	603	-	1205	640	17780	19625
Whit. But	1000	2000	2200	3460	6141	4220	85800	69980	148820	181080	170480	419360	1094541
Ghee 15Kg	355	180	-	-	47670	57165	48720	37575	25425	6645	11880	55440	291055
1 Kg	3672	1470	3480	11420	5970	3073	4480	2890	20	3630	390	1190	41685
1/2 Kg	4280	2690	6002	6600	3320	3850	6280	3340	890	5730	4260	2800	50042
Loss	-	3045	150	785	46	45	515	-	585	-	-	-	5171
Bombay	-	-	-	-	-	-	-	-	-	-	-	-	14580
Total	8307	7385	12632	19555	57006	64133	59995	43805	26920	20985	22380	59430	402533
H.P. 25Kg	18650	91250	219225	36850	2700	10225	9000	9500	7125	132000	364275	2275	903075
1 Kg	9375	13525	13225	15400	17775	13300	450755	19600	31725	12300	22975	17850	232125
1/2 Kg	2380	2970	1640	1404	1670	1190	2610	1400	2130	1970	2210	2010	23584
100 Gm	2880	1360	23125	1610	1720	1820	1500	1980	1700	1520	1710	2380	224825
C. B.	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	33285	109105	236402	44264	23865	26535	58185	32480	42680	147790	391170	24515	11812765
B.P. 100Gm	485	200	150	150	200	-	150	350	100	120	113	150	2168
250 Gm	5534	4958	3608	3436	4510	2380	4392	3850	3738	3220	3060	5530	48224
100 Gm	2460	2124	1590	1314	2280	1422	2130	1440	2058	1782	2554	3252	23406
Loss	1258	1156	890	678	1020	608	1274	802	976	1104	1220	1590	12576
Total	9737	8558	6238	5578	8050	4430	7294	6450	7137	6226	5974	10617	540
Amra. 500Gm	1176	876	696	690	966	462	846	834	702	708	786	1326	10068
250 Gm	625	486	354	402	624	252	498	468	546	474	552	1014	6304
100 Gm	336	272	194	242	228	226	212	340	340	341	394	632	3757
Loss	-	80	160	-	-	55	-	-	-	15	155	-	461
Total	2136	1724	1404	1334	1818	992	1556	1642	1588	1538	1887	2972	20594
B.P.+Amra	11873	10282	7642	5913	9868	5425	9502	8092	8725	7764	7834	13589	107508
T.B. 500Gm	260	290	880	1051	711	470	1100	740	1139	1630	1260	1320	10851
100 Gm	273	103	144	213	183	322	252	180	530	412	279	342	3223
Total	533	393	1024	1264	884	792	1352	920	1669	2042	1539	1662	14074
Whole M.P.	-	-	-	-	-	-	-	-	9000	50	-	-	9050





Milk Product Sales for the 1993-94

Production	April	May	June	July	August	September	October	November	December	Jan. 92	February	March	Total
<b>Creame</b>	25970	14750	-	-	-	-	-	3000	16065	3000	300	450	63535
Whit. But	79004	46560	60060	24640	1380	51620	41000	34340	135220	429180	259780	32220	190640
Ghee 15Kg	31185	3615	915	1710	-	6725	11505	8115	10815	11460	1500	10620	98175
1 Kg	930	480	1510	2700	796	780	1290	1680	810	1090	850	840	13936
1/2 Kg	1620	1745	3460	5180	1840	3020	3120	3859	4030	4662	3520	2540	41834
Lose	500	-	500	625	1435	160	4540	3120	1004	3530	-	-	16314
Bombay	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	34235	-	6385	10215	4071	10695	621355	16954	166599	20742	5870	14000	200456
<b>M.P. 25Kg</b>	342575	5840	302250	10800	7825	32025	6825	3225	36825	33900	118425	10290	135950
1 Kg	36375	357925	10675	29475	3975	1650	6175	1500	600	295014	2250	1825	135950
1/2 Kg	2280	23175	3370	2370	2700	1660	2710	2782	2080	1931	2759	1850	120925
100 Gm	2330	4900	2290	2770	1310	1690	1470	990	960	1160	920	1020	31392
C. B.	-	1740	-	-	-	-	-	-	-	-	-	-	18650
<b>Total</b>	383560	387740	318585	42415	15810	54965	17180	8497	40465	39941	124654	106695	1534807
<b>B.P. 100Gm</b>	100	2790	1080	650	-	1550	150	10	-	1660	40	110	21530
250 Gm	2820	2154	1524	2262	1690	1365	1910	3850	1480	1662	870	1230	27520
100 Gm	2502	1980	1362	1944	2154	1266	1884	1870	1384	1926	1104	1410	21135
Lose	1656	1196	1012	1324	1836	680	1632	1788	1524	944	1371	1686	12686
<b>Total</b>	10125	8785	5038	8950	6839	4082	6634	1584	5279	6267	4502	5570	80264
<b>Amra. 500Gm</b>	1500	1218	588	1080	774	48	649	774	654	720	510	576	9523
250 Gm	852	816	528	924	678	402	564	480	444	558	522	408	7176
100 Gm	670	458	310	340	392	268	436	342	382	420	276	382	4675
Lose	20	480	55	-	22	15	-	120	-	-	-	-	722
<b>Total</b>	3042	2982	1421	2344	1866	1165	1649	1716	1480	7968	1308	1365	22096
<b>B.P. + Amra</b>	13137	11767	6519	11294	8705	6007	8283	7890	6755	700	5809	6935	10236
T.B. 500Gm	490	1040	690	1300	20	760	1130	1427	1200	288	929	290	9976
100 Gm	270	368	310	661	12	110	243	439	158	-	158	320	3337
<b>Total</b>	760	1408	1000	1961	32	870	1373	1866	1358	988	1087	610	15179
<b>Whole M.P.</b>	25	-	6925	-	-	-	493	-	-	-	-	750	2393



Product Sale for the Year 1994-95

Sale	April	May	June	July	August	September	October	November	December	Jan. 92	February	March	Total
Crene	2865	5200	2985	-	-	-	-	-	-	-	-	105	11155
Whit. But	14460	34940	23000	3000	-	-	-	-	-	-	-	-	75400
Ghee 15Kg	1035	7515	90	-	-	-	-	-	-	-	-	-	8640
1 Kg	540	250	890	1770	430	810	3720	3720	1419	1100	870	540	16059
1/2 Kg	2854	3170	1940	3315	-	2920	7210	4440	3270	4272	2150	2212	37753
Lose	-	500	500	-	-	1020	990	200	-	-	-	-	3210
Bombay	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	4429	11435	3420	5085	430	4750	11920	8360	4689	5372	3020	2752	65662
S Ghee	4950	-	4545	-	5950	4500	1995	-	-	5950	2030	-	29920
M.P. 25Kg	58250	184175	191850	308125	501500	-	-	16500	16800	-	-	-	29920
1 Kg	1450	17175	44575	43475	50025	12910	2523	7430	2314	5580	6320	3420	197197
1/2 Kg	2431	2400	1830	2590	10160	3130	300	-	-	1210	952	2514	27517
100 Gm	1880	1410	1530	1390	1550	950	1621	1010	1484	790	880	18	22309
C. B.	-	1740	-	-	-	-	-	-	-	-	-	-	18650
Total	64011	205160	239775	355580	563235	1699	4444	24940	20598	7580	8152	7814	15242
B.P. 1 Kg	-	50	10	-	1740	-	-	-	60	50	50	-	220
B.P. 1/2 Kg	2100	1390	700	900	-	1100	1750	860	1100	1190	1030	1775	15635
B.P. 500gm	2569	1398	1208	983	1740	1386	1800	1554	1549	1488	1224	2730	20127
250 Gm	2922	1584	1140	990	2652	1734	2023	1494	1836	1806	1554	3312	23047
100 Gm	1120	1090	622	629	1344	1080	1155	906	1400	1214	1394	2016	13970
Lose	10	130	30	40	-	-	-	40	150	55	-	60	515
Total	8721	5642	3710	2642	7974	5300	6728	4854	6095	5803	5252	9893	73514
Amra. 500Gm	966	636	396	420	1050	624	802	576	753	708	648	1062	8641
250 Gm	822	534	324	354	804	330	786	516	792	672	420	1080	7434
100 Gm	332	422	258	250	488	302	504	410	490	452	200	752	4860
Lose	-	505	-	-	-	-	-	-	50	-	180	30	765
Total	2120	2097	978	1024	2342	1256	2092	1502	2085	1832	1448	2924	21700
B.P. + Amra	10841	7739	4688	3666	10316	6556	8820	6356	8180	9635	6700	12817	95184
T.B. 500Gm	750	1160	860	1153	631	1290	3010	7010	3235	990	290	760	21139
100 Gm	282	350	668	240	237	319	1522	939	1097	578	240	244	6386
Total	1032	1510	1528	1393	868	1609	4532	7949	4332	1568	530	1004	27855

Kolhapur Zilla Sakhari Duddh Utpadak Sangh Ltd. Kolhapur  
Average Milk Collection 1991-92

Month	Sangh		MahaSangh		Total	Wholesale		Bombay Outstate		Total	
	Buffalo	Cow	Buffalo	Cow		Buffalo	Cow	Sales	Cow		
April-91	170518	76813	29806	10344	30006	23466	-	23466	113462	30148	30148
May-91	147929	75292	31106	10744	28879	22689	-	22689	112632	28557	28557
June-91	153093	75254	30570	10868	28846	36010	-	36010	114833	24638	24636
July-91	146780	73105	31543	10056	24824	39935	-	39935	118792	24822	24822
August-91	162246	75388	34952	7989	23957	25075	-	25075	129591	23372	23372
Sept.-91	187384	82309	35426	10966	38051	28906	-	28906	136159	19218	19218
Octo.-91	216383	83584	37026	7575	28331	28941	4791	33732	144185	14291	14291
Nov.-91	233234	83380	35371	7274	28731	19288	8572	27860	142363	16614	16614
Dec.-91	227455	79294	36185	8842	28141	19527	9242	28769	148340	19730	20919
Janu.-92	235606	81302	36310	9669	32145	18821	9482	28303	153065	22880	23178
Febe.-92	235619	83111	37401	9974	38877	16906	7787	24693	154844	23822	23822
March-92	231666	84467	40116	10367	49539	20168	-	20168	157807	25689	25689
Average	194824	79437	34651	9556	31694	24144	3323	27467	135503	22831	22956

Kolkhapur Zilla Sahkari Dudd Utpadak Sangh Ltd Kolkhapur  
Average Milk Collection 1992-93

Month	Sangh		MahaSangh		Total	Wholesale		Bombay		Total
	Buffalo	Cow	Local	Buffalo Cow		Buffalo Cow	Sales	Outstate Cow		
April-92	200133	86543	38966	10691	36227	46918	21741	145818	26911	26911
May -92	178330	83706	38425	9164	36794	45958	16820	126435	25860	25860
June -92	166894	79712	37541	8726	23664	32390	21104	134059	25701	25701
July -92	170311	95789	33611	7994	23679	31673	23526	132119	23812	23812
August-92	207058	83739	37715	7965	29476	37441	17084	149122	24057	24057
Sept. -92	242618	89738	36665	4920	28029	32949	10790	152042	17504	17504
Octo. -92	284777	95318	36870	1248	31579	32827	31120	161895	14266	14266
Nov. -92	315351	97473	36139	0	35362	35362	10115	157823	15036	15036
Dec. -92	294205	86566	37298	161	53695	53856	4969	153629	17837	17837
Janu. -93	2744960	81235	36026	296	45896	46192	1278	145408	19032	19032
Febr. -93	279571	90236	37152	329	47625	47954	1050	155325	20756	20756
March-93	277723	96488	39523	128	46404	46572	13957	161555	22316	22316
Average	240953	87190	328143	4305	36536	40841	14462	147963	21091	21091

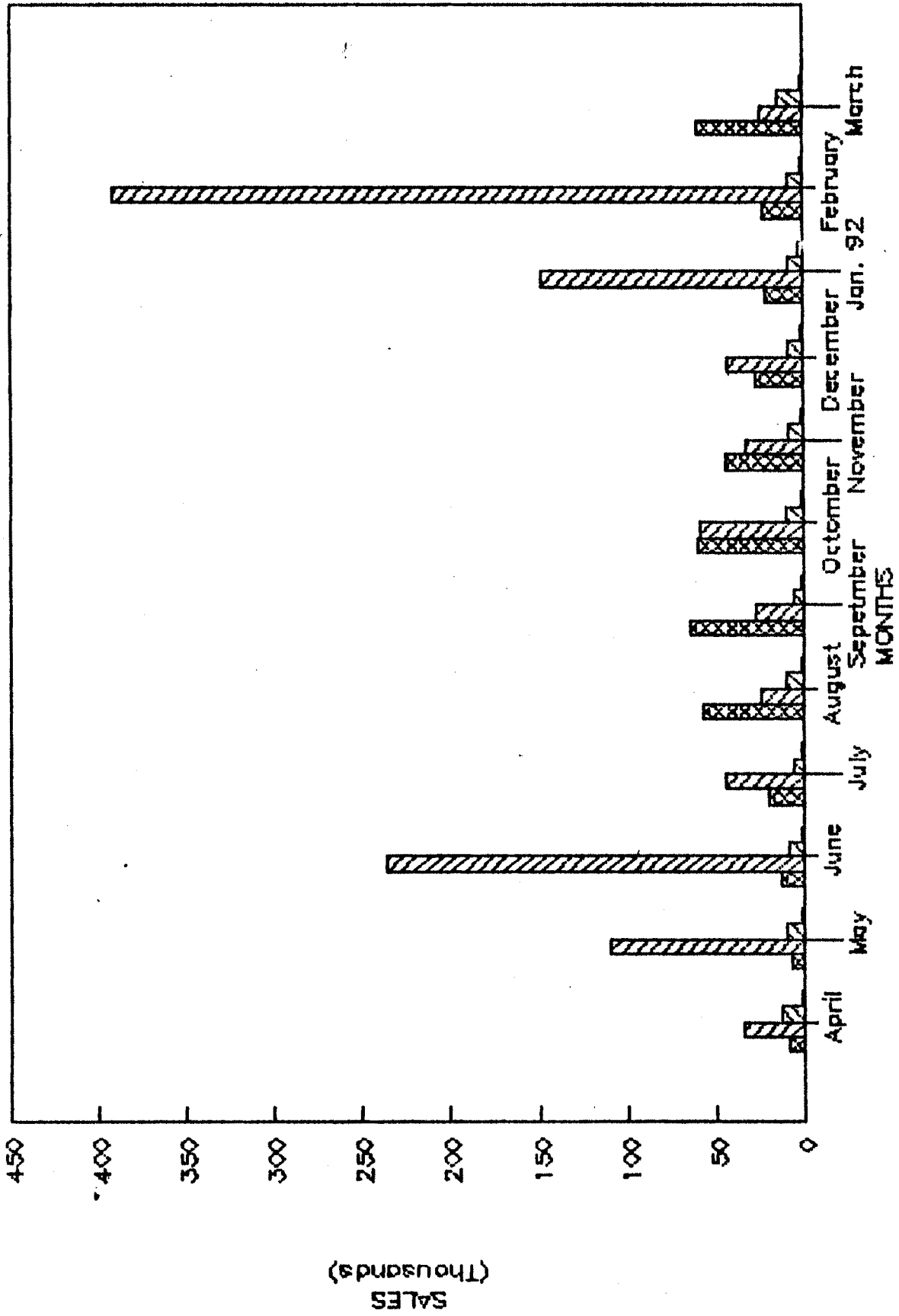


Kolhapur Zilla Sahkari Duddh Utpadak Sangh Ltd Kolhapur  
Average Milk Collection 1994-95

Month	Sangh		Total	Local	MahaSangh		Total	Wholesale		BOMBAY SA		GOA
	Buffalo	Cow			Buffalo	Cow		Buffalo	Cow	buffalo	Total	
April-94	275761	119123	394884	44760	9493	11060	9493	11060	177214	229218	908	
May-94	235728	114864	350592	45754	8576	26746	18387	26746	170841	216814	1470	
June-94	224489	107102	331501	43236	9642	23290	19370	23290	190113	240283	-	
July-94	200209	100160	300369	45266	3494	12012	11658	12012	183186	238017	2674	
August-94	221305	105403	326708	51399	1656	6615	1656	6615	186235	250289	1485	
Sept.-94	253111	110859	363970	53371	5709	11474	9275	11474	191484	255102	606	
Octo.-94	277585	114706	392291	53690	5060	17098	7008	12068	195560	262526	1184	
Nov-93	316429	119861	436290	46580/ 698	5793	14135	9111	14904	187617	253160	-	
Dec-94	305030	109378	414407	47819/ 3003	4587	10338	8964	13551	192043	262939	-	
Janu.-95	314600	105415	420015	47760/ 4096	4617	7654	8587	13204	196755	268929	-	
Febr.-95	300808	104094	404902	51243/ 4752	4558	10931	3379	7937	206615	283939	-	
March-95	281215	104281	385496	55015/ 3310	-	8127	-	-	213392	295265	885	
Average	266910	109591	376501	49839	5265	13224	5693	10258	190221	254007	768	

# MILK PRODUCT SALE 1992-93

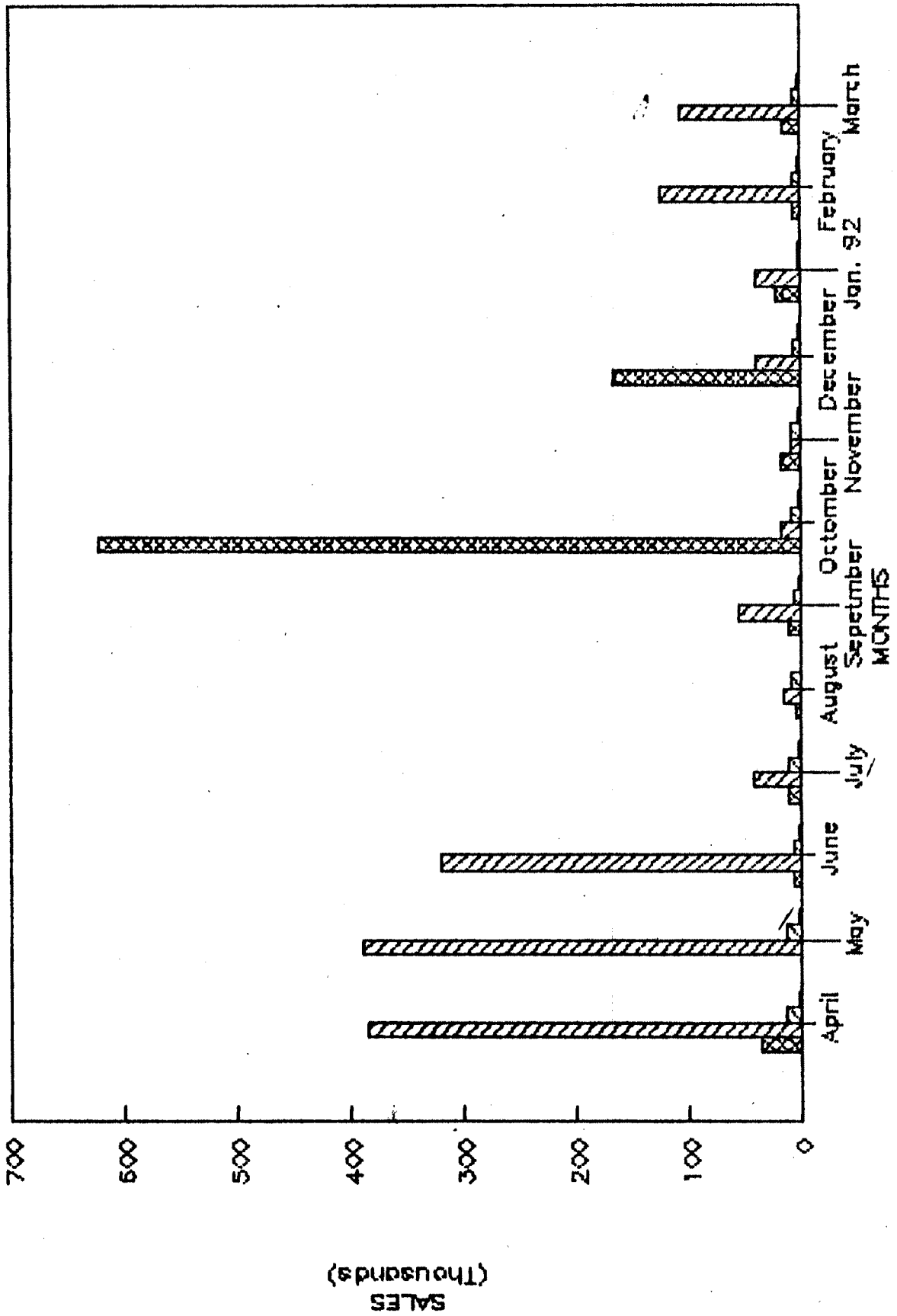
## GHEE, MILK POWDER, SHRIKHAND TABLE BUTTER





# MILK PRODUCT SALE 1993-94

GHEE, MILK POWDER, SHRIKHAND TABLE BUTTER



## **Interepretation of Collected Data**

After detailed study following main points are observed from data

1. Rise in Average milk procurement of cow and buffelo from 1991 to 1995 is fast.
2. Milk products production and sale has not definite trend.

## DEVELOPMENT OF MODEL FOR MARKETING INFORMATION SYSTEM

While developing the Marketing Information Model for the dairy unit the requirement of various levels of management is carefully studied, so that each one who is interpreting the reports get the information as he requires in the given format. The levels of management are

1. Top level management
2. Middle level management
3. Operating staff

After detail discussion with management the reports to be generated were divided into three prime categories.

1. Daily reports
2. 10 days reports
3. Monthly reports
4. Yearly reports

To carry out data analysis of the numerous data collected a software has to be generated which can be easily operated by computer operators. Hence a computer software is generated using Clipper. Data structures are created using Clipper. Headings are defined in programme. For better utility menu driven system is generated. Provision is made for addition in the programme itself. Data for monthly and other cumulative reports is accessed from data collected and stored daily. For comparison on yearly basis previous year data is referred which is stored in the computer itself.