Chapter Seven

Summary, Conclusion & Suggestions
Adoption of sound and feasible methodology is a vital importance in the economic study. The study was undertaken in the districts of Marathwada region of Maharashtra state. Processing industries like Oil mill, Dal mill, Ginning Factory and Sugar Factories were selected for the study. In accordance with the processing industries following crops were selected for the study viz. Groundnut, Sunflower, Safflower, Tur, Gram, Cotton and sugarcane. Primary data have been obtained from 350 farmers and 20 agro-processing industries. Secondary data have been obtained from Season and Crop reports, Epitome of Agriculture and Agricultural Situation in India.

The present study has been divided under Six major heads.
1) To study the cropping pattern of different districts of the region.
2) To study the performance of selected crops during the period 1960-61 to 1989-90.
3) To study the socio-economic characters of selected farm families.
4) To find out the cost of production of the selected crops on cultivators field.
5) To study the processing cost and find out the profitabili-ty after processing.
6) To examine prospects for agro-based industries in Marathwada region
The state of Maharashtra forms a major part of peninsular India. The Aurangabad division of Maharashtra state popularly known as Marathwada consisted seven districts. The information about geographical situation, geographical area, hills, rivers, rainfall, forest, soil, land use, cropping pattern, irrigation, co-operative societies, population, agricultural production and markets, industrial production, railway network, MIDC centres and regulated markets in the Marathwada region have been collected.

It is seen that cropping pattern of the region is dominated by foodgrain crops i.e. cereals and pulses. Area under foodgrain crops in the region is about 67 per cent of the gross cropped area. Area under total cereals and pulses in the region is about 48 per cent and 20 per cent respectively of the gross cropped area. Oilseeds occupies about 18 per cent while cotton and sugarcane is about 12 per cent and 1 per cent of gross cropped area. Area under fruits, vegetables and other misc. crops is only to the extent of 1.25 per cent of the total cropped area.

Area under total oilseeds in the region varied between 576600 hectares (1982-83) to 1089700 hectare (1988-89) with a mean area of 785933 hectares. The co-efficient of variance is worked out to be 24.35 per cent. The area has increased at an annual compound growth rate of 6.026 per cent, significant at one per cent level. It has increased at an annual compound growth rate of 8.577 per cent in Osmanabad, followed by Nanded (7.227 per cent), Parbhani (4.945 per cent), Beed (4.432 per cent) and Aurangabad (4.335 per cent).
Production of total oilseeds in the region varied between 201500 tonnes (1980-81) and 626600 tonnes (1989-90) with a mean production of 359866 tonnes. The co-efficient of variance of production is worked out to be 39.15 per cent. Production of total oilseeds has increased at an annual compound growth rate of 8.553 per cent. Among the districts production of total oilseeds was highest in Osmanabad district i.e. 109608 tonnes. It accounts for about 30.45 per cent of the total production in the region, followed by Aurangabad (24.36 per cent), Parbhani (21.45 per cent), Beed (17.09 per cent) and Nanded (6.65 per cent). It has increased at an annual compound growth rate of 14.152 per cent in Nanded district, followed by Parbhani (12.779 per cent), Osmanabad (7.737 per cent), Beed (7.628 per cent) and Aurangabad (4.884 per cent).

Yield of total oilseeds in the region varied between 284 kg/ha (1986-87) and 595 kg/ha (1989-90) with an average yield of 454.25 kg/ha. Co-efficient of variance is 24.27 per cent. Yield per hectare has increased at an annual compound growth rate of 2.299 per cent, statistically non-significant indicating stagnation in the yield. Among the districts per hectare yield seems to be comparatively more i.e. 549.83 kg/ha in Parbhani followed by Beed (475.33 kg/ha), Aurangabad (446.58 kg/ha), Nanded (421.91 kg/ha) and Osmanabad (400.16 kg/ha). The productivity of total oilseeds has shown increasing trend in all the districts except Osmanabad district.
Area under groundnut in the region varied between 87500 hectares (1987-88) to 377800 hectares (1962-63) with an average area of 198460 hectares. Co-efficient of variance is worked out to be 46.64 per cent. The area under groundnut in the region has declined at an annual compound growth rate of -5.271 per cent, significant at one per cent level. Among the districts maximum area under groundnut is found in Osmanabad district i.e. 89516 hectares. It accounts for about 45.10 per cent followed by Aurangabad (19.35 per cent), Beed (16.59 per cent), Nanded (10.61 per cent) and Parbhani (8.35 per cent). The area under groundnut has declined at an annual compound growth rate of 4.189 per cent in Aurangabad, Parbhani (-4.565 per cent), Beed (-6.926 per cent), Nanded (-6.780 per cent) and Osmanabad (-4.877 %).

Production of groundnut in the region is varied between 18300 tonnes (1986-87) to 249100 tonnes (1964-65) with a mean of 105146 tonnes. Co-efficient of variance is worked out to be 62.75 per cent. The production has declined at an annual compound growth rate of -6.163 per cent, significant at one per cent level. Production of groundnut in Osmanabad district is highest i.e. 47.46 per cent followed by Beed (20.05 per cent), Aurangabad (13.53 per cent), Nanded (10.25 per cent) and Parbhani (8.71 per cent). Annual compound growth rate of production of groundnut in different districts are (-3.243 per cent), Parbhani (-4.670 per cent), Beed (-8.055 per cent), Nanded (8.802 per cent) and Osmanabad (-6.248 %). It clearly indicates that production of groundnut has significantly declined in the region during last 30 years.
Yield of groundnut in the region is fluctuated between 145 kg/ha in 1972-73 to 741 kg/ha in 1960-61 with a mean of 524.20 kg/ha. Co-efficient of variance is computed to be 28.27 per cent. The productivity of groundnut has declined at an annual compound growth rate of -0.939 per cent, statistically non-significant indicating stagnation in the yield. Among the districts per hectare yield of groundnut seems to be highest in Parbhani (579.13 kg/ha) followed by Beed (569.76 kg/ha), Osmanabad (531.43 kg/ha), Nanded (481.10 kg/ha) and Aurangabad (420.43 kg/ha). Annual compound growth rate of Aurangabad district (1.044 per cent) shows increasing trend of yield. In case of Parbhani, Beed, Nanded and Osmanabad the trend shows declining growth rate i.e. -0.159 per cent, -1.323 per cent, -2.250 per cent and -1.121 per cent respectively.

Area under sunflower in Marathwada region fluctuated between 28100 hectares (1980-81) to 315700 hectares (1988-89) with an average area of 171850 hectares. Co-efficient of variance of area is calculated to be 64.90 per cent. The area under sunflower has increased at an annual compound growth rate of 32.979 per cent, significant at one per cent level. Area under sunflower in Osmanabad district is about 60.31 per cent followed by Beed (18.29 per cent), Parbhani (9.06 per cent), Nanded (6.34 percent) and Aurangabad (6.00 per cent). The area under sunflower in Parbhani district has increased at an annual compound growth rate of 78.258 per cent followed by Aurangabad (60.805 per cent) ,Nanded (58.960 %), Beed (39.729 %) and Osmanabad (26.161 per cent).
Production of sunflower in the region is varied between 18900 tonnes (1980-81) to 167500 tonnes (1989-90) with an average production of 72370 tonnes. Co-efficient of variance is computed to be 69.34 per cent. The production has increased at an annual compound growth rate of 24.265 per cent, significant at one per cent level. Production of sunflower in Osmanabad is highest i.e. 58.32 per cent followed by Beed (17.06 per cent), Parbhani (9.27 per cent), Aurangabad (7.82 per cent) and Nanded (7.53 per cent). Annual compound growth rate of production was high in Parbhani district i.e. 73.021 per cent, followed by Aurangabad (61.656 per cent), Nanded (56.823 per cent), Beed (32.495 per cent) and Osmanabad (15.244 per cent).

Average productivity of the sunflower crop in the region fluctuated between 245 kg/ha (1986-87) and 682 kg/ha (1989-90) with a mean of 457.20 kg/ha. Co-efficient of variance for the region as a whole is worked out to be 29.57 per cent. Yield per hectare of sunflower has declined at an annual compound growth rate of 2.247 per cent. Per hectare yield of sunflower in different districts varied between 423.90 kg/ha. in Beed and 528.20 kg/ha. in Aurangabad. The yield has shown declining trend in Aurangabad, Beed and Osmanabad district, while increasing trend has been observed in Parbhani and Nanded district.
Area under safflower in the region fluctuated between 269400 hectares (1980-81) to 393200 hectares (1987-88) with a mean area of 316520 hectares. Co-efficient of variance of area is computed to be 10.74 per cent. The area under the crop has increased at an annual compound growth rate of 2.511 per cent, significant at five per cent level. The area under the crop is highest in Aurangabad i.e. 42.16 per cent followed by Parbhani (21.04 per cent), Beed (16.06 per cent), Osmanabad (19.26 per cent) and Nanded (1.48 per cent). Annual compound growth rate was high in Nanded district i.e. 16.344 per cent, followed by Parbhani (3.844 per cent), Osmanabad (3.420 per cent) and Aurangabad (1.753 per cent). It has declined in Beed at the rate of 0.287 per cent.

Production of safflower in the region varied between 137100 tonnes (1980-81) to 234100 tonnes (1983-84) with a mean of 180260 tonnes. Co-efficient of variance is worked out to be 19.35 per cent. The production has increased at an annual compound growth rate of 1.929 per cent, statistically non-significant indicating stagnation in the production. Among the districts Aurangabad rank first (33.76 per cent) followed by Parbhani (26.11 per cent), Beed (19.47 per cent), Osmanabad (18.60 per cent) and Nanded (2.06 per cent). The production of the crop has increased at an annual compound growth rate of 11.016 per cent in Nanded followed by Parbhani (4.153 per cent), Aurangabad (3.764 per cent), while it has declined in Beed (2.00 per cent) and Osmanabad district (0.322 per cent).
Yield per hectare of safflower in the region varied between 414 kg (1985-86) and 750 kg (1983-84) with a mean of 586.10 kg/ha. Co-efficient of variance of yield is computed to be 18.64 per cent. It has declined at an annual compound growth rate of 1.300 per cent. Among the districts per hectare yield is comparatively more in Beed (731.70 kg) followed by Parbhani (698.80 kgs.), Nanded (612.80 kg.), Osmanabad (518.30 kgs.) and Aurangabad (493.80 kgs.). Per hectare yield has shown declining trend in all the districts except Parbhani. In Parbhani it has increased at an annual compound growth rate of 0.739 per cent, while it has declined in other districts. It has declined at an annual compound growth rate of 1.867 per cent in Aurangabad and 1.241 per cent in Nanded.

Area under total pulses in the region varied between 800100 hectare (1960-61) to 1206300 hectares (1988-89) with a mean area of 980680 hectares. Co-efficient of variance of area is calculated to be 11 per cent. The area has increased at an annual compound growth rate of 0.942 per cent significant at one per cent level. Among the districts maximum area under total pulses is in Aurangabad i.e. 27.34 per cent followed by Osmanabad (26.46 per cent), Parbhani (21.66 per cent), Beed (12.62 per cent) and Nanded (11.92 per cent). The area under total pulses in Parbhani districts has increased at an annual compound growth rate of 1.491 per cent followed by Osmanabad (1.383 per cent), Nanded (0.888 per cent), Aurangabad (0.537 %) and Beed (0.002 per cent).
Production of total pulses in the region varied between 109100 tonnes (1972-73) and 550400 tonnes (1989-90) with a mean of 298183 tonnes. Co-efficient of variance is worked out to be 34.74 per cent. The production has increased at an annual compound growth rate of 1.964 per cent significant at five per cent level. Production in Osmanabad district is highest in the region. It accounts for about 26.55 per cent, followed by Aurangabad (25.32 per cent), Parbhani (23.13 per cent), Nanded (13.65 per cent) and Beed (11.35 per cent). Annual compound growth rate of production was highest in Parbhani i.e. 2.866 per cent, followed by Osmanabad (2.756 per cent), Beed (2.226 per cent), Aurangabad (2.197 per cent) and Nanded (1.836 per cent).

Per hectare yield of total pulses in the region fluctuated between 128 kg/ha (1972-73) to 494 kg/ha (1987-88) with a mean of 309.36 kg/ha. Co-efficient of variance of yield is computed to be 24.34 per cent. The productivity has increased at an annual compound growth rate of 1.538 per cent, significant at five per cent level. Among the districts per hectare yield of total pulses seems to be highest in Nanded district i.e. 350.06 kg per hectare followed by Parbhani (334.23 kg/ha), Osmanabad (309.26 kg/ha), Aurangabad (289.83 kg/ha) and Beed (279.03 kg/ha). Annual compound growth rates of yield was highest in Beed (2.234 per cent), followed by Parbhani (1.359 per cent), Osmanabad (1.299 per cent), Aurangabad (1.261 per cent) and Nanded (0.904 per cent).
Area under tur in the region varied between 172000 hectares (1971-72) and 400000 hectares (1989-90) with a mean area 260006 hectares. Co-efficient of variance of area worked out to be 18.94 per cent. The area under tur has increased at an annual compound growth rate of 1.826 per cent, significant at one per cent level. Among the districts area under tur is maximum in Osmanabad district i.e. 35.64 per cent followed by Aurangabad (21.35 per cent), Parbhani (18.29 per cent), Nanded (15.04 percent) and Beed (9.68 per cent). The area under tur in Beed district has increased at an annual compound growth rate of 3.708 per cent followed by Osmanabad (2.264 per cent), Parbhani (1.925 per cent), Nanded (0.895 per cent) and Aurangabad (0.819 per cent).

Production of tur in the region is fluctuated between 37400 tonnes (1972-73) to 256600 tonnes (1989-90) with an average production of 108293 tonnes. Co-efficient of variance is calculated to be 42.84 per cent. The production has increased at an annual compound growth rate of 3.578 per cent, significant at one per cent level. Production of tur in Osmanabad district is highest in the region i.e. 36.41 per cent of the total production in the region followed by Parbhani (23.65 per cent), Nanded (15.97 per cent), Aurangabad (15.52 per cent) and Beed (8.45 per cent). Annual compound growth rate of production was highest in Beed i.e. 7.662 per cent followed by Parbhani (3.915 per cent), Aurangabad (3.455 per cent), Nanded (2.186 per cent) and Osmanabad (1.625 per cent).

Per hectare yield of tur in the region varied between 178
kg/ha (1972-73) to 624 kg/ha (1987-88) with an average of 401.90 kg/ha. Co-efficient of variance of yield is calculated to be 25.47 per cent. The production has increased at an annual compound growth rate of 1.678 per cent, significant at one per cent level. Among the districts per hectare yield of tur seems to be highest in Parbhani district i.e. 546.56 kg/ha followed by Nanded (467.30 kg/ha), Osmanabad (386.33 kg/ha), Aurangabad (332.10 kg/ha) and Beed (318.40 kg/ha). Among the districts annual compound growth rate of yield was highest in Beed 3.667 per cent followed by Aurangabad (2.530 per cent), Parbhani (1.976 per cent), Nanded (1.284 per cent) and Osmanabad (0.958 per cent).

Area under gram in Marathwada region varied between 126400 hectares (1972-73) to 243900 hectares (1971-72) with a mean area 177896 hectares. Co-efficient of variance of area is worked out to be 12.76 per cent. The area under gram has increased at an annual compound growth rate of 0.500 per cent, statistically non-significant indicating stagnation in the area. Among the district area under gram is maximum in Osmanabad district. It accounts for about 32.69 per cent of the total area under gram in the region followed by Aurangabad (22.03 per cent), Parbhani (18.43 per cent), Beed (16.29 per cent) and Nanded (10.56 per cent). Among the districts area under gram has declined trend in Beed (0.600 per cent) and Nanded (1.141 per cent). In case of Aurangabad, Parbhani and Osmanabad the area under gram has significantly increased at an annual compound growth rate of 0.785 per cent, 1.171 per cent and 0.997 per cent respectively.
Production of gram in the region fluctuated between 15000 tonnes (1972-73) to 104700 tonnes (1988-89) with an average production of 58093 tonnes. Co-efficient of variance is computed to be 32.31 per cent. The production has increased at an annual compound growth rate of 1.519 per cent, statistically non-significant indicating stagnation in the production. Production of Osmanabad district is highest i.e. 34.47 per cent of the total production in the region followed by Aurangabad (22.34 per cent), Parbhani (17.54 per cent), Beed (16.48 per cent) and Nanded (9.17 per cent). Among the districts production has shown declined trend in Nanded district (0.773 per cent). In case of Aurangabad, Parbhani and Osmanabad production has shown increased trend at an annual compound growth rate of 2.866 per cent, 2.207 per cent and 1.765 per cent respectively. In case of Beed (0.086 %) production has shown complete stagnancy during last 30 years.

Per hectare yield of gram in the region fluctuated between 119 kg/ha (1972-73) to 520 kg/ha (1988-89) with an average of 370.76 kg/ha per hectare. Co-efficient of variance is calculated to be 25.25 per cent. The yield per hectare increased at an annual compound growth rate of 1.037 per cent, statistically non-significant indicating stagnancy in the yield. Per hectare yield of gram seems to be the highest in Osmanabad i.e. 340.83 kg/ha followed by Beed (335.33 kg/ha), Aurangabad (323.76 kg/ha), Parbhani (305.96 kg/ha) and Nanded (286.76 kg/ha). Yield of gram has increased at an annual compound growth rate of 1.875 per cent in Aurangabad followed by Parbhani (0.983%), Beed (0.712%), Osmanabad (0.521 %) and Nanded (0.374 %).
Area under cotton in the region fluctuated between 506200 hectares (1976-77) and 790600 hectares (1969-70) with a mean area 685656 hectares. Co-efficient of variance is worked out to be 11.39 per cent. The area under cotton has declined at an annual compound growth rate of 0.342 per cent, statistically non-significant indicating that the area under cotton remained unchanged during the last 30 years. Among the districts area under cotton is maximum in Parbhani district. It occupies 34.94 per cent area of the total area in the region followed by Nanded (29.02 per cent), Aurangabad (25.02 per cent), Beed (5.83 per cent) and Osmanabad (5.19 per cent). Among the districts area under cotton has declined in Aurangabad (0.671 per cent), Osmanabad (3.004 per cent) and Beed (3.034 per cent). In case of Nanded the area under cotton has significantly increased at an annual compound growth rate of 0.600 per cent, while in case of Parbhani the area has shown non-significant increasing trend (0.052 per cent).

Production of cotton in the region varied between 47400 bales (1964-65) and 622300 bales (1989-90) with a mean production of 244313 bales. Co-efficient of variance is calculated to be 75.75 per cent indicating large fluctuation and uncertainty in production. The production has increased at an annual compound growth rate of 9.635 per cent, significant at one per cent level. Production of cotton is highest in Parbhani i.e. 34.08 per cent followed by Nanded (28.98 per cent), Aurangabad (28.01 per cent), Beed (5.22 per cent) and Osmanabad (3.71 per cent). The rate of increment of production is highest in Aurangabad (10.282 per cent) followed by Parbhani (10.116 per cent), Nanded (10.049 per cent), Beed (7.245 per cent) and Osmanabad (5.762 per cent).
Per hectare yield of cotton in the region changed between 22 kg lint (1970-71) and 150 kg lint (1989-90) with an average of 84.20 kg lint per hectare. Co-efficient of variance is computed to be 37.59 per cent. The yield per hectare of cotton has increased at an annual compound growth rate of 1.878 per cent, statistically non-significant indicating stagnation is the yield. Per hectare yield of cotton seems to be highest in Aurangabad district i.e. 90.96 kg per hectare followed by Beed (87.30 kg/ha), Parbhani (79.23 kg/ha), Nanded (76.03 kg/ha) and Osmanabad (69.83 kg/ha). Per hectare yield of cotton has increased at an annual compound growth rate of 3.537 per cent in Aurangabad followed by Beed (3.502 per cent), Nanded (1.744 per cent), Parbhani (1.567 %) and Osmanabad (1.388 per cent).

Area under sugarcane in the region varied between 19800 hectares (1963-64) and 104200 hectares (1989-90) with a mean area of 39500 hectares. Co-efficient of variance is worked out to be 48.44 per cent. It has increased at an annual compound growth rate of 4.450 per cent, significant at one per cent level. Among the districts maximum area under sugarcane is in Aurangabad i.e. 35.88 per cent of the total area in the region followed by Osmanabad (28.19 per cent), Nanded (14.54 per cent), Beed (11.71 per cent) and Parbhani (9.68 per cent). The area under Beed has increased at an annual compound growth rate of 7.352 per cent, followed by Osmanabad (4.854 per cent), Parbhani (4.215 per cent), Nanded (3.840 per cent) and Aurangabad (3.803 per cent).
Production of the sugarcane in the region fluctuated between 75100 tonnes (1962-63) to 757600 tonnes (1989-90) with an average of 256746 tonnes. Co-efficient of variance of production is computed to be 39.72 per cent. The production has increased at an annual compound growth rate of 6.124 per cent, significant at one per cent level. Production in Aurangabad district is highest i.e. 39.96 per cent of the total production in the region followed by Osmanabad (27.82 per cent), Beed (12.27 per cent), Nanded (11.47 per cent) and Parbhani (8.48 per cent). Annual compound growth rate of production is highest in Beed (8.391 per cent) followed by Osmanabad (6.316 per cent), Aurangabad (6.190 per cent), Nanded (4.630 per cent) and Parbhani (4.626 per cent).

Per hectare yield of sugarcane in the region changed between 3700 kg gur per hectare (1962-63) to 8400 kg gur per hectare (1982-83) with a mean of 6350 kg gur per hectare. Co-efficient of variance is calculated to be 21.28 per cent. The production has increased at an annual compound growth rate of 1.731 per cent, significant at one per cent level. Among the districts the yield seems to be highest in Aurangabad i.e. 6956 kg/ha, followed by Beed (6403 kg/ha), Osmanabad (6056 kg/ha), Parbhani (5636 kg/ha) and Nanded (5613 kg/ha). Annual growth rate of yield was highest in Aurangabad (2.779 per cent), followed by Osmanabad (1.887 per cent), Beed (1.002 per cent), Parbhani (0.531 per cent) and Nanded (0.410 per cent).
It is seen that the average size of the family in Marathwada region is 6.94. The proportion of male, female and children is 26.65 per cent, 28.53 per cent and 44.82 per cent. Smallest family size comprises of 5 members in Nanded district followed by Parbhani (5.75 members), Jalna (6.60 members), Aurangabad (8.30 members) and Latur (9.05 members).

It is observed that on an average maximum heads of families belongs to category of young age (46 per cent) followed by middle age (39 per cent) and old age (15 per cent).

It is observed that maximum number of selected farmers are educated. The percentage of middle education is more i.e. 35 per cent followed by S.S.C education (29 per cent), Illiterate (14 per cent), Primary education (12 per cent) and above S.S.C. level (10 per cent) in the region.

It is revealed that the major source of income is farming (92.97 per cent). The subsidiary source of income is comparatively very less (7.03 per cent). Per family farm income is comparatively more in Latur (Rs.39650), followed by Nanded (Rs. 32619), Aurangabad (Rs. 23912), Parbhani (Rs. 22125) and Jalna (Rs. 20732). Subsidiary annual income is comparatively more in Parbhani district (Rs.2950) followed by Latur (Rs.2550), Aurangabad (Rs. 2507), Jalna (Rs. 1810) and Nanded (Rs.705). Thus, total per family income is more in Latur followed by Nanded, Aurangabad, Parbhani and Jalna.
It is seen that maximum number of selected farmers belongs to the income group up to Rs. 25000 i.e. 50 per cent followed by 35 per cent the income group of Rs. 25001 to Rs. 50,000 and 15 per cent are having their income above Rs. 50,000.

It is seen that total land possessed by the selected farmers was 2.65 hectares in the region. The net cultivable area was worked out to be 2.44 hectares (92.08 per cent), while permanent fallow was 0.21 hectares (7.92 per cent). Double cropped area was found to be 0.62 hectares i.e. 25.40 per cent of the net cultivable area. The gross cropped area worked out to be 3.06 hectares. The cropping intensity in the region is worked out to be 125.41 per cent. The cropping intensity was high in Jalna district (146.51 per cent) followed by Latur (130.38 per cent), Aurangabad (129.54 per cent), Nanded (118.25 per cent) and Parbhani (117.66 per cent).

Cropping pattern of the selected farmers revealed that maximum area is devoted for cereal crops (31.03 per cent) followed by pulses (17.97 per cent), oilseeds (14.40 per cent), cotton (12.74 per cent) and sugarcane (7.52 per cent), fruits, vegetables and othermisc. crops occupies an area about 16.34 per cent of the crop.
Per hectares input utilization for groundnut production were studied. It is revealed that per hectare human labour utilization was 112.54 days. Use of bullock labour was 20.87 days. Use of seed was on an average 96.27 kg. Farm yard manure was used to the extent of 16.79 cart loads. Among the fertilizers N was used to the extent of 23.83 kg, P was used 39.44 kg and K was 13.76 kg. The average production of ground-nut observed to be 10.14 quintals and by-products observed to be 15.07 quintals.

Per hectare cost of production of groundnut was studied. The total cost of production i.e. cost C on an average worked out to be Rs. 8620.28, while cost B was Rs. 7936.40 and cost A was Rs. 5541.22. It is seen that on an average the value of main produce was Rs. 8730.54 per hectare. Value of by-produce worked out to be Rs. 349.62. Thus total value of main and by-produce worked out to be Rs. 9080.16 per hectare. It is seen that on an average profit on cost A, cost B and cost C worked out to be Rs. 3538.94, Rs. 1143.76 and Rs. 459.88 per hectare respectively. Input-Output ratio on an average per hectare at cost A, cost B and cost C worked out to be 1: 1.63, 1: 1.14 and 1: 1.05 respectively.
It is seen that on an average per quintal cost of production of groundnut was at cost A Rs. 546.47, cost B Rs. 782.68 and cost C Rs. 850.12. On an average price per quintal of groundnut in the market noted to be Rs. 861. Thus per quintal profit worked out to be Rs. 314.53 at cost A, Rs. 78.32 on cost B and Rs. 10.88 at cost C.

Per hectare input utilization for sunflower production was studied. It is revealed that per hectare human labour utilization was 48.13 days, Use of bullock labour was 14.50 days. Per hectare use of seed was 15.32 kg. Farm Yard Manure was used to the extent of 14.14 cart loads. Among the fertilizer N,P,K was used to the extent of 25.99 kg, 27.05 kg and 9.87 kg respectively. The main and by-produce of sunflower was observed to 7.81 quintals and 11.20 quintals respectively.

Per hectare cost of production of sunflower was studied. The total cost of production i.e. cost C on an average calculated to be Rs. 5771.04 per hectare. Cost B and Cost A was found to be Rs. 5451.79 and Rs. 3704.04 per hectare respectively. It was seen that value main and by-produce was Rs. 6162.09 and Rs. 199.36 per hectare respectively. Thus on an average value of main and by-produce worked out to be Rs. 6361.45 per hectare. On an average profit on cost A, cost B and cost C worked out to be Rs. 2657.41, Rs. 909.66 and Rs. 590.41 per hectare respectively. Input-Output ratio on an average per hectare at cost A, Cost B and cost C calculated to be 1:1.71, 1:1.16 and 1:1.10 respectively. It can be said from analysis that sunflower production is profitable on all cost levels.
It was seen that on an average per quintal cost of production of sunflower comes to cost A Rs. 474.27, cost B Rs.698.05 & cost C Rs.738.93. On an average price per quintal of sunflower at the market noted to be Rs. 789. Thus, on an average per quintal profit worked out to be Rs. 414.73 at cost A, Rs. 90.95 at cost B and Rs. 50.07 at cost C.

Per hectare inputs utilization for safflower production was studied. Per hectare human labour utilization, bullock labour, seed, FYM was used to the extent of 51.44 days, 13.29 days, 13.13 kg and 10.22 cart loads per hectare respectively. Among the fertilizers N and P was used to the extent of 24.73 kg and 13.83 kg per hectare. The average production of safflower and its by-produce observed to be 6.42 quintals and 9.25 quintals per hectare respectively.

The cost of production of safflower was studied. The total cost of production i.e. cost C on an average calculated to be Rs. 4242.24 per hectare. Cost B and cost A calculated to be Rs. 3670.05 and Rs. 2261.23 per hectare. It was seen that on an average the value of main and by-produce was Rs.4943.40 and Rs. 161.42 per hectare respectively. Thus, on an average value of main and by-produce worked out to be Rs. 5104.82 per hectare. It was observed that on an average profit on cost A, cost B and Cost C worked out to be Rs. 2843.59, Rs. 1434.77 and Rs. 862.58 per hectare respectively. Input-Output ratio per hectare calculated at cost A is 1:2.25, cost B 1:1.39 and cost C 1:1.20.
On an average per quintal cost production of safflower comes to cost A Rs. 352.21, cost B Rs. 571.65 and cost C Rs. 660.78. Price per quintal of safflower at market noted to be Rs. 770.00. Profit per quintal on cost A, cost B and cost C was Rs. 417.79, Rs. 198.35 and Rs. 109.22 respectively. It can be said that the safflower production is profitable on all cost levels.

Per hectare input utilization of tur crop production were studied. It was revealed that per hectare use of human labour, bullock labour, seed and FYM was to the extent of 93.50 days, 18.05 days, 14.02 kg and 7.54 cart loads respectively. Among the fertilizer use of N, P and K was 28.24 kg, 26.65 kg and 5.39 kg per hectare respectively. The average production of tur and its by-product observed to be 9.74 quintals and 16.32 quintals per hectare respectively.

Per hectare cost of production of tur was computed. The total cost of production i.e. cost C on an average worked out to be Rs. 6290.43, cost B and cost A was found to be Rs. 5922.03 and Rs. 3284.26 respectively. It was seen that on an average the value of main and by-produce was Rs. 9399.10 and Rs. 652.80 per hectare respectively. Thus, on an average total value of main and by-produce worked out to be Rs. 10051.90 per hectare. On an average profit on cost A, cost B and cost C worked out to be Rs. 6767.64, Rs. 4129.87 and Rs. 3761.47 per hectare respectively. Input-Output ratio on an average per hectare at cost A, cost B and cost C worked out to be 1:3.06, 1:1.69 and 1:1.60 respectively.
On an average per quintal cost of production of tur at cost A, cost B and cost C was Rs. 337.19, Rs. 608.01 and Rs. 645.83 respectively. Price per quintal of tur at market was noted to be Rs. 965. Thus per quintal profit worked out to be Rs. 627.81 at cost A, Rs. 356.99 at cost B and Rs. 319.17 at cost C level.

Per hectare input utilization for gram production was studied. Per hectare human labour, bullock labour, seed and FYM utilisation was 43.13 days, 9.81 days, 52.32 kg and 3.69 cart loads respectively. Among the fertilizers N and P was used to the extent of 11.00 kg and 22.40 kg per hectare respectively. The average production of gram and its by-produce worked out to be 5.95 quintals and 3.73 quintals per hectare respectively.

The cost of production of gram was calculated. The total cost of production i.e. cost C worked out to be Rs. 3650.30 per hectare. On an average cost B and cost A found to be Rs. 3083.22 and Rs. 1739.03 respectively. The value of main and by-produce was Rs. 4867.10 and Rs. 111.90 per hectare respectively. Thus on an average total value of main and by-produce worked out to be Rs. 4979.00 per hectare. Profit on cost A, cost B and cost C worked out to be Rs. 3239.97, Rs. 1895.78 and Rs. 1328.70 per hectare respectively. Input-Output ratio per hectare at Cost A, Cost B and cost C worked out to be 1:2.86, 1:1.61 and 1:1.36 respectively.
On an average per quintal cost of production of gram at Cost A Rs. 292.27, cost B Rs. 518.18 and cost C Rs. 613.50. Price per quintal of gram at market noted to be Rs. 818. Thus per quintal profit worked out to be Rs. 525.73 at cost A, Rs. 299.82 at cost B and Rs. 204.50 at cost C level.

Per hectare inputs utilization for cotton production were collected. On an average per hectare human labour, bullock labour, seed and FYM utilization was 109.96 days, 23.48 days, 2.10 kg and 10.48 cart loads respectively. Among the fertilizers N, P and K was used to the extent of 97.72 kg, 37.42 kg and 12.50 kg per hectare respectively. The average production of cotton observed to be 7.48 quintals per hectare. Per hectare quantity of by-produce worked out to be 10.38 quintals.

Per hectare cost of production of cotton were calculated. The cost of production on cost C, cost B and cost A worked out to be Rs. 7384.99, Rs. 6672.59 and Rs. 4870.09 per hectare respectively. It was seen that the value of main produce and by-produce calculated to be Rs. 6208.40 and Rs. 513.52 per hectare respectively. Thus on an average value of main and by-produce worked out to be Rs. 6721.92 per hectare. It was observed that profit on Cost A and cost B was Rs. 1851.83 and Rs. 49.33 per hectare respectively. However on cost C loss is incurred of Rs. 663.07 per hectare. Input-Output ratio at cost A, cost B and cost C was 1:1.38, 1:1.00 and 1:0.91 respectively.
Per quintal cost production of cotton comes to at cost A Rs. 651.08, at cost B Rs. 892.06 and cost C Rs. 987.29. Price per quintal of cotton at market noted to be Rs. 830. Per quintal profit observed to be at cost A Rs. 178.92. However per quintal loss observed on cost B and cost C was Rs.62.06 and Rs.157.29 respectively. Cotton production incurred losses at cost B and cost C level in all the Marathwada region.

Input utilization for sugarcane production were studied. It is revealed that on an average per hectare human labour, bullock labour, seed, FYM, and irrigation utilization was 254.00 days, 21.69 days, 26600 sets, 23.57 cart loads and 21.00 Nos. respectively. Among the fertilizers N,P and K was used to the extent of 268.94 kg, 93.06 kg, and 29.60 kg per hectare respectively. The average production of sugarcane and by-product observed to be 63.36 tonnes and 8.17 tonnes per hectare respectively.

Per hectare cost of production of sugarcane were studied. The total cost i.e. cost C computed to be Rs. 23085.43 per hectare. On an average cost B and cost A computed to be Rs.20974.88 and Rs. 15073.95 per hectare respectively. The value of main and by-produce was Rs. 21984.70 and Rs. 721.00 per hectare respectively. Thus, average value of main and by-produce worked out to be Rs.22705.70 per hectare. Profit on cost A and cost B was Rs. 7631.75 and Rs. 1730.82 per hectare respectively. However loss is observed on cost C i.e. Rs. 379.73 per hectare. Input-Output ratio per hectare at cost A 1:1.51, cost B 1:1.08 and cost C is 1:0.98.
Per ton cost of production of sugarcane comes to cost A Rs. 238.95, cost B Rs. 332.35 and cost C Rs. 366.18. Average price per ton of sugarcane at market noted to be Rs. 348.00. Per ton profit on cost A and Cost B observed to be Rs. 109.05 and Rs. 15.65 respectively. However, on cost C loss is observed to be Rs. 18.18 per ton.

It is revealed that on an average per quintal cost of processing of groundnut into groundnut oil is Rs. 60.10.

Proportion of groundnut into groundnut oil is estimated to be 31 per cent, oilcake 45 per cent and losses 24 per cent. Total cost of processing groundnut into groundnut oil is Rs. 921.10. The value of processed main product i.e. oil and by-product i.e. oilcake is estimated to be Rs. 1059.25, of which 81.94 per cent received from main product and 18.06 per cent received from by-product. Profit after processing one quintal of groundnut is worked out to be Rs. 125.13. Thus, Input-Output ratio is estimated to be Rs. 1:1.14.

On an average per quintal cost of processing of sunflower into sunflower oil is Rs. 42.89.
Proportion of sunflower into sunflower oil is estimated to be 32 per cent, oilcake 60 per cent and losses 8 per cent. Total cost of processing sunflower into sunflower oil is Rs. 831.89. The value of processed main product i.e. oil and by product i.e. oilcake is estimated to be Rs. 901.20, of which 76.69 per cent and 23.31 per cent is received from main and by-product respectively. Profit after processing one quintal of sunflower is worked out to be Rs. 41.66. Thus, Input-Output ratio is estimated to be 1:1.05.

It is observed that on an average per quintal cost of processing safflower into safflower oil is Rs. 98.73.

Proportion of safflower to safflower oil is estimated to be 25 per cent, oil cake 31 per cent, busa 40 per cent and losses 4 per cent. Total cost of processing safflower into safflower oil is Rs. 868.73. The value of processed main product i.e. oil and by-product i.e. oilcake and busa is estimated to be Rs. 886.00 of which 73.36 per cent, 20.99 per cent and 5.65 per cent received from oil, oilcake and busa respectively. Profit after processing one quintal of safflower is computed to be Rs. 17.27. Thus, Input-Output ratio is calculated to be 1:1.02.
It is seen that on an average per quintal cost of processing of tur into tur dal is Rs. 53.76.

Proportion of tur into tur dal is estimated to be No.1 quality tur dal 40 per cent, No.2 quality tur dal 30 per cent, tucada dal 10 per cent, husk 15 per cent and losses 5 per cent. Total cost of processing tur into tur dal is Rs. 1018.76. The value of processed product is estimated to be Rs. 1051.50, of which 58.01 per cent, 33.66 per cent, 4.77 per cent and 3.56 per cent received from No.1 quality tur dal, No.2 quality tur dal, tucada dal and husk respectively. Profit after processing one quintal of tur is calculated to be Rs. 32.74. Thus, Input-Output ratio is estimated to be 1:1.03.

It is revealed that on an average per quintal cost of processing gram into gram dal is Rs. 45.54.

Proportion of gram into gram dal is estimated to be 75 per cent, tucada 5 per cent, husk and busa 18 per cent and losses 2 per cent. Total cost of processing gram into gram dal is Rs. 863.54. The value of processed main and by-product is estimated to be Rs. 904.00, of which 91.26 per cent received from main product i.e. gram dal and 2.76 per cent from tucada and 5.98 per cent received from husk and busa. Profit after processing one quintal of gram is worked out to be Rs. 40.16. Thus, Input-Output ratio is estimated to be 1:1.05.
It is revealed that on an average per quintal cost of processing cotton into lint is Rs. 41.45.

Proportion of cotton into lint is estimated to be 33 per cent, cotton seed 64 per cent and losses 3 per cent. Total cost of processing cotton into lint is Rs. 871.45. The value of main and by-product i.e. lint and cotton seed is estimated to be Rs. 1074.60 of which 76.77 per cent received from lint and 23.23 per cent received from cotton seed. Profit after processing one quintal cotton is worked out to be Rs.181.66. Thus, Input-Output ratio is estimated to be 1:1.20.

It is seen that on an average per ton cost of processing sugarcane into sugar is Rs. 240.51.

Proportion of sugarcane into levy sugar is estimated to be 40.56 per cent, free sugar 53.07 per cent, export levy sugar 6.37 per cent. Total cost of processing sugarcane into sugar is Rs. 588.51. The value of processed main product i.e. sugar and by-product i.e. molasses and bagasses is estimated to be Rs.639.49 of which 35.39 per cent, 56.59 per cent, 4.10 per cent, 3.59 per cent and 0.33 per cent received from levy sugar, free sugar, export levy sugar, molasses and bagasses respectively. Profit after processing one ton of sugarcane is worked out to be Rs. 38.20. Thus, Input-Output ratio is estimated to be 1:1.06.
During the survey farmers and agro-processing industrialist were personally contacted for collection of data. During the interview they have expressed difficulties and hardships faced by them. Important among them and common among them are as follows.

**A) Difficulties of farmers**

1) Majority of farmers has expressed that good quality seed of improved and high yielding varieties was not available in time and at reasonable cost.

2) Many times they were not aware about the improved technology regarding cultivation of the new introduced seeds.

3) New introduced improved and high yielding varieties are susceptible to insect and pest attack. Farmers were expressed their inability to identify the insect and pest and control them in time.

4) Farmers had also expressed that they did not have storage facilities and thus they were compelled to sale their produce immediately after harvest and thus, they were not able to fetch reasonable price for their produce.
5) The new crop production technology is very costly and capital oriented one. Farmers expressed that they were enable to get crop loan in time and thus, the crop suffers due to lack of proper care viz. application of fertilizers, plant protection measure etc.

6) Farmers also expressed that inputs like seed, fertilizers and insecticides and pesticides are very costly and not readily available in time, thus, its use is limited.

7) Lack of irrigation facilities, so that there is no scope for increasing production of cash crops.

B) Difficulties of processing industries

1) Procurement of raw material is difficult because raw material produced by different categories of farmers viz. small, medium and large and is scattered one.

2) Assembling of small and scattered raw material and at appropriate place is difficult one. It involves mainly intermediaries, agents, dalals etc.
3) Transport and communication facilities are show, inadequate and costly.

4) Raw material produced by different cultivators is not of homogeneous type. It varies in variety, colour, quality etc.

5) The attitude of the cultivator is not scientific one and encouraging to the industrialist. They don't produce the quality and quantity of raw material required for industries.

6) Present machinery installed in many processing units is old one and requires frequent repairs.

7) New and improved plant and machinery is very costly, which requires huge capital. Bank and financial institutions hesitate to provide adequate capital in time.

8) Agricultural produce is seasonal one. It is to be procure immediately after harvest and to be stored throughout remaining season. Many times due to lack of raw material processing units remains closed.

9) Processing industrialist had also expressed that there are number of rules and regulation of government which restrict the smooth functioning of industries.
10) There are certain restriction of government which prevent the processing units to store the processed product in view to get good price in the market in future.

11) Many industrialist had expressed that there are heavy taxes of government both at the time of purchasing raw material and also selling the processed product.

12) Availability of skill labour becomes difficult particularly during peak season.

13) Industrialist has expressed that the government should have liberal policy regarding licence, taxes, transport within and between the states, storage and advancement of loans etc.

14) Distribution of processed product is mainly controlled by intermediaries i.e. agents, dalals, wholesalers etc.

15) Many industrialist has expressed that prices of raw material and finished product are not stable during the year.

16) Processing method is old one. Thus it causes comparatively more proportion of by-product. Thus it creates more losses.

17) Local market having low purchasing power.

18) Inadequate and uncertain supplies of raw materials.
Development of agro-based industries is an integral part of overall rural development. The availability of adequate surplus of agricultural and allied products, would ensure a rapid and sustained growth of industries based on these resources. We tried to identify the opportunities for industrial development in Marathwada based on agriculture, as they currently exist and as they emerge in future.

There are 153 ginning units during the year 1990. Similarly there are 11 ginning and pressing units in the region. If the present ginning and pressing capacity in the region is fully utilized the present establishments are adequate one. However, if anticipated growth rate in production in considered additional 18 ginning- cum-pressing units can be set up in the region. In addition to ginning and pressing units in the region 10 spinning mills can also be set up in the region. One pre-weaving processing and post- weaving finishing plant can also be set up at Jalna district. Further there is scope for the establishment of 10 cotton seed crushing units. There is also scope for by-products available from cotton seed crushing units to be utilized in variety of ways. A number of small scale units can be set up in the region for the spinning of waste cotton. Production of paper and paper board from cotton rags and waste cotton is also possible in the region. It is clear that cotton can provide an invaluable base for industrial development of Marathwada region.
Important components of total oilseeds are groundnut, sunflower and safflower. The oilseeds crushing industry in Marathwada essentially comprises expeller oil mills and oil ghanies. It is understood that there are about 150 to 180 oil mills and more than 1000 ghanis in Marathwada. In addition, the Marathwada State Oilseeds Commercial and Industrial Corporation Limited comprising two oil mills. The Maharashtra State Co-operative Marketing Federation has also a cotton seed processing units at Jalna. Another unit in Dharmabad is also coming up in the co-operative sector. These have an adequate capacity to process the existing level of production. Considering the fact that Marathwada has a good potential to augment its oilseeds production and marketing, the scope for not only the fuller utilization of the existing capacity but its expansion is also quite immense. The oilseed processing capacity during A.D. 2001-01 can jump five fold of the existing level. For fuller utilization of groundnut production 13 oil mills in addition to the existing one can be set up in the region. Two oilcake cattle feed manufacturing units can be established in the region. The by-products of the oil-processing units can be used for manufacturing of soap industry can be organised in the region.

At present there are 22 co-operative sugar factories working in the region. These are capable of crushing the available cane in the region. With the expansion of irrigation facilities, the area under sugarcane and its production
in the region is steadily increasing. If the anticipated increased production takes place about 10 new sugar factories could came up in the region by A.D. 2000-01. In addition to sugar factories, more gur making and khandsari units could also be set up for processing an additional sugarcane in small-scale sector. The two important by-products of sugar factories are bagasses and molasses. Bagasses-based manufacturing such as insulation boards, hand boards or newsprint is possible. The molasses is mainly used for manufacture of alcohol, cattle feed, production of food yeast and essential amino acids etc.

At present there are 49 dal mills located in different districts of the region and capable of processing existing production of pulses. More dal mills needs to be estimated under small-scale industries to process the estimated increase in production of pulses. During A.D. 2000-01 two modern dal mills can be established in each district. Thus in all 14 dal mills can be established in the region in near future.

In addition to the above important industries other agro-based industries such as Fertilizer-mixing, Fruits and Vegetable processing, Milk products, Leather industry, Mineral-based industry, Engineering industry, Rice mills, Masala-making industry, Household industry, Forest-based industries, Wheat-based industry can be established and flourished in the Marathwada region in near future.
CONCLUSIONS

In brief, the results of the study can be concluded with the following points.

1. Cropping pattern of the region is dominated by foodgrain crops i.e. Cereals and Pulses.

2) Area of major crops under study have shown increasing trend during the last 30 years except groundnut and cotton.

3) Production of major crops under study have also shown increasing trend during the last 30 years except groundnut.

4) Productivity of the crops under study have shown increasing trend during the last 30 years except oilseed crops i.e. groundnut, sunflower and safflower.

5) Average size of the family in the region is 6.94.

6) Maximum heads of families belongs to young age group up to 35 years.

7) Maximum number of farmers are educated.
8) Major source of income of the farmers is farming.

9) Maximum number of farmers belongs to income group up to Rs. 25000 P.A.

10) On an average farm size of the farmers under study was 2.65 hectares. Cropping intensity was highest in Jalna and lowest in Parbhani.

11) Cost of production of the crops under study have shown that these crops are remunerative except cotton and sugarcane.

12) Processing of crops under study found to be profitable one.

13) The value added products i.e. processed products viz. oil, dal, lint and sugar gets remunerative price in the market.

14) On the basis of the study it can be concluded that there is a good scope for establishment, progress and prospects for agro-based industries in Marathwada region.

The above are the major conclusions drawn from the study, "A Study of Agro-Processing Industries in Marathwada region of Maharashtra State".
SUGGESTIONS

Suggestions based on the study can be divided into three major groups, such as, suggestions based on the information obtained from farmers, suggestions based on the study of agro-processing industries and suggestions for future progress of agro-based industries in the region.

AJ SUGGESTIONS BASED ON FARMERS DATA

1. Cropping pattern of the region is dominated by foodgrain crops. It is desirable to have more proportion of commercial crops for economic betterment of the farmers. It will help to establish diversified agro-processing industries in the region which can run throughout the year.

2. Productivity i.e. per hectare yield is an important factor to increase the production of any crop. Higher the productivity leads to higher production as there is limitation to increase the area under crops.

3. To increase the productivity adoption of new technology is an important factor thus the required inputs and technical knowhow should reach to the cultivators in time and at reasonable price.

4. Attempt needs to be made to procure the agricultural produce through regulated markets and co-operative societies so that cultivators will get remunerative price.
5. Infrastructural facilities like storage, transportation, banking and communication should be increased in rural areas so as to get reasonable price to agricultural produce.

6. The country is facing edible oil crisis. An attempt needs to be made to increase the production of oilseed crops. Groundnut being an important oilseed crop of the region more efforts are required to increase production and productivity of this crop.

7. Credit facilities should be increased at minimum rate of interest to the farmers so that he can adopt new production technology which is capital oriented one.

8. The important inputs required for crop production should be provided at subsidize rates to the farmers to enhance their use to the desired extent.

9. Irrigation facilities in the region is limited to the extent of 10 per cent of the gross cropped area as against 35 to 40 per cent in the country as a whole, thus irrigation facilities need to be increased.
BJ SUGGESTIONS BASED ON THE STUDY OF AGRO-PROCESSING INDUSTRIES

1. Raw material required for processing industries be made available at appropriate place, accessible to the processing industries.
2. Raw material be available to the processing industries through co-operative societies of farmers by eliminating intermediaries to facilitate quality material at reasonable price.
3. Quick and efficient transport and communication facilities are required to run the processing units efficiently.
4. Rejuvenation of the existing machinery is required for efficient processing.
5. Credit facilities needs to be extended to the agro-processing industries at subsidize rate of interest for rejuvenation of old machinery and to meet the fixed and current capital requirement in time.
6. For full capacity utilization of the processing machinery adequate and timely supply of raw material be assured either by government or farmer's co-operative organisations.
7. Government restrictions should be minimized for flourishing of agro-processing industries.
8. Heavy taxes leveled at purchasing raw material and selling finished product be minimized.
9. Technical and Vocational courses be started to assure the availability of technical and skill persons required for such industries.
10. New and improved appropriate technology be developed to avoid losses during processing.
11. Necessary permission be given to export the processed material to earn foreign exchange & due profit to the industries.
12. It is necessary to assure the processing industries a fair and assured return on the capital invested.
13. The processing units be organized on co-operative basis particularly in rural areas. This will facilitate easy availability of raw material & will help to boost rural economy.

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FUTURE PROSPECTS FOR AGRO-BASED INDUSTRIES

There is a good scope for the establishment of agro-based industries in respect of oilseeds, pulses, cotton and sugar-cane.

1. If the anticipated growth in cotton production is considered, additional 18 ginning-cum-pressing units can be set up in the region. In addition to this, one pre-weaving and post-weaving finishing plant can be set up. Further, there is a scope for the establishment of 10 cotton seed crushing units. By-products of cotton seed crushing units can be used for manufacture of mattresses, blankets, animal feeds, fertilisers, soaps, glycerine, fatty acids, etc. Cotton rags can be used for paper and paper board. It is clear that cotton can provide an invaluable base for industrial development of Marathwada region.

2. There is a scope for expansion of industries based on oilseeds. Oilseed processing capacity can jump almost five fold of the existing level in the coming decade. There is a scope for the establishment of 13 oil mills, solvent extraction plants & refineries in the region. The by-products of the oil processing units can be used for manufacture of soap, cattle feed, etc.
3. With the expansion of irrigation facilities there is a scope for establishment of 10 new sugar factories by A.D. 2000-01. In addition to sugar factories more gur making and khandsari units can be establish. The bagasses and molasses can be used as base for new industries such as manufacture of alcohol, cattle feed, amino acids etc.

4. In addition to existing dal mills, there is a scope for the establishment of 14 new dal mills in coming decade.

5. Likewise there is a scope for adequate establishment of Fertilizer-mixing plants, Fruits and Vegetable processing plants, Milk processing plants, Leather industries, Mineral-based industries, Engineering industries, Rice mills, Masala-making industries, Household industries, Forest based industries and Wheat-based industries in the different parts of the region.

For the economic development of the region the suggestions recorded above needs careful attention of the planners, administrators and social workers and useful for those involved in the planning and execution process of different developmental programmes in the welfare of the common masses of the region.