CHAPTER- IX

FINDINGS AND CONCLUSION

9.1.0 MAJOR FINDINGS

9.2.0 CONCLUSION

9.3.0 HYPOTHESIS TESTING

9.4.0 RESULTS AND THEORETICAL IMPLICATIONS

9.5.0 SUGGESTIONS
Chapter- IX

Findings and Conclusion

Introduction

This chapter deals with the research findings, conclusions, hypothesis testing and theoretical implications thereon. The main objective in the course of study was to estimate the cost of production of selected flowers under open field cultivation i.e. aster, marigold, chrysanthemum, rose and tuberose grown under small, medium and large sized holdings in Pune district. Furthermore, it was also intended to study the details of floricultural development in India and home state of study area i.e. Maharashtra. The investigation made was exclusively based on the primary data collected from the small, medium and large sized landholdings those grown open field flowers. For the study, area chosen as probability proportion i.e. Dound, Haveli, Khed and Purandar, based on maximum number of flower growers. A respondent of forty one each of aster and marigold, twenty nine of rose, fifty one and fifty two of chrysanthemum and tuberose, respectively, was drown by randomly so as to a total sample grower was two hundred and fourteen. Survey conducted with the help of a pre-tested schedule and accesses the data on resource use, cost and returns, marketing cost for the year 2009/10. Simple tabular analysis carried out and obtained the following result.
9.1.0 Major findings

The results obtained after the analysis of the data and findings has briefly summarized as under.

9.1.1 Findings – Regarding Floriculture Development

First section of the thesis discussed floriculture development of India as well as Maharashtra; it supported to research. So according to secondary data, following observations was finding out.

1. At the beginning of current decade (2001-2010), India’s flower export to world market was of about $ 50 billion crore per annum which less than 0.1 per cent.
2. In India, production of loose and cut flowers increased by 110 and 497 per cent, respectively in year 2006-2007.
3. In India, 160.72 thousand hectare area under flower cultivation in year 2007-2008 and produces 870 thousand MT of loose and 4341 million numbers of cut flowers.
4. West Bengal was the leading state occupied major area under flowers, which occupied 27.42 thousand hectare, where as Maharashtra, occupied 16.74 thousand hectare with fifth place in the rank among the various states in the country.
5. It observed that in order to loose flower production, Tamil Nadu tops with 25 per cent in year 2007-08, followed by Karnataka 19 per cent, Andhra Pradesh 14 per cent, Punjab 9 per cent and Maharashtra occupies fifth place with 8 per cent.
6. State wise production under green house flower observed that West Bengal tops with 45 per cent, followed by Maharashtra obtained second place with 13(13.19) per cent, Karnataka third with 13 per cent.
7. A number of horticultural development programmes have launched by the state, namely the National Horticulture Mission and other various Government Schemes, along with production and export intensives.

8. The number and area of operational holding in Maharashtra was maximizing in 1.0 to 2.0 hectare size class, which were 29.7 and 25.4 per cent respectively.

9. It observed that, jawar, bajara, all cereals are decreasing trends where groundnut and tobacco both were decreased rapidly, while rice and wheat are increasing trends where all pulses, sugarcane and cotton are increasing significantly in reference period, it showed that, farm community of Maharashtra prefer high value crops.

10. Amravati, Kolhapur and Nagpur region occupied above 10 per cent area of the state flower crop and Pune region occupied near about 45 per cent area while as regard to production, Pune got 39 per cent; followed by Kolhapur got 34 per cent. As far as concern to cut flower under open field, Pune got 58, 46 and 22 per cent of aster, tuberose and rose respectively; Kolhapur region got maximum production of rose (33%) while Amravati region got 21 per cent production of rose.

11. It observed regarding open field, maximum area showed under rose of 4967 ha (30.22%) followed by marigold of 4453.69 ha(10 %), chrysanthemum 2226 ha(13.55 %), whereas  jasmine of 1798 ha (10.94%), Tuberose 912.17 ha(5.55 %), aster 650.94 ha (3.96%) in Maharashtra.

12. Production under green house flower has been rising rapidly in Maharashtra. It raises more than doubled during 2008-09 to 2009-10 of all type of flowers.

13. It observed that, Rice, wheat, jawar, bajra, cereals, tur, gram, pulses, sugarcane, cotton, groundnut, sunflower, soyabean, grapes, pomegranate, custard apple, fig, vegetables, flowers are the major crops grown in the Pune district.
14. It found that irrigated area in 2001-02 increased by 162 per cent over the year 1960-61 but percentage change of net irrigated area after 1991 was comparatively low. It was 77 per cent net growth during 1980-81 to 1990-91 while 18 percent during 1990-91 to 2001-02.

15. It shows that marigold, tuberose, rose, chrysanthemum and aster these are the flowers covered major area of district under flowers. Marigold obtained higher area i.e. 35.75 per cent where as tuberose, aster and chrysanthemum obtained 13.05, 13.45 and 11.80 per cent area respectively, rose cultivation was 4.31 per cent in year 2007/08.

16. As regard to tahsil wise distribution of major flower cultivation Dound, Junner and Purandar occupied 65 per cent area while Haveli, Khed, Baramati and Ambegaon occupied 28 per cent area.

17. As regard to flower crops, Junner and Khed occupied 69 per cent of aster, Dound and Junner 65 per cent of chrysanthemum, Dound, Junner and Purandar 69 per cent of marigold, Dound and Haveli 52 per cent of rose, Baramati and Dound 80 per cent of tuberose.

18. It found that the area under total cereals, total pulses and total food grain crops was highest in Dound (9.28%) followed by Khed (8.91%). Sugarcane and vegetables showed a significant proportion in Dound. Fruits were dominant place in Haveli and Purandar. Area under oilseed seen more in Khed (21.24%) followed by Purandar (9.69%). Fodder crop grown more in Haveli (19.46%). Gross cropped area was more in Dound and Khed of 9.89 and 8.97 per cent, respectively.

9.1.2 Findings- Regarding Socio-Economic Indicator

20. It observed that average size of sample farm family was 5.7 at the overall level. The average number of members among small, medium and large size group of farms
was 5.3, 5.7 and 6.1, respectively. The composition of family at the overall level shows that each family has 2.1 adult males, 1.7 adult females and 1.9 children.

22. As regard to number of earner and dependent, it showed 42 per cent and 58 per cent, respectively, at overall level.

23. It observed that the percentage of illiteracy was 10 per cent of male and 11 per cent of female at overall level. The percentage of primary level schooling observed 36 per cent of male while 41 per cent of female and 40 per cent among children. The percentage of secondary level schooling observed 41 per cent of male while 37 per cent of female and 39 per cent of children. The percentage of graduation level observed 13 per cent of male and 12 per cent of female.

24. The average size of the holding found 1.37, 2.79 and 5.85 hectares, in small, medium and large groups of farm respectively. It shows that the land under irrigation was more in large size group (2.65 ha) in fact percentage of irrigated area was more in small sized group (77 %) followed by medium (67 %) and large (53 %).

26. As compare to different size group of farms, food grains occupied major area i.e. 28.5 per cent, 33.5 per cent and 36.5 per cent of small, medium and large size group of farms, respectively. Flowers occupied of 15.5,18.3, and 20 per cent; other cash crops of 20, 22, and 31.3 per cent; other ordinary crops of 36,26.2 and 12.2 per cent among small, medium and large size group of farms, respectively.

9.1.3 Findings- Regarding Input Use

27. At the overall level, aster crop required about 46 male and 185 female labour days. Of which 68 labours belongs family labour and 32 female labour days belongs hired labour. It observed that small sized group used above 80 per cent family labour
followed by medium sized group of 65 per cent and large sized group of 55 per cent to total human labour days.

28. It showed, at the overall level marigold required about 43 male and 173 female labour days of which 71 per cent came from family, while 29 per cent from hired. This shows that the dependency of farmers on family labour was considerably high. The size group wise comparison shows that requirement of hired labour increased as size of farms increases. It was about 20, 27 and 40 per cent of small, medium and large sized groups of farms, respectively.

29. It showed that, chrysanthemum farms utilized 117.83 male labour days of which 46.25 per cent came from hired labour while 53.75 per cent came from family at the overall level. The total female labour utilized 420.13 days of which 55.25 per cent came from hired labour and 44.75 per cent from family labour. Large sized farms about 71.31 per cent and 83.44 per cent came from hired labour whereas about 33 per cent male, 30.23 per cent, and 49.82 per cent female labour days for small and medium sized groups, respectively.

30. It observed that, at overall level field rose farms utilized 145.5 male labour days of which 46.73 per cent came from hired labour while 53.26 per cent came from family. The total female labour utilized 617 days of which 40.52 per cent came from hired labour and 59.48 per cent from family labour.

31. It appears that, at overall level tuberose farms utilized 121.66 male labour days of which 33 per cent came from hired labour while 66 per cent from family. The total female labour utilized 622 days of which 37 per cent came from hired labour and 63 per cent from family labour.
32. The manure and fertilizer application was significant inputs used by aster grower. It observed that 15 MT of manure and 508 kg of N.P.K. utilized. One or two dose required for aster of 6.6 liter. It observed that input utilization increased with size of farms increases except irrigation.

33. The input used by marigold grower, manure and fertilizer about 18.17 MT of manure and 440 kg of fertilizer, insecticides and pesticides 2.66 liter and 6 round of irrigation.

34. The utilization of manure and fertilizer for chrysanthemum increased as the size of farms increased. It was least at small sized farms of 20 MT and 500 kg whereas medium and large sized groups used about 24 MT and 600 kg, 22 kg and 759 kg respectively. The application of insecticides and pesticides required 11.39 liter.

35. The utilization of manure and fertilizer for rose was least at small sized farms 45 MT &1840 kg whereas medium and large sized groups used about 52 MT and 1875 kg and 55 MT and 2062 kg, respectively. Application of insecticides and pesticides required 26.5 liter. Whereas irrigation round required on an average 23.4 round.

36. The utilization of manure and fertilizer for tuberose was least at small sized farms 60 MT and 2777 kg whereas medium and large sized groups used about 62.5 MT and 3333 kg and 75 MT and 3611 kg, respectively. Application of insecticides and pesticides observed 10, 11 and 15 liter at overall level. Whereas irrigation round required on an average 21.4 round per hectare per annum.

37. It observed that, the operation weeding and picking of flowers were exclusively done by the female labour of 37.65 per cent, 33.29 per cent, 44 per cent, 41.34 per cent and 46 per cent were required for aster, marigold, chrysanthemum, rose and tuberose, respectively. The highest number of male labour days 36.49 per cent, 37.21
per cent, 32.31 per cent, 58.5 and 43.83 consumed by aster, marigold, chrysanthemum, rose and tuberose, respectively for irrigation purpose, similar trend observed among different size group of farms.

9.1.4 Findings- Regarding Cost of Cultivation

i) Per-hectare cost A

38. The per hectare cost A of aster was worked out about Rs. 29,400 (53.05%), Rs. 34,788 (60.70%) and 39,264 (65.25%) for small, medium and large size groups of aster farms, respectively. Among the different items of costs at overall level, it observed bullock and machine labour 10.92 per cent, seedlings 4.76 per cent, irrigation charges 2.45 per cent, insecticides and pesticides 11.64 per cent, land revenues 0.26 per cent and interest on working capitals 2.42 per cent.

39. The per hectare cost A of marigold was worked out about Rs. 26,095 (58.81%), Rs. 28,133 (61.86%) and 32,331 (69.30%) for small, medium and large size groups of farms, respectively. Among the different items of cost at overall level observed bullock and machine labour 12.85 per cent, seedlings 6.40 per cent, irrigation charges 1.74 per cent, insecticides and pesticides 5.03 per cent, land revenues 0.33 per cent, interest on working capitals 3.13 per cent.

40. The per-hectare cost A of chrysanthemum was worked out about Rs 68,325 (44.11%), Rs87, 766 (50.68%) and Rs 15,878 (65.45%) for small, medium and large size groups of farms, respectively. Among the different items of costs at overall level observed bullock and machine labour 4.68 per cent, seedlings 7.91 per cent, irrigation charges 1.28 per cent, insecticides and pesticides 5.09 per cent, land revenues 0.11 per cent interest on working capitals 4.35 per cent.
41. The per-hectare cost A of rose was worked out about Rs. 185925 (65.50 %), Rs. 195321(65.40%) and 226380 (72.40%) for small, medium and large size groups of farms, respectively. Among the different items of cost at overall level observed apportioned establishment cost 28.54 per cent, irrigation charges 0.98 per cent, insecticides and pesticides 10.76 per cent, land revenues 0.06 per cent, interest on working capitals 1.43 per cent.

42. The per-hectare cost A of tuberose worked out about Rs. 110164 (52.12%), Rs. 128303 (56.96%) and 137488 (58.13%) for small, medium and large size groups of farms, respectively. Among the different items of cost at overall level observed apportioned establishment cost 21.13 per cent, irrigation charges 1.53 per cent, insecticides and pesticides 10.76 per cent, land revenues 0.08 per cent, interest on working capitals 1.67 per cent. Thus, the similar trend of per hectare cost of cultivation as well as item wise cost observed among the different size groups of farms at the overall level.

ii) Per-hectare cost B

43. The per hectare cost B of aster was worked out about Rs 38400 (68.13%), Rs 43213 (75.40%), Rs 47874 (79.57%) for small, medium and large size groups of farms, respectively. Net cost on item of B found Rs 8500(15.9%), Rs 8425(14.70%), and 8610(14.32%) for small, medium and large size groups of farms, respectively.

44. The per hectare cost B of marigold was worked out about Rs 34695 (67.86%), Rs 36623 (70.11%), Rs 40920 (76.62%) for small, medium and large size groups of farms, respectively. Net cost on item of B found Rs 8600 (16.82%) Rs 8490(16.25%) (14.70%), and 8589 (16.09%) for small, medium and large size groups of farms, respectively.
45. The per hectare cost $B$ of chrysanthemum was worked out about 110792 (71.52%), 132717 (76.64%), 162691 (91.89%) for small, medium and large size groups of chrysanthemum farms, respectively. Net cost on item of $B$ found Rs 42467 (27.42%), Rs 44951 (25.96%), and Rs 46813 (26.44%) for small, medium and large size groups of farms, respectively.

46. The per hectare cost $B$ of rose was worked out about 229534 (80.86%), 238623 (79.90%), 270262 (86.44%) for small, medium and large size groups of rose farms, respectively. Net cost on item of $B$ found Rs 43609 (15.4%), Rs 43302 (14.5%), and Rs 43882 (14.03%) for small, medium and large size groups of farms, respectively.

47. The per hectare cost $B$ of tuberose was worked out about 153283 (72.51%), 171870 (76.29%), 181730 (76.83%) for small, medium and large size groups of tuberose farms, respectively. Net cost on item of $B$ found Rs 43119 (20.4%), Rs 43567 (19.3%), and Rs 44242 (18.70%) for small, medium and large size groups of farms, respectively.

iii) Per-hectare cost $C$

48. The per hectare cost $C$ of aster was worked out about Rs 56362 (72 per cent), Rs 57313 (71%), Rs 60167 (70.6%) for small, medium and large size groups of aster farms, respectively. At overall level, it was about Rs 57848 of which 38 per cent (12.48% hired & 25.38% family) cost contributes human labour. Second major item was manure and fertilizer together 13.68 percent (6.68%+7%) followed by insecticide and pesticide 11.64 percent, bullock and machine labour 10.92 per cent. Net cost on family labour contributes 25.38 per cent

49. The per hectare cost $C$ of marigold was worked out about Rs 51125 (72%), Rs 52231 (71.3%), Rs 53406 (70.5%) for small, medium and large size groups of farms, respectively. At overall level, it was about Rs 52254 of which 42.51 per cent (13% hired
& 28.46% family) cost contributes human labour. Second major item was manure and fertilizer together 17.73 percent (10% + 7.73%) followed by bullock and machine labour 12.85 percent. Net cost on family labour contributes 28.46 percent.

50. The per hectare cost C of chrysanthemum was worked out about Rs 154892 (75.7%), Rs 173166 (76%), Rs 177041 (76.3%) for small, medium and large size groups of chrysanthemum farms, respectively. At overall level, it was about Rs 168366 of which 39.83 percent (20.25% hired & 19.58% family) cost contributes human labour. Second major item was rental value of land 22.27 percent followed by seedlings 7.91 percent. Net cost on family labour contributes 19.58 percent.

51. The per hectare cost C of rose was worked out about Rs 283834 (71.6%), Rs 298623 (71.1%) and Rs 312637 (71%) for small, medium and large size groups of rose farms, respectively. At overall level, it was about Rs 298364.7 of which 30.47 percent (12.97% hired & 17.50% family) contributes human labour. Second major item 28.54 percent contributes apportioned establishment cost followed by rental value of land 12.56 percent, manure and fertilizer together 10.90 percent (5.10% + 5.80%), insecticides and pesticides 10.76 percent. Net cost on family labour contributes 17.50 percent.

52. The per hectare cost C of tuberose was worked out about Rs 211383, Rs 225270, and Rs 236530 for small, medium and large size groups of tuberose farms, respectively. At overall level, it was about Rs 224387 of which 38.6 percent (13.82% hired & 24.78% family) contributes human labour. Second major item 21.13 percent contributes apportioned establishment cost followed by rental value of land 16.74 percent, fertilizer 8.81 percent. Net cost on family labour contributes 24.78 percent.
9.1.5 Findings- Regarding Marketing Cost

53. The significant item of cost was the commission of commission agent contributing to around 66.8 per cent, 55.81 per cent, 68.25 per cent, 55.22 per cent and 61.29 per cent for aster, marigold, chrysanthemum, rose and tuberose, respectively of the total marketing cost. Second important item of cost found transportation charges around 15.46 per cent, 25.73 per cent, 21.17 per cent, 21.10 per cent and 30.33 per cent followed by packing and grading charges around 11.06 per cent, 12.87 per cent, 3.73 per cent, 18.15 per cent and 2.24 per cent for aster, marigold, chrysanthemum, rose and tuberose, respectively of the total marketing cost.

9.1.6 Findings- Regarding Cost of Production

54. The cost of production of aster at overall level was Rs. 81,309 of which major item of cost was the human labour (26.7%). Second important item of cost found marketing cost (21.72%). It was Rs. 78,378, Rs. 80793 and Rs. 84,755 for small, medium and large size group of farms, respectively.

55. The cost of production of marigold at overall level was Rs. 73344.33 of which major item of cost was the human labour (28.33%). Second important item of cost found marketing cost (21.63%). It was Rs71021, Rs 73295 and Rs. 75717 for small, medium and large size group of farms, respectively. It indicates that, trends of cost of production increased with size group of farms increases.

56. The cost of production of chrysanthemum, at overall level was Rs. 221486 of which major item of cost was the human labour (30.28%). Second important item of cost found marketing cost (16.39%). It was Rs 204470, 227979 and Rs 232010 for small, medium and large size group of farms, respectively.
57. The cost of production of rose at overall level was Rs. 419083 of which major item of cost was the human labour (21.70%). Second important item of cost found marketing cost (21.67%) followed by apportioned establishment cost (20.32%). It was Rs 396266, 419774 and Rs 441212 for small, medium and large size group of farms, respectively.

58. The cost of production of tuberose, at overall level was Rs. 302636 of which major item of cost was the human labour (28.33%). Second important item of cost found marketing cost (21.63%) followed by apportioned establishment cost (18.43%). It was Rs 284829, 303545 and 319534 for small, medium and large size group of farms, respectively.

9.1.7 Findings- Regarding Per Hectare Yields

59. Per-hectare total yield obtained from aster at the overall level was 21,125 pairs. Among the size groups of farms, the yield got 20,000, 20,625 and 22,750 pairs in small, medium and large size groups of farms, respectively.

60. Per-hectare total yield obtained from marigold at the overall level was 4607 kg. Among different size groups of farms, the yield was 4325 kg, 4620 kg and 4851 kg in small, medium and large size groups of farms, respectively.

61. Per-hectare total yield got from chrysanthemum at the overall level was 7684.5 kg. Among the difference size group of farms, yield was 7225, 7947.5 and 7881 kg from small medium and large size groups of farms, respectively.

62. Per-hectare total yield got from rose at the overall level was 836390 numbers. Among the difference size groups of farms the yield was 766500, 839300 and 903370 numbers in small medium and large size groups of farms, respectively.
63. Per-hectare total yield obtained from tuberose at the overall level was 9581 kg. Among the difference size groups of farms the yield was 9125, 9581 and 10037 kg from small, medium and large size groups of farms, respectively.

9.1.8 Findings- Regarding Per Hectare Gross and Net Returns

64. The gross returns received from aster were Rs. 1,19,553 at the overall level. It observed to be Rs. 1,15,000 Rs. 1,18,594 and Rs. 1,18,594 from small, medium and large size group of farms, respectively, large sized group of aster farms received highest per hectare gross returns followed by medium and small sized group of farms. The net returns received at overall level of Rs 32284. It was Rs 36322,Rs 37801,Rs 40308 from small, medium and large size groups of farms, respectively. Per-hectare net return was the highest in large sized group of farms followed by medium and small sized group of farms.

65. The gross returns received from marigold were Rs. 94213 at the overall level. It observed to be Rs. 88958, Rs. 94479 and Rs. 99203 from small, medium and large size group of farms, respectively. The large sized group of marigold farms received highest per hectare gross returns followed by medium and small sized group of farms. The net returns received at overall level of Rs 20889. It was Rs 17937, Rs 21118, Rs 23446 from small, medium and large size groups of farms, respectively. Per-hectare net return was the highest in large sized group of farms followed by medium and small sized group of farms.

66. The gross returns received from chrysanthemum was Rs 247672 at the overall level. It was observed to be Rs 232862,Rs 256148 and Rs 254005 from small, medium and large size groups of farms respectively. Medium sized farms received highest per hectare gross returns followed by large and small size groups of farms. The net returns
received at overall level of Rs 26186. It was Rs 28932, Rs 28169, Rs 21995 from small, medium and large size groups of farms respectively. Per-hectare net return was the highest in small sized group of farms followed by medium and large sized group of farms.

67. The gross returns received from rose were Rs 501834 at the overall level. It observed to be Rs 459900, Rs 503700 and Rs 542025 from small, medium and large size groups of farms, respectively. Large sized farms received highest per hectare gross returns followed by medium and small size groups of farms. The net returns received at overall level of Rs 82750. It was Rs 63364, Rs 83926 and Rs 100815 from small, medium and large size groups of farms, respectively. Per-hectare net return was the highest in large sized group of farms followed by medium and small sized group of farms.

68. The gross returns received from tuberose were Rs 342041.7 at the overall level. It observed to be Rs 325762.5, Rs 342041.7 and Rs 358320.9 from small, medium and large size group of farms, respectively. Large sized farms received highest per hectare gross returns followed by medium and small size groups of farms. The net returns received at overall level of Rs 39414. It was Rs 40938, 38502, 38802 from small, medium and large size groups of farms, respectively. Per-hectare net return was the highest in small sized group of farms followed by large and medium sized group of farms.

9.1.9 Findings - Regarding Returns at Cost A, Cost B and Cost C

69. It appears from analysis that, returns of aster at overall level observed to be Rs 84799, Rs 76390 and Rs 61705 at level of cost A, cost B and cost C, respectively. The returns at cost A were highest Rs 85799 at large sized group followed by small sized Rs 85100 and medium sized Rs 83806. The returns at cost B were highest Rs
77189 at large sized group followed by small sized Rs 76600 and medium sized Rs 75381. The returns at cost C were highest Rs 65196 at large sized group followed by medium sized Rs 61281 and small sized Rs 58638.

70. It appears from analysis that, returns of marigold at overall level observed to be Rs.65360, Rs.56833 and Rs.41959 at level of cost A, cost B and cost C, respectively. The returns at cost A were highest Rs. 66872 at large sized group followed by medium sized Rs.66346 and small sized Rs.62863. The returns at cost B were highest Rs.58283 at large sized group followed by medium sized Rs.57856 and small sized Rs.54263. The returns at cost C were highest Rs 45799 at large sized group followed by medium sized Rs 42248 and small sized Rs 37833.

71. It appears from analysis that, returns of chrysanthemum at overall level observed to be Rs 157015, Rs 112272 and Rs 79306 at level of cost A, cost B and cost C, respectively. The returns at cost A were highest Rs168382 at medium sized group followed by small sized Rs 164537 and large sized Rs 138187. The returns at cost B were highest Rs 123431 at medium sized group followed by small sized Rs 122070 and large sized Rs 91314. The returns at cost C were highest Rs 82982 at medium sized group followed by small sized Rs 77970 and large sized Rs 76964.

72. It appears from analysis that, returns of rose at overall level observed to be Rs 329034, Rs 285437 and Rs 233212 at level of cost A, cost B and cost C, respectively. The returns at cost A were highest Rs 346729 at large sized group followed by medium sized Rs 337597 and small sized Rs 302900. The returns at cost B were highest Rs 302847 at large sized group followed by medium sized Rs 294295 and small sized Rs 259291. The returns at cost C were highest Rs 260472 at large sized group followed by medium sized Rs 234295 and small sized Rs 204991.
73. It appears from analysis that, returns of tuberose at overall level observed to be Rs 216732, Rs 173089 and Rs 108263 at level of cost A, cost B and cost C, respectively. The returns at cost A were highest Rs 220833 at large sized group followed by small sized Rs 215599 and medium sized Rs 213740. The returns at cost B were highest Rs 176591 at large sized group followed by small sized Rs 172480 and medium sized Rs 170172. The returns at cost C were highest Rs 116772 at medium sized group followed by small sized Rs 114380 and large sized Rs 109820.

9.1.10 Findings- Regarding Benefit Cost Ratio

74. It observed that, at the overall level B: C ratio of aster cultivation was Rs.1:1.48 while cost A, cost B and cost C level it was Rs. 1:3.48, Rs. 1:2.79 and Rs. 1:2.07 respectively. At cost of production level, the cost benefit ratio found to be more in large size group (Rs-1:1.48) followed by medium and small size group (Rs-1: 1.47). it clarified that the aster cultivation was also profitable

75. It observed that, at the overall level B:C ratio of marigold cultivation was Rs.1:1.28 while cost A, cost B and cost C level it was Rs. 1:3.29, Rs. 1:2.51 and Rs.1:1.80 respectively. At cost of production level, the cost benefit ratio found to be more in large size group (Rs. 1:1.31) followed by medium (Rs 1:1.28) and small size group (Rs1: 1.25). it clarified that the marigold cultivation was also profitable

76. At the overall level B:C ratio of chrysanthemum cultivation indicate that profitability of investment was observed to be 1:2.83 at cost A, 1:1.86 at cost B and 1:1.47 at cost C, Whereas at cost of production level it was 1:1.11. The output-input ratio was greater than unity. Among the different size groups of farms the output-input ratio at cost C was highest of small sized group followed by medium and large sized group of
farms, it clarified that the chrysanthemum cultivation was profitable. It was highest in small (1:1.13) followed by medium (1:1.12) and large (1:1.09) size groups of farms.

77. It appears that, the B:C ratio of rose cultivation indicates that profitability of investment observed to be 1:2.91 at cost A, 1:2.46 at cost B and 1:1.87 at cost C. The output-input ratio was greater than unity indicating thereby the cultivation of rose was profitable. Among the size groups of farms the output-input ratio at cost C was highest in large sized group followed by medium and small sized group of farms. The output-input ratio at cost of production was 1:1.19 at the overall level, it clarified that the field rose cultivation was also profitable. It was highest in large (1:1.22) followed by medium (1:1.19) and small (1:1.16) size groups of farms.

78. It appears that, at the overall level, the B:C ratio of tuberose indicate that profitability of investment was observed to be 1:2.75 at cost A, 1:2.02 at cost B and 1:1.52 at cost C and 1:1.22 at cost of production level, the output-input ratio was greater than unity indicating thereby the cultivation of tuberose was profitable. Among the size groups of farms the output-input ratio at cost C was highest in large sized group followed by medium and small sized group of farms. The output-input ratio at cost of production was 1:1.22 at the overall level, it clarified that the tuberose cultivation was profitable. It was highest in small (1:1.43) followed by medium (1:1.12) and large (1:1.12) size groups of farms.

9.1.11 Findings- Regarding Intra Flower Comparison

79) As compared to the cost and returns of aster and marigold crops, cost of production of aster found 1.11 times more than marigold whereas, gross returns showed 1.27 times more than marigold.
80) As compared between aster and marigold cultivation, the aster cultivation yielded better returns i.e., Rs 1.48 for every rupee invested, whereas marigold farms yielded only Rs 1.28 for every rupee invested. Thus, from this measure, it can be concluded that, the capital was efficiently used in both flower crop but aster crop showed more benefited than marigold.

81) The cost of production of aster and marigold (together) compared with chrysanthemum, it indicates that, on an average cost of production of chrysanthemum was 1.44 times more than aster and marigold together. As regard to gross returns, it was 1.16 times more of chrysanthemum. Therefore, it can be concluded that aster and marigold crops showed more benefitted than chrysanthemum.

82) As compared between field rose and tuberose, at the overall level the cost of establishment showed that rose farm required 1.7 times more amount on material cost than tuberose. As regard to share of labour cost, it was two times more.

83) As compared the cost and returns of rose and tuberose, cost of production of rose found 1.33 times more than tuberose whereas gross returns 2.42 times more. Ultimately, it revealed that cost of production and gross returns showed more in rose cultivation.

84) As compared between rose and tuberose cultivation, the rose cultivation yielded better returns i.e., Rs 1.19 for every rupee invested, whereas tuberose farms yielded only Rs 1.09 for every rupee invested. Thus, from this measure, it can be concluded that, the capital was profitably used in both flower crop but rose was more profitable.
9.2.0 Conclusion

9.3.0 9.2.1 Conclusion – Regarding Floriculture Development

It can be concluded that,

i) India is being specialized in the export of cut flower and emerged as new production centre.

ii) Area and production of flowers under both green house and open field cultivation observed increasing trends in India.

iii) The Central as well as State Government tries to help floriculture sector through supporting agencies i.e. N.H.B. APEDA, NABARD and National Horticulture Mission.

iv) Maharashtra’s soil, topography and climate shows a definite potential and scope for various horticultural crops.

v) Pune district is the major flowers growing district as compare to other district of Maharashtra.

vi) The number and area of operational holding in Maharashtra was maximizing in 1.0 to 2.0 sizes.

vii) Dound, Haveli, Khed, Purandar and Junner are the famous tahsil for flower cultivation. It is remarkable feature that, each tahsil concentrated with one or two flower crop.

9.2.2 Conclusion - Regarding Socio-Economic Indicator

i) As compared to different size group of farms, number of men, women and children’s were relatively more in large size group followed by medium and small.
ii) According to cultivation record, family member used as a labour relatively more in small. While, member of families belongs large size group involved relatively low in farm activities.

iii) Percentage of illiteracy was more in female. The percentage of primary level education was more in female. The percentage of secondary level and graduation level was more in male.

iv) Different size group indicate that dependent numbers were more among small and medium size group of farms.

v) Aster and marigold concentrated area Khed and Purandar was relatively less irrigated compare to others at all categories. It also seen the same features of proportion of area sown more than once and gross cropped area which related to irrigation facilities.

vi) The land under irrigation was more in large size group in fact proportional percentage of irrigated area was more in small sized group followed by medium and large.

vii) As compare to different size group of farms, food grains occupied major area. Flowers occupied of 15.5, 18.3, and 20 per cent of small, medium and large size group of farms, respectively.

9.2.3 Conclusion- Regarding Input Use

Small sized group used family labour above 80 per cent followed by medium sized group of 60 per cent and large sized group of 50 per cent to total human labour days. Requirement of hired labour increased as size of farms increases. It clarified that the dependency on family labour for flower farms was relatively high. The total female labour utilized with large amount of which average 30 to 35 per cent came from hired
labour and average 65 to 70 per cent from family labour. As regard to use of human labour, female labour utilized large extent than male.

i) As regards to different size group of farms, large sized depends on hired labour at relatively higher than small and medium sized groups.

ii) Share of family labour decreased as size of farms increased, whereas hired labour increased as size of farms increased.

iii) The operation weeding and picking of flowers were exclusively done by the female labour. The manure and fertilizer application is significant inputs used by flower grower.

iv) Input utilization increased with size of farms increases except irrigation. It was least at small sized farms.

9.2.4 Conclusion- Regarding Cost of Cultivation

i) Cost A increase with increases the size of farm because of requirement of hired labour increase with increases the size of farm. It was 55.6 per cent, 59 per cent and 65.8 per cent for small, medium and large sized farms, respectively.

ii) Cost B (rental value on land) showed constant because of rental value considered as privilege rate.

ii) Cost C (share of family labour) decrease with increases the size of farm because of utilization of family labour decrease with increases the size of farm. It was 27.6 per cent, 24.4 per cent and 18.6 per cent for small, medium and large sized farms, respectively.
iii) Major item of cost found human labour followed by, manure and fertilizer, insecticide and pesticide. In case of perennial flower crop, second important item was apportioned establishment cost.

9.2.5 Conclusion- Regarding Marketing Cost

i) The significant item of cost was the commission of commission agent contributing to around 62 per cent of the total marketing cost.

ii) The second important item of cost was the transportation charges around 23 per cent followed by packing and grading charges around 10 per cent of the total marketing cost.

iii) As regard to cost of production, marketing cost contribute to around 21 per cent. It was second largest component of cost of production.

9.2.6 Conclusion- Regarding Cost of Production and Yield

It concluded that,

i) Per-hectare yield of flowers increased with an increase in the size group of farms.

ii) Cost of production was the highest on large size farm followed by medium and small size group of farm.

iii) Pattern of cost of production of flowers having larger size put larger amount of money in the flower cultivation as it is an important cash crop.

iv) Gross returns also clarified the similar trend that was of per hectare yield.

9.2.7 Conclusion- Regarding Per Hectare Returns

i) Large sized group of farms received highest per hectare gross returns followed by medium and small sized group of farms.
ii) Per-hectare net returns was the highest in large sized group of farms followed by medium and small sized group of farms, except chrysanthemum (It was highest in medium sized group of farms followed by large and small sized group of farms).

iii) Returns at cost A was highest at large and medium sized farm, returns at cost B showed highest at different level for different crops. While returns at cost C was highest at large and medium sized farm.

9.2.8 Conclusion - Regarding Benefit Cost Ratio

i) As compare among different flower crops, the benefit cost ratio at the cost of production level was highest in aster (Rs 1.48) followed by marigold (Rs1.28), rose (Rs 1.19), tuberose (Rs 1.13) and chrysanthemum (Rs1.11).

ii) At the cost of production level, the benefit cost ratio of aster, marigold and rose found to be more in large size group followed by medium and small size group while it found more in small size for chrysanthemum and medium for tuberose.

iv) At cost A and cost B level the benefit cost ratio was found highest of aster (Rs.3.47and 2.77) followed by marigold (Rs.3.26 and 2.51), rose (Rs.2.91 and 2.32), tuberose (Rs.2.72 and 2.02) and chrysanthemum (Rs.2.73 and 1.82).

v) At cost C level the benefit cost ratio was found highest of aster (Rs 2.07) followed by rose (Rs 1.81), marigold (Rs 1.80), tuberose (Rs 1.52) and chrysanthemum (Rs 1.47)
vi) It concluded that the benefit cost ratio in all the levels of cost and size groups were more than unity therefore the cultivation of flower growing was profitable in the area under study.

vii) It concluded that aster and marigold crops were more profitable than chrysanthemum while rose was more profitable than tuberose.

Eventually, it concluded from flower grower’s point of view, that farmers are capable to produce properly only there is need to sale properly.

3.2.9 Conclusion - Regarding Intra Flower Comparison

i) As compared to the cost and returns of aster and marigold as a seasonal flower crops, it was more in aster.

ii) As compared between aster and marigold cultivation, the aster cultivation yielded better returns. It can be concluded that, the capital was efficiently used in both flower crop but aster crop was more benefited than marigold.

iii) The cost and returns of aster and marigold (together) compared with chrysanthemum, it can be concluded that aster and marigold crops showed more benefitted than chrysanthemum.

iv) It can be concluded that, cost of establishment of rose farms required more capital than tuberose.

v) The cost of establishment showed that rose farm required more amounts on material and labour cost than tuberose.

vi) As compared between rose and tuberose cultivation, the rose cultivation yielded better returns, it can be concluded that, the capital was profitably used in both flower crop but rose found more profitable.
9.3.0 Hypothesis testing

This research study presented the following hypotheses that tested as below.

9.3.1 Hypothesis No. 1

‘*Flower cultivation is labour intensive farming and dependency of family labour is high*.’

The result of present study revealed that cost on human labour was large proportion. Following analysis clarified that selected all flowers were labour intensive.

- Aster

At overall level, cost of cultivation of aster crop (Cost C) worked out to Rs. 57,848 per hectare, of which Rs 25907 (45\%) required for human labour.

The comparison of per hectare cost of cultivation in different size groups of farms clarify that human labour formed at large of total cost in all the size groups of farms. It was Rs.21962 (38\%), Rs. 25462/ (45\%) and Rs. 24267 (41.49\%), of which family labour formed Rs. 17,962 (31.86\%), Rs. 14,100 (24.60\%) and Rs. 11,993 (19.94\%) for small, medium and large sized groups of farms, respectively. Whereas share of hired human labour accounted Rs.4,000 (7.09\%), Rs.7,500 (13.08\%) and Rs.10,167 (16.89\%) for small, medium and large sized groups of farms respectively.

- Marigold

At the overall level, cost of cultivation of marigold (Cost C) worked out to Rs. 52254 per hectare of which Rs 20779 (41\%) required for human labour for small, medium and large sized groups of farms, respectively.

The comparison of per hectare cost of cultivation in different size groups of farms clarify that human labour formed largest proportion of total cost in all the size groups of farms, i.e. Rs.20180 (40.5\%) for human labour. Rs.21233 (42.24\%) and Rs.20924
(41.4%) of which family labour formed Rs.16430 (32.13%) Rs.15608 (29.88%) and Rs.12486 (23.37%) for small, medium and large sized groups of farms, respectively. While it was 14861.33 (28.46%) at overall level. Whereas share of hired human labour accounted Rs.3750 (8.45%), Rs.5625 (12.36%) and Rs.8438 (18.08%) for small, medium and large size groups of farms, respectively.

- Chrysanthemum

At the overall level, the cost of cultivation of chrysanthemum (Cost C) worked out to Rs.168366. The major items of cost were aggregate human labour Rs.67080 (39.83%) of which family labour formed 19.58 per cent while hired labour formed 20.25 per cent.

As compare to different size groups of farms it was Rs 6500(39.78 per cent), Rs 69349(40.01%) and Rs.68691 (38.78%) for small, medium and large sized groups of farms, respectively. It showed that share of family labour of Rs.44100 (28.46%), Rs.40449 (23.34%) and Rs.14350 (8.10%) for small, medium and large sized groups of farms, respectively, whereas hired labour of Rs.19100 (12.32%), Rs.28900 (16.67%) and Rs.54341 (30.68%) for large, medium and small sized groups of farms, respectively.

- Rose

Cost of cultivation of rose (Cost C) worked out to Rs.298365. The major items of cost were aggregate human labour Rs.90950 (30.48%) of which family labour formed 17.50 per cent while hired labour formed 12.97 per cent.

As compare to different size groups of farms it was Rs.92750 (29.66%), Rs 90000(31.47%) and Rs.86100 (30.33%) for large, medium and small sized groups of farms, respectively. It showed that share of family labour of Rs.42375 (13.55%), Rs.60000 (20.0%) and Rs.54300 (19.14%) for large, medium and small sized groups of
farm, respectively, whereas, hired labour of Rs 50375 (16.1%), Rs.34000 (11.3%) and Rs.31800 (11.20%) for large, medium and small sized groups of farms, respectively.

- Tuberose
  The cost of cultivation of tuberose (Cost C) worked out to Rs.224387. The major items of cost were aggregate human labour Rs.86533.33 (37.01%) of which family labour formed 24.78 per cent while hired labour formed 13.82 per cent.

  As compare to different size groups of farms it was Rs. 88400 (37.3 %), Rs.86900 (38.5%) and Rs.84300 (39.7%), for large, medium and small sized groups of farms, respectively. It showed that share of family labour of Rs. 54800 (23%), Rs. 53400 (23%) and Rs. 58100 (27.4%) for large, medium and small sized groups of farms, respectively whereas hired labour of Rs. 33600 (14.2%), Rs. 33500 (14.8%) and Rs.26200 (12.3%) for large, medium and small sized groups of farms, respectively. This shows that the dependency on family labour was considerably high.

  **Hence, the hypothesis: ‘Flower cultivation is labour intensive farming and dependency of family labour is high’ stands valid.**

9.3.2 Hypothesis No. 2

2. ‘Share of family labour decreases as size of farms increases’.

  The details about labour utilization carried out to assess the above hypothesis and find out as below.

  **Aster** -The comparison of per hectare cost of cultivation in different size groups of farms clarify that human labour formed at large of total cost in all the size groups of farms. Of which family labour formed Rs. 17,962 (31.8%), Rs. 14,100 (24.6%) and Rs.11, 993 (19.9%) for small, medium and large sized groups of farms, respectively. It revealed that share of family labour decreased as size of farms increased.
**Marigold**- For marigold cultivation, family labour formed Rs.16430 (32.13%), Rs. 15608 (29.88%) and Rs. 12486 (23.37%) for small, medium and large sized groups of farms, respectively. It revealed that share of family labour decreased as size of farms increased.

**Chrysanthemum**- For chrysanthemum cultivation it showed that, share of family labour of Rs.44100 (28.46%), Rs.40449 (23.34%) and Rs.14350 (8.10%) for small, medium and large sized groups of farms, respectively. It is clear that share of family labour decreased as size of farms increased.

**Rose**- For rose cultivation, it showed that share of family labour of Rs.54300 (19.14%), Rs.60000(20.09%) and Rs.42375(13.55%) for small, medium and large sized groups of farms, respectively. It indicates that small farms utilized more quantity of family labour than large farms.

**Tuberose**- For rose cultivation, it showed that share of family labour of Rs.58100 (27.4%), Rs.53400 (23.7%) and Rs. 54800 (23.1%), for small, medium and large sized groups of farms, respectively. It is clear that share of family labour decreased at large sized groups of farms.

*Therefore, hypothesis ‘Share of family labour decreases as size of farms increases’ stands valid.*

9.3.3 Hypothesis No. 3

3. ‘**Crop productivity per unit of land declines with an increase in farm size**’.

A large number of studies during the 1960s and 1970s provided evidence that crop productivity per unit of land declined with an increase in farm size (Sen1962, 1964; Mujumdar 1965; Khusro1968; Hanumant Rao 1968; Saini1971). However, analysis of present course of study showed that, flower crop productivity increase with the size of farms increases. Following results proven that as below-
Aster crop has investigated in present course of study and per hectare yield found 20,000, 20,625 and 22,750 pairs from small, medium and large size group of farms, respectively.

Marigold found 4325, 4620 and 4851 kg from small, medium and large size group of farms, respectively.

Chrysanthemum found 7225, 7947.5 and 7881 kg from small, medium and large size group of farms, respectively.

Rose found 766500, 839300 and 903700 numbers from small, medium and large size group of farms, respectively.

Tuberose found 9125, 9581 and 10037 kg from small, medium and large size group of farms, respectively.

Above results showed that yield per hectare increased as size of farm increased.

Therefore, the second hypothesis ‘Crop productivity per unit of land declines with an increase in farm size’ stands invalid.

9.3.4 Hypothesis No.4

‘Larger the size of the farm, higher the returns’

Present course of study estimated the cost and returns. Profitability measured by the surplus of output over costs, including the imputed value of labour, and estimated cost and returns thereby result found as below.

- **Aster**-The gross returns received from aster were Rs. 1, 19, 553 at the overall level. It observed to be Rs. 1, 15,000 Rs. 1, 18,594 and Rs. 1, 18,594 in small, medium and large size group of farms, respectively, medium and large sized group of aster farms received highest per hectare gross returns.
- **Marigold** - The gross return received from marigold were Rs. 94213 at the overall level. It observed to be Rs. 88958, Rs. 94479 and Rs. 99203 from small, medium and large sized group of farms, respectively.

- **Chrysanthemum** - The gross returns received from chrysanthemum were Rs. 247672 at the overall level. It observed to be Rs. 232862, Rs. 256148 and Rs. 254005 from small, medium and large size groups of farms, respectively.

- **Rose** - The gross returns received from rose were Rs 501834 at the overall level. It observed to be Rs. 459900, Rs. 503700 and Rs. 542025 in small, medium and large size groups of farms, respectively.

- **Tuberose** - The gross returns received from tuberose was Rs. 342041.7 at the overall level. It observed to be Rs. 325762.5, Rs.342041.7 and Rs.358320.9 in small, medium and large size groups of farms, respectively.

Above analysis revealed that, large sized farms received highest per hectare gross returns followed by medium and small size groups of farms.

- **Hence, the hypothesis ‘larger the size of farm higher the returns’ stands valid.**

6.3.5 **Hypothesis No.5**

‘**Benefit cost ratio of flower cultivation is higher**’

- **Overall level**

  At the overall level, B: C ratio of aster was Rs. 1.48, marigold was Rs. 1.28, chrysanthemum was Rs. 1.11, rose was Rs. 1.19 and tuberose was Rs. 1.13.

- **At cost A and B**

  At cost A and cost B level the benefit cost ratio of aster Rs. 3.47 and 2.77, marigold Rs. 3.26 and 2.51, chrysanthemum Rs. 2.73 and 1.82 rose Rs 2.91 and Rs. 2.32, tuberose (Rs. 2.72 and 2.02).
• At cost C

At cost C level the benefit cost ratio was found, of aster Rs. 2.07, marigold Rs. 1.80, chrysanthemum Rs 1.47, rose Rs. 1.81, tuberose Rs. 1.52.

The output-input ratio was greater than unity. It concluded that the benefit cost ratio in all the levels of cost and groups more than unity.

• Hence, the hypothesis ‘Benefit cost ratio of flower cultivation seems to be higher’ stands valid.

9.4.0 Results and Theoretical Implications

For this study, economic theories and models used as theoretical framework, i.e. production function theories and statistical tools, arguments of past studies those in context to farm management analysis. Brief discussion on its implication and results presented as below.

9.4.1 Productivity and application of Cobb-Douglas production function

Present course of study used data from a random sample of flower farms. The data classified by area of sample tahsil (4), types of flowers (5) and size of farm (3). The input included (6) such as land, labour, manure, fertilizer, insecticide & pesticides, and irrigation. Interestingly, this study anticipated some of the matter in the empirical study on farm production and its function. This study concerned with contribution of input to output variation with factor productivity. The estimated production elasticity reported 1.02, 1.11, 1.20, 0.63 and 1.10 for aster, marigold chrysanthemum, rose and tuberose, respectively by pooled together.

This study was promptly by methodological innovation introduced by Cobb-Douglas. Yet their orientation is applicative in nature. Attention focused on the contribution of the various factors to the explanation of output variations in the cross
section, the production elasticity’s and significance, the role of economies of scale by the sum of elasticity. The database of this study varied from observations on individuals farms to cross section.

9.4.2 Implication of Returns to Scale

Present course of study, conducted survey and find out input-output relation. Data access on input those used significantly further it processed with Cob-Douglas production function and according to the sum of elasticity estimated gives the value of the ‘return to scale’ parameter. According to production elasticity of aster, marigold, chrysanthemum, and tuberose it find out production elasticity is more than one. Since the sum is more than one, it can be observed that the output is characterized by increasing returns to scale except rose crop.

9.4.3 Schultz theory ‘Transformation of Traditional Agriculture’

Professor Schultz gave attention on economic potentials of agriculture. He criticize, earlier development studies mostly took the form of macro-development models, which were not relevant in examining the behavior of agriculture as a source of growth. When these models are used to analyze real data it turns out that economic growth is concealed under the heading technological change. According to Schultz, it is residual; there is no explanation for it. Those who have taken any notice whatsoever of the agricultural sector always abhor the backwardness of farm people. He pointed; it has been widely held that traditional agriculture can improve only when farm people learn the economic virtue of “work and thrift”.

In context of flower grower in study area, researcher concluded that most of flower grower does not used modern technology, due to high risk and uncertainty. It is observed that farmer benefited with less technological changes but they took efforts on
marketing, such as present at auction individually, try to bargaining then sold it to retailers through commission agent. Therefore, flower grower gaining more than that of other crops. Hence, in the context of Indian farmer it is important to learn the marketing economics. It can be concluded that, how to produce has not been major problem but how to sell would be the major problem, which is the reason of backwardness of farm people.

9.4.4 Imputing values to the inputs and profitability

*Prof. Amartya Sen* argued that ‘When family labour employed in agriculture is given an imputed value in terms of prevailing wage rate, much of Indian agriculture seems non-remunerative. Simply that means if an account is made of the cost on family farms by imputing values to the inputs then the farming will not be profitable or in other words, there will be no surplus over costs.

Present course of study found that, in flower cultivation, every individual obtained profits when profitability measured by the surplus of output over costs, including the imputed value of labour. It means flower cultivation is remunerative.
9.5.0 SUGGESTIONS

- Maharashtra state has much potentiality to develop farm economy; especially there is scope for various horticulture crops. Therefore, there is urgent need to give more incentives to farmer by subsidy.

- Study data shows that, Maharashtra’s irrigation policy is very poor, so, there is need to encourage less water intensive irrigation system. For promotion of micro irrigation, it needed to change the system of distribution of subsidy.

- According to result of this study, share of cost of marketing was highest on commission of commission agent therefore rate of commission should reduce or give permission to sale producer to retailers in APMC.

- Researcher observed that there are no any co-operatives for transportations and sale of flowers in study area. If flower grower tries to establish flower grower association it will be helpful to reduce cost of production.

- It observed that majority flower grower used homegrown seeds. For the promotion of traditional flower grower, it is essential to implement high yielding variety programme to use hybrid seeds as well as soil testing.

- Researcher would like to suggest that NHM has introduced several schemes to boost up traditional flower cultivation but according to flower grower, distribution system is very poor. Therefore, effective distribution system should introduce.