CONCLUSIONS

1) The analysis of mean monthly rainfall in the district shows that during
the month of January, February and March the rainfall received is less than 10 mm for a month. In the months of April and December it varies from 15 - 25 mm. In the months of May, June, July and November the mean rainfall varies from 45 - 95 mm. In August, September and October the district receives more than 100 mm. The maximum mean rainfall of 131.3 mm is received in the month of September. The mean minimum rainfall of 3.15 mm is received in the month of February.

2) The average number of rainy days are less than 1 in the months of January, February and March. In April, May and December the average number of rainy days vary from 1 to 3. In the months of June and November the average number of rainy days vary from 4-5. In July, August, September and October the number of rainy days vary from 6-8. The maximum of 7.17 days is noticed in September and the minimum of 0.22 days in February. The rainfall intensity is high in the months of September, October and November. The average intensity during these months range from 18.17 - 18.32 mm for a rainy day. In the months of March, May and August the average rainfall intensity varies from 15.10 mm - 17.44 mm for a rainy day. During April, June and July the average intensity
ranges from 14.14 - 14.90 mm for a rainy day. In January, February and December the average rainfall intensity varies from 13.24 - 13.86 mm for a rainy day. The maximum of 18.32 mm for a rainy day is noticed in September and the minimum of 13.24 mm for a rainy day is found in December.

3) The monthly analysis of rainfall variability shows that during the months of January, February and March the values are very high and exceed more than 240% and denotes that there is a greater instability in rainfall distribution. In the months of April, May and December the values of rainfall variability are also high and indicate that there is a greater instability. In June and November moderate stability is noticed. In July, August, September and October that there is a greater stability in rainfall distribution.

4) The mean monthly rainfall ratio values show greater abnormalities in the months of January, February, March, April, May and December. In June and November a few abnormalities are noticed. In July, August, September and October the abnormalities are very low and show fairly stable rainfall distribution.

5) The seasonal analysis of mean rainfall depicts that during the winter period the rainfall received is less than 10 mm. The highest average rainfall of 385.68 mm is received during southwest monsoon followed by northeast monsoon period (234.82 mm). During the summer
period the district average rainfall is 66.56 mm. The average number of rainy days are less than 1 in winter period. They are 4.28 days in summer period and 13.37 days in northeast monsoon period. The maximum of 24.48 rainy days are found in southwest monsoon period. The rainfall intensity is very high during northeast monsoon period (17.56 mm for a rainy day), followed by southwest and summer periods (15.55 - 15.75 mm for a rainy day). During winter period the average rainfall intensity is about 14.1 mm for a rainy day. The rainfall variability is low during southwest and northeast monsoon periods due to high rainfall received during these two monsoons. The variability during summer period is moderate to high and very high in winter period due to low rainfall. The rainfall ratio value do not show any abnormalities in southwest and northeast monsoon periods. However prominent anomalies are found during the winter period.

6) The mean annual rainfall in the district varies from a minimum of 604 mm in Pulivendla station to a maximum of 833.8 mm in Sidhout station. The district average is 696.54 mm.

7) The monthly analysis of the frequency of rainfall reveals that in the months of January, February and March the departure from normal rainfall of the district is very high and depicts that there is very high variability in rainfall occurrence. In the months
of April, May and December the departure from normal is also high and depicts instability in rainfall occurrence. During the monsoon months of June, July, August, September, October and November the departure from normal is low. It is very low in the months of July and September in the district and denotes that there is greater stability of rainfall in July and September.

8) The analysis of seasonal rainfall frequency reveals that during the winter period the departure from normal rainfall is very high. In summer period also it is found high. In southwest monsoon period the departure from normal rainfall is low. During the northeast monsoon period the analysis reveals that there is moderate departure from the normal. The seasonal rainfall frequency reveals that during southwest and northeast monsoon periods there is more stability in rainfall due to low variability.

9) The mean monthly decadal rainfall analysis show low variations in rainfall in January, February, March and April. During the monsoon months in some stations on the western parts of the district there is a decrease in rainfall. An increase in rainfall is found in few decades in Rajampet, Badvel, Sidhout and Cuddapah stations. The seasonal analysis revealed that there is a decrease in rainfall in winter period. An increase in rainfall in summer period has been noticed in Sidhout, Rajampet, Proddutur, Badvel, Cuddapah,
Jammalamadugu and Kamalapuram stations. During the southwest monsoon and northeast monsoon periods both increase and decrease are noticed. Gradual increase in annual rainfall is found in Sidhout, Pulivendla and Badvel. The decrease in rainfall is noticed in Cuddapah, Proddutur and Rayachoti stations. In other stations both increase and decrease are noticed.

10) The analysis of mean monthly decadal variability shows the higher values in January, February, March, April and December. These months fall in winter and pre-monsoon period. In June, July, August and September and October the values range from moderate to low. Due to high rainfall received in the months of September, the values are found low in all the stations. The seasonal analysis reveals that during the winter period the variability is high. In summer and northeast monsoon period the variability is moderate and low in southwest monsoon period. The annual decadal rainfall variability do not show greater variations but show a decrease in trend in Badvel, Cuddapah, Kamalapuram, Rajampet and Sidhout.

11) The analysis of monthly ground water level variations reveal that in Rajupalem and Gundlakunta observation wells the level is less than 5 mts in almost in all the months. The ground water level has exceeded more than 10 mts. in Kalasapadu, Kondapuram and Bodeddulapalli controlled wells. In other observation wells of
the district the level varies from 5 - 10 mts.

12) The seasonal analysis of ground water levels in the district reveal that in northeast monsoon period the levels in the ground water are at lower depth followed by winter and southwest monsoon period. During the summer period the depth of ground water levels are higher than other seasons. In Rajupalem and Gundlakunta the level is less than 5 mts in all the seasons. The ground water level is more than 10 mts in Kalasapadu, Kondapuram, Bodedulapalli and Vempalli observation wells.

13) The annual ground water level varies from 3.25 - 13.4 mts Table 3.2. The minimum of 3.25 mts is noticed in Rajupalem and the maximum of 13.4 mts is found in Kalasapadu of Badvel taluk.

14) The analysis of seasonal ground water fluctuation reveals that during the winter period the fluctuation is low followed by southwest monsoon and northeast monsoon period. In summer the fluctuations in ground water are high in the district.

15) The annual ground water level fluctuations in Cuddapah district range from 0.48 - 6.38 mts. The minimum of 0.48 mts is found in Proddutur station and the maximum of 6.30 mts is noticed in Veeraballi observation well.

16) From the monthly variability analysis it has been found that in
about 5 observation wells the variability is less than 15% in majority of the months. Kalasapadu observation well showed the lowest variability among all the observation wells in all months. In Bodeddulapalli, Veeraballi, Rayachoti and Ippenta observation wells the variability is high and has exceeded more than 30%. In other wells of the district the variability ranges from 15 - 30%.

17) The seasonal analysis of ground water level variability indicates that in Bodeddulapalli and Veeraballi wells the variability is high. In Kalasapadu, Vempalli, Regadipalli, Gollapalli, Mydukur, Devapitla, Kodur, Kondapuram, Rajupalem and Proddutur the variability is low. In other wells of the district the variability ranges from 15 - 30%.

18) The annual ground water level variability ranges from 4% - 45%. The minimum variability of 4% is found in Kalasapadu observation well and the maximum variability of 45% is noticed in Veeraballi observation well.

19) The monthly analysis of ground water level changes indicate that in Vempalli, Regadapalli, Gollapalli, Kalasapadu, Devapitla, Gundla-kunta, Rajupalem, Proddutur, Pulivendla, Machenur and Chenur observation wells the ground water level changes are less than 5 mts in almost all the months. In these wells also the variability is found low. The Rajupalem observation well has showed very
low monthly changes in ground water level. In Bodeddulapalli, Rayachoti, Veeraballi and Ippenta observation wells the monthly ground water changes are more than 10 mts. In these wells also the variability values are high and exceeded 30%. In other observation wells of the district the changes noticed range from 5 - 10 mts. The analysis reveals that in observation wells which showed low changes the variability is low and vice-versa.

20) The seasonal analysis reveals that in Vempalli, Regadapalli, Gollapalli, Vonipenta, Devapatla, Gundlakunta, Rajupalem, Proddutur, Pulivendla and Chennur the changes in ground water level are less than 5 mts. In these wells the variability is also low. In Bodeddulapalli, Veeraballi, Ippenta and Rayachoti wells the ground water level changes are high. The variability is also high in these wells.

21) The annual changes in ground water level varies from a minimum of 1.5 mts in Rajupalem to a maximum of 11.3 mts in Bodeddulapalli.

22) The monthly analysis of rise and fall in ground water level reveals that in Bodeddulapalli, Palagiri, Vempalli, Rayadapalli, Gollapalli, Vonipenta, Goliveedu, Kondapuram, Rajupalem, Proddutur, Rayachoti, Pulivendla, Ippenta and Machenur observation wells, the fall in ground water level is noticed. In Bodeddulapalli the fall is high.
The rise in ground water level is noticed in Veeraballi, Kodur and Rajampet. In other observation wells both rise and fall in ground water level are noticed.

23) The seasonal analysis of rise and fall in ground water level indicates that in observation wells of Boddedulapalli, Palagiri, Vempalli, Regadapalli, Gollapalli, Vonipenta, Galiveedu, Kondapuram, Rajupalem Proddutur, Rayachoti, Pulivendla and Machenur there is a fall in ground water level in all the seasons. The rise in ground water level is noticed in Boyanapalli, Rajampet, Kodur and Veeraballi observation wells. However in other wells there is both rise and fall in ground water level.

24) The annual rise and fall in ground water level indicate that in about 18 observation wells there is a fall in ground water level. The fall varies from a minimum of -0.02 mts in kalsapadu to a maximum of -5.59 mts in Boddedulapalli. The rise in ground water level is found in 5 observation wells.

25) The seasonal analysis of ground water recharge indicates that during southwest monsoon the recharge is high in the district followed by northeast monsoon and summer periods. In winter period the recharge is very low in the district.

26) The annual recharge worked out by various methods shows that it varies from a minimum of 65.65% in Pulivendla taluk to a maximum
of 97.07% in Sidhout taluk.

27) The monthly analysis of water balance elements reveal that during the months of March, April and May the PE value in the district has exceeded more than 200 mm in majority of the stations. In February, June, July and August the values of PE ranges from 140 - 160 mm. In September, October and January the PE values range from 120 - 130 mm. In November and December the values of PE range from 95 - 110 mm. The spatial distribution shows that on north western parts of the district the PE values are high.

28) The AE values are found high in the months of September, October and November and are almost equal to PE values. They are however low in February, March, April and May. The values of AE are moderate in the months of January, June, July, August and December.

29) The water deficit in the district is high in the months of February, March, April, May and June. In January, July and August the water deficit is moderate. It is low in the months of November and December. The water surplus is not noticed in the district except in one (or) two stations in September and October.

30) The moisture adequacy values are high in the months of January, July, August, September, October, November and December. In these months the higher moisture adequacy values are highly favourable for crop culture. The moisture adequacy values are low in the month
of February, April, May and June. Crop culture could be possible only by supplementing water through some source of irrigation.

31) The Aridity index values are high in the months of February, March April, May and June. There is very high water shortage in the district during the above said months. In January, July, August and December the Aridity index values are moderate. In September, October and November the Aridity index values depict that there is no water shortage in the district.

32) The humidity index is found nil in January, February, March, April May, June, July, August and December. During these months there is no water surplus in the district.

33) The moisture index value depicts that the district experiences semi-arid type of climate in February, March, April and May. The dry subhumid type of climate is found in July, August and December. The dry subhumid and semi-arid types of climate are found in January and June. The district experiences the moist subhumid and dry subhumid climate in the month of September. In October and November the district experiences humid, moist subhumid and dry subhumid types of climate. The variations in climate are brought out based on the variations in the water deficit, water surplus, potential evapotranspiration, Aridity index, humidity index and moisture index.
The seasonal analysis of water balance elements reveal that the PE values are high in summer period, moderate in winter and southwest monsoon period and low during northeast monsoon period. The PE value increase from southwest to east and northeast. The AE values are found high during the northeast monsoon period, moderate in southwest monsoon and winter periods and low in summer period. The AE values increase from northwest to southeast. The water deficit is found very high during the summer period. It ranges from 474 - 515 mm. During the winter and southwest monsoon periods the values of water deficit are moderate. They are low during the northeast monsoon period and ranges from 2 - 42%. The trend shows an increase in southeast to northwest during winter period, southwest to north in summer period, from central to peripheral sides in southwest monsoon period and from east to northwest, during the northeast monsoon period. The water surplus is nil in all the stations of the district during the different seasons. The moisture adequacy values are high during northeast monsoon period. The values of Ima are moderate to high and vary from 58 - 75%. The values of Ima denote that there is sufficient moisture in the atmosphere for crop culture during the northeast and southwest monsoon periods. In winter period the Ima values range from 31 to 53%. In summer the values range from 15 - 24%, indicating that the crop culture could be carried out by providing irrigation water.
35) The Aridity index values are high during summer period and vary from 76 - 84%. In winter period the la values range from 47 - 69% and indicate that there is high water shortage. During southwest monsoon period the la values are moderate and range from 25-42%. In northeast monsoon period the values of la range from 1 - 13% and indicates low water shortage. The lh value in the district during the different seasons are nil due to lack of surplus water. The climatic classification shows that the district experiences dry subhumid type of climate during southwest and northeast monsoon period. In summer semi-arid type of climate is noticed. In winter period the eastern parts of the district experiences dry subhumid type of climate and western parts of the district semiarid type of climate.

36) The annual water balance elements of the district shows that the PE value in the district varies from 1719 - 1857 mm. The minimum of 1719 mm is noticed in Rayachoti station and the maximum of 1815 mm is found in Badvel station. The AE value ranges from 842 - 1074 mm. The minimum of 842 mm is found in Puli vendla station and a maximum of 1074 mm is noticed in Sidhout station.

37) The water deficit in the district varies from 760 - 968 mm. The minimum of 760 mm is found in Sidhout station and the maximum of 968 mm is noticed in Jammalamadugu station. The moisture
adequacy values range from 47 - 59%. The minimum of 47% is noticed in Jammalamadugu and the maximum of 59% is noticed in Sidhout station. The la values range from 41 - 53%. The minimum of 41% is found in Sidhout station and the maximum of 53% is noticed in Jammalamadugu station. The lh value in the district varies from 0.17%-3.81%. The minimum of 0.17% is found in Proddutur station and the maximum of 3.81% is noticed in Rajampet station. The moisture index values show that the district experiences dry subhumid type of climate.

37) The analysis of monthly soil moisture elements of the Cuddapah district reveals that the soil moisture availability is very high in the district in the months of September, October and November. In December and January the values are moderate. They are low in February and March. They are very low in the months of April, May, June, July and August. During these months crop culture could be carried out only by supplementing with irrigation water.

38) The soil moisture deficit is very high in the district in the months of February, March, April, May, June, July and August. The deficit is moderate in the months of January and December. The deficit is very low in September, October and November.

39) The soil moisture adequacy values are very high during the months of September, October and November. They are moderate in the
months of December and January. The adequacy values are low in the months of February and March. They are very low in April, May, June, July and August.

40) The soil moisture aridity values are very high in the months of April, May, June, July and August. They are high in the months of February and March. They are moderate in the months of December and January. The values of soil moisture aridity are very low in September, October and November.

41) The analysis of seasonal soil moisture elements reveals that the soil moisture availability is high in the district during the northeast monsoon period, followed by winter period. During the southwest monsoon period the availability is low to moderate in the district. It is very low during the summer period.

42) The soil moisture deficit is very high during the summer period. It is also high in winter and southwest monsoon periods. The soil moisture deficit is low during the northeast monsoon period due to high water availability in the district.

43) The soil moisture adequacy is very high in the district during the northeast monsoon period. It is low in winter and southwest monsoon periods. It is very low in summer season.

44) The soil moisture aridity values are very high in the district during
the summer period. They are also high in southwest monsoon and winter periods. The values of soil moisture aridity are low in northeast monsoon period. The analysis of soil moisture elements reveals that during the northeast monsoon period there is sufficient soil moisture for crop culture in the district.

45) The analysis of annual soil moisture elements indicates that on western stations of the district there is very high soil moisture shortage. On the eastern parts of the district the soil moisture shortage is moderate to high.

46) The analysis of concentration index of land utilisation in 1985-86 and 1988-89 reveals that in eastern parts of the district which is covered by hilly terrain comprises high percentage of forest area. The barren lands were found more in Kodur valley and south western parts of the district. In land put to non agriculture use the concentration was high in Badvel and Kodur valley. The permanent pastures and grass lands concentration was very high in Kodur valley and north western mandals of the district. The miscellaneous trees concentration was very high in the Kodur valley and north western mandals. The current fallow lands were found high in Badvel valley and in central mandals of the district. The net sown area concentration was very high in both the periods in north western and south western mandals of the district.
47) The analysis of relative percentage of changes in land utilisation at mandal level in the Cuddapah district shows decrease in the forest, barren lands, land put to miscellaneous trees, current fallow and net sown area. The increase was noticed in permanent pasture and grazing lands, culturable waste lands and other fallows.

48) The analysis of land use variability shows low in forest area, barren lands, land put to non-agricultural use, and net sown area. The high variability is found in permanent pasture and grazing lands, miscellaneous trees, cultivable waste and other fallows. The very high variability is found in current fallow.

49) The analysis of land use data using remote sensing techniques have helped to spatially map different land use units and bring out changes from 1986 to 1989 and revealed that there is reduction in forest area, increase in degraded forests, increase in orchards area, reduction in upland scrubs and current fallows, and increase in agricultural land.

50) The analysis of the concentration index during 1985-86 and 1988-89 reveals that the canal irrigation concentration was high in about 14 mandals of the district. The tank irrigation was high in south western and Badvel valley of the district in 1988-89. The well and other sources of irrigation was found high in Kodur and Badvel valley.

51) The analysis of volume of changes in irrigation at mandal level shows an increase in total irrigated area, tank irrigated area and
well and other sources of irrigated area. The decrease was found in only in canal irrigated area.

52) The analysis of variability of various sources of irrigation reveals that there is very high variability in other sources of irrigation. The moderate variability is found in canal and tank irrigated area. In total irrigated area the variability is low.

53) The district possess 45,938.93 hectares of land under major irrigation and 43, 331.99 hectares under minor irrigation. The total irrigated land under various sources of major and minor irrigation schemes in 1986-87 was 89,270.92 hectares and accounts for 5.81% of the total area of the district.

54) The analysis of crop concentration in 1985-86 and 1988-89 reveals that Paddy concentration was very high in K.C. canal area and in the mandals of Badvel and Kodur valleys. Jowar, Korra and pulses concentration was high in north western mandals of the district. Bajra and ragi concentration was found high in the mandals of Badvel and Kodur valleys. The turmeric concentration was also high in K.C. canal area and Badvel and Kodur valleys. Sugarcane concentration was high along the river valleys and in K.C. canal area. Cotton concentration was high in mandals where black soil formation is good in north western and northern mandals of the Badvel valley. Groundnut concentration was high in western mandals of the district and other crops in the mandals of the Kodur valley.
55) The analysis of the relative percentage of changes at mandal level in the Cuddapah district from 1985-86 to 1988-89 shows an increase in the total cropped area of paddy, pulses, groundnut, other crops and total cropped area. The decrease was noticed in jowar, bajra, ragi, korra, turmeric, sugarcane and cotton. The maximum decrease of 67.06% was noticed in cotton crop in the district. The analysis reveals that there was very high change in korra, sugarcane, jowar, turmeric and cotton.

56) The analysis of co-efficient variability among the selected crops in the Cuddapah district reveals that in korra, pulses, turmeric, sugarcane, cotton and other crops the variability is high. It is moderate in paddy, jowar and bajra crops. In ragi, groundnut and total cropped area the variability is low. Among the taluks the various selected crops variability reveal that low variability is found in Badvel and Pulivendla taluks, moderate variability in Cuddapah, Jammalamadugu, Proddutur and Rajampet taluks and very high variability in Rayachoti and Sidhout taluks.

57) The study reveals that during 1988-89 there is very low diversification in crop culture in northern, western and south western mandals of the district. In the eastern mandals of the district there is very high diversification in crop culture. From 1985-86 to 1988-89 the study of crop diversification index reveals that in the northern, western and south western mandals of the district there is increase in index values and reveal that from 1985-86 to 1988-89 the farmers
have switched over to selected crop with very low diversification in crop culture. The study of index of concentration shows that farmers have chosen groundnut as an important oil seed crop for crop culture in these mandals of the district. Therefore the crop diversification in these mandals of the district is low.

58) The analysis of crop combinations could not bring out clearly crop regions and failed to explain the dominant crop prevailing in different regions of the district by the Weaver's method.

59) The analysis of crop combinations by Doi's Method reveals that during both the years the crop regions were distinct. The mono cropped regions were noticed in south western mandals, three crop regions in Badvel valley and two and three crop regions in central mandals. Therefore in this method the crop region delimitation was more clear and elegant.

60) The analysis of intensity of irrigation during 1988-89 reveals that the intensity values were more than 100% in 10 mandals and in 1985-86 only 6 mandals were found with intensity of more than 100%. There was an increase in the intensity values because of increase in total irrigated area from 1985-86 to 1988-89 and the year 1988-89 was a wet year climatologically and received good rainfall.

61) The analysis of intensity of cropping pattern in 1985-86 and 1988-89 reveals that there was an increase in the intensity values in about 33 mandals. This may be due to high rainfall received in
the year 1988-89 and all the tanks present in the district stored sufficient water sources for cultivation of crops particularly in the Badvel and Kodur valleys. Where the concentration is high.

62) The analysis reveals that in about ten mandals the index value was more than 75% in both the years and the agricultural development was high in these mandals. Moderate development in the agriculture was found in Nandalur, Kodur, Gopavaram, Pothumanilla, Chapadu and Mydukur mandals in both the years. The analysis also reveals that in about 31 mandals there was an increase in the index of agricultural development values from 1985-86 to 1988-89. In other words, besides infrastructural facilities availed by the farmers in the district, the high rainfall received during the year 1988-89 increased the intensity of irrigation and the intensity of cropping pattern. This in turn resulted into increase in the development of agriculture in the district during 1988-89.

63) The analysis of water availability days denote that during moist period the number of days are more in the district and vary from 123 - 185 days followed by dry period, 61 - 120 days and moderately dry period, 58 - 120 days. In humid period the number of water availability days are low and range from 30 - 91 days. But during humid and moist period together the number of water availability days are more and vary from 184 - 215 days. In otherwords the number of water availability days are more in the district for crop culture.
The analysis of water availability calendar for each station reveals that in Sidhout and Cuddapah stations the humid period of 3 months is found. They extend from September to November. In Jammalamadugu, Proddutur, Pullivendla, Rajampet, Rayachoti and Badvel stations in humid period 2 months are noticed. In Kamalapuram only September month is found in humid period. The moist period is noticed for 6 months in Kamalapuram. It is noticed for 5 months in Rajampet, Rayachoti and Badvel. The moist period is found for 4 months in Proddutur, Pullivendla, Sidhout and Cuddapah stations. The moderately dry period is noticed for 3 months in Kamalapuram, Jammalamadugu, Rayachoti and Cuddapah. It is noticed for 3 months in Proddutur, Rajampet, Sidhout and Badvel stations. In Pullivendla station it is found in four months. In dry period two months are found in Pullivendla, Rajampet, Sidhout and Badvel stations. Three months are noticed in Kamalapuram, Proddutur, Rayachoti and Cuddapah. In Jammalamadugu station the dry period prevails for 4 months. The humid and moist periods are found for 6 months from July to December in Jammalamadugu, Proddutur and Pullivendla. The moderately dry and dry periods extend for 6 months from January to June in Jammalamadugu, Proddutur and Pullivendla stations. In Kamalapuram, Rajampet, Rayachoti, Sidhout, Badvel and Cuddapah stations the moderately dry and dry periods extend for 5 months from February to June. The analysis reveals that from July to December in all the stations the crop culture is highly favourable.
Based on agroclimatic, soil moisture conditions, water availability, irrigation facilities and physical characteristics of the district, the crop suitability zones of the district have been prepared (Fig. 8.6. and Table 8.3). The wet and commercial crops like paddy, banana, sugarcane, turmeric etc., could be cultivated in ayacut areas where there is assured water supply through canal, tank and well. These crops could also be cultivated in fluvial plains. Land development in these plains could be carried out by land leveling, land mulching, and adding required quantities of nitrates, phosphates and potash. The excess water during the flood periods have to be drained out through well maintained and disilted drainage canals. The groundwater in these pockets could be used for second crop due to return flow. Two crops could be successfully cultivated. In the zone II paddy, dry food crops, vegetables, fruits commercial crops, horticulture crops could be cultivated. The land shaping, forming and smoothing has to be carried out depending upon the soil cover. Proper water management practices have to be adopted depending upon available water resources. The zone III could be used for cultivation of paddy, vegetable, fruits, dry food crops, and oil seeds. The land shaping and land levelling has to be carried out depending upon the slope of land. The zone IV could be used for dry food crops, oil seeds and cereals. The land development has to be carried out of land levelling, smoothing and shaping. The zone V could be used for the cultivation of dry food crops, fruits and oil seeds.
Since the irrigation facilities are very limited water management practices and modern dry land farming techniques have to be adopted. The land development has to be carried out by land levelling, land grading, land shaping, land forming and land terracing depending upon the slope, depth of soil formation and mode of irrigation. The zone VI has to be used for development of pastures and horticulture crops. The zone VII should not disturbed for cultivation practices and should be allowed for the growth of natural forests. The multiple croping programme could be introduced in dry land to minimise crop failures due to droughts. The crop rotation has to be adopted in irrigated tracts. Since sericulture is gaining importance in Rayachoti and Mydukur areas the farmers have to be trained for mulberry cultivation. Apart from agriculture developments programmes dairy farming, sheep rearing, poultry farming, duck keeping, piggery, be keeping sericulture, and fish rearing will bring additional income to the farmers and increases the economic status for better standard living.