

fuel purpose) can produce about 62000 tons (about 1/3rd of raw material) of organic manures which is equivalent to about 372 tons of N, 1420 tons of P₂O₅ and 1040 tons of K₂O which is about 10, >100 and >80 times higher than that of the present N, P₂O₅ and K₂O consumption, respectively for the district. Thus, from the above it is clear that the district has tremendous potential to cultivate crops by use of exclusively organics. As it is well established facts that organically farm produce can fetch premium price, tribal farmers not only earn better return from organically farm produces but also their lands are ecologically sustained as well.

TS II: P1**INFLUENCE OF WEATHER FACTORS ON PRODUCTIVITY OF BANANA AND SAPOTA**

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The variation of climatic trend on banana and sapota productivity as well as on growth parameters of banana were evaluated under normal experimental conditions at FRS, NAU, Gandevi. The twenty years (1991-2010) mean data of maximum, minimum temperature, rainfall and evaporation were correlated with shooting (flowering) and maturity days as well as the yield of banana in the respective year in context to climate change. While, the eighteen years (1993-2010) mean data of weather parameters were correlated with yield of sapota.

The correlation coefficient within weather parameters revealed the non-significant positive correlation between banana yield and maximum ($r = 0.0545$) and minimum ($r = 0.1715$) temperature, while rainfall and evaporation showed non-significant negative effect on yield at 1% and 5% levels of significance. Similarly, there was positive correlation during planting to shooting period with temperature, but negative correlation with rainfall ($r = -0.2748$) and evaporation ($r = -0.2312$). The effect of weather factors during planting to shooting was found non-significant. Further, the period between planting to maturity showed non-significant positive coefficient ($r = 0.0861$) with minimum temperature, whereas negative influence of maximum temperature ($r = -0.2307$), rainfall ($r = -0.6618$) and evaporation ($r = -0.6702$) on the span required to maturity.

This indicated that under Gandevi condition, average temperature throughout the growing period has positive influence as maximum temperature did not exceed 38°C and reversely negative effect of rainfall and evaporation on productivity as well as on shooting and maturity period excluding the maximum temperature mainly exposed its effect on shooting to harvest.

In case of yield of sapota and weather parameters correlation matrix, the effect was found negatively non-significant. Therefore, it can be revealed that the effect of weather parameters on yield of sapota is due to disparity of monsoon and frequent change in weather parameters. The non-significant result indicates minimum consequence of climate change on productivity of banana and sapota.