

Recommendations or technology developed (2004 to 2018)

Sr. No.	Details of recommendations/Technology developed	Year
Mango		
1	Nurseryman of Gujarat state interested to prepare mango grafts are advised to use the stone of variety Kesar as a root stock for vigorous growth and better survival against salt stress up to EC 2.0 dSm ⁻¹ of water.	2009
2	Scientists are advised to keep freshly harvested mature mango fruits cv. Kesar in a small cool chamber at 14 ⁰ C with 90 % R.H. to maintain the fruit quality up to 25 days.	2009
3	It is recommended that the freshly harvested mature mango fruits cv. Kesar should be treated with Ethrel @ 750 mg /l of water for 5 minutes and kept it room temperature to enhance the ripening and get maximum ripened and marketable fruits at 9 th day.	2010
4	It is recommended to scientific community that the climatic parameters like temperature, humidity, rainfall, bright sun shine hours and wind velocity influenced the flowering, fruit setting, fruit dropping, number of fruit per plant and fruit yield. Higher day temperature with lower night temperature as well as more fluctuation in day & night temperature disturb the flowering, pollination and fruit setting process. Similarly, higher humidity, dew, late rain or off seasonal rain during flowering also affects adversely. Mango requires 25-30 ⁰ C day temperature & 15-18 ⁰ C night temperature, 40-45% humidity, no dew formation, lower late rain (September), higher sun shine hours (8-9 hrs.) during floral bud initiation, flowering and fruit setting.	2017
5	It is observed that the growing degree days (GDD) have direct influence on BDS, flowering, fruit set and various fruit development stages, but not for the physical characters of fruits. The GDD requirements of different varieties were found unique and a mango variety Kesar requires low GDD for maturity with higher Heat Use Efficiency.	2018
Acid lime		
6	Farmers of Saurashtra region growing acid lime cv. Kagzi lime are advised to apply 80 per cent recommended dose of fertilizers for more production and higher income from adult tree. Out of which nitrogen in form of urea 2.6 kg per plant in 12 equal splits should be applied at monthly intervals through drip irrigation, while phosphorus and potash should be applied as soil application in two splits (SSP-3.75 kg & MOP-2.00 kg/tree) in June and October. The drip system should be operated at 0.8 PEF for 3.00 hours daily during October to February and 5.00 hours from March to onwards with 4 drippers, each having 4 lit. discharge per hour (1 kg/cm ² pressure) keeping dripper 1.0 meter away from trunk of lime plant to save 33.19 per cent irrigation water.	2007

7	Kagzi lime growers of South Saurashtra Agro Climatic Zone are recommended that 20 years old rejuvenated tree through medium pruning (2.00 m height) should apply the half RDF (25 kg FYM , 450g N, 375g P ₂ O ₅ & 250g K ₂ O) in which 25 kg FYM with half dose of N i.e. 225 N g, 375 g P and 250g K per tree should be at the onset of monsoon and remaining half dose of Nitrogen i.e. 225 g N in the month of March for getting higher net return along with higher yield and quality of fruits.	2009
Papaya		
8	For remunerative cultivation of papaya cv. Madhubindu under organic farming in South Saurashtra Agro-climatic conditions farmers are advised to apply only vermicompost @ 12 kg/pl at the time of transplanting to obtain economic return and quality fruits as compared to chemical fertilizers and FYM.	2005
9	Papaya growers of Saurashtra region are advised to grow Madhubindu variety for maximum papain production. Further they are advised to extract papain from papaya at 80 days old fruits for getting maximum fresh and dry weight of latex (crude papain).	2007
10	Papaya growers of Saurashtra region are advised that the fresh harvested fruits of papaya cv. Madhubindu should be dip for five minutes in the solution of GA ₃ 100 ppm (100 mg/lit) followed by packing in perforated polythene bag which enhanced shelf life, marketability and quality of fruits up to six days of storage.	2007
11	Farmers of South Saurashtra Agro-climatic Zone growing papaya (Madhubindu) crop are advised to apply 25 per cent N from FYM (6 kg FYM), and remaining 75 per cent N (150 g), 200g P and 250g K per plant from chemical fertilizers during 2nd, 3rd and 4th month after transplanting in equal splits for getting higher yield and net return.	2015
12	Farmers of South Saurashtra Agro-climatic Zone are advised to spray micronutrients viz., zinc sulfate 24.0 g (Zn 0.5 %) and Borax 10.0 g (B 0.1 %) per liter of water during 2nd and 4th month after transplanting for getting higher yield and net return in papaya cv. Madhubindu.	2015
Custard apple		
13	Farmers of Saurashtra region are advised that the fresh fruits of custard apple should be dipped in the solution of 0.5% carbendazim for 10 minutes and then packing in polyethylene beg of 30 x 20 cm size having six vents with KMnO ₄ coated silica gel for enhancing post-harvest life, marketability and quality of fruits up to six days.	2005
14	Farmers of South Saurashtra Agro-climatic zone are advised to apply 200gN+100gP ₂ O ₅ +50gK ₂ O and Azotobacter and Phosphobacter bio-fertilizer each @ 30 g by mixing with 15 kg FYM/plant at onset of monsoon to get maximum fruit yield and net profit in six year old custard apple cv. Sindhan orchard.	2008
15	Farmers of South Saurashtra agro- climatic zone are advised to apply 100g N + 50g P ₂ O ₅ + 25g K ₂ O + 2.5 kg castor cake per adult custard apple tree cv. Sindhan at first rainfall in monsoon to get maximum fruit yield and net profit.	2010

16	The climatic parameters like temperature, humidity and rainfall influence the flowering, fruit setting, fruit retention percentage, fruit yield and disease-pests incidence. More humidity and off seasonal rain during March-April insist the first and second reproductive flush and adversely affects the third flush. Optimum temperature and rain leads to more fruit set. Heavy rain during fruit set also tends to more drop with less fruit retention percentage. Mealy bug population is decreasing with increasing rain, whereas, black spot decreases when wind speed is less. Custard apple requires 30-35 °C temperature during flowering and fruit setting, 75-90% humidity and 600-1400 mm even distributed rainfall. Off seasonal rain disturbs the flowering pattern and adversely affects the crop.	2012
Sapota		
17	South Saurashtra Agro-climatic zone growing sapota cv. Kalipatti are advised to apply 900 g N or 450g N plus 8.00 kg castor cake per adult tree along with recommended dose of 50 kg FYM, 450g each of P ₂ O ₅ and K ₂ O to obtained higher yield and better quality of fruit. One half dose of nitrogen and full dose of caster cake, FYM, P ₂ O ₅ and K ₂ O should be applied in June and remaining half dose of nitrogen in September.	2008
18	Fruit processors are advised to dry the sapota slices of 0.5 cm thickness in solar dryer up to 33 per cent recovery to maintain quality in storage up to six months at room temperature.	2015
Banana		
19	Farmers of South Saurashtra Agro - climate Zone cultivating banana cv. Grand Naine are advised to apply total 300g nitrogen and 4kg vermicompost per plant in four equal split at 2 nd , 3 rd , 4 th and 5 th month after planting; along with recommended dose of phosphorus 90g and 200g potash per plant at 3rd month after transplanting, while 5 kg FYM as basal dose at transplanting for getting good quality, higher yield and higher return.	2016
Guava		
20	Farmers of Saurashtra region are advised that the fresh fruits of guava should be dipped in the solution of 0.5 per cent carbendazim for 10 minutes and then packing in polyethylene beg of 30 x 20 cms size having six vents with KMnO ₄ coated silica gel for enhancing post harvest life, marketability and quality of fruits up to six days.	2005
21	The farmers of South Saurashtra Agro-climatic zone growing guava cv. Sardar are advised to apply 10 kg FYM along with 120 g N, 60 g P ₂ O ₅ and 60 g K ₂ O per tree at the age of one year which should be increased in equal quantity every year up to fifth year (50 kg FYM, 600 g N, 300 g P ₂ O ₅ and 300 g K ₂ O per tree) for obtaining economical production. One half dose of nitrogen and full dose of FYM, P ₂ O ₅ and K ₂ O should be applied in June and remaining half dose of nitrogen in September.	2008
22	Farmers of Saurashtra region growing guava cv. Bhavnagar Red (6 years and above old tree) for <i>mrug bahar</i> crop are advised to apply 1.0 kg urea per plant through drip irrigation and 0.4 kg MOP per plant in soil in four equal splits during June, August, October and December, while, phosphorus (SSP-1.5 kg) as a basal dose with drip system operating for 3.00 hours daily during October to December	2012

	and 4.00 hours during January to March with 4 drippers per tree, each having discharge 4.00 lit per hour keeping dripper 1.00 meter away from trunk of tree, which will save 40.69% irrigation water for higher production and income.	
23	Fruit Processors are advised to use 20 % pulp with 0.3 % acidity and 17 % TSS to prepare a good quality of guava nectar (RTS) stored up to 150 days.	2013
24	The farmers of South Saurashtra Agro-climatic Zone who are growing guava cultivar Lucknow-49 are advised to apply either vermicompost @ 10 kg along with 75% recommended dose of fertilizers (450 g nitrogen, 225 g phosphorus and 225 g potash) per tree or FYM 75 kg + 25% RDF (150 g nitrogen, 75 g phosphorus 75 g potas) + PSB (20 g per tree) + <i>Azospirillum</i> (20 g per tree), in which half dose of nitrogen, full dose of phosphorus, potash and vermicompost should apply at the onset of monsoon and remaining half dose of nitrogen in first week of October to get higher yield and net return.	2013
Gunda		
25	The farmers of South Saurashtra Agro-climatic Zone are advised to prune 75% length of one year old branches of <i>gunda</i> from all sides of the tree in 1 st week of June to get higher yield and economic return.	2010
26	Fruit processors are advised that the freshly harvested fruits of lasora should be dipped either in Brine 30% + CaCl ₂ 2% (LR grade) or sea water @ 35 ppt (collected from 1 km inside the sea shore) for enhancing storage life up to 180 days with good quality fruit.	2013
Coconut		
27	Farmers of South Saurashtra Agro Climatic conditions growing coconut hybrid (D x T) are advised to apply 270 g urea per plant at monthly intervals through drip irrigation and the drip system should be operated for 1 hour and 30 minutes daily during October to February and for 2 hours and 30 minutes from march onwards with 4 drippers, each having 8 liters discharge per hour (1.1 kg/cm ² pressure), keeping drippers 1 m away from trunk of palm to save 46.82% irrigation water without affecting yield.	2006
Gladiolus (Flori.)		
28	Farmers of South Saurashtra agro climatic zone who are interested to grow gladiolus cv. American Beauty under poly house are advised to treat the corms of gladiolus with thiourea 1g/liter for 10 hrs before planting for getting maximum number of spikes with good quality, vase life and to get highest net return.	2011
29	Farmers of South Saurashtra agro climatic zone who are interested to grow gladiolus cv. American Beauty under poly house are advised to treat the corms of gladiolus with GA ₃ 0.05g/liter for 10 hrs before planting for getting maximum number of corms and to get highest net return.	2011
Vegetable		
	Tomato	
30	Farmers of Saurashtra region interested to grow tomato in protected condition are advised to grow indeterminate variety in 60 % white shade net house for getting higher yield and net return.	