Recommendations or technology developed for farmers and scientific community

Sr. No.	Details of recommendations/Technology developed	Year
01	**Field efficacy of newer insecticides against inflorescence pests of mango:** For effective management of inflorescence pests of mango viz., hopper, thrips and flower bug, two sprays of spinosad 45 % SC 0.018% (4 ml/10 lit water) or carbosulfan 25 % EC 0.05% (20 ml/10 lit water) or acetamiprid 20 % SP 0.01% (5 g/10 lit water) at 15 days interval starting from pests infestation were found effective	2015
02	**Survey of various pests in mango orchard:** The incidence of leaf gall midge, mango hopper, shoot borer and thrips were found enormously during the month of September to October, January to March, July to September and August to December, respectively. Maximum population of leaf gall midge and mango hopper was noticed in Chalala and Mendarda area, while shoot borer and thrips were found maximum in Talala area of Saurashtra region	2015
03	**Field efficacy of different insecticides against citrus pests** Two sprays of spinosad 45 SC 0.0135 % (3 ml/10 lit. water) and difenthiuron 50 WP 0.05 % (10 ml/10 lit. water) at 15 days interval starting from pests infestation was found effective for management of leaf miner and black fly in South Saurashtra Agro-climatic Zone	2016
04	**Survey of various insect-pests of pomegranate in Saurashtra region;** The incidence of anar butterfly and thrips were found enormous during the month of January to April and September to December, respectively. The maximum population of anar butterfly was noticed in Junagadh region, while thrips was found maximum in Kalawad area	2016
05	**Field efficacy of different insecticides against citrus pests** The farmers of South Saurashtra Agro-climatic Zone growing citrus are advisedto apply two sprays of imidacloprid 17.8 SL 0.0072% (4 ml/10 lit. water), first spray at starting of pests infestation and second15 days after the first spray for effective management of leaf miner and black fly.	2016
06	**Response of coconut varieties in relation to different seasons for the eriophyid mite damage** The coconut eriophyid mite damage was higher in summer where as it was lower in winter. Higher damage was recorded in dwarf green variety and less damage in west coast tall (WCT), In hybrid variety, higher damage found in D x T as compared to T x D	2017
07	**Efficacy of newer insecticides against diamond back moth infesting cauliflower** In South Saurashtra Agro-climatic Zone growing cauliflower in rabi season are advised to apply two spray of chlorantraniliprole 18.5 SC 0.006 % (3.2 ml/10 litre of water) at 15 days interval starting from pest infestation for effective and economical management of diamond back moth	2017
08	**Effectiveness of *B. bassiana* in combination with different insecticides against onion thrips** For effective and economical management of thrips, *Thrips tabaci* in onion,three sprays of spinosad 45 SC 0.0135% (3 ml/10 litre of water) or *B. bassiana* 1.15 WP 0.0035% (Min. 2 x 10^6 cfu/g) + spinosad 45 SC 0.0068% (30 g	2018

	+ 1.5 ml/10 litre of water), first spray at initiation of pest infestation and subsequent two sprays at ten days interval after first spray found effective in onion.	
09	**Effect of different schedule base insecticidal spray against garlic thrips** For effective and economical management of thrips, *Thrips tabaci* in garlic, schedule spraying of dimethoate 30 EC 0.003% (10 ml/10 litre of water), fipronil 5 SC 0.01% (5 ml/10 litre of water) and acetamiprid 20 SP 0.006% (4 g/10 litre of water) or profenophos 50 EC 0.075% (20 ml/10 litre of water), spiromesifen 240 SC 0.011% (10 ml/10 litre of water) and thiamethoxam 25 WG 0.01% (4 g/10 litre of water), first spray at initiation of pest infestation and subsequent two sprays at ten days interval after first spray found effective	2018
10	**Evaluation of new pheromone based mating disruption technology for fruit fly in mango** The farmers of South Saurashtra Agro-climatic zone growing mango are advised togive Sawaj MDP technology @ 400 g paste are uniformly distributed in 1000 dots (10 dots/tree) on main and subsidery branches of each tree/ha against fruit fly, first application in the month of march, when fruit fly catches in the trap and successive two applications at 30 days interval for effective, economical and eco-friendly management of this pest.	2018
11	**Effectiveness of different bio-pesticides against mealybug in custard apple** For effective, economical and eco-friendly management of mealy bug in custard apple, the farmers of South Saurashtra Agro-climatic zone are advised to apply two sprays of *Lecanicillium lecanii* 1.15 WP (Min. $2x10^6$ cfu/g) 0.007% (60 g/10 litre of water) or *Beauveria bassiana* 1.15 WP (Min. $2x10^6$ cfu/g) 0.007% (60 g/10 litre of water) along with sticker (3 ml/10 litre of water), first spray at initiation of pest infestation and second spray at 20 days interval after first spray	2018
12	**Effectiveness of *B. bassiana* in combination with different insecticides against onion thrips** For effective and economical management of thrips, *Thrips tabaci*in onion,the farmers of South Saurashtra Agro-climatic zone are advised to apply three sprays of dimethoate 30 EC 0.03% (10 ml/10 litre of water) or *B. bassiana*1.15 WP 0.0035% (Min. 2 x 10^6 cfu/g) + dimethoate 30 EC 0.015% (30 gm + 5.0 ml/10 litre of water) or *B. bassiana*1.15 WP 0.007% (60 gm/10 litre of water) first spray at initiation of pest infestation and subsequent two sprays at ten days interval after first spray. For organic farming in onion are advised to apply three sprays of *B. bassiana*1.15 WP 0.007% (60 gm/10 litre of water) first spray at initiation of pest infestation and subsequent two sprays at ten days interval after first spray are found effective and economical management of thrips, *Thrips tabaci*. (Dimethoate 30 EC is registered under CIB approved list and no waiting period required from last spray of this insecticide to harvesting)	2018
13	**Effect of different schedule base insecticidal spray against garlic thrips** For effective and economical management of thrips, *Thrips tabaci* in garlic,the farmers of South Saurashtra Agro-climatic zone are advised to apply schedule spraying of*B. bassiana* 1.15 WP(Min. $2x10^6$ cfu/g),first spray at initiation of pest infestation 0.0035% (30 gm/10 litre of water). Subsequent second0.007% (60 gm/10 litre of water) and third0.009% (80 gm/10 litre of water) spray at ten days interval after first spray.	2018

14	**Study on efficacy of different insecticides against white fly in papaya** Two sprays of acetamiprid 20 SP 0.006% (3 g/10 l of water) or thiamethoxam 25 WG 0.01% (4g/10 l of water), first at nymphs and adults infestation and second at 15 days after first spray found effective against whitefly (*Bemisiatabaci*) infesting papaya.	2020
15	**Management of mealybug, Maconellicoccus hirsutus Green infesting custard apple** The farmers of South Saurashtra Agro-climatic Zone having custard apple orchards are recommended to apply two sprays of fenobucarb 50 EC, 0.1% (20 ml/10 l of water) or first spray of Beauveria bassiana 1.15 WP (Min. 1 x 108 cfu/g) 0.007% (60 g/10 l of water) followed by second spray of fenobucarb 50 EC, 0.1% (20 ml/10 l of water), first at initiation of pest infestation and second at 15 days after first spray for the effective management of mealybug.	2023
16	**Management of post-harvest diseases of mango** The farmers of south Saurastra agro-climatic zone growing mango are recommended to treat harvested mango fruits with hot water (52 ± 1°C for 5 minutes) or hot water (52 ± 1°C) treated with sodium hypochlorite (NaOCl) 5% solution @ 200 ppm (2 ml in 10 liter water) for 5 minutes for effective and economical management of stem end rot and fruit rot.	2024
17	**Management of twister disease complex in onion** For effective management of twister disease complex in onion, apply chlorantraniliprole 0.4 G (10 kg/ha) + copper oxychloride 50 WP (1.25 kg/ha) in soil at the time of transplanting along with two foliar applications of tebuconazole 50 + trifloxystrobin 25 WG 0.075% (10 g/10 L water) or azoxystrobin 18.2 + difenoconazole 11.4 SC 0.03% (10 ml/10 L water), first spray at initiation of disease and second spray at 15 days after first spray.	2024
18	**Effect of different substrate mixture on growth, yield and nutritional value of oyster mushroom (*Pleurotus ostreatus*)** Farmers of Gujarat growing oyster mushroom [*Pleurotus ostreatus* (Jacq.ex.fr) P. kumm] are recommended to use wheat straw + cocopeat + lime + gypsum + sucrose (70:27:1:1:1) or wheat straw + tea waste + lime + gypsum + sucrose (70:27:1:1:1) as substrate for higher production of mushroom.	2025