

Recommendations made by this Station :

CROP PRODUCTION : Total : 56

S.N.	Aspect	Year	Recommendations
1. Brinjal : Total – 5			
(1)	Fertilizer cum spacing	1996	37.5 kg P ₂ O ₅ and 37.5 kg K ₂ O should be given as a basal dose. 100 kg N in two splits at 3 weeks and at a flowering stage after T. P. at 40 x 40 cm spacing.
(2)	Weed control in Brinjal	2001	Application of Pendimethalin 1.0 kg <i>a.i.</i> /ha + HW at 30 DAT recorded the highest fruit yield of 341.66 q/ha with CBR of 1:3.14.
(3)	Weed management	2002	Pendimethalin @ 1.00 kg <i>a.i.</i> /ha (40 ml/10 L) at pre-planting stage and one hand weeding at 30 days after transplanting.
(4)	Effect of multi-micronutrient formulations on brinjal	2018	Apply micronutrients as per soil test value as basal OR apply foliar spray of multi-micronutrient formulation Grade IV (Fe-Mn-Zn-Cu-B, 4.0-1.0-6.0-0.5-0.5 %) @ 1% at 45, 60 and 75 DATP in addition to recommended dose of fertilizers (100 - 37.5 - 37.5 N-P ₂ O ₅ -K ₂ O kg/ha) to brinjal (Late <i>Kharif</i>) for getting higher yield and net return.
(5)	Effect of N, P and K fertilizer on growth, yield and nutrients uptake by brinjal	2019	Apply nitrogen @ 125 kg ha ⁻¹ in four equal split (Basal 25, 50 and 75 days after transplanting), P ₂ O ₅ @ 50 kg ha ⁻¹ and K ₂ O @ 50 kg ha ⁻¹ as basal for getting higher yield and net return.
2. Tomato : Total – 5			
(1)	Fertilizer trial on hybrid tomato	2001	Application of N @ 180 kg/ha + Phosphorus 120 kg/ha along with potash 80 kg/ha with cost benefit ratio 1:2.66, which gave the maximum fruit yield of 285.26 q/ha.
(2)	Fertilizer	2002	120 kg P ₂ O ₅ should be given as a basal dose. 180 kg N in two splits at 30 and 50 days after transplanting.
(3)	Foliar application of micronutrients	2010	In addition to NPK @ 75-37.5-62.5 kg/ha; apply three spray of mixture of all the micronutrients at 40, 50 and 60 days after transplanting.
(4)	Integrated Nutrient Management	2010	Apply nutrients with NPK through chemical fertilizers @ 120-40-60 kg/ha + FYM 10 t/ha + S @ 25 kg/ha + Azotobactor @ 5 kg/ha.
(5)	Effect of multi-micronutrient formulations on tomato	2017	Apply micronutrients as per soil test value as basal in addition to recommended dose of fertilizers (75-37.5-62.5 N-P ₂ O ₅ -K ₂ O kg/ha) to tomato for getting higher yield and net return OR foliar spraying of multi-micronutrient formulation Grade IV (Fe-Mn-Zn-Cu-B, 4.0-1.0-6.0-0.5-0.5 %) is recommended @ 1% at 45, 60 and 75 DAS in addition to recommended dose of fertilizers (75-37.5-62.5 N-P ₂ O ₅ -K ₂ O kg/ha) to tomato for getting higher yield and net return.
3. Onion : Total – 19			
(1)	Fertilizer for bulb production	1982	37.5 kg N and 37.5 kg P ₂ O ₅ /ha as basal dose and 37.5 kg N/ha after one month of transplanting.
(2)	Fertilizer for seed production	1982	37.5 kg N. 75 kg P ₂ O ₅ and 50 kg K ₂ O as a basal dose and 37.5 kg N/ha after one month of planting.
(3)	Storage study	1981	The foliar application of 500 ppm Maleic Hydrazide (M.H. 40) 15 days before harvesting of the onion.
(4)	Sowing time of Kanji bulb	1988	Kanji should be sown at 20 th September onwards to obtain maximum yield.

(5)	Sowing time and spacing	1988	Seed sowing in nursery at 20 th Sept. and transplanting after 40 days at 10 x 10 cm.
(6)	Weed control in Onion	1997	The treatment Pendimethalin 1.00 kg <i>a.i.</i> /ha + 1 HW at 45 DAT with highest cost benefit ratio of 1:2.22 and gave highest onion bulb yield 552.18 q/ha.
(7)	Fertilizer cum spacing	1999	37.5 kg N. 60 kg P ₂ O ₅ and 50 kg K ₂ O should be given as a basal dose. 37.5 kg N/ha should be given one month after transplanting spacing at 10 x 10 cm
(8)	Fertilizer for bulb production	2007	For <i>Kharif</i> season, apply 37.5 kg N, 50 kg P ₂ O ₅ and 25 kg K ₂ O per hectare as a basal dose. 37.5 kg N/ha should be applied at one month after transplanting.
(9)	Effect of Sulphur fertilizer on bulb yield of onion	2007	Apply 20 kg Sulphur/ha before 20 to 25 days of transplanting in the form of elemental Sulphur for getting economically maximum bulb yield.
(10)	Planting and fertilizer application method on seed yield of onion	2009	Grow bulbs on ridges with planting spacing of 30 cm x 30 cm for getting economically maximum seed yield of onion during <i>rabi</i> season.
(11)	Foliar application of nutrients in onion	2011	For bulb production during <i>rabi</i> season, apply three spray of NPK (19:19:19) at 30, 45 and 60 days after planting.
(12)	Drip irrigation in onion for seed	2011	For seed production during <i>rabi</i> season, grow bulbs with drip irrigation at 75 % PE daily.
(13)	Weed management	2013	Application of Oxyflurofen 23.5% EC before planting (1.5 to 1.5 ml/l of water) + one hand weeding at 40-60 days after transplanting was found superior in terms marketable bulb yield, WCE and B: C ratio. WCE increased by 65-80% over control.
(14)	Integrated Nutrient Management	2013	Combined application of 110:40:60:40 kg NPKS along with organic manures equivalent to 15 t FYM and Azospirillum and PSB @ 5 kg each/ha was better with respect to marketable bulb yield and cost benefit ratio. It also reduces the use of inorganic fertilizers by 25%.
(15)	Effect of Sulphur sources and levels on yield and quality of onion	2014	Application of Sulphur @ 30 kg/ha is recommended where soils' Sulphur level is more than 15 kg/ha. Whereas, Sulphur @ 45 kg/ha is recommended where soils' Sulphur level is less than 15 kg/ha. Gypsum is recommended as a source of Sulphur.
(16)	Effect of micro nutrients application on yield and storage quality of onion	2016	ZnSO ₄ @ 10 kg/ha as basal is recommended in areas having Zn deficiency (Nasik, Chiplima and Jabalpur). Borax @ 10 kg/ha is recommended for areas having Boron deficiency (Dharwad & Srinagar). FYM @15t/ha is recommended in a reas having multi micronutrients deficiency along with the foliar application of micronutrients mixture (Fe 2.5%, Zn 0.3%, Mn 1.0%, Cu 1.0%, B 0.2%) at 45 and 60 days after transplanting for increasing onion productivity
(17)	Effect of Salicylic acid on onion production	2016	Foliar application of Salicylic acid @ 250 mg/l at 30 days after sowing in nursery and in the main field either at 30 or 45 or 60 days after transplanting is recommended for increasing onion productivity
(18)	Effect of foliar application of various fertilizers on growth,	2021	The farmers growing onion are recommended to apply 75% RDF (56-45-37.5- 15 kg N-P ₂ O ₅ -K ₂ O-S /ha) + 1% (100 g/10 L water) foliar spray of water soluble fertilizer (19-19-19% N-P-K) and 1% Novel organic

	yield and nutrients uptake by onion		liquid nutrient at 45 and 60 day after transplanting for getting higher yield and net return.
(19)	Effect of zinc and boron application on onion seed crop	2022	Foliar application of micronutrient mixture (composition Fe-2.5%, B-0.50%, Zn-3.0%, Cu-1.0%, Mn-1.0%) along with recommended dose fertilizers (100:50:50:50 kg NPKS/ha) and FYM compost (5 t/ha) produced significantly higher onion seed yield. This technology increased profit by 15-30% compared to the control
4.	Garlic : Total – 7		
(1)	Fertilizer	1982	25 kg N 50 kg P ₂ O ₅ and 50 kg K ₂ O/ha should be applied as a basal dose. 25 kg N/ha one month after sowing.
(2)	Storage study	1981	The foliar application of 1500 ppm Maleic Hydrazide 15 days before harvesting of bulb.
(3)	Sowing time and spacing	1993	Seed sowing from 1 st to 21 st Oct. at a distance of 10 x 10 cm.
(4)	Fertilizer trial on Garlic	1997	Maximum cost benefit ratio 1:2.63 was recorded under application of 50 kg N + 60 kg K ₂ O ₅ /ha.
(5)	Evaluation of integrated nutrient management module for garlic	2014	Application of 75:40:40:40 kg NPKS/ha along with combination of two or three organic manures (FYM, Poultry manure and Vermi compost) equivalent to 15 t FYM/ha is recommended.
(6)	Effect of multi-micronutrient formulations on garlic	2017	Apply micronutrients as per soil test value as basal in addition to recommended dose of fertilizers (50-50-50 N-P ₂ O ₅ -K ₂ O kg/ha) OR soil application of multi-micronutrient formulation Grade V (Fe-Mn-Zn-Cu-B, 2.0-0.5-5.0-0.2-0.5 %) is recommended @ 40 kg/ ha in addition to recommended dose of fertilizers (50-50-50 N-P ₂ O ₅ -K ₂ O kg/ha) OR apply foliar spray of multi-micronutrient formulation Grade IV (Fe-Mn-Zn-Cu-B, 4.0-1.0-6.0-0.5-0.5 %) @ 1% at 60, 75 and 90 DAS in addition to recommended dose of fertilizers (50-50-50 N-P ₂ O ₅ -K ₂ O kg/ha) to garlic for getting higher yield and net return.
(7)	Effect of fresh cow dung on yield and yield attributes of garlic	2024	The farmers of South Saurashtra Agro-climatic Zone growing garlic are recommended to apply slurry (cow dung: water - 1:3) of 1500 kg/ha fresh cow dung Page 80 (up to 5 days) with irrigation at the time of sowing for getting higher yield, net return and improving soil fertility.
5.	Okra : Total – 7		
(1)	Seed production (Pickings)	1982	Three pickings of green pods, prior to allow the pods to mature for seed production.
(2)	Sowing time & spacing in Summer Okra	1997	Sowing time 25 th January to 10 th February at a spacing of 30 x 15 cm
(3)	Weed management (seed crop)	1997	Pendimethalin 0.6 kg <i>a.i.</i> /ha (40 ml/ 10 L) at pre-planting stage and two hand weeding at 25 and 50 days after sowing.
(4)	Fertilizers	2002	Application of 150 kg N and 50 kg P ₂ O ₅ /ha for okra variety GO-2.
(5)	Varietal trial and sowing time	2005	The variety Varsha Uphar should be sown on 15th June.
(6)	Integrated nutrient management in okra	2013	Apply FYM @ 10 t/ha + half RDF (75:25:25 N: P ₂ O ₅ :K ₂ O kg/ha) to get higher yield and net profit in summer okra.
(7)	Multi-micronutrient formulations on okra	2016	In <i>Kharif</i> okra, apply micro nutrients as per soil test value as basal in addition to recommended dose of fertilizers (150-50-50: N-P ₂ O ₅ -K ₂ O kg/ha. Alternatively, foliar spraying of multi-micro nutrient

			formulation Grade IV (Fe-Mn-Zn-Cu-B, 4.0-1.0-6.0-0.5-0.5%) @ 1% at 45, 60 and 75 DAS in addition to RDF.
6.	Cauliflower : Total – 2		
(1)	Seed production (Sowing time)	1981	Seed sowing in nursery from 25 th August to 15 th September
(2)	Fertilizer-cum-spacing	1997	Basal dose of 37.5 kg P ₂ O ₅ as a basal and 150 kg N in two splits at 3 and 6 weeks after transplanting at a distance of 30 x 30 cm.
7.	Cabbage : Total – 1		
(1)	Fertilizer and spacing	1991	40 kg P ₂ O ₅ as basal dose. 75 kg each of N at 3 and 6 weeks after transplanting at spacing of 30 x 30 cm.
8.	Bitter gourd : Total – 1		
(1)	Fertilizers	1999	30 kg N, 60 kg P ₂ O ₅ and 60 kg K ₂ O should be given as a basal dose. 30 kg N/ha at flowering stage.
9.	Bottle gourd : Total – 3		
(1)	Training and Pruning	2000	Training and pruning of bottle gourd during <i>Kharif</i> season is not suitable to obtained higher fruit yield.
(2)	Integrated nutrient management	2015	Application of poultry manure @ 2.5 t/ha + half recommended NPK through chemical fertilizers in bottle gourd resulted in maximum green fruit yield (180.86) and net returns with B: C ratio of 3.09, followed by application of FYM @ 10 t/ha + half recommended NPK through chemical fertilizers.
(3)	Effect of N, P and K levels on growth, yield and nutrients uptake by bottle gourd	2023	Apply 125-75-75 kg N-P ₂ O ₅ - K ₂ O/ha for achieving higher yield and net return. Nitrogen should be applied in three equal splits (Basal and remaining nitrogen at 30 and 45 days after sowing as spot application), full dose of phosphorus and potash as basal in summer bottle gourd
10.	Ridge gourd: Total – 1		
(1)	Integrated nutrient management in ridge gourd	2013	Apply FYM @ 5t/ha and 25:12.5:12.5 N: P ₂ O ₅ :K ₂ O kg/ha to get higher yield and net return in summer ridge gourd.
11.	Cowpea: Total – 1		
(1)	Integrated nutrient management	2015	Maximum green pod yield (117.98 q/ha) of cowpea was obtained when crop was nourished with FYM @ 10 t/ha + Half NPK through chemical fertilizers with highest net returns and B: C ratio of 4.79. OR Poultry manure @ 2.5 t/ha + Half NPK through chemical fertilizers OR Vermicompost @ 2.5 t/ha + Half NPK through chemical fertilizers.
12.	Inter cropping in vegetable crops: Total – 1		
(1)	Inter cropping of seed spices in vegetables	2015	The higher gross return can be obtained under intercropping of cabbage + coriander (1:2) OR carrot + ajwain (3:1) OR carrot + fennel (3:1).
13.	Coriander Total – 2		
(1)	Effect of N, P and K levels on growth, yield and nutrients uptake by coriander	2020	The farmers of South Saurashtra Agro-climatic Zone growing coriander are recommended to apply 40 kg N/ha in two equal splits (½ as basal and ½ at 30 DAS), 30 kg P ₂ O ₅ /ha and 20 kg K ₂ O/ha as basal for getting higher seed yield and net return.
(2)	Soil test-based fertilizer recommendation for	2025	The scientist of soil testing laboratories are informed that the nutrients requirement for production of one quintal coriander seed was assessed as 3.92, 0.51 and 2.61 kg; N, P ₂ O ₅ and K ₂ O, respectively

	targeted yields of coriander		and the fertilizer prescription equations are: for N: $[FN : 8.13 \times T - 0.46 \times SN - 0.23 \times FYM]$, P: $[FP_2O_5 : 4.75 \times T - 3.60 \times SP - 0.24 \times FYM]$ and K: $[FK_2O : 8.05 \times T - 0.56 \times SK - 0.26 \times FYM]$ with FYM 5 t/ha. While, without FYM the fertilizer prescription equations are: for N: $[FN : 11.16 \times T - 0.63 \times SN]$, P: $[FP_2O_5 : 9.41 \times T - 7.13 \times SP]$ and K: $[FK_2O : 9.23 \times T - 0.63 \times SK]$. Targeted yield concept could be effectively adopted from 12.5 to 17.5 q/ha for site specific fertilizer recommendation to achieve high yields of coriander in the medium black calcareous soils of Saurashtra region of Gujarat.
14.	Cucumber Total – 1		
(1)	Integrated nutrient management in Cucumber	2022	The highest fruit yield, net income and B:C ratio was obtained when half recommended NPK + FYM @ 10 t/ha + Vermicompost @ 2 t/ha + Bio fertilizers was applied. It also maintains the soil available N, P and K status.

CROP PROTECTION: Total – 25

S.N.	Disease	Year	Recommendations
1.	Onion : Total –3		
(1)	Purple Blotch	1994	Spraying of Ziram 0.15 % (20 ml/10 L) or Mancozeb 0.2 % (27g/10 L) or Carbendazim 0.05% (10g/10 L) should be done at the appearance of purple blotch and then two sprays at an interval of 15 days.
(2)	Leaf Blight	2001	For effective control of purple blotch leaf blight disease of onion and weed management in <i>rabi</i> onion crop can be achieved by application of three sprays of Mancozeb 0.2% (27g/10L) at an interval of 20 days starting from 25 days after transplanting and Pendimethalin @ 1 liter <i>a.i./ha</i> (40 ml/10 L) after three days of transplanting.
(3)	Thrips, purple blotch and Stemphylium blight diseases	2021	Three foliar sprays of (Metiram 55% + Pyraclostrobin 5% WG @ 20 g/10 lit) + Cyantraniliprole 10.26% OD @ 9 ml/10 lit + Sticker @ 10 ml/10 lit at 30, 50 and 70 days of transplanting should be carried out.
2.	Garlic : Total - 4		
(1)	Stem phylum leaf blight	2003	For effective control of Stemphylium leaf blight disease, first spray of Carbendazim 0.05% (10g/10 L) and subsequent three sprays of Haxaconazole @ 0.008 % (16ml/10 L) or four spray of either Thiophanate methyl @ 0.05% (7g/10 L) or Mancozeb @ 0.2% (27g/10 L) during <i>rabi</i> season at 10 days interval starting from initiation of blight diseases.
(2)	Powdery mildew	2007	Apply three sprays of Thiophanate methyl 70% WP @ 0.05 % (CBR 1:7.85) or Hexaconazole 5% EC @ 0.008 % (CBR 1:6.48) at 10 days interval starting from initiation of powdery mildew.
(3)	Thrips and Purple blotch & Stemphylium blight	2024	Four foliar sprays of Metiram 55% + Pyraclostrobin 5% WG @ 20 g/10 lit + Cyantraniliprole 10.26% OD @ 9 ml/10 lit + Sticker @ 10 ml/10 lit at 30, 45, 60 and 75 days of planting is effective.
(4)	Thrips and mites	2024	Four foliar sprays of spinetoram 11.7% SC (0.8 ml/lit) or spinosad 45% SC (0.4 ml/lit) at 40, 55, 70 and 85 days after dibbling for effective and

			economical management of thrips in garlic and also improve the marketable bulb yield of garlic.
3.	Chilli : Total – 1		
(1)	Leaf curl	1995	Soil application of Phorate 1.25 kg. <i>a. i.</i> /ha at the time of transplanting and spraying of Monocrotophos 0.05% (14ml/ 10L) at 30 days after transplanting and then at 10 days interval.
4.	Tomato : Total – 4		
(1)	Late blight	1996	Six sprays of Mancozeb 0.2% (27g/10 L) starting from 15 days after transplanting at an interval of 10 days.
(2)	Early Blight	2004	Seed treatment with Captan @ 3 g/kg seeds and application of Carbofuran @ 1 kg <i>a.i.</i> /ha. (33 kg/ha) in seed bed and covering of nursery with nylon net (400 mesh) after sowing and after transplanting, four sprays of Mancozeb @ 0.3 % (27g/10 L) (ICBR 1:7.09) during <i>rabi</i> season at 15 days interval starting from initiation of early blight disease is recommended.
(3)	Leaf blight	2013	Three sprays of copper hydroxide 77 WP @ 0.2% (25g/10 lit water) at 10 days interval starting from the initiation of the disease.
(4)	Integrated Disease Management	2018	For effective and economical integrated management of major diseases of tomato viz., damping off, early blight, tomato leaf curl virus and tomato spotted wilt virus disease and to improve the marketable fruit yield following treatments should be adopted. 1. Seeds of tomato should be treated with seed pro @ 4 g per kg seeds at the time of sowing in nursery and after germination of the seeds soil drenching with seed pro @ 5 % should be carried out. 2. Tomato nursery should covered with 40 - 60 mesh white nylon net until transplanting and at the time of transplanting tomato seedling should be dip with 0.1 % (Carbendazim 12 % + Mancozeb 63 WP) solution. 3. Maize should be grown as border crop surrounding transplanted tomato field. The foliar sprayings of pesticides should be scheduled as Acephate 75 WP @ 1.5 g / liter 10 days after transplanting, Fipronil 5 SC @ 1.5 ml / liter 20 DAT, copper hydroxide 77 WP @ 2.0 g / liter 25 DAT and Imidacloprid 70 WG @ 2g / 15 liter 40 DAT along with two to three spraying of Fenamidone 10 % + Mancozeb 50 WDG, 0.25 % from 45 DAT at 10 days intervals.
5.	Cauliflower : Total –3		
(1)	Damping off	1998	Seed treatment of Thiride 75% SD 2 g/kg seeds followed by drenching of seed bad with Thiride 75 % W.P. 0.2% (27g/10 L) at 3 lt./M at 15 days after showing.
(2)	Soil-borne diseases	2024	Seed treatment with Captan 75% WP @ 3 g/kg seed followed by soil drenching with Captan 75% WP @ 0.25% in root zone near collar region at the time first earthing up and two foliar sprays of Mancozeb 75WP @ 0.25% first foliar spray at first sign of disease and second foliar spray at 10 days interval after first spray is effective, if cauliflower growers can apply soil application of neem cake @ 10 q/ha + Trichoderma (TCV-2) @ 2.5 kg/50kg FYM/ha at 25 days prior to transplanting

(3)	Foliar diseases (Black rot)	2024	Hot water seed treatment at 52°C followed by four foliar sprays of copper oxychloride 50% WP @ 0.3% at 10 days interval starting from initiation of disease is effective.
6. Ridge gourd : Total - 2			
(1)	Downy mildew	2000	Spraying of Bordeaux mixture @ 0.5% (50g CuSO ₄ , 50g lime /10 L) or copper oxychloride 50% w.p. % @ 0.3% (60g /10 L), first spray 40-45 DAS, then subsequent sprays at an interval of 7 days.
(2)	Downy mildew	2011	Adoption of bower system and seed treatment with Metalaxy 8 % + Mancozeb (64% WP) @ 4 g/kg seeds + three times removal of old leaves in the morning and three sprays of Mancozeb (75% WP) @ 0.2% in the afternoon at 45, 55 and 65 DAS for economic and effective control of downy mildew disease in ridge gourd.
7. Okra: Total – 1			
(1)	Root rot	2011	Seed treatment with Trichoderma @ 10 g/kg seed, + application of Trichoderma @ 2.5 kg in 500 kg FYM/ha + drenching with Trichoderma 10 gm/lit of water @ 1000 lit/ha at 15 DAS for the effective management of Rhizoctonia root rot in okra.
8. Bottle gourd: Total – 4			
(1)	Powdery mildew	2012	Three foliar sprays wettable Sulphur (0.2%) at 15 days intervals starting from the initiation of disease found against powdery mildew disease of bottle gourd.
(2)	Foliar and fruit spot diseases in bottle gourd	2016	Four sprays of Difenconazole 25 EC 0.025% (10ml/10 L) or Hexaconazole 5 EC 0.005% (10 ml/ 10 L) at 10 days interval after appearance of the diseases for effective management of foliar and fruit spot diseases of bottle gourd grown in <i>Kharif</i> season.
(3)	IDM package for cucurbit diseases	2018	Seed treatment with Carbendazim 12%+ Mancozeb 63% WP @ 3 g per kg seeds at the time of sowing and soil drenching with Captan 70 % +Hexaconazole 5% WP @ 0.1 %, 249.94 a.i./ha (13.33 g /10 l) at 1st true leaf stage after germination followed by spraying of Tebuconazole 50 % + Trifloxystrobin 25 % WG @ 0.075 %, 112.50 g.a.i./ha (10 g /10 l) followed by spraying of (Imidacloprid 17.8 SL @ 0.0089 %, 13.35 g a.i./ha (5 ml / 10 l) + Neem oil 0.15 EC @0.2 %, 0.34 g.a.i./ha (15 ml/10 l) followed by spraying of Fosetyl – Al @ 0.1 %, 150 g.a.i./ha (12.50 g/10 l) followed by spraying of (Tebuconazole 50 % + Trifloxystrobin 25 % WG) @ 0.075 %, 225 g.a.i./ha (10 g /10 l) followed by spraying with Imidacloprid 17.8 SL @ 0.0089 %, 26.70 g.a.i./ha (5 ml / 10 l) + Neem oil 0.15 EC @0.2 %, 0.675 g.a.i./ha (15 ml / 10 l) followed by Fosetyl – Al @ 0.1 %, 300 g.a.i./ha (12.5 ml / 10 l) at 10 days interval.
(4)	Gummy stem blight/stem splitting disease	2024	Seed treatment by Carbendazim 50% WP @ 2.5 g/kg seed + application of micronutrients @ 5 kg/ha in root zone near collar region at the time earthing + two foliar sprays of Azoxystrobin 4.8% + Chlorothalonil 40% SC @ 0.25%, first spray at first sign of disease and second spray at 10 days interval of first spray is effective. In case of organic cultivation of bottle gourd, seed treatment by talc-based consortia of Trichoderma (TCV-2) + Bacillus subtilis (CRB-7) @ 10 g/kg seed + Soil drenching with consortia of

			Trichoderma (TCV-2) + Bacillus subtilis (CRB-7) @ 1% in root zone at the time of each earthing is effective.
9.	Cowpea: Total -2		
(1)	Leaf spot and Rust diseases	2012	Two foliar sprays of Propiconazole (0.025%) at 15 days intervals found effective against <i>Cercospora</i> leaf spot and rust (<i>Uromyces</i>) diseases.
(2)	Foliar blight disease	2024	Seed treatment with Trichoderma viride @ 4g/kg + application of 50 kg FYM enriched with 5q neem cake and 2.5 kg Trichoderma viride/ha at 15 days prior to sowing followed by four foliar sprays of Copper oxychloride 50%WP @ 0.3% or four Foliar sprays of Streptocycline @ 100 ppm + (Tebuconazole 50% + Trifloxystrobin 25% WG) @ 0.1% at 10 days interval started with the initiation of disease.