Vegetable

Recommendation released in last 10 years

2019-20	1	Two sprays of flupyradifurone 200 SL @ 20 ml per 10 litre of water at an interval of 10 days starting from Economic Threshhold Level (ETL) are recommended for the control of leaf hoppers and whiteflies on okra.
2018-19	2	Two sprays of flupyradifurone 200 SL @ 20 ml per 10 litre of water at an interval of 10 days starting from Economic Threshhold Level (ETL) are recommended for the control of leaf hoppers and whiteflies on okra
	3	IDM packages for cucurbit diseases (Veg 8.22) at Kalyani and Rahuri: Integrated IDM moduleT5 involving growing of two rows of maize as border crops and use of agri silver mulch sheet followed by seed treatment with carbendazim 12%+ mancozeb 63% @3 g/kg and drenching of captan 70% + hexaconazole 5%WP @ 0.1% 15 days after germination followed by spraying of tebuconazole 50% + trifloxystrobin 25% @1g/l + spray with (imidacloprid 17.8 SL @7.5 ml/ 15 l+ Neem oil 0.2%) followed by fosetyl-Al @0.1% followed by spraying of tebuconazole 50% + trifloxystrobin 25% @1g/l + spray with (imidacloprid 17.8 SL @ 7.5 ml/ 15 l + neem oil 0.2%) followed by fosetyl-Al @0.1% at 10 days interval was highly effective against gummy stem blight, powdery mildew and downy mildew with maximum fruit yield. The ICBR 8.9 in bottle gourd cv Jorabota (Local) was recorded at Kalyani, C:B ratio 1:3 in cucumber variety Himangi was recorded at Rahuri. The marketable bottle gourd fruits analyzed for pesticide residue at Kalyani and no pesticides have been detected.
2017-18	4	Two sprays of flupyradifurone 200 SL @ 20 ml per 10 liter of water is recommended at an interval of 10 days for the control of leaf hoppers and whiteflies in okra starting from economic threshhold level (ETL).
	5	Foliar spray of growth retardant cycocil @ 500ppm and spacing at 60x30 cm increased the seed yield and quality in Okra cv.P. Utkarsha during kharif season at Rahuri. Hence, it is recommended for agro-climatic condition of Zone VI
	6	Highest seed yield of 270.09 kg/ha was recorded with foliar spray of NAA 30 ppm at 5 days before transplanting in nursery, 25days, 45days and 65 days after transplanting in Chilli cv. Phule Jyoti at Rahuri. Hence, it is recommended for agro-climatic condition of Zone VII
	7	At Rahuri chemical module T_4 comprising of seed treatment with captan 50% WP (2g/kg) + drenching of nursery by fosetyl Al 80% WP @0.1% immediately after germination, foliar spray of nursery with copper hydroxide 77% WP (2.0g/l) at 3-5 leaf stage and in main field seedling dip with 0.1% (carbendazim 12% + mancozeb 63%WP), spray of acephate 75% WP @1.5 g/l on 10 days after transplanting, spray with fipronil 5% SC @1.5 ml/l on 20 DAT after transplanting, spray with copper hydroxide 77% WP (2.0g/l) on 25 DAT, spray with imidacloprid 70% WG @2g/l on 40 DAT and spray with fenamidone 10% + mancozeb 50% WDG (0.25%) two times was effective. The C: B ratio was 1:1.74 on cultivar Phule Raja which may be recommended.
2016-17	8	In brinjal, four sprays of cassava based bio-pesticide (Nanma) @ 10 ml/lit at 15 days interval was found superior in suppressing the population of whitefly, *Bemisia tabaci* (69% reduction) as well as infestation of *Leucinodes orbonalis*, with 57% and 50% reduction in shoot and fruit damage respectively, with good marketable yield (320.73 q/ha) at Rahuri conditions

	9	Onion seed production is recommended in West Ghat Zone with bulb planting in first week of November with fertilizer dose of 150:75:75 kg NPK/ ha.for maximum monetary returns.
	10	It is recommended to cultivate potato cultivar 'Kufri Surya' for higher tuber yield in *Rabi* season in plain zone of Maharashtra.
	11	Planting of turmeric by cutting mother rhizomes in two splits is recommended to save 50 % of seed rhizomes.
	12	In brinjal, lowest infestation of BSFB, *L. orbonalis* was recorded in brinjal crop grown under protected condition with 31% and 32.2% reduction in fruit damage on number and weight basis, respectively as compared to open field conditions. Highest yield (239.99 q/ha) was obtained in protected plot with 12.05% increase, as compared to un-protected plot at Rahuri condition
	13	Insecticide resistance management (IRM) strategy comprising of rotation of rynaxpyr 18.5 SC @ 0.4ml/L followed by E. benzoate 25 WG @ 0.5gm/L, spinosad 45 SC @ 0.5ml/L, chloropyriphos 20 EC @ 2ml/L and cypermethrin 25 EC @ 0.5ml/L at 10 days interval gave lowest shoot and fruit damage by *L. orbonalis* in brinjal, with highest marketable fruit yield at Varanasi, Sabour and Rahuri conditions. Highest B:C ratio of 10.55 and 11.37 was obtained at Rahuri and Varanasi centres, respectively. This strategy reduces number of pesticide sprays in brinjal by 50 % as compared to farmers practice and it can be used as a pest and resistance management strategy for shoot & fruit borer in brinjal
	14	Integrated pest management module consisting of seedling root dip with imidacloprid 17.8 SL @ 0.5ml/L and subsequent spray of buprofezin 25 SC @ 1ml/L followed by fipronil 5 SC @ 1.5 ml/L, *Verticellium lecanii* (1 x 108 CFU/g) @ 5.0 gm/L, chlorfenapyr 10 SC @ 1.0 ml/L and neem oil @ 10ml/l at an interval of 10 days starting from 25 days after transplanting was found most effective with 76.57 and 70.80 % reduction in chilli thrips and mites, respectively and gave 53.70 % increase in marketable fruit yield with highest B:C ratio of 2.83 at Rahuri conditions
	15	Pest management module consisting of erection of yellow sticky traps @ 2 traps/50-100 m^2, foliar spray of imidaclorpid 200 SL @ 0.5 ml/L at 20 and 30 days after transplanting, spray of chlorantranliprole 18.5 SC @ 0.5 ml/L at 15 days interval at the initiation of flowering and spray of fenzaquin 10 EC @ 2.5 ml/L was found most effective with 78.06, 66.32 and 72.41 % reduction in whitefly, leafminer and fruit borer, respectively in tomato and gave 59.77% increase in yield and highest B:C ratio of 2.68 at Rahuri conditions
	16	Seeds of dolichos bean coated with carbendazim @ 2 g/kg seed + imidacloprid @ 2 ml/kg seed + micronutrient mixture @ 20 g/kg of seed recorded maximum germination (80.5%) and vigour at Rahuri
	17	Three sprays of Azoxystrobin 23% SC or Tebuconazole 25.9% EC fungicide @ 10 ml along with the sticker 10 ml. per 10 lit. of water is recommended at 10 days interval starting from the appearance of the disease for effective control of ripe fruit rot disease and better yield of chilli during *kharif* season
2015-16	18	**Recommendation on fungicidal management for downy mildew of bitter gourd:** Three sprays of Cymoxanil 8% + Mancozeb 64% WP fungicide @ 30 g along with the sticker 10 ml. per 10 lit. water are recommended at 10 days interval, starting from the appearance of the disease for control of downy mildew disease and better yield of bitter gourd in *kharif* season

	19	Foliar application of 50 ppm NAA at 6, 8 and 10 weeks after transplanting of rainfed chilli in sub motane zone of Maharashtra in medium deep soil is recommended for higher yield and returns.
	20	Three sprays of Cymoxanil 8 % + Mancozeb 64 % WP fungicide @ 30 g along with the sticker 10 ml per 10 lit watre are recommanded at 10 days interval,. starting from the appearance of the disease for control of downy mildew disease and better yield of bittergourd in kharif season.
	21	The planting of tissue culture banana cv. Grand naine in the first week of February is recommended for the higher yield of quality fruits and higher monetary returns in addition to June and October plantings for Khandesh region (Jalgaon, Nandurbar and Dhule) under changing climatic conditions.
	22	Sprayings of deltamethrin 1% + triazophos 35% (Ready-mix insecticide) @ 20 ml/10 lit. of water, need based application at an interval of 15 days starting from flowering is recommended for the control of shoot and fruit borer (*Leucinodes orbonalis* Guen.) of brinjal.
	23	The following regression equation showing inter relationship between shoot and fruit borer incidence on brinjal and weater parameters is recommended Equation : BSFB = -279.06 + 7.78 x Tmax – 1.67 x Tmin + 0.94 x RH-I + 0.48 x RH-II – 0.10 x RF – 1.57 x BSS Where, BSFB = Shoot and fruit borer population (in equation), T_{max} = Max. Temp. (^{0}C), T_{min} = Min. Temp. (^{0}C), RH-I = Relative Humidity % (morning), RH-II = Relative Humidity % (evening), RF = Rainfall (mm) BSS = Bright sunshine hours (hours day^{-1}) The resulting negative value in equation will indicate absence of shoot and fruit borer incidence and positive value indicates possibility of occurrence of incidence
2014-15	24	In brinjal for the management of leaf hoppers and shoot and fruit borer *Leucinodes orbonalis*, IPM module comprising of seedling root dip with imidacloprid 17.8 SL @ 1 ml/lit for three hours before transplanting, sowing of maize as border crop, installation of sex pheromone traps @ 100 traps/ha, clipping of infested shoots at weekly interval from 20 days after transplanting and spray of azadirachtin (1500 ppm) @ 3 ml/l and triazophos 40 EC @ 2ml/l alternately twice at an interval of 10 days starting from flowering gave 83.61 and 71.91% reduction in leafhopper and fruit damage, respectively and 38.85 % increase in yield over control with maximum 1:21.64 ICBR and 1:1.95 B:C ratio at Rahuri conditions
	25	Conditioning of *Dolichous* bean seed in wetted gunny bag for 12 hrs. followed by 2 hrs. hydropriming coupled with shade drying till original moisture content (10%) by using “betweenpaper method” comprised of four towel paper at 25^{0}C temperature is recommended for laboratory germination test.
	26	IDM including, use of white nylon net (40-60 mesh) and soil application of neem cake @ 0.5kg/m2 in nursery, border crop with two rows of maize and seedling dip of Imidacloprid 0.5ml/l for 60 min followed by four sprays at 10 days interval, first spray with Acephate @ 1.5 g/l + Neem oil 2 ml/l, second spray with Fipronil @ 1.5 g/lit + Neem oil 2 ml/l, third spray with Imidacloprid @ 2 g/ 15 l + Neem

<table>
<tr><td></td><td></td><td>oil 2 ml/l and fourth spray with Acephate @ 1.5 g/l + Neem oil 2 ml/l under main field, recorded with significant less Tospo virus incidence (14.82%) in comparison to control (46.77%) as well as high BC ratio 1:2.89 in tomato (cv. Dhanashree) at Rahuri.</td></tr>
<tr><td></td><td>27</td><td>It is recommended to use of 2.5 months stored onion seed–bulbs produced particularly via “Set Plantation Technique” for 15th November planting alongwith application of sugarcane trash (0.5 kg/m^2) at 60 days after planting (an organic mulch) for upscaling of seed production potential particularly of kharif onion cultivars in Maharashra State.</td></tr>
<tr><td></td><td>28</td><td>Sprayings of chlorantraniliprole 18.5% SC @ 4 ml or ready-mix insecticide (deltamethrin 1% + triazophos 35% EC EC) @ 20 ml/10 l of water, need based application at an interval of 15 days starting from flowering are recommended for the control of shoot and fruit borer (Leucinodes orbonalis Guen.) of brinjal</td></tr>
<tr><td>2013-14</td><td>29</td><td>Application of recommended dose (120:80:120 NPK kg /ha) in water soluble form through drip in 11 weekly splits as per given schedule alongwith 3 foliar sprays of 2 % urea phosphate at 30, 45 and 60 DAP is recommended for efficient water and nutrient use and higher returns from rabi potato cultivated in medium deep black soils.
Fertilizer Schedule Per cent nutrients to be applied in 11 weekly splits
<table>
<tr><th rowspan="2">Days after planting</th><th colspan="2">N</th><th colspan="2">P</th><th colspan="2">K</th></tr>
<tr><th>%</th><th>Kg/ha</th><th>%</th><th>Kg/ha</th><th>%</th><th>Kg/ha</th></tr>
<tr><td>1-21 (3 equal weekly splits)</td><td>15</td><td>18</td><td>20</td><td>16</td><td>15</td><td>18</td></tr>
<tr><td>22-42 (3 equal weekly splits)</td><td>35</td><td>42</td><td>40</td><td>32</td><td>35</td><td>42</td></tr>
<tr><td>43-63 (3 equal weekly splits)</td><td>40</td><td>48</td><td>20</td><td>16</td><td>30</td><td>36</td></tr>
<tr><td>64-77 (2 equal weekly splits)</td><td>10</td><td>12</td><td>20</td><td>16</td><td>20</td><td>24</td></tr>
<tr><td>Total</td><td>100</td><td>120</td><td>100</td><td>80</td><td>100</td><td>120</td></tr>
</table></td></tr>
<tr><td></td><td>30</td><td>Spraying of herbicides Oxyflurofen 23.5 % EC @ 7.5 ml + Quizalofop - ethyl 5% EC @ 10 ml per 10 liter of water at 25 days after transplanting and one hand weeding at 45 DAT is recommended for effective weed control in onion</td></tr>
<tr><td></td><td>31</td><td>Recommendation sourses and levels of sulphur in Onion : The trial cundected at Rahuri during 2010 to 2013, it is recommended to apply 45 kg sulphur per hectare through gypsum or elemental sulphur source before fifteen days of transplanting for higher Onion bulb yield (527.03 q/ha) in rabi season under western Maharashtra conditions</td></tr>
<tr><td></td><td>32</td><td>At Rahuri, five sprays of deltamethrin1 EC+ triazophos 35 EC 2 ml/L at fortnightly interval reduced the brinjal shoot and fruit borer damage to 10% and recorded highest yield (345 q/ha) with ICBR of 1:30.21.</td></tr>
<tr><td></td><td>33</td><td>At Rahuri, alternate sprays of acephate 75 % WP @ 1g/l and dicofol 18.5 EC @ 2ml/l and neem oil at 0.1 % reduced the thrips (2.74/ leaf) and mites (14.73 /leaf) population and recorded with highest yield (157.82 q/ha).</td></tr>
<tr><td></td><td>34</td><td>At Rahuri, IPM module consisting of bait spray (Jaggery 10 % + malathion 2 ml/l) coupled with installation of cu-lure traps suppressed fruit fly damage in bower system (16%), Kniffin (21.65%) and ground trailing (30.12%) as compared to untreated plots with 22.44 %, 33.06 % and 44.2 % fruit fly damage, respectively.</td></tr>
<tr><td></td><td>35</td><td>Integrated Nutrient Management for garlic : The trials were conducted at Rahuri during 2010 to 2013. Application of 75:40:40:40 kg NPKS /ha along with combination of two or three organic manures (FYM, Poultry Manure and</td></tr>
</table>

		Vermicompost) equivalent to 15 t FYM/ha is recommended for Tamilnadu (Ooty), Rajasthan, Bihar, Orrisa, Madhya Pradesh, Maharashtra and Gujrat
	36	A set plantation technique of onion is recommended for achieving early maturity (75 days), higher bulb production and profitability of kharif onion. **A) Package of practices for set production:** 1. Prepare the flat beds of 3 X 2 m^2 size for set preparation. 2. Before seed sowing add 10 kg FYM with biofertilizers 10 g *VAM,* 5 g each of *Azosprillium* and *PSB*, 250 g of fertilizer (15:15:15) and 25 g of Copper oxychloride/bed and then well mixed in soil. 3. The seeds of onion (20 g/bed) of cv. Baswant -780 or Phule Samarth should be sown 10 cm apart in lines from IInd forthnight of January. 4. Irrigation water should be withheld 10 to 15 days before harvest of sets. 5. Spraying of Carbendazim 10 g + sticker 10 ml/ 10 lit of water 10 days before harvesting of sets and after harvest spraying of Mancozeb or Copper oxychloride 25 g / 10 lit. of water should be done to avoid storage losses of sets. 6. Harvest onion sets with tops and tie in bundles and stored in well ventilated storage. **B) Onion set plantation technology** 1. The transplanting of stored sets should be done from second forthnight of June for better quality onion production within 70 to 75 DAT. 2. For better marketable yield and storage (3 months) quality one pre-harvest spray of Carbendenzim @10 g + sticker 10ml/10 lit. of water should be taken at 10 days prior to harvest. **3.** The harvested bulbs along with tops should be shade cured for 10 days.
2012-13	37	In medium deep soils of irrigated area of Western Maharashtra, to achieve higher productivity and profitability with maintaining soil health, the soybean-onion cropping system is recommended over pear millet-wheat cropping system under irrigation condition and soybean-chickpea under limited irrigation is recommended.
	38	The application of 10 t FYM ha^{-1} + nitrogen, phosphorus and potassium as per yield targeting equations for 12-16 t ha^{-1} yield of summer okra is recommended for *Inceptisols* of Western Maharashtra. **With FYM** | **Without FYM** $FN = 15.88 X T–0.50 X SN-2.38 X FYM$ | $FN = 16.20 X T – 0.51 X SN$ $FP_2O_5 = 10.09X T–3.17XSP - 1.08 X FYM$ | $FP_2O_5 = 11.05 X T – 3.47 X SP$ $FK_2O = 9.82 X T – 0.13 X SK - 1.60 X FYM$ | $FK_2O = 10.07 X T – 0.13X SK$ **Where,** FN, FP_2O_5 and FK_2O are fertilizer N, P_2O_5 and K_2O in kg ha^{-1} respectively. T is yield target in t ha^{-1} from 12-16 t for okra and SN, SP and SK are soil available N, P and K in kg ha^{-1}, FYM in t ha^{-1}.
	39	The application of 10 t FYM ha^{-1} + nitrogen, phosphorus and potassium as per yield targeting equations for 150-200 q ha^{-1} yield of *rabi* potato is recommended for *Inceptisols* of Western Maharashtra. **Fertilizer prescription equation**

		With FYM / **Without FYM** FN = 1.21 X T – 0.32 X SN 0.81 X FYM / FN = 1.52 X T – 0.40 X SN FP_2O_5 = 0.93 X T – 5.61 X SP 0.75 X FYM / FP_2O_5 = 0.91 X T – 5.53 X SP FK_2O = 1.18 X T – 0.16 X SK 0.76 X FYM / FK_2O = 1.32 X T – 0.17 X SK **Where,** FN, FP_2O_5 and FK_2O are fertilizer N, P_2O_5 and K_2O in kg ha^{-1} respectively. T is yield target in q ha^{-1} from 150 to 200 q for potato and SN, SP and SK are soil available N, P and K in kg ha^{-1}, FYM in t ha^{-1}.
	40	The application of nitrogen, phosphorus and potassium as per yield targeting equations for 50-60 t ha^{-1} of summer brinjal is recommended for *Inceptisols* of Western Maharashtra. **Fertilizer prescription equation** FN = 4.82 X T – 0.53 X SN FP_2O_5 = 3.14 X T – 7.32 X SP FK_2O = 3.21 X T – 0.13 X SK **Where,** FN, FP_2O_5 and FK_2O are fertilizer N, P_2O_5 and K_2O in kg ha^{-1} respectively. T is yield target in t ha^{-1} from 50-60 for brinjal and SN, SP and SK are soil available N, P and K in kg ha^{-1}
	41	IDM consisting of seed treatment with Carbendazim @ 1.5 g/kg and soil drenching with Carbendazim @ 0.1% three times at 15 days interval was effective in controlling *Fusarium* wilt (*F. oxysporum* f.sp. *melonis*) by 74.08% and the treatment recorded with high BC ratio (1:2.27) in muskmelon (cv. Keshar) at Rahuri
	42	Spraying of 19:19:19 water soluble fertilizer @ 0.5 % at 30 and 45 days after transplanting along with basal dose of fertilizer (50: 50 : 50 N, P_2O_5, K_2O kg/ha) is recommended for obtaining higher green–top **onion** yield and higher monetory returns.
	43	Following recommendation are made for the control of jassids and whiteflies on potato. For the control of any above sucking pests on potato, take first foliar spray of 240 SC spiromesifen 8 ml per 10 litres of water at 4th week after planting. Second foliar spray of 25 WG thiamethoxam 3gm per 10 litres of water at 6th week after planting and third foliar spray of 240 SC spiromesifen 8 ml per 10 litres of water at 8th week after planting.
	44	Four sprays of 75 % SP acephate @ 8.0 g or 20 % SP acetamiprid @ 2.5 g per 10 litres of water at an interval of fifteen days after observing population at economic threshold level (20 thrips/plant) are recommended for the control of onion thrips.
	45	Following package is recommended in cabbage to save 25% recommended dose of nitrogen through chemical fertilizers and to increase yield. 1. Seed treatment (700 g seeds/ha) with *Azotobacter, Azospirillum Gluconacetobacter* and PSB 5 g each, before raising seedlings in the nursery. 2. Dip seedling roots for 10 min in a solution of 20 ltrs of water containing these biofertilisers 125 g each, at transplanting.
	46	Seed treatment with *Pseudomonas fluorescence* @10 g/kg seed before sowing. Dipping of seedling root in a solution prepared by mixing 2.5 kg *Pseudomonas fluorescence* in 40 L water and application of 2.5 kg *Pseudomonas fluorescence* mixed in 50 kg og moist FYM acre soil at the time of transplanting o rdrenching of soil around brinjal plant with copper oxycloride 49 g + streptocycline 2 g mixed in 10 l of water are recommended for controlling bacterial wilt of brinjal and thereby gaining higher fruit yield.

	47	Three following foliar sprays at 10 days interval on onset of rust and / or powdery mildew are recommended to control rust and powdery mildew of pea with highest economic benefit. Wettable Sulphur 80 % @ 20 g + Propiconazole 25 EC @ 10 ml or Mancozeb 75 WP 25 g per ten liters of water.
	48	The improved 'water and nutrient management' technology for onion seed production is recommended to obtain better growth, yield, efficient water & nutrient use and higher monetary returns.
2011-12	49	The trial on foliar application of nutrients in onion, conducted at Rahuri during 2007-08 to 2009-10 it was recommended that foliar application of water soluble NPK fertilizers (20:20:20) in onion @ 5g/litre at 30, 45 and 60 days after transplanting in *rabi* season for highest bulb yield (392 q/ha) and cost benefit ratio of 1:4.95 at Rahuri
	50	The soil application of ferrous sulphate + zine sulphate @ 20kg ha^{-1} each + Borax@ 5 kg ha^{-1} at the time of sowing of okra or foliar sprays of ferrous sulphate + zine sulphate (0.5% each) + 0.2 % Boric acid at 30 and 45 days after sowing of okra along with recommended dose of fertilizers (FYM- 20 t/ha + 100:50:50 $N:P_2O_5:K_2O$ kg/ha) in iron, zine and boron deficient soil is recommended for higher yield as well as maintaining micronutrient status in the soil.
	51	Irrigation at 100% crop evapotranspiration (Etc) through micro sprinkler twice in a week (3-4days interval) is recommended for higher yield and efficient water use for cabbage cultivated on medium black soil.
	52	Application of water at 75% of crop evapotranspiration at 3 days interval through drip is recommended for efficient water use and higher yield of onion seed in medium black soil
	53	Integrated Management of fruit fly (*Bactrocera cucurbitae*) in bittergourd under different trailing systems. Integrated Pest Management Package as is recommended for the effective control of fruit fly (*Bactrocera cucurbitae*) in bittergourd. • Collection and destruction of infested fruits after each harvest. • Raking of the soil under the vine. • Use of cue lure traps @ 12/ha for trapping male fruit flies, replacing the cue lure septa after 3 months. • Spot application of bait sprays consisting of malathion 50EC @ 20ml+100gm jaggery per 10 L water on the border row vines at every 5m distance
	54	In plain zone of Maharashtra on deep black soils under rainfed condition for higher economical benefit intercropping of pigeon pea + French bean (1:3) is recommended.
	55	Drip irrigation at 100% PE daily interval gave the highest seed yield (5.21 q/ha), maximum water saving (49.3%) combined with higher cost benefit ratio of 1:2.23 at Rahuri. Whereas, under Rajgurnagar conditions, the highest seed yield of 6.16 q/ha with higher cost benefit ratio of 1:3.81 and maximum water saving (48.3%) was recorded in the same treatment. Hence it is recommended for Rahuri and Rajgurunagar conditions of Maharashtra
	56	The soil application of $FeSO_4$ + $ZnSO_4$ and @ 20 kg ha^{-1} each+ Borax @ 5 kg ha^{-1} at the time of sowing of okra or foliar sprays of $FeSO_4$ + $ZnSO_4$ (0.5% each) + 0.2 % Boric acid at 30 and 45 days after sowing of okra is recommended for good quality, higher yield, gross and net monetary returns, B: C ratio and maintaining micronutrient status in iron zinc and boron deficient soil

	57	The seed treatment of metalaxyl 35 S.D. @ 5g+Phule Trichoderma Formulation @5g kg^{-1} of seed is recommended for effective control of damping off disease of pea
	58	The seed treatment of Metalaxyl 35 S.D. @ 5 g kg^{-1} of seed is recommended for control of damping off disease of pea.
2010-11	59	Two sprays of profenofos @ 2ml/l at 20 and 30 DAT and 3 sprays of Ha. N.P.V. @ 350 LE/ha at 10 days interval from flowering or initiation of infestation is found to be effective in management of therips, leaf miner and fruit borer of tomato and recommended under Rahuri conditions.
	60	Management of foliar disease of onion – four sprays of the fungicide Azotrobin @ 0.1% along with sticker @ 0.1% at 10 days interval is recommended for the control of purple blotch and colletotrichum blight in *kharif* Onion. The first spray should be given as soon as the disease appears.
	61	Application of 80% recommended dose of fertilizers (240:120:120, N:P:K Kg/ha) in water soluble form in 14 equal weekly splits starting from planting through drip is recommended for improved yield and quality of fruits , better water and nutrient use and enhanced economical returns from hybrid tomato cultivation in medium deep black soils.
	62	Integrated weed management practices, spraying of pre-emergence herbicide pendimethalin @ 1 Kg a.i.ha^{-1} (3.33 lit. herbicide in 500 lit. water) with one hand weeding at 30 days after sowing of kharif okra is recommended for highest monetary returns and efficient weed control under irrigated condition in the plain Zone of Western Maharashtra.
	63	For higher yield and economic benefit, the sowing of Dolichous bean (bush type) cultivar Phule Suruchi at 30 x 30 cm spacing and application of 60:60:40 kg NPK/ha is recommended under Western Maharashtra conditions.
	64	Four sprays of the fungicide Tebuconazole (@ 0.1 %) along with the sticker (@ 0.1 %) at 10 days interval is recommended for the control of purple blotch and colletotrichum blight in Kharif onion. The first spray should be given as soon as the disease appears.
	65	In Kharif season, for the management of sucking pests and maximum seed production of forage cowpea, 3 sprays of Verticillium lecanii (cfu 1 x 108/g) @ 50g/10 litres of water at 10 days interval are recommended as and when the infestation of sucking pests is noticed.
2009-10	66	Efficacy of different newer insecticides against onion thrips (*Thrips tabaci*) • For the effective control of thrips in onion three sprays of fipronil 5 SC @ 15 ml or profenofos 40 EC @ 10 ml or carbosulfan 25 EC @ 10 ml or deltamethrin 1 EC + triazophos 35 EC (mixed insecticide) @ 20 ml/10 l. water starting from 30 days after transplanting at ETL (20 thrips / plant) are recommended. • The above insecticides may be sprayed alternately to prevent resistance of the pest to insecticides.
	67	Efficacy of different newer insecticides against chilli thrips (*Scirtothrips dorsalis*) and mites (*Polyphagotarsonemus latus*). For the management of thrips and mites on chilli use treated seed. If treated seed is not available treat the seed with thiamethoxam 75 SP @ 5 g./kg seed (put the seed in plastic container alongwith insecticide powder add 5 ml of water per kg seed and shake well and dry the seed in shade before sowing.), Spray NSE 4% and fipronil 15 ml/10 l. of water and abamectin 5 ml / 10 l. of water alternately four times at an interval of 15 days are recommended for thrips and mites.

<table>
<tr><td></td><td>68</td><td>In medium deep black soils of Western Maharashtra, the application of nitrogen, phosphorus and potassium to rabi cauliflower as per 40 t ha^{-1} yield target with 10 t FYM ha^{-1} is recommended for yield target, higher monetory return and B:C ratio.
Fertilizer prescription equation
<table><tr><th>Without FYM</th><th>With FYM</th></tr><tr><td>FN = 6.83 T – 0.35 SN</td><td>FN = 6.0 T – 0.30 SN – 1.44 FYM</td></tr><tr><td>FP_2O_5 = 4.25 T – 2.21 SP</td><td>FP_2O_5 = 3.92 T – 2.04 SP – 1.20 FYM</td></tr><tr><td>FK_2O = 3.90 T – 0.08 SK</td><td>FK_2O = 3.07 T - 0.06 SK – 1.12 FYM</td></tr></table>Where, FN, FP_2O_5 and F_2O are fertilizer N, P_2O_5 and K_2O in kg ha^{-1}, T is yield target in t ha^{-1}, SN, SP and SK are soil available N, P and K in kg ha^{-1} and FYM in t ha^{-1}.</td></tr>
<tr><td></td><td>69</td><td>In medium deep black soils of Western Maharashtra, the application of nitrogen, phosphorus and potassium to rabi cabbage as per 40 t ha^{-1} yield target with 10 t FYM ha^{-1} is recommended for yield target, higher monetary return and B:C ratio.
Fertilizer prescription equation
FN = 8.28 T – 0.21 SN
FP_2O_5 = 4.72 T – 2.34 SP
FK_2O = 6.68 T – 0.19 SK
Where, FN, FP_2O_5 and F_2O are fertilizer N, P_2O_5 and K_2O in kg ha^{-1}, T is yield target in t ha^{-1}, SN, SP and SK are soil available N, P and K in kg ha^{-1} and FYM in t ha^{-1}.</td></tr>
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