**PROCEEDINGS OF ELEVENTH COMBINED JOINT AGRESCO MEETING OF PLANT PROTECTION/ CROP PROTECTION OF STATE AGRICULTURAL UNIVERSITIES OF GUJARAT HELD AT AAU, ANAND DURING 7-9TH APRIL, 2015**

**11.3 PLANT PROTECTION/ CROP PROTECTION**

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| **Chairman** | **:** | Dr. A. N. Sabalpara, Director of Research, NAU, Navsari |
| **Co-Chairman** | **:** | Dr. A. M. Parakhia, Director of Extension, Education, JAU, Junagadh  Dr. D. M. Korat, Associate Director of Research, AAU, Anand |
| **Rapporteurs:** | **:** | Dr. H. R. Patel, Res. Sci. (Pl. Path.) and Unit Officer BTRS, Anand  Dr. G. G. Radadia, Prof. and Head, Dept. of Ento. and Registrar, NAU, Navsari |

**Summary of recommendations and new technical programmes**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Sr. no.** | **Name of university** | **Recommendations for farming community** | | **Recommendations for scientific community** | | **New technical programmes** | |
| **Presented** | **Approved** | **Presented** | **Approved** | **Presented** | **Approved** |
| **1** | **AAU** | 06 | 05 | 24 | 24 | **59** | **59** |
| **2** | **JAU** | 20 | 16 | 01 | 09 | **20** | **19** |
| **3** | **NAU** | 08 | 02 | 15 | 21 | **34** | **34** |
| **4** | **SDAU** | 05 | 02 | 01 | 05 | **21** | **21** |
|  | **Total** | **39** | **25** | **41** | **59** | **134** | **133** |

**The details of recommendations and new technical programmes presented/ discussed and approved**

|  |  |  |
| --- | --- | --- |
| **11.3.1** | **RECOMMENDATIONS** | |
| **A** | **FARMING COMMUNITY** | |
| **ANAND AGRICULTURAL UNIVERSITY, ANAND**  Dr. P. K. Borad, Convener, Plant Protection Sub-Committee presented proposal for recommendations | | |
| **AGRICULTURAL ENTOMOLOGY** | | |
| **11.3.1.1** | **Evaluation of effectiveness of auditory bird repeller (Gas canon) to scare birds**  Gas (LPG) canon self operated as single blast of 100-125 decibels at 60 second interval in continuous mode is effective to repel the birds (blue rock pigeon) from the one acre area. For better efficiency, the gas canon should be installed at least at 1 m above the crop height in down wind direction and be kept operated on need base period.  એલપીજી ગેસ આધારિત સ્વયં સંચાલિત ધડાકા મશીનને ૬૦ સેકન્ડના સમયાંતરે ૧૦૦ - ૧૨૫ ડેસીબલના ધડાકા કરવાથી એક એકર વિસ્તારમાં પક્ષીઓને (કબૂતર) દૂર રાખે છે. સારી અસરકારકતા માટે મશીનને પાકની ઉંચાઈથી ઓછામાં ઓછુ એકાદ મીટર ઉંચાઈએ તેમજ પવનની દિશામાં સ્થાપિત કરવું અને જરૂરિયાતના સમયગાળા દરમ્યાન મશીન ચાલુ રાખવું.  **(Action :** Res. Sci. (Ornitho.), AINP on Agril. Ornithology, AAU, Anand) | |
| **11.3.1.2** | **Evaluation of insecticide molecules against sucking pests of okra**  For effective and economical control of jassid in okra, the farmers of middle Gujarat are advised to spray thiamethoxam 25 WG, 0.009%, 3.5 g/ 10 litre water (43.75 g a.i./ha) and for whitefly, spiromesifen 240 SC, 0.02%, 8 ml/ 10 litre water (96 g a.i./ha) first at the appearance of the pest and second at 10 days interval.   |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Recommendation for PHI as per CIB guidelines:** | | | | | | | | | | | **Year** | **Crop** | **Pest** | **Pesticides with formulation** | **Dosage** | | | | **Appl. schedule** | **Waiting period /PHI**  **(Days)** | | **g. a. i./ ha** | **Quantity of formulation per ha** | **Conc. (%)** | **Dilution in water**  **(10 lit)** | | 2015 | Okra | Jassid | Thiamethoxam 25 WG | 43.75 | 175 g | 0.009 | 3.5 g | First foliar spray application at appearance of pests and second at 10 days after first application | 3 | | Whitefly | Spiromesifen 240 SC | 96 | 400 ml | 0.02 | 8.0 ml | 5 |   મધ્ય ગુજરાત વિસ્તારમાં ભીંડાની ખેતી કરતા ખેડૂતોને લીલા તડતડીયાંના અર્થક્ષમ અને અસરકારક નિયંત્રણ માટે થાયામેથોક્ઝામ ૨૫ વેગ્રે, ૦.૦૦૯%, ૩.૫ ગ્રામ/૧૦ લિટર પાણીમાં (૪૩.૭૫ ગ્રા.સ.ત./ હે.) અને સફેદમાખીના નિયંત્રણ માટે સ્પાયરોમેસીફેન ૨૪૦ એસસી, ૦.૦૨%, ૮ મિ.લિ./૧૦ લિટર પાણીમાં (૯૬ ગ્રા.સ.ત./ હે.) પ્રથમ છંટકાવ જીવાતનો ઉપદ્રવ શરૂ થાય ત્યારે અને ત્યારબાદ બીજો છંટકાવ ૧૦ દિવસના અંતરે કરવાની ભલામણ છે.  **(Action :** Asstt. Res. Sci. (Ento.), MVRS, AAU, Anand**)** | |
| **PLANT PATHOLOGY AND NEMATOLOGY** | | |
| **11.3.1.3** | **Management of root-knot nematodes in Mungbean by crop rotation**  The farmers of middle Gujarat (AES III) growing mungbean during *Kharif* season in root-knot nematode infested soil are advised to adopt crop rotation of cabbage in *Rabi* andcluster bean (vegetable purpose) in summer for two years to manage root-knot nematodes effectively and economically.  ગંઠવા કૃમિગ્રસ્ત ખેતરમાં ચોમાસુ મગની ખેતી કરતા મધ્ય ગુજરાત (ઝોન 3) ના ખેડૂતોને ગંઠવા કૃમિના અસરકારક અને અર્થક્ષમ નિયંત્રણ માટે શિયાળામાં કોબીજ અને ઉનાળામાં ગુવાર (શાકભાજી માટે) બે વર્ષ સુધી પાકની ફેરબદલી કરવાની ભલામણ કરવામાં આવે છે.  **(Action :** Prof. and Head, Dept. of Nematology, BACA, AAU, Anand**)** | |
| **11.3.1.4** | **Integrated management of root-knot nematode, *Meloidogyne* spp. infecting pomegranate**  The farmers of middle Gujarat growing pomegranate are advised to apply *Paecilomyces lilacinus* (2 x 106 spores/g) 20 kg/ha + castor cake @ 2 tonne/ha in root zone, 12 to 18 inch away from tree trunk in approximately 9 inch deep in soil at onset of monsoon and second application at interval of 6 months to manage root-knot nematode with higher fruit yield.  મધ્ય ગુજરાતના દાડમની ખેતી કરતા ખેડૂતોને ગંઠવા કૃમિના અસરકારક અને અર્થક્ષમ નિયંત્રણ માટે પેસીલોમાયસીસ લીલાસીનસ (૨ x ૧૦૬ બિજાણું/ગ્રામ) ૨૦ કિ.ગ્રા./હે + દિવેલી ખોળ ૨ ટન/હે ચોમાસાની શરુઆતમાં અને ત્યાર બાદ દર ૬ માસના આંતરે થડથી ૧૨ થી ૧૮ ઇંચ દૂર તથા આશરે ૯ ઇંચ ઉંડી રીંગ કરીને જમીનમાં મૂળ નજીક આપવાની ભલામણ કરવામાં આવે છે.  **(Action :** Prof. and Head, Dept. of Nematology, BACA, AAU, Anand**)** | |
| **11.3.1.5** | **Management of damping off using fungicide in bidi tobacco nursery**  Farmers of middle Gujarat (AES III) are advised to apply metalaxyl MZ 68 WP, 2.16 kg a.i./ha, 0.0432%, 6.4 g/10 litre using 5,000 litre water/ha under wet soil conditions, as spray drench with sprayer or 0.0108%, 1.6 g/ 10 litre using 20,000 litre water/ha under dry soil conditions with rose cane on seedlings as and when required for effective and economical control of damping-off disease in bidi tobacco nursery.  **મધ્ય ગુજરાત (ઝોન ૩)ના બીડી તમાકુ ધરૂ ઉગાડતા ખેડૂતોને કોહવારાના અસરકારક અને અર્થક્ષમ નિયંત્રણ માટે મેટાલેક્ષીલ એમઝેડ ૬૮ વે.પા., ૨.૧૬ કિ.ગ્રા. સ.ત./હે. ૦.૦૪૩૨**%, **૬.૪ ગ્રામ/૧૦ લિટર મુજબ ૫,૦૦૦ લિ.પાણી/હે. પ્રમાણે ભીની જમીનમાં પંપથી ધરૂ ભીંજાય અને દ્રાવણ જમીન ઉપર રેલાય તે રીતે છંટકાવ દ્વારા અથવા ૦.૦૧૦૮**%, ૧.૬ ગ્રામ/૧૦ લિટર મુજબ **૨૦,૦૦૦ લિ.પાણી/હે. સૂકી જમીનમાં ઝારાથી રેલાવીને જરૂરિયાત મુજબ આપવાની ભલામણ કરવામાં આવે છે.**  **(Action :** Res. Sci. (Patho.), BTRS, AAU, Anand**)** | |
| **JUNAGADH AGRICULTURAL UNIVERSITY, JUNAGADH**  Dr. V. N. Patel, Convener, Plant Protection Sub-Committee presented proposal for recommendations | | |
| **AGRICULTURAL ENTOMOLOGY** | | |
| **11.3.1.6** | **Management of sucking pests through insecticides in brinjal**  For effective and economical control of brinjal whitefly, three sprays of chlorantraniliprole 18.5 SC, 0.002%, 1.08 ml/10 litre water at 15 days interval starting from the pest infestation are recommended under South Saurashtra Agro climatic Zone. The PHI for chlorantraniliprole 18.5 SC, 0.002% is one day.  દક્ષિણ સૌરાષ્ટ્ર ખેત આબોહવાકીય વિસ્તારમાં રીંગણની સફેદમાખીનાં અસરકારક અને અર્થક્ષમ નિયંત્રણ માટે કલોરાન્ટ્રાનીલીપ્રોલ ૧૮.૫ એસસી, ૦.૦૦૨%, ૧.0૮ મિ.લિ./૧૦ લિટર **પાણી**ના ત્રણ છંટકાવ દર ૧૫ દિવસના અંતરે કરવાની ભલામણ કરવામાં આવે છે. કલોરાન્ટ્રાનીલીપ્રોલ ૧૮.૫ એસસી, ૦.૦૦૨% ના છંટકાવ અને ફળ ઉતારવા વચ્ચે સમયગાળો એક દિવસ રાખવો.  (**Action :** Prof. and Head, Dept. of Entomology, JAU, Junagadh) | |
| **11.3.1.7** | **Storage potential of bio-agent under refrigerator conditions**  Farmers are advised to store the field collected ladybird beetles (*Coccinella septempunctata* (L.)) in jar containing folded papers under domestic refrigerator conditions (6.0 to 7.5 0C) up to 120 day with the survival rate of 84% without hampering their longevity and fecundity. These stored predatory beetles can be released in field crops for biological control of insect pests.  ખેડૂતોને સલાહ આપવામાં આવે છે કે, ખેતરમાંથી એકત્રિત કરેલા પુખ્ત પરભક્ષી લાલ દાળિયાને ગડી પાડેલ કાગળ ધરાવતી બરણીમાં રાખી તેને ફ્રીજમાં (૬.૦ થી ૭.૫૦ સે.) ૧૨૦ દિવસ સુધી ૮૪% જીવંત દર સાથે, તેની આયુષ્ય અને પ્રજનન શક્તિને કોઈપણ જાતનાં અવરોધ વગર શીત સંગ્રહ કરી શકાય છે, અને તેનો ખેતી પાકોની જીવાતોના જૈવિક નિયંત્રણ માટે ઉપયોગમાં લઇ શકાય છે.  (**Action :** Prof. and Head, Dept. of Entomology, JAU, Junagadh) | |
| **11.3.1.8** | **Storability of HaNPV and SNPV under refrigerator condition**  Farmers are advised for biological control of *Helicoverpa armigera* and *Spodoptera litura* through Nuclear Polyhedrosis Virus (NPV) to store the field collected NPV infected larvae under domestic refrigerator conditions (6.0 to 7.5 0C). These NPV infected larvae can be stored up to 8 months of storage period with 100 per cent virulence, which can be utilized for the biological management of respective pest.  લીલી ઈયળ તથા લશ્કરી ઈયળોના જૈવિક નિયંત્રણમાં રસ ધરાવતા ખેડૂતોને ભલામણ કરવામાં આવે છે કે, વિષાણુ રોગગ્રસ્ત ઈયળોને ઘરાઉ રેફ્રીજરેટરમાં (૬.૦ થી ૭.૫૦ સે.) ૮ માસ સુધી ૧૦૦% રોગ ઉત્પન્ન કરવાની ક્ષમતા સાથે સંગ્રહ કરી શકાય છે. જેનો સંબંધિત જીવાતનાં જૈવિક નિયંત્રણ માટે વિષાણુયુક્ત દ્રાવણ તૈયાર કરી ઉપયોગમાં લઈ શકાય છે.  (**Action :** Prof. and Head, Dept. of Entomology, JAU, Junagadh) | |
| **11.3.1.9** | **Studies on effect of drip v/s flood irrigation on the incidence of important mango pests.**  Mango growers of South Saurashtra Agro-climatic Zone are informed that the lower incidence of gall midge, hopper and thrips is found in drip irrigated orchard as compared to flood irrigated orchard.  દક્ષિણ સૌરાષ્ટ્ર ખેત આબોહવાકીય વિસ્તારમાં આંબાના બગીચા ધરાવતા ખેડૂતોને જણાવવામાં આવે છે કે, ટપક પિયત પદ્ધતિમાં ગાંઠીયા માખી, મધિયો અને થ્રીપ્સનો ઉપદ્રવ રેલાવીને પિયત પધ્ધતિ કરતા ઓછો જોવા મળે છે.  (**Action :** Prof. and Head, Dept. of Entomology, JAU, Junagadh) | |
| **11.3.1.10** | **Testing of efficacy of different newer insecticides against shoot fly and stem borer in pearl millet**  Farmers of North Saurashtra Agro-climatic Zone growing *kharif* pearl millet are advised to treat the seeds with imidacloprid 600 FS, 8.75 ml/kg seeds, 4.20 g a.i./kg seeds at the time of sowing followed by spray with imidacloprid 17.8 SL, 0.009%, 5.0 ml/10 liter water, 45.39 g a.i./ha at 35 days after germination of the crop for effective management of shoot fly and stem borer. The PHI for these insecticides is 42 days.  ઉત્તર સૌરાષ્ટ્ર ખેત આબોહવાકીય વિસ્તારમાં ચોમાસુ બાજરી ઉગાડતા ખેડૂતોને ભલામણ કરવામાં આવે છે કે સાંઠામાખી અને ગાભમારાની ઈયળના અસરકારક નિયંત્રણ માટે બાજરીના બીજને વાવેતર વખતે ઈમિડાક્લોપ્રિડ ૬૦૦ એફએસ ૮.૭૫ મિલિ/કિ.ગ્રા. બીજ, ૪.૨૦ ગ્રામ સ.ત. / કિ.ગ્રા. નો પટ આપવો તેમજ પાકના ઉગાવા બાદ ૩૫ દિવસે ઈમીડાક્લોપ્રીડ ૧૭.૮ એસએલ, ૦.૦૦૯% (૫.૦ મિલિ/૧૦ લિટર પાણી, ૪૫.૩૯ ગ્રામ સ.ત. /હેકટર) નો છંટકાવ કરવો. આ દવાના છેલ્લા છંટકાવ અને કાપણી વચ્ચે ૪૨ દિવસનો સમય ગાળો જાળવવો.  (**Action :** Research Scientist (Pearl Millet), JAU, Jamnagar) | |
| **11.3.1.11** | **Storage study of wheat harvested by combine harvester**  The farmers storing wheat are advised that wheat harvested by combine harvester (up to 6% mechanically damaged grain) to be stored with the treatment of castor oil (15 ml/1.0 kg grain) and can be kept in GI bin container to keep safe against lesser grain borer up to eight months of storage as it reduces pest population, grain damage, weight loss as compared to untreated wheat kept in jute bags.  ઘઉં સંગ્રહ કરતા ખેડૂતોને ભલામણ કરવામાં આવે છે કે, કમ્બાઇન્ડ હાર્વેસ્ટર દ્વારા કાપણી કરી તૈયાર થતા ઘઉંને કોઇપણ જાતની માવજત વિના શણનાં કોથળામાં સંગ્રહ કરવાને બદલે દિવેલની (૧૫ મિ.લિ./કિ.ગ્રા. યંત્ર દ્વારા નુક્સાન પામેલ દાણા) માવજત આપી ગેલ્વેનાઇઝ્ડ પીપમાં સંગ્રહ કરવામાં આવે તો સંગ્રહ દરમ્યાન નુકસાન કરતી જીવાત આંધળા જીવડા, તેનાથી થતુ દાણાનુ નુકસાન તથા વજનમાં થતો ઘટાડો ઓછો જોવા મળે છે અને ૮ માસ સુધી સંગ્રહ કરી શકાય છે.  (**Action :** Prof. and Head, Dept. of Proc. & Food Eng., CAET, JAU, Junagadh) | |
| **11.3.1.12** | **Testing bio-efficacy of certain insecticides against pod borer complex on urdbean**  Farmers of South Saurashtra Agro-climatic zone are advised to apply two sprays of chlorantraniliprole 18.5 SC, 0.006%, 3 ml/ 10 litre water or flubendiamide 48 SC, 0.0096%, 2 ml/ 10 litre water, first spray at 50 per cent flowering and second at 15 days interval for the control of pod borer complex in urdbean.  The PHI for chlorantraniliprole 18.5 SC is 20 days, whereas 11 days for flubendiamide 48 SC.  Nl1F6 ;F{ZFQ8= B[T VFAMCJFlSI lJ:TFZGF ખેડૂતોને V0NGF\ 5FSDF\ શિંગ SMZL BFGFZL .I/MGF\ V;ZSFZS VG[ VY"1FD lGI\+6 DF8[[ S,MZFg8=FGL,L5|M, !(P5 V[;;L \_P\_\_& @ s# **મિ.લિ.** q !\_ લિ8Z 5F6LDF\f VYJF O,]A[g0LIFDF.0 $( V[;;L \_P\_\_)& @ sZ **મિ.લિ.** q!\_ લિ8Z 5F6LDF\f GF\\ A[ K\8SFJ SZJFGL E,FD6 K[P 5|YD K\8SFJ 5\_ 8SF ફૂલ VJ:YFV[ VG[ ALHM K\8SFJ 5|YD K\8SFJ AFN !5 lNJ;[ SZJMP  S,MZFg8=FGL,L5|M, !(P5 V[;;LGF K[<,F K\8SFJ VG[ SF56L JrR[GM ;DI UF/M Z\_ દિવસનો જાળવવો VG[ O,]A[g0LIFDF.0 $( V[;;LGF K[<,F K\8SFJ VG[ SF56L JrR[GM ;DI UF/M[ !! દિવસનો જાળવવો.  (**Action :** Research Scientist (Chickpea), JAU, Junagadh) | |
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| **11.3.1.13** | **Assessment of *Trichoderma* population in the field under groundnut cultivation**  Farmers of North and South Saurashtra Agro-climatic Zone are advised to apply *Trichoderma* every year for the management of stem/pod rot disease in groundnut.  ઉતર અને દક્ષિણ સૌરાષ્ટ્ર ખેત આબોહવાકીય વિસ્તારમાં ખેડૂતોને સલાહ આપવામાં આવે છે કે મગફળીના થડના સડાના નિયંત્રણ માટે ટ્રાયકોડર્માની માવજત દર વર્ષે આપવી.  (**Action :** Prof. and Head, Dept. of Pl. Pathology, JAU, Junagadh ) | |
| **11.3.1.14** | **Standardization of method and time of application of bio-control agents for management of stem and pod rot of groundnut caused by *Sclerotium rolfsii***  Farmers of South Saurashtra Agro-climatic Zone are advised furrow application of *Trichoderma harzianum* 2 x 106 cfug-1 @1.25 kg in 125 kg of castor cake/ha at the time of sowing as well as its broadcasting at plant base with same dose at one month after sowing for effective and economic control of stem and pod rot (*Sclerotium rolfsii*) of groundnut.  **દક્ષિણ સૌરાષ્ટ્ર ખેત આબોહવાકીય વિસ્તારના ખેડૂતોને ભલામણ કરવામાં આવે છે કે મગફળીના થડ અને ડોડવાના સડાના અસરકારક નિયંત્રણ માટે ૧.૨૫ કિ.ગ્રા. ટ્રાયકોડર્માં હારજીયાનમ ૨ x ૧૦૬ જીવંત કોષો/ગ્રા. ને ૧૨૫ કિ.ગ્રા. દિવેલીના ખોળમાં ભેળવી વાવેતર સમયે ચાસમાં આપવું અને તેટલો જ જથ્થો વાવેતરના એક મહિના પછી થડની પાસે વેરીને આપવો.**  (**Action :** Prof. and Head, Dept. of Pl. Pathology, JAU, Junagadh) | |
| **11.3.1.15** | **Compatibility of *Trichoderma* with different seed dressing agrochemicals used for the management of diseases and pest in groundnut**  Farmers of South Saurashtra Agro-climatic Zone are advised that the agrochemicals used for seed treatment in groundnut viz., carbendazim 12% + mancozeb 63% - 75 WP @ 3.0 g/kg seed or mancozeb 75 WP @ 4.0 g/kg seed or carboxin 37.5 % + thirum 37.5 % - 75 WP @ 3.0 g/kg seed or tebuconazole 2 DS @ 2.0 g/kg seed or imidacloprid 600 FS @ 3.0 ml/kg seed against seed and soil borne diseases/sucking pests do not reduce the soil population of *Trichoderma*, hence they are compatible with *Trichoderma harzianum*.  દક્ષિણ સૌરાષ્ટ્ર ખેત આબોહવાકીય વિસ્તારના ખેડૂતોને ભલામણ કરવામાં આવે છે કે મગફળીમાં બીજ અને જમીનજન્ય રોગો/ ચૂસીયાં પ્રકારની જીવાતોના નિયંત્રણ માટે બીજ માવજત તરીકે વપરાતા કૃષિ રસાયણો જેવા કે કાર્બેન્ડાઝીમ ૧૨% + મેન્કોઝેબ ૬૩% - ૭૫ વેપા ૩.૦ ગ્રામ/કિલો બીજ અથવા મેન્કોઝેબ ૭૫ વેપા ૪.૦ ગ્રામ/કિલો બીજ અથવા કાર્બોક્સીન ૩૭.૫% + થાયરમ ૩૭.૫% - ૭૫ વેપા ૩.૦ ગ્રામ/કિલો બીજ અથવા ટેબ્યુકોનાઝોલ ૨ ડીએસ ૨.૦ ગ્રામ/કિલો બીજ અથવા ઈમીડાક્લોપ્રીડ ૬૦૦ એફએસ ૩.૦ મિ.લિ./કિલો બીજના દરે આપેલ માવજતથી, જમીનમાંની ટ્રાયકોડર્માંની સંખ્યા ઘટતી નથી, આમ આ કૃષિ રસાયણો ટ્રાયકોડર્માં હારજીયાનમની સાથે સુસંગત છે.  (**Action :** Prof. and Head, Dept. of Pl. Pathology, JAU, Junagadh) | |
| **11.3.1.16** | **Effect of spawn rates on sporophore production of Oyster mushroom (*Pleurotus sajor-caju*)**  Mushroom growers are advised to use 3.0 per cent spawn rate in polyethylene bags (18 × 24 inch) of oyster mushroom (*Pleurotus sajor-caju*) to get the optimum sporophore production with higher biological efficiency.  મશરૂમ ઉગાડતા ઉદ્યમીઓને ભલામણ કરવામાં આવે છે કે પ્લાસ્ટિકની કોથળી (૧૮ × ૨૪ ઇંચ) માં ઉગાડાતી ઓય્સટર મશરૂમના અધિક જૈવિક કાર્યક્ષમતા સાથે વધુ ઉત્પાદન માટે ૩ ટકાનો બીજ દર રાખવો.  (**Action :** Prof. and Head, Dept. of Pl. Pathology, JAU, Junagadh) | |
| **11.3.1.17** | **Effect of substrate rates on sporophore production of Oyster mushroom (*Pleurotus sajor-caju*)**  Mushroom growers are advised to use 3 kg wheat straw substrate with 3 per cent spawn rate in polyethylene bags (18 × 24 inch) for the optimum sporophore production with higher biological efficiency of oyster mushroom (*Pleurotus sajor-caju*).  મશરૂમ ઉગાડતા ઉદ્યમીઓને ભલામણ કરવામાં આવે છે કે પ્લાસ્ટિકની કોથળી (૧૮ × ૨૪ ઇંચ)માં ઉગાડાતી ઓય્સટર મશરૂમના મહતમ જૈવિક કાર્યક્ષમતા સાથે વધુ ઉત્પાદન માટે કોથળી દીઠ ૩ કિલો ઘઉંના પરાળના માધ્યમનો ૩ ટકાના બીજ દર સાથે ઉપયોગ કરવો.  (**Action :** Prof. and Head, Dept. of Pl. Pathology, JAU, Junagadh) | |
| **11.3.1.18** | **Management of cumin wilt (*Fusarium oxysporum f. sp. cumini*)**  Farmers of South Saurashtra Agro-climatic Zone are advised to broadcast *Trichoderma harzianum* 2 x 106 cfug-1 @ 5.0 kg mixed in 1000 kg of FYM/ha at the time of sowing for effective and economical control of cumin wilt.  **દક્ષિણ સૌરાષ્ટ્ર ખેત આબોહવાકીય વિસ્તારના ખેડૂતોને ભલામણ કરવામાં આવે છે કે જીરૂના સુકારાના અસરકારક નિયંત્રણ માટે ૫.૦ કિ.ગ્રા. ટ્રાયકોડર્માં હારજીયાનમ ૨ x ૧૦૬ જીવંત કોષો/ગ્રા.ને ૧૦૦૦ કિ.ગ્રા./હે. ગળતીયા ખાતરમાં ભેળવી વાવણી સમયે જમીનમાં આપવું.**  (**Action :** Prof. and Head, Dept. of Pl. Pathology, JAU, Junagadh) | |
| **11.3.1.19** | **Efficacy of different bio-control agents against cumin wilt caused by *Fusarium oxysporum f. sp. cumini***  Farmers of South Saurashtra Agro-climatic Zone are advised to broadcast mixture of *Trichoderma viride* @ 1.70 kg + *T. harzianum* @ 1.70 kg + *Pseudomonas fluorescens* @ 1.70 kg (2 x 107 cfug-1) or *T. viride* @ 2.50 kg + *P. fluorescens* @ 2.50 kg (2 x 107 cfug-1) mixed in 500 kg of castor cake/ha at the time of sowing for effective and economical control of cumin wilt.  દક્ષિણ સૌરાષ્ટ્ર ખેત આબોહવાકીય વિસ્તારના ખેડૂતોને ભલામણ કરવામાં આવે છે કે જીરૂના સુકારાના અસરકારક નિયંત્રણ માટે ૧.૭૦ કિ.ગ્રા. ટ્રાયકોડર્માં વિરીડી + ૧.૭૦ કિ.ગ્રા. ટ્રાયકોડર્માં હારજીયાનમ + ૧.૭૦ કિ.ગ્રા. સ્યુડોમોનાસ ફ્લુરોસન્સ (૨ x ૧૦૭ જીવંત કોષો/ગ્રા.) અથવા ૨.૫૦ કિ.ગ્રા. ટ્રાયકોડર્માં વિરીડી + ૨.૫ કિ.ગ્રા. સ્યુડોમોનાસ ફ્લુરોસન્સ (૨ x ૧૦૭ જીવંત કોષો/ગ્રા.)ના મિશ્રણને ૫૦૦ કિ.ગ્રા. દિવેલીના ખોળમાં ભેળવી વાવેતર સમયે જમીનમાં વેરીને આપવું.  (**Action :** Prof. and Head, Dept. of Pl. Pathology, JAU, Junagadh) | |
| **11.3.1.20** | **Effect of foliar application of insecticides in cumin on *Trichoderma* applied in soil**  Farmers of South Saurashtra Agro-climatic Zone are advised to apply *Trichoderma harzianum* (2 x 107 cfug-1) @ 5 kg in 500 kg of castor cake/ha at the time of sowing as well as its broad-casting @ 5 kg/ha Trichoderma in 100 kg sand at one month after germination of crop for effective and economical control of cumin wilt.  દક્ષિણ સૌરાષ્ટ્ર ખેત આબોહવાકીય વિસ્તારના ખેડૂતોને ભલામણ કરવામાં આવે છે કે જીરુંના સુકારાના અસરકારક નિયંત્રણ માટે ટ્રાયકોડર્માં હારજીયાનમ (૨ x ૧૦૭ જીવંત કોષો/ગ્રા.) ૫ કિ.ગ્રા. ને ૫૦૦ કિ.ગ્રા. દિવેલીના ખોળમાં ભેળવી વાવેતર સમયે જમીનમાં આપવું તેમજ ૫ કિ.ગ્રા./હે ને ૧૦૦ કિ.ગ્રા. રેતીમાં ભેળવી પાકના ઉગવાના એક મહિના પછી વેરીને આપવું.  (**Action :** Prof. and Head, Dept. of Pl. Pathology, JAU, Junagadh) | |
| **11.3.1.21** | **Effect of foliar application of herbicides in cumin on *Trichoderma* applied in soil**  Farmers of South Saurashtra Agro-climatic zone are advised that the application of herbicides oxadiargyl 6 EC, 0.075 kg a.i./ha, 25 ml/10 litre at 7 days after sowing in cumin do not reduce the soil population of *Trichoderma harzianum*.  દક્ષિણ સૌરાષ્ટ્ર ખેત આબોહવાકીય વિસ્તારના ખેડૂતોને ભલામણ કરવામાં આવે છે કે ટ્રાયકોડર્માં હારજીયાનમ જમીનમાં ભેળવ્યા બાદ જીરુમાં નીંદણ નિયંત્રણ માટે વપરાતુ નીંદણનાશક, ઓક્સાડાયાર્જીલ ૬ ઈસી, ૦.૦૭૫ કિલો સ. ત./હે (૨૫ મિ.લિ./૧૦ લિટર) ના દરે વાવેતરના સાત દિવસ પછી આપવાથી જમીનમાંની ટ્રાયકોડર્માંની સંખ્યામાં ઘટાડો થતો નથી.  (**Action :** Prof. and Head, Dept. of Pl. Pathology, JAU, Junagadh) | |
| **NAVSARI AGRICULTURAL UNIVERSITY, NAVSARI**  Dr. Z. P. Patel, Convener, Plant Protection Sub-Committee presented proposal for recommendations | | |
| **AGRICULTURAL ENTOMOLOGY** | | |
| **11.3.1.22** | **Bio-efficacy of some insecticides and neem products against *Helicoverpa armigera* (Hubner) on tomato**  For effective control of tomato fruit borer, farmers of south Gujarat (AES III) are advised to apply two sprays of flubendiamide 20 WDG, 2.5 g/10 litre or chlorantraniliprole 18.5 SC, 3.0 ml/10 litre, first at the time of flowering and second at 15 days after first spray for obtaining higher yield and better return. Further, the residue content of these insecticides remained below MRL in tomato fruits after three days.  **દક્ષિણ ગુજરાતના ટામેટા ઉગાડતા** ખેડૂતોને લીલી ઇયળના અસરકારક નિયંત્રણ માટે ભલામણ કરવામા આવે છે કે **ફ્લુબેન્ડીયામાઇડ** ૨૦ વેજી (૨.૫ ગ્રામ/ ૧૦ લિટર, ૨૫ ગ્રામ સ.ત./હે) અથવા ક્લોરેન્ટ્રાનીલીપ્રોલ ૧૮.૫ એસસી (૩.૦ મિલિ/ ૧૦ લિટર, ૩૦ ગ્રામ સ.ત./હે) ના બે છંટકાવ કરવા તે પૈકી પ્રથમ છંટકાવ ફૂલ બેસવાની અવસ્થાએ અને બીજો છંટકાવ પંદર દિવસ બાદ કરવાથી વધુ ઉત્પાદન સાથે સારૂ વળતર મળે છે. ટામેટામાં આ દવાના અવશેષો ત્રણ દિવસ બાદ મહત્તમ અવશેષ મર્યાદા માત્રા કરતાં નીચે જોવા મળે છે.  **Recommendation for PHI as per CIB guidelines:**   |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | Year | Crop | Pest | Pesticide with formulation | Dose | | | Waiting period (days) | | Quantity of formulation | Conc. (%) | Dilution in water | | 2015 | Tomato | Fruit borer | Flubendiamide 20 WDG | 25 g a.i./ha | 0.005% | 500 L | 3 | | 2015 | Tomato | Fruit borer | Chlorantraniliprole 18.5 % SC | 30 g a.i./ha | 0.006% | 500 L | 3 |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | વર્ષ | પાક | જીવાત | જંતુનાશક | માત્રા | | | વેઈટીંગ પીરીયડ (દિવસ) | | ગ્રા.સ.ત/ હે | સાંદ્રતા % | પાણીમાં મિશ્રણ | | ૨૦૧૫ | ટામેટા | ફળ કોરનાર ઈયળ | ફ્લુબેન્ડીયામાઇડ ૨૦ ડબ્લ્યુડીજી | ૨૫ ગ્રામ | ૦.૦૦૫ % | ૫૦૦ લી. | ૩ | | ૨૦૧૫ | ટામેટા | ફળ કોરનાર ઈયળ | કલોરેન્ટ્રાનીલીપ્રોલ ૧૮.૫ .એસસી | ૩૦ ગ્રામ | ૦.૦૦૬ % | ૫૦૦ લી. | ૩ |   **(Action :** Asstt. Prof. ( Ento)., Polytechnic (Horti.), NAU.,Navsari) | |
| **11.3.1.23** | **Residues and dissipation of deltamethrin 2.8 EC in okra**  The okra growers of South Gujarat Heavy Rainfall Agro-climatic Zone (AES III) are advised to observe one day pre harvest interval after the last spray of deltamethrin 2.8 EC when applied at 0.028% (10 ml in 10 litre water).  દક્ષિણ ગુજરાતના ભારે વરસાદવાળા ખેત આબોહવાકીય વિસ્તારના ભીંડા ઉગાડતા ખેડૂતોને ડેલ્ટામેથ્રીન ૨.૮ ઈસી, ૦.૦૨૮% (૧૦ મિ.લિ./૧૦ લિટર પાણી) ના છેલ્લા છંટકાવ અને ઉતાર વચ્ચે એક દિવસનો સમયગાળો રાખવાની સલાહ આપવામાં આવે છે.  **Recommendation for PHI as per CIB guidelines:**   |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | Year | Crop | Pest  /Diseases | Pesticide with formulation | Doses | | | Waiting Period  (days) | | Quantity of formulation | Conc. (%) | Dilution in water | | 2015 | Okra | Fruit borer, shoot borer and jassid. | Deltamethrin 2.8 EC | 11.2 g a.i/ha | 0.028 % | 400 L | 1.0 |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | વર્ષ | પાક | જીવાત | જંતુનાશક | માત્રા | | | વેઈટીંગ પીરીયડ ( દિવસ) | | સ.ત/ હે | સાંદ્રતા % | પાણીમાં મિશ્રણ | | ૨૦૧૫ | ભીંડા | ફળ અને ડુંખવેધક અને લીલા તડતડીયા | **ડેલ્ટામેથ્રીન ૨.૮ ઈ.સી** | ૧૧.૨ ગ્રામ | ૦.૦૨૮% | ૪૦૦ | ૧ |   **(Action :** Asstt. Prof. (Pesticide Residue), FQTL., NAU., Navsari) | |
| **SARDAR KRUSHINAGAR DANTIWADA AGRICULTURAL UNIVERSITY, SK NAGAR**  Dr. B. R. Patel, Convener, Plant Protection Sub-Committee presented proposal for recommendations | | |
| **AGRICULTURAL ENTOMOLOGY** | | |
| **11.3.1.24** | **Insecticidal seed treatment against maize stem borer**  To minimize the damage of stem borer in maize, the farmers of North Gujarat Agro-climatic zone are advised to apply seed treatment before sowing with thiamethoxam 70 WS @ 5 g per kg seeds by preparing slurry with 50 ml water at the time of sowing.  ptTZ U]HZFT B[T CJFDFG lJEFUGF DSF.G] JFJ[TZ SZTF B[0}TMG[ E,FD6 SZJFDF\ VFJ[ K[ S[4 UFEDFZFGL .I/G] G]SસાG 38F0JF DF8[ ALHG[ JFJTF 5C[,F YFયાD[YMShFD \*\_ 0A<I]V[;5 U|FD q કિ,M ALH 5|DF6[ 5\_ lDPલિP 5F6LDF\ ZU0M AGFJLG[[ DFJHT આપવીP  (**Action :** SMS (Ento.), KVK, SDAU, Khedbrahma and Assistant Res. Sci. ARS, SDAU, Bhiloda) | |
| **PLANT PATHOLOGY** | | |
| **11.3.1.25** | **Effect of date of sowing on the development of bacterial blight of clusterbean**  Farmers of North Gujarat Agro-climatic zone are advised to grow the vegetable cluster bean during the first week of August to minimize the intensity of bacterial leaf blight for getting the maximum green pod yield and net return.  ptTZ U]HZFT B[T vCJFDFG lJEFUGF XFSEFHL[ U]JFZG]\ JFJ[TZ SZTF B[ડૂTMG[ કાળીયા ZMUGL TLJ|TF 38F0JF DF8[ TYF ,L,L શિ\UMGF JW] pt5FNG VG[ GOM D[/JJF DF8[ XFSEFHL U]JFZG]\ JFJ[TZ VMUQ8 DF;GF 5|YD V9JF0LIFDF\ SZJFGL E,FD6 SZJFDF\ VFJ[[ K[P  (**Action :** Asstt. Res. Scientist (Pl. Path.), CRSS, SDAU, Jagudan) | |
| **B** | **SCIENTIFIC COMMUNITY/INFORMATION** | |
| **ANAND AGRICULTURAL UNIVERSITY, ANAND**  Dr. P. K. Borad, Convener, Plant Protection Sub-Committee presented proposal for recommendations | | |
| **AGRICULTURAL ENTOMOLOGY** | | |
| **11.3.1.26** | **Study on biodiversity of insect fauna through light traps**  Among the different types of light used in the light trap, visible and ultra violet lights found more effective and efficient to monitor the insects under field conditions. The coleopterans and dipterans insects were maximum in ultraviolet light, while, hemipteran and hymenopteran insects in visible light.  **(Action :** Prof. and Head, Dept. of Ento., BACA, AAU, Anand**)** | |
| **11.3.1.27** | **Screening of *Brassica* species against aphid**  The genotypes RAYAD 9602, NRCM 120, NRCM 353 (*Brassica juncea*) and PUSA SWARNIM (*B. carinata*) found highly resistant to aphid, *Lipaphis erysimi* Kalt. under field condition.  **(Action :** Prof. and Head, Dept. of Ento., BACA, AAU, Anand**)** | |
| **11.3.1.28** | **Evaluation of jute string as physical barrier to prevent entry of Indian peafowl into the feeding site**  In order to restrict the movement of peafowl in the fields, it is suggested to tie parallel two strings firmly, one above other at 30 and 50 cm above the ground.  **(Action :** Res. Sci. (Ornitho.), AINP on Agril. Ornithology, AAU, Anand**)** | |
| **11.3.1.29** | **Evaluation of effectiveness of acoustic device as bird repeller from feeding site**  Acoustic device operated playing birds call of 3-5 khz frequency (Two calls : Predator – pigeon) per cycle at 1 minute interval is not effective to repell the birds from the one acre area.  **(Action :** Res. Sci. (Ornitho.), AINP on Agril. Ornithology, AAU, Anand**)** | |
| **11.3.1.30** | **Residue and persistence of monocrotophos 36 SL in castor**  Two foliar sprays of monocrotophos 36 SL in castor at 15 days interval @ 157.32 and 314.64 g a.i. ha-1 starting from flowering stage resulted in its residue below the limit of quantitation of 0.05 µg g-1 in castor oil and cake if harvested 84days after the second spray. Therefore, PHI of 84 days could be suggested if monocrotophos 36 SL is recommended on castor with MRL of 0.05 µg g-1 in oil and cake.  **(Action :** Residue Analyst, AINP on Pesticide Residues, AAU, Anand**)** | |
| **11.3.1.31** | **Residue and persistence of monocrotophos 36 SL in pigeon pea**  Two foliar sprays of monocrotophos 36 SL in pigeonpea at 15 days interval @ 450 and 900 g a.i. ha-1 starting from pod formation stage resulted in its residue below determination level of 0.05 µg g-1 in seeds 45 days after the last spray. Therefore, PHI of 45 days could be suggested if monocrotophos 36 SL is recommended on pigeon pea with MRL of 0.05 µg g-1 in grains.  **(Action :** Residue Analyst, AINP on Pesticide Residues, AAU, Anand**)** | |
| **11.3.1.32** | **Residue and persistence of monocrotophos 36 SL in mustard**  Two foliar sprays of monocrotophos 36 SL in mustard at 10 days interval @ 135 and 270 g a.i. ha-1 starting from pod formation stage resulted in its residue below the limit of quantitation of 0.05 µg g-1 in mustard oil and cake if harvested 43 days after the second spray. Therefore, PHI of 43 days could be suggested if monocrotophos 36 SL is recommended on mustard with MRL of 0.05 µg g-1 for oil and cake.  **(Action :** Residue Analyst, AINP on Pesticide Residues, AAU, Anand**)** | |
| **11.3.1.33** | **Residue and persistence of phosphamidon 40 SL in mustard**  Two foliar sprays of phosphamidon 40 SL in mustard at 10 days interval @ 200 and 400 g a.i. ha-1 starting from flowering stage resulted in its residue below the limit of quantitation of 0.05 µg g-1 in mustard oil and cake if harvested 43 days after the second spray. Therefore, PHI of 43 days could be suggested if phosphamidon is recommended on mustard with MRL of 0.05 µg g-1 for oil and cake.  **(Action :** Residue Analyst, AINP on pesticide residues, AAU, Anand**)** | |
| **11.3.1.34** | **Residue and persistence of phenthoate 50 EC in cotton**  Three foliar sprays of phenthoate 50 EC in cotton at 15 days interval @ 1000 and 2000 g a.i. ha-1 starting from flowering and square formation stage resulted in its residue below the limit of quantitation of 0.05 µg g-1 in cotton oil, lint and cake if harvested 29 days after the third spray. Therefore, PHI of 29 days could be suggested if phenthoate 50 EC is recommended on cotton with MRL of 0.05 µg g-1 for oil, lint and cake.  **(Action :** Residue Analyst, AINP on Pesticide Residues, AAU, Anand**)** | |
| **11.3.1.35** | **Residue and persistence of ipconazole 25 % + metalaxyl 20 % - 45 ME in maize**  Seed treatment of a combination product ipconazole 25% + metalaxyl 20% - 45 ME in *rabi* maize @ 0.25 + 0.20 and 0.50 + 0.40 g a.i per kg seed did not result in their residues in immature grains with cob as well as matured grains at harvest. The residues persisted in the seedlings only up to the 20 days from the date of treatment. The combination product if registered for maize can be considered safe from residue point of view.  **(Action :** Residue Analyst, AINP on Pesticide Residues, AAU, Anand**)** | |
| **11.3.1.36** | **Residue and persistence of penflufen 154 + trifloxystrobin 154 - 308 FS in chickpea**  Seed treatment of the combination product penflufen 154 + trifloxystrobin 154 - 308 FS @ 15.4 + 15.4 and 30.8 + 30.8 g a.i./100 kg seed in chickpea neither revealed residues of any molecule of the mixture nor the metabolite of trifloxystrobin above determination in the green pods collected at pod formation stage or matured grains and soil collected at the time of harvest.  **(Action :** Residue Analyst, AINP on Pesticide Residues, AAU, Anand**)** | |
| **11.3.1.37** | **Residue and persistence of flonicamid 15 % + fipronil 15 % - 30  WG in cotton**  Two foliar applications of the combination product of flonicamid 15 % + fipronil 15 % - 30 WG @ 60 + 60 and 120 + 120 g a.i. ha-1 in cotton at 15 days interval starting from flowering and boll formation stage revealed residues of either product below their determination levels in cotton seed, lint, oil and cake 35 days after the last application. Therefore, the PHI of 35 days can be recommended if a mixture of flonicamid 15% + fipronil 15% - 30 WG is recommended in cotton.  **(Action :** Residue Analyst, AINP on Pesticide Residues, AAU, Anand**)** | |
| **11.3.1.38** | **Residue and persistence of spirotetramate 150 OD in brinjal**  Three foliar applications of spirotetramate 150 OD in brinjal at 10 days interval @ 90 g a.i. ha-1 starting from flowering stage resulted in its residue below determination level in brinjal fruits within one hour of the last application. Considering the MRL of spirotetramate at the limit of quantitation, i.e. 0.05 µg g-1, PHI of 1 day can be recommended if the insecticide is registered on brinjal.  **(Action :** Residue Analyst, AINP on Pesticide Residues, AAU, Anand**)** | |
| **11.3.1.39** | **Residue and persistence of chlorpyriphos 20 EC in okra**  Two foliar sprays of chlorpyriphos 20 EC in okra at 10 days interval @ 300 g a.i. ha-1 starting from fruiting stage resulted in its residue below the limit of quantitation of 0.01 µg g-1 in okra if fruits are harvested from 3 days after the second spray. Therefore, PHI of 3 days could be suggested if chlorpyriphos 20 EC is recommended on okra with MRL of 0.01 µg g-1.  **(Action :** Residue Analyst, AINP on pesticide residues, AAU, Anand**)** | |
| **11.3.1.40** | **Residue and persistence of quinalphos 25 EC in okra**  Two foliar sprays of quinalphos 25 EC in okra at 10 days interval @ 250 g a.i. ha-1 starting from fruiting stage resulted in its residue below the limit of quantitation of 0.01 µg g-1 in okra if fruits are harvested from 3 days after the second spray. Therefore, PHI of 3 days could be suggested if quinalphos 25 EC is recommended on okra with MRL of 0.01 µg g-1.  **(Action :** Residue Analyst, AINP on Pesticide Residues, AAU, Anand**)** | |
| **11.3.1.41** | **Residue and persistence of ethion 50 EC in okra**  Two foliar sprays of ethion 50 EC in okra at 10 days interval @ 500 g a.i. ha-1 starting from fruiting stage resulted in its residue below the limit of quantitation of 0.01 µg g-1 in okra if fruits are harvested from 10 days after the second spray. Therefore, PHI of 10 days could be suggested if ethion 50 EC is recommended on okra with MRL of 0.01µg g-1.  **(Action :** Residue Analyst, AINP on pesticide residues, AAU, Anand**)** | |
| **11.3.1.42** | **Residue and persistence of carbendazim 50 WP in okra**  Two foliar sprays of carbendazim 50 WP in okra at 10 days interval @ 250 g a.i. ha-1starting from fruiting stage resulted in its residue below the limit of quantitation of 0.01 µg g-1 in okra if fruits are harvested from 20 days after the second spray. Therefore, PHI of 20 days could be suggested if carbendazim 50 WP is recommended on okra with MRL of 0.01 µg g-1.  **(Action :** Residue Analyst, AINP on Pesticide Residues, AAU, Anand**)** | |
| **11.3.1.43** | **Residue and persistence of chlorpyriphos 20 EC in brinjal**  Two foliar sprays of chlorpyriphos 20 EC in brinjal at 10 days interval @ 300 g a.i. ha-1 starting from fruiting stage resulted in its residue below the limit of quantitation of 0.01 µg g-1 in brinjal if fruits are harvested from 5 days after the second spray. Therefore, PHI of 5 days could be suggested if chlorpyriphos 20 EC is recommended on brinjal with MRL of 0.01 µg g-1.  **(Action :** Residue Analyst, AINP on Pesticide Residues, AAU, Anand**)** | |
| **11.3.1.44** | **Residue and persistence of quinalphos 25 EC in brinjal**  Two foliar sprays of quinalphos 25 EC in brinjal at 10 days interval @ 250 g a.i. ha-1 starting from fruiting stage resulted in its residue below the limit of quantitation of 0.01 µg g-1 in brinjal if fruits are harvested from 5 days after the second spray. Therefore, PHI of 5 days could be suggested if quinalphos 25 EC is recommended on brinjal with MRL of 0.01 µg g-1.  **(Action :** Residue Analyst, AINP on Pesticide Residues, AAU, Anand**)** | |
| **11.3.1.45** | **Residue and persistence of ethion 50 EC in brinjal**  Two foliar sprays of ethion 50 EC in brinjal at 10 days interval @ 500 g a.i. ha-1 starting from fruiting stage resulted in its residue below the limit of quantitation of 0.01 µg g-1 in brinjal if fruits are harvested from 15 days after the second spray. Therefore, PHI of 15 days could be suggested if ethion 50 EC is recommended on brinjal with MRL of 0.01 µg g-1.  **(Action :** Residue Analyst, AINP on Pesticide Residues, AAU, Anand**)** | |
| **11.3.1.46** | **Residue and persistence of carbendazim 50 WP in brinjal**  Two foliar sprays of carbendazim 50 WP in brinjal at 10 days interval @ 250 g a.i. ha-1 starting from fruiting stage resulted in its residue below the limit of quantitation of 0.01 µg g-1 in brinjal if fruits are harvested from 23 days after the second spray. Therefore, PHI of 23 days could be suggested if carbendazim 50 WP is recommended on brinjal with MRL of 0.01 µg g-1.  **(Action :** Residue Analyst, AINP on Pesticide Residues, AAU, Anand**)** | |
| **11.3.1.47** | **Evaluation of insecticide molecules against sucking pests of chilli**  Foliar application of milbectin 1 EC 0.0003%, 2.5 ml/ 10 liter water (1.25 g a.i./ha) or abamectin 1.9 EC, 0.0006%, 3 ml/10 litre water (2.85 g a.i./ha) found effective against thrips and mite infesting chilli.  **(Action :** Asstt. Res. Sci. (Ento.), MVRS, AAU, Anand**)** | |
| **PLANT PATHOLOGY AND NEMATOLOGY** | | |
| **11.3.1.48** | **Management of early blight of potato**  Treatment of cut tubers with mancozeb 75 WP @ 1 kg/ 100 kg potato + 5 kg talc powder as dry seed treatment before 12 hours of planting along with 5 sprays of propiconazole 25 EC, 0.025% first at the disease initiation at about 35 days after sowing and remaining sprays at 12 days interval found effective for the management of early blight of potato.  **(Action :** Prof. and Head, Dept. of Plant Pathology, BACA, AAU, Anand**)** | |
| **11.3.1.49** | **Screening of green gram genotypes against Bean Common Mosaic(BCMV) disease**  LGG 460 and GM 02-19 genotypes of green gram found resistant against Bean Common Mosaic (BCMV) disease.  **(Action :** Asst. Res. Sci. (Ento.), Agril. Research Station, AAU, Derol**)** | |
| **JUNAGADH AGRICULTURAL UNIVERSITY, JUNAGADH**  Dr. V. N. Patel, Convener, Plant Protection Sub-Committee presented proposal for recommendations | | |
| **AGRICULTURAL ENTOMOLOGY** | | |
| **11.3.1.50** | | **Management of sucking pests through insecticides in brinjal**  Three sprays of bifenthrin 10 EC, 0.02%, 20 ml /10 litre water or buprofezin 25 SC, 0.06%, 24 ml/10 litre of water at 15 days interval starting from the pest infestation found effective for the control of brinjal whitefly.  The PHI for bifenthrin 10 EC, 0.02% and buprofezin 25 SC, 0.06% is 1 and 7 days, respectively.  (**Action :** Prof. and Head, Dept. of Entomology, JAU, Junagadh) |
| **11.3.1.51** | | **Population dynamics of important pests of mango**  The incidence of mango hopper, thrips and flower bug was found high during December to February while, leaf gall midge and shoot borer were found active during September to October.  (**Action :** Prof. and Head, Dept. of Entomology, JAU, Junagadh) |
| **11.3.1.52** | | **Population dynamics of important pests of pomegranate**  *Anar* butterfly was found high during November to May while, thrips was found active during August to November in pomegranate.  (**Action :** Prof. and Head, Dept. of Entomology, JAU, Junagadh) |
| **11.3.1.53** | | **Testing of efficacy of different newer insecticides against shoot fly and stem borer in pearl millet**  Seed treatment with imidacloprid 600 FS @ 8.75 ml/kg, 4.20 g a.i./kg at the time of sowing followed by spray with spinosad 45 SC, 0.009% @ 2.0 ml/10 litre at 35 days after germination of the crop found effective for the management of shoot fly and stem borer. The PHI for these insecticides is 42 days.  (**Action :** Research Scientist (Pearl Millet), JAU, Jamnagar) |
| **11.3.1.54** | | **Incidence of insect pests of chickpea through the cropping period and monitoring of pod borer moths using pheromone traps**  Normal and late sowing of chickpea varieties showed sustainable population of *Helicoverpa armigera* at 60 days after sowing.  (Action : Research Scientist (Chickpea), JAU, Junagadh) |
| **PLANT PATHOLOGY** | | |
| **11.3.1.55** | | **Effect of fungicides application in cumin on *Trichoderma* applied in soil**  Soil drenching of carbendazim 50 WP @ 2 kg in 2000 litre water/ha or foliar spray of mancozeb 75 WP @ 30 g/10 litre or hexaconazole 5 EC @ 10 ml/ 10 litre against soil borne diseases do not reduce the population of *Trichoderma harzianum* applied in soil.  (**Action :** Prof. and Head, Dept. of Pl. Pathology, JAU, Junagadh) |
| **11.3.1.56** | | **Effect of foliar application of insecticides in cumin on *Trichoderma* applied in soil**  Foliar spray of imidacloprid 17.8 SL @ 3 ml/10 litre or dimethoate 30 EC @ 10 ml/10 litre in cumin against sucking pests do not reduces the population of *Trichoderma harzianum* applied in soil.  (**Action :** Prof. and Head, Dept. of Pl. Pathology, JAU, Junagadh) |
| **11.3.1.57** | | **Effect of foliar application of herbicides in cumin on *Trichoderma* applied in soil**  Herbicides used as pre-emergence or early post emergence in cumin viz., pendimethalin 30 EC, 0.9 kg a.i./ha, 60 ml/10 litre at 2 DAS or glyphosate 41 SL, 0.75 kg a.i./ha, 37 ml/10 litre at 2 DAS reduces the soil population of *Trichoderma* up to one month after sowing but *Trichoderma* population was increased at later stage. While application of oxyfluorfen 23.5 EC, 0.240 kg a.i./ha, 20 ml/10 litre at 2 DAS do not reduce the population of *Trichoderma harzianum* applied in soil.  (**Action :** Prof. and Head, Dept. of Pl. Pathology, JAU, Junagadh) |
| **11.3.1.58** | | **Disease management through organic practices for organic groundnut cultivation**  Blanket furrow application of FYM @ 7.5 tonne/ha followed by *Trichoderma viride* as seed treatment @ 10 g/kg seed, and *T. viride* @ 4.0 kg enriched in 250 kg FYM and as spray @ 2.5 kg/ha (5 g/litre of water) at 30 and 45 DAS found effective for the management of diseases of groundnut.  **(Action :** Res. Sci. (Groundnut), JAU, Junagadh**)** |
| **NAVSARI AGRICULTURAL UNIVERSITY, NAVSARI**  Dr. Z. P. Patel, Convener, Plant Protection Sub-Committee presented proposal for recommendations | | |
| **AGRICULTURAL ENTOMOLOGY** | | |
| **11.3.1.59** | | **Residues of some insecticides in/on Indian bean pods**  Following foliar application of thiamethoxam 25 WG (35 g a.i. /ha), novaluron 10 EC (33.5 g a.i. /ha), indoxacarb 14.5 SC (60 g a.i. /ha), spinosad 45 SC (75 g a.i. /ha), acetamiprid 20 SP (20 g a.i. /ha) and flubendiamide 39.35 SC (50 g a.i. /ha), PHI of 7 days was observed while, imidacloprid 17.8 SL (25 g a.i. /ha) it was ten days in Indian bean pods.  **(Action :** Assoc. Prof. (Ento), Dept. of Ento., ACHF, NAU, Navsari) |
| **11.3.1.60** | | **Status of residues of insecticides in/on Indian bean after *Ubadia* preparation**  The residues of imidacloprid 17.8 SL (25 g a.i. /ha), thiamethoxam 25 WG (35 g a.i. /ha), novaluron 10 EC (33.5 g a.i. /ha), indoxacarb 14.5 SC (60 g a.i. /ha), spinosad 45 SC (75 g a.i. /ha), acetamiprid 20 SP (20 g a.i. /ha) and flubendiamide 39.35 SC (50 g a.i. /ha) were observed below detectable level in *Ubadia* prepared from Indian bean.  **(Action :** Assoc. Prof.( Ento), Dept. of Ento., ACHF,NAU, Navsari) |
| **11.3.1.61** | | **Integrated pest management in mango**  IPM package consisting of first spray of spinosad 45 SC, 0.004%, 0.88 ml/10 litre water at panicle emergence stage followed by second spray with thiamethoxam 25 WG, 0.008%, 3.2 g/10 litre water at 21 days after first spray and third need based spray of Azadirachtin 1 EC, 30 ml /10 litre of water found effective for the management of mango hopper and thrips.  **(Action :** Asstt. Res. Sci.(Ento), AES., Paria) |
| **11.3.1.62** | | **Management of banana rust thrips, *Chaetanophothrips signipennis***  For effective control of rust thrips in banana, inject the bud with one ml solution of 0.6 ml imidacloprid 17.8 SL (2 ml solution of 5 ml azadirachtin 10000 ppm mixed in one lit of water) at the time of emergence of flower (upright position).  **(Action :** Asstt.Res.Scientist (Ento.), FRS., NAU, Gandevi) |
| **11.3.1.63** | | **Management of sapota seed borer *Trymalitis margarias* Meyrick**  Sapota growers of South Gujarat Heavy Rainfall Zone-I AES-III are advised to apply three sprays of profenophos 50 EC, 15 ml or novaluron 10 EC, 5 ml per 10 litre water at 20 days interval from October for effective management of seed borer.  **(Action :** Asstt.Res.Scientist (Ento.), FRS., NAU, Gandevi) |
| **11.3.1.64** | | **Survey of natural enemies and occurrence of indigenous egg parasitoid*, Trichogramma* spp*.* using *Corcyra* egg cards in different vegetable crops**  The activity of egg parasitoid, *Trichogramma* spp. found in Indian bean, cowpea, chilli, okra and tomato ecosystem while in brinjal ecosystem it did not appear under south Gujarat condition.  **(Action :** Prof. and Head, Dept. of Ento., NMCA., Navsari) |
| **11.3.1.65** | | **Screening of carnation cultivars for the resistance to *Tetranychus urticae* Koch**  Under the polyhouse conditions the carnation variety Domingo was highly tolerant to spider mite attack, while variety Famosa and Cherry Solar were medium tolerant and Gaudina and Garuda were tolerant whereas the variety Rubisco was highly susceptible to spider mite attack.  **(Action :** Prof. and Head, Dept. of Ento., NMCA., Navsari) |
| **11.3.1.66** | | **Seasonal incidence of spider mite *Tetranychus urticae* (Koch.) (Tetranychidae: Acarina) infesting carnation under polyhouse conditions**  The two spotted red spider mite, *Tetranychus urticae* Koch (Tetranychidae: Acarina) remains active throughout the crop season on carnation with the peak activities during first week of April. A significant positive correlation exist between spider mite population and average temperature whereas a significant negative correlation existed between mite population and average relative humidity under polyhouse conditions on carnation.  **(Action :** Prof. and Head, Dept. of Ento., NMCA., Navsari) |
| **11.3.1.67** | | **To test out feasibility of mass rearing of *Chrysoperla zastrowi sillemi* (Esben- Petersen) under laboratory conditions**  The teared accordance white coloured paper stripes (5 x 2 cm) found the best and feasible alternative method for group rearing of *Chrysoperla zastrowi sillemi* under laboratory conditions.  **(Action :** Prof. and Head, Dept. of Ento., NMCA., Navsari) |
| **11.3.1.68** | | **Residue and dissipation pattern of bifenthrin, fipronil, chlorpyrifos and imidacloprid in clayey and sandy loam soils and their downward movement and leaching potential**  Considering the leaching potential and depth wise distribution and chances of contamination of water, bifenthrin 10 EC, chlorpyrifos 20 EC and fipronil 5 SC should be preferred over imidacloprid 17.8 SL for the control of soil pests in sandy loam and clay soils.  Bifenthrin, chlorpyrifos, fipronil and imidacloprid can be used to control soil pests in sandy loam and clay soils due to their moderate persistency and strong adsorption in the soil.  **(Action :** Asstt. Prof.(Pesticide Residue), FQTL, Navsari) |
| **11.3.1.69** | | **Screening of sugarcane varieties for early shoot borer resistance**  Sugarcane genotypes viz., Co 08008, Co 08020, Co 08001 and 2007 N 469 are found less susceptible to early shoot borer.  **(Action :** Asstt. Res. Sci.(Ento), MSRS, Navsari) |
| **11.3.1.70** | | **Screening of sugarcane varieties for scale insect resistance**  Sugarcane genotypes viz., Co 08008, 2007 N 535, 2007 N 469, CoSnk 08101, Co 08016 and VSI 08122 are found less susceptible to scale insect**.**  **(Action** : Asstt. Res.Sci.(Ento), MSRS, Navsari**)** |
| **PLANT PATHOLOGY** | | |
| **11.3.1.71** | | **Management of powdery mildew of niger**  Two sprays of wettable sulphur 80 WP @ 2.5 g/litre, first at the disease initiation and second after 15 days found effective for the management of powdery mildew of niger.  **(Action :** Asstt.Res.Scientist (Patho), Niger Research Station, NAU, Vanarasi) |
| **11.3.1.72** | | **Screening for Resistance to *Fusarium* wilt in tomato varieties**  Tomato genotypes viz., NTL-2, NTL-6, NTL-7 and NTL-10 are resistant, while genotype N TL-1, NTL-8, NTL-9, and GT-2 are moderately resistant against tomato *Fusarium* wilt.  **(Action :** Assoc. Prof. (Pl. Path), Dept. of Pl. Patho., ACHF, NAU., Navsari) |
| **11.3.1.73** | | **Detection of fungal pathogen from forest tree seeds *in vitro***  *Alternaria* sp, *Aspergillus* sp*., Fusarium* sp*, Trichoderma* sp are found the most frequently associated fungal genera with six forest trees *viz., Tectona grandis* (Teak), *Leucaena leucocephala* (Subabul), *Delonia regia* (Gulmohar), *Acacia mangium* (Mangium), *Adenanthera pavonina* (Ratangunj) and *Cassia fistula* (Garmalo) using blotter and agar platemethod**.**  **(Action :** Assoc. Prof. (Pl. Path), Dept. of Pl. Patho., ACHF, NAU. Navsari) |
| **11.3.1.74** | | ***In vitro* efficacy of isolated probiotic organism**  *Enterococcus faecium strain LAB1, Leuconostoc mesenteroides and Leuconostoc pseudomesenteroides* shows the antimicrobial properties as well as produce good quality curd. Thus, these strains can be used for probiotic curd preparation.  **(Action :** Assoc. Prof. (Pesticide Residue), FQTL, NAU, Navsari) |
| **11.3.1.75** | | **Screening of sugarcane varieties for red rot resistance**  Sugarcane varieties viz., Co 08008, CoSnk 08101, PI 08131 and 2007 N 469 are found to be moderately resistant to red rot by plug method.  **(Action :** Asstt. Res. Sci. (Pl.Path.), MSRS, NAU, Navsari) |
| **11.3.1.76** | | **Screening of sugarcane varieties for smut resistance**  Sugarcane varieties viz., Co 08020, Co Snk 08101, 2007 N 535, 2007 N 469, 2007 N 390 and 2007 N 510 showed resistant reaction. While, Co 08001, VSI 08121 and Co 08016 exhibited moderately resistant reaction against smut disease.  **(Action :** Asstt. Res. Sci. (Pl.Path.), MSRS, NAU, Navsari**)** |
| **11.3.1.77** | | **Studies on mango malformation**  The mango variety Himsagar showed consistently higher malformation. Therefore, this variety can be used as a susceptible check for screening of mango germplasms against mango malformation.  **(Action :** Asso. Prof. (Pl. Path.), AES, NAU, Paria) |
| **11.3.1.78** | | **Bio-efficacy of fungicides against sorghum ergot**  Effective and economic management of sorghum ergot can be done with two sprays of hexaconazole 5 SC @ 0.005% at an interval of 15 days commencing from 15 days after emergence of earheads.  **(Action :** Asstt. Res. Sci. (Pl. Path.), MSRS, NAU, Surat) |
| **11.3.1.79** | | Bio-efficacy of fungicides against sorghum grain mold  Effective and economic management of grain mold in sorghum is done with three sprays of carbendazim 12% + mancozeb 63% - 75 WP @ 0.2% at an interval of 15 days commencing from 15 days after emergence of earheads.  **(Action :** Asstt. Res. Sci. (Pl. Path.), MSRS, NAU, Surat) |
| **SARDAR KRUSHINAGAR DANTIWADA AGRICULTURAL UNIVERSITY, SK NAGAR**  Dr. B. R. Patel, Convener, Plant Protection Sub-Committee presented proposal for recommendations | | |
| **AGRICULTURAL ENTOMOLOGY** | | |
| **11.3.1.80** | | **Chemical control of fruit borer in ber**  Three sprays of profenophos 50 EC 0.05 % (10 ml/10 litre water) or Azadirachtin–3000 ppm, 25 ml/10 litre water or NSKE 5 % (Neem Seed Kernel powder 500 g/10 litre water) at 15 days interval, starting from pea size of ber found effective for control of fruit borer in ber crop. The PHI for profenophos 50 EC 0.05 % is 27 days.  (**Action :** Asso. Res. Sci. (Ento), AFRS, SDAU, Sardarkrushinagar) |
| **11.3.1.81** | | **Management of seed wasp, S*ystole albipennis* Walker infesting fennel**  Two sprays of thiamethoxam 25 WG, 0.0084%, 3.36 g/10 litre water; 42 g a.i./ha or acetamiprid 20 SP, 0.004%, 2 g/10 litre water; 20 g a.i./ha found effective for management of seed wasp, *Systole albipennis* Walker of fennel. First foliar spray should be made at appearance of seed wasp damage and second spray at 10 days after first spray. The PHI of both the insecticides is 66 days.  (**Action :** Asso. Res. Sci.(Ento), CRSS, SDAU, Jagudan) |
| **11.3.1.82** | | **Insecticidal seed treatment against maize stem borer**  To minimize the damage of stem borer in maize apply seed treatment before sowing with imidacloprid 70 WS, 5 g or clothianidin 50 WDG, 2 g per kg seeds by preparing slurry with 50 ml water.  (**Action :** SMS (Ento.), KVK, Khedbrahma and Asst. Res. Sci. ARS, SDAU, Bhiloda) |
| **PLANT PATHOLOGY** | | |
| **11.3.1.83** | | **Effect of seed dresser/s for the management of root rot of moth bean**  Seed treatment of moth bean with fungicide carboxin 37.5 % + thiram 37.5% - 75 WS, 3 g/kg or captan 50 WP, 2 g/kg found effective for the management of root rot.  **(Action :** Asstt. Res. Sci. (Path), CERP, SDAU, SKN) |
| **11.3.1.84** | | **Biological control of powdery mildew of ber**  Three sprays of bioagent *Trichoderma* sp. CIAH 240 @ 0.5 % (1 x 108 cfu/ml) at 15 days interval starting from the initiation of the powdery mildew disease in ber *i.e*. last week of September to first week of October was found effective for the control of powdery mildew in ber.  (**Action :** Asstt. Res. Sci.(Path), AFRS, SDAU, Sardarkrushinagar) |

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| **11.3.2** | **NEW TECHNICAL PROGRAMME** | | | | |
| **ANAND AGRICULTURAL UNIVERSITY** | | | | | |
| **AGRICULTURAL ENTOMOLOGY** | | | | | |
| **Sr. No.** | **Title/Centre** | | | | **Suggestions** |
| **Dept. of Agril. Entomology, BACA, AAU, Anand** | | | | | |
| 11.3.2.1 | Bio-efficacy of selected insecticides against pink bollworm in *Bt* cotton | | | | **Accepted with following suggestions :**  1.The trial may be conducted at surat (Dr. H. R. Desai), Junagadh (Mr. R. K. Vekaria) and Talod (Shri. M. M. Patel) and Dr. C. C. Patel (Anand) will act as PI of all the centers.  2. All the centers except Anand will have to make survey.  3. Code of experiment is required.  4. Use cotton variety G. Cot. BG 6.  5. Observations on larval population should be recorded.  6. Year of start should be 2015-2016.  **(Action:** All the above scientists andProf. and Head, Dept. of Agril. Entomology, BACA, AAU, Anand**)** |
| **AICRP on Biological control, AAU, Anand** | | | | | |
| 11.3.2.2 | Bio-efficacy of microbial insecticides against sucking pest in *Bt* cotton | | | | **Accepted with following suggestions :**  1. Variety G. Cot. BG 6 should be used.  2. Include thiamethoxam as T-9  **(Action:** Principal Res. Sci., AICRP on Biological control, AAU, Anand**)** |
| 11.3.2.3 | Bio-efficacy of microbial insecticides against *Spodoptera litura* Fabriciusin cabbage | | | | **Accepted with following suggestion :**  1. Record observations on number of egg mass and     gregarious form of larvae per plant.  **(Action:** Principal Research Scientist, AICRP on Biological control, AAU, Anand**)** |
| **Bidi Tobacco Research Station, AAU, Anand** | | | | | |
| 11.3.2.4 | Evaluation of insecticidal toxicity against parasitoid of tobacco mealy bug, *Phenacoccus solenopsis* Tinsley under field and laboratory | | | | **Approved**  **(Action:** Asso. Res. Sci. (Ento.), BTRS, AAU,Anand**)** |
| 11.3.2.5 | Screening of rustica tobacco genotypes against leaf eating caterpillar (*Spodoptera litura* Fabricius) in nursery | | | | **Approved**  **(Action:** Asso. Res. Sci. (Ento.), BTRS,AAU, Anand**)** |
| **AINP on Pesticide Residues, AAU, Anand** | | | | | |
| 11.3.2.6 | Residues and persistence study of dimethoate 30 EC in cotton | | | | **Approved**  **(Action:** Residue Analyst, AINP on Pesticide Residues, AAU, Anand**)** |
| 11.3.2.7 | Residues and persistence study of Afidopyropen 5 DC in brinjal | | | | **Approved**  **(Action:** Residue Analyst, AINP on Pesticide Residues, AAU, Anand**)** |
| 11.3.2.8 | Residues and persistence study of Afidopyropen 5 DC in cotton | | | | **Approved**  **(Action:** Residue Analyst, AINP on Pesticide Residues, AAU, Anand**)** |
| 11.3.2.9 | Residues and persistence study of pyraclostrobin 2.5 % + fipronil 25 % + thiophanate methyl 22.5 % - 50 FS in soybean | | | | **Approved**    **(Action:** Residue Analyst, AINP on Pesticide Residues, AAU, Anand**)** |
| 11.3.2.10 | Residues and persistence study of pyraclostrobin 2.5 % + fipronil 25 % + thiophanate methyl 22.5 % – 50 FS in groundnut | | | | **Approved**  **(Action:** Residue Analyst, AINP on Pesticide Residues, AAU, Anand**)** |
| 11.3.2.11 | Residues and persistence study of fluopyram 200 + tebuconazole 200 – 400 SC in mango | | | | **Approved**  **(Action:** Residue Analyst, AINP on Pesticide Residues, AAU, Anand**)** |
| 11.3.2.12 | Residues and persistence study of fosetyl Al 80 WP in tomato | | | | **Approved**  **(Action:** Residue Analyst, AINP on Pesticide Residues, AAU, Anand**)** |
| 11.3.2.13 | Residues and persistence study of fluopyrum 400 SC in tomato | | | | **Approved**  **(Action:** Residue Analyst, AINP on Pesticide Residues, AAU, Anand**)** |
| 11.3.2.14 | Monitoring of pesticide residues at national level | | | | **Approved**  **(Action:** Residue Analyst, AINP on Pesticide Residues, AAU, Anand) |
| 11.3.2.15 | Studies on pesticide residues from surface and ground water under SSP phase - I area | | | | **Approved**  **(Action:** Residue Analyst, AINP on Pesticide Residues, AAU, Anand) |
| 11.3.2.16 | Studies on pesticide residues from surface and ground water under SSP phase - II area Kheda, Ahmedabad and Gandhinagar region | | | | **Approved**  **(Action:** Residue Analyst, AINP on Pesticide Residues, AAU, Anand) |
| 11.3.2.17 | Studies on pesticide residues from surface and ground water under SSP phase - II area Saurashtra region | | | | **Approved**  **(Action:** Residue Analyst, AINP on Pesticide Residues, AAU, Anand**)** |
| **Main Vegetable Research Station, AAU, Anand** | | | | | |
| 11.3.2.18 | Integrated Pest Management in okra | | | | **Accepted with following suggestion**  **1.** Revise the module as IPM, organic and chemical suggested in the house  **(Action:** Asst. Res. Sci. (Ento.), MVRS, AAU, Anand**)** |
| **Agricultural Research Station, AAU, Derol** | | | | | |
| 11.3.2.19 | | Impact of sowing periods and variety on the population of thrips in summer  green gram | **Accepted with following suggestion**  1. Observations on Yellow Mosaic (YMV) is required to be recorded  **(Action:** Asst. Res. Sci. (Ento.), ARS, AAU, Derol | | |
| **PLANT PATHOLOGY AND NEMATOLOGY** | | | | | |
| **Dept. of Plant Pathology, BACA, AAU, Anand** | | | | | |
| 11.3.2.20 | | Field evaluation of fungicides for the management of pyricularia leaf spot/ blast disease of pearl millet | | **Accepted with following suggestion**  1. Treatment T-5, kresoxim methyl and T-6, carbendazim should be replaced with *P. fluorescence* (NAU culture) and *T. viridae,* respectively.  **(Action:** Prof. and Head, Dept. of Plant Pathology, BACA, AAU, Anand**)** | |
| 11.3.2.21 | | Management of early blight of potato | | **Accepted with following suggestion**  1. Residue analysis is required  **(Action:** Prof. and Head, Dept. of Plant Pathology, BACA, AAU, Anand**)** | |
| 11.3.2.22 | | Evaluation of seed treatment with bioagents for management of soil borne diseases in mungbean | | **Accepted with following suggestion**  1. Two sets of main treatment with 12 combinations should be finalized by Dr. R. N. Pandey.  **(Action:** Prof. and Head, Dept. of Plant Pathology, BACA, AAU, Anand**)** | |
| 11.3.2.23 | | Management of cumin blight disease through fungicide application | | **Approved**  **(Action:** Prof. and Head, Dept. of Plant Pathology, BACA, AAU, Anand**)** | |
| 11.3.2.24 | | Investigations on the prevalence of designated objectionable diseases of pearl millet under the changing climate situations through fixed plot survey | | **Approved**  **(Action:** Prof. and Head, Dept. of Plant Pathology, BACA, AAU, Anand**)** | |
| **Department of Nematology, BACA, AAU, Anand** | | | | | |
| 11.3.2.25 | Screening of pigeonpea lines/germplasm against root- knot nematodes | | **Accepted with following suggestion**  1. Include T 15 – 15 as check  **(Action:** Prof. and Head, Dept. of Nematology, BACA, AAU, Anand**)** | | |
| 11.3.2.26 | Plant parasitic nematodes infecting major crops in the State and pest risk analysis - Cereals & Millets | | **Accepted with following suggestion**  1. Details about locations and treatments should be mention.  **(Action:** Prof. and Head, Dept. of Nematology, BACA, AAU, Anand**)** | | |
| 11.3.2.27 | Plant parasitic nematodes infecting major crops in the State and pest risk analysis - Pulse crops | | **Approved**  **(Action:** Prof. and Head, Dept. of Nematology, BACA, AAU, Anand**)** | | |
| 11.3.2.28 | Plant parasitic nematodes infecting major crops in the State and pest risk analysis - Fruit crops | | **Approved**  **(Action:** Prof. and Head, Dept. of Nematology, BACA, AAU, Anand**)** | | |
| 11.3.2.29 | Plant parasitic nematodes infecting major crops in the State and pest risk analysis - Fibre crops | | **Approved**  **(Action:** Professor and Head, Dept. of Nematology, BACA, AAU, Anand**)** | | |
| 11.3.2.30 | Plant parasitic nematodes infecting major crops in the State and pest risk analysis - Spices | | **Approved**  **(Action:** Prof. and Head, Dept. of Nematology, BACA, AAU, Anand**)** | | |
| 11.3.2.31 | Plant parasitic nematodes infecting major crops in the State and pest risk analysis - Protected Cultivation Systems | | **Approved**  **(Action:** Prof. and Head, Dept. of Nematology, BACA, AAU, Anand**)** | | |
| 11.3.2.32 | Plant parasitic nematodes infecting major crops in the State (newer areas not covered so far) and pest risk analysis - Vegetable crops | | **Approved**  **(Action:** Prof. and Head, Dept. of Nematology, BACA, AAU, Anand**)** | | |
| 11.3.2.33 | Impact of economically important nematode populations on crop yield from the identified hot spot areas - Cereals | | **Approved**  **(Action:** Prof. and Head, Dept. of Nematology, BACA, AAU, Anand**)** | | |
| 11.3.2.34 | Impact of economically important nematode populations on crop yield from the identified hot spot areas – Pulses | | **Approved**  **(Action:** Prof. and Head, Dept. of Nematology, BACA, AAU, Anand**)** | | |
| 11.3.2.35 | Impact of economically important nematode populations on crop yield from the identified hot spot areas – Oilseeds & Fibre crops | | **Approved**  **(Action:** Prof. and Head, Dept. of Nematology, BACA, AAU, Anand**)** | | |
| 11.3.2.36 | Impact of economically important nematode populations on crop yield from the identified hot spot areas - Fruit crops | | **Approved**  **(Action:** Prof. and Head, Dept. of Nematology, BACA, AAU, Anand**)** | | |
| 11.3.2.37 | Estimation of avoidable yield losses due to economically important nematodes under nematode infested conditions | | **Approved**    **(Action:** Prof. and Head, Dept. of Nematology, BACA, AAU, Anand**)** | | |
| 11.3.2.38 | Screening, confirmation and field evaluation of promising resistant germplasms of Vegetable Crops against root-knot nematode & reniform nematode | | **Approved**    **(Action:** Prof. and Head, Dept. of Nematology, BACA, AAU, Anand**)** | | |
| 11.3.2.39 | Evaluation of bio-pesticides for the management of root – knot nematodes (*Meloidogyne* spp.) in tomato | | **Approved**  **(Action:** Prof. and Head, Dept. of Nematology, BACA, AAU, Anand**)** | | |
| 11.3.2.40 | Evaluation of bio-pesticides for the management of root - knot nematodes (*Meloidogyne* spp.) in okra | | **Approved**    **(Action:** Prof. and Head, Dept. of Nematology, BACA, AAU, Anand**)** | | |
| 11.3.2.41 | Screening, confirmation and field evaluation of promising resistant germplasm of pulse crops against important nematodes - mung | | **Approved**  **(Action:** Prof. and Head, Dept. of Nematology, BACA, AAU, Anand**)** | | |
| 11.3.2.42 | Screening, confirmation and field evaluation of promising resistant germplasm of pulse crops against important nematodes - blackgram | | **Approved**  **(Action:** Prof. and Head, Dept. of Nematology, BACA, AAU, Anand**)** | | |
| 11.3.2.43 | Screening, confirmation and field evaluation of promising resistant germplasm of pulse crops against important nematodes - chickpea | | **Approved**  **(Action:** Prof. and Head, Dept. of Nematology, BACA, AAU, Anand**)** | | |
| 11.3.2.44 | Screening, confirmation and field evaluation of promising resistant germplasm of pulse crops against important nematodes - cowpea | | **Approved**  **(Action:** Prof. and Head, Dept. of Nematology, BACA, AAU, Anand**)** | | |
| 11.3.2.45 | Screening, confirmation and field evaluation of promising resistant germplasm of pulse crops against important nematodes - pigeonpea | | **Approved**  **(Action:** Prof. and Head, Dept. of Nematology, BACA, AAU, Anand**)** | | |
| 11.3.2.46 | Screening of oilseeds and fibre crops against key nematode pests - Groundnut | | **Approved**  **(Action:** Prof. and Head, Dept. of Nematology, BACA, AAU, Anand**)** | | |
| 11.3.2.47 | Screening of oilseeds and fibre crops against key nematode pests - Castor | | **Approved**  **(Action:** Prof. and Head, Dept. of Nematology, BACA, AAU, Anand**)** | | |
| 11.3.2.48 | Screening of oilseeds and fibre crops against key nematode pests - Sunflower | | **Approved**  **(Action:** Prof. and Head, Dept. of Nematology, BACA, AAU, Anand**)** | | |
| 11.3.2.49 | Screening of oilseeds and fibre crops against key nematode pests - Cotton | | **Approved**  **(Action:** Prof. and Head, Dept. of Nematology, BACA, AAU, Anand**)** | | |
| 11.3.2.50 | Management of *Meloidogyne javanica* on groundnut by using non host / antagonistic crops | | **Approved**  **(Action:** Prof. and Head, Dept. of Nematology, BACA, AAU, Anand**)** | | |
| 11.3.2.51 | Management of root-knot nematode, *M. javanica* pt. 2 in groundnut | | **Approved**  **(Action:** Prof. and Head, Dept. of Nematology, BACA, AAU, Anand**)** | | |
| 11.3.2.52 | Management of *R. reniformis* in castor | | **Approved**  **(Action:** Prof. and Head, Dept. of Nematology, BACA, AAU, Anand**)** | | |
| 11.3.2.53 | Effect of organic amendments and bio-control agents in citrus against *M. indica* | | **Approved**    **(Action:** Prof. and Head, Dept. of Nematology, BACA, AAU, Anand**)** | | |
| 11.3.2.54 | Basic studies on root-knot nematodes, *Meloidogyne* spp. infecting crops in India | | **Approved**  **(Action:** Prof. and Head, Dept. of Nematology, BACA, AAU, Anand**)** | | |
| 11.3.2.55 | Co-ordinated trial on exploitation of potential bio-control agents from different agro-climatic regions of India | | **Approved**  **(Action:** Prof. and Head, Dept. of Nematology, BACA, AAU, Anand**)** | | |
| 11.3.2.56 | Impact of climate change on plant parasitic nematode density in different agro-Climatic zone | | **Approved**  **(Action:** Prof. and Head, Dept. of Nematology, BACA, AAU, Anand**)** | | |
| **AICRP on Biological control, AAU, Anand** | | | | | |
| 11.3.2.57 | Biological control of chilli anthracnose disease | | | **Accepted with following suggestions**  1. Include *T. harzianum* and *P. fleuroscence* of AAU/TNAU as treatments.  2. Dr. R. G. Parmar should be Co-PI from Dept. of Plant Pathology.  3. Observations on disease on branches/ fruits should be recorded as per standard.  4. Variety GBC-11 should be used.  5. Ancillary observations on alternaria/ fruit rot should be recorded.  **(Action:** Principal Res. Sci., AICRP on Biological control, AAU, Anand**)** | |
| **Bidi Tobacco Research Station, AAU, Anand** | | | | | |
| 11.3.2.58 | Monitoring resistance development in *pythium aphanidermatum* to azoxystrobin | | | **Approved**  **(Action:** Res. Sci. (Patho.), BTRS, AAU, Anand**)** | |
| 11.3.2.59 | Effect of planting dates and topping levels on occurrence of diseases in bidi Tobacco cv. GABT 11  (Modification in Technical Programme Approved in 10th PPSC) | | | **Approved**  **(Action:** Res. Sci. (Patho.), BTRS, AAU, Anand**)** | |
| **JUNAGADH AGRICULTURAL UNIVERSITY** | | | | | |
| **AGRICULTURAL ENTOMOLOGY** | | | | | |
| 11.3.2.60 | | Microbial management of white grubs in groundnut | | **Accepted with following suggestions**  1.Mention the strain of bioagent  2. In T-2 and T-4 apply the bioagent with castor cake before sowing and use 1000 litre water/ ha in case of drenching  3. T-1 imidacloprid 17.8 SL should be replaced with chlorpyriphos 20 EC, 25 ml/ kg seed  4. Include imidacloprid 17.8 SL @ 0.1 g a.i./ kg as T-2 and consider T-2 of above point 2 as T-3  5. In T-5 use the bioagent @ 2.5 kg/ha and keep the interval 30 days instead of 45 days  (**Action :** Prof. and Head, Dept. of Entomology, JAU, Junagadh) | |
| 11.3.2.61 | | Survey of major insect-pests and their natural enemies in seed spices of Junagadh district | | **Accepted with following suggestion**  1. Remove per plant from observation No. 1.  (**Action :** Prof. and Head, Dept. of Entomology, JAU, Junagadh) | |
| 11.3.2.62 | | Population dynamics of important pests of seed spices | | **Accepted with following suggestions**  1. Keep plot size 20 x 20 m  2. Correlation of weather parameters to be studied.  3. Egg mass and gregarious form of larvae should be counted  (**Action :** Prof. and Head, Dept. of Entomology, JAU, Junagadh) | |
| 11.3.2.63 | | Management of sucking pest in cumin | | **Accepted with following suggestions**  1. Use 40 g product instead of 60 g in T-1 and T-2.  2. Title should be modify adding the words “by bioagents”  3. Remove all chemicals from the treatment  4. Add combination of T-1 and T-2 as treatment  (**Action :** Prof. and Head, Dept. of Entomology, JAU, Junagadh) | |
| 11.3.2.64 | | Testing the bio-efficacy of newer insecticides against castor defoliators | | **Accepted with following suggestions**  1. Remove observation number 5 from methodology.  2. In T-1 write common name of Rynaxypyr as chlorantraniliprole 0.04%.  3. Apply only 2 sprays first at appearance of the pest and second after 15 days.  (**Action :** Asso.Res. Sci. (Ento.), MORS, JAU, Junagadh) | |
| 11.3.2.65 | | Efficacy of insecticides and botanicals against storage insects of seeds and their influence on seed viability during storage under ambient condition | | **Approved**  (**Action :** Asso.Res. Sci. (Ento.), PMRS, JAU, Jamnagar) | |
| 11.3.2.66 | | Management of groundnut pod borer (*Caryodon serratus*) in groundnut pods | | **Approved**  (**Action :** Asso.Res. Sci. (Ento.), PMRS, JAU, Jamnagar) | |
| 11.3.2.67 | | Bio-efficacy of newer insecticides against major sucking pests in Bt cotton | | **Accepted with following suggestions**  1. Remove the word newer from title  2. Apply three sprays at 15 days interval  (**Action :** AssociateRes. Sci. (Ento.), CRS, JAU, Junagadh) | |
| **PLANT PATHOLOGY** | | | | | |
| 11.3.2.68 | | Testing the nutritional efficiency of Azotobacter isolates on cotton under field condition | | **Accepted with following suggestions**  1. Title should be modified as “Impact of Azotobacter isolates on cotton under field conditions”  2. Treatment of 50 % RD of N may be included.  3. Initial and final population of microbes at harvest be recorded.  4. Select only two isolates for study.  (**Action :** Prof. and Head, Dept. of Plant Pathology, JAU, Junagadh) | |
| 11.3.2.69 | | Testing the nutritional efficiency of Phosphate Solubilizing microorganism isolates in cotton under field conditions | | **Accepted with following suggestions**  1. Title may be changed in line of experiment no. 9  2. Specify the strain of PSB 11, 12, 13  3. Initial and final population of microbes at harvest be recorded  4. Treatment of 50 % RD of N to be included  5. Select only two isolates for study  (**Action :** Prof. and Head, Dept. of Plant Pathology, JAU, Junagadh) | |
| 11.3.2.70 | | Testing the nutritional efficiency of Rhizobium isolates in groundnut under field conditions | | **Accepted with following suggestions**  1. Title may be changed in line of experiment no. 9.  2. Treatment of 50 % RD of N should be included.  3. Mention the species of Rhizobium.  4. Initial and final population of the microbes at harvest be recorded.  5. Select only two isolates for study.  (**Action :** Prof. and Head, Dept. of Plant Pathology, JAU, Junagadh) | |
| 11.3.2.71 | | Survey and status of diseases of crops grown under protected cultivation | | **Accepted with following suggestions**  1. Include “pests” also in the title.  2. Record the diseases and pests in open field conditions simultaneously.  (**Action :** Prof. and Head, Dept. of Plant Pathology, JAU, Junagadh) | |
| 11.3.2.72 | | Management of bulb rot complex of garlic | | Suggested to drop the experiment as the disease was not appeared.  (**Action :** Prof. and Head, Dept. of Plant Pathology, JAU, Junagadh) | |
| 11.3.2.73 | | Distribution pattern of aflatoxin producing organism, *Aspergillus flavus* in groundnut growing area of Saurashtra region | | **Approved**  (**Action :** Res. Sci. (Pl. Path), MORS, JAU, Junagadh) | |
| 11.3.2.74 | | Evaluation of promising groundnut genotypes against *Aspergillus flavus* under sick plot | | **Accepted with following suggestion**  1. Resistant and susceptible check to be included.  (**Action :** Res. Sci. (Pl. Path), MORS, JAU, Junagadh) | |
| 11.3.2.75 | | Integrated management practice to minimize *Aspergillus flavus* infection in groundnut | | **Accepted with following suggestion**  1. Include *T. harzianum* (JAU culture) as check (T-11).  (**Action :** Res. Sci. (Pl. Path), MORS, JAU, Junagadh) | |
| 11.3.2.76 | | Biological control of root rot of castor | | **Accepted with following suggestion**  1. Include *T. harzianum* (JAU culture) as check (T-9).  (**Action :** Res. Sci. (Pl. Path), MORS, JAU, Junagadh) | |
| 11.3.2.77 | | Developing IDM modules for the management of cotton diseases | | **Approved**  (**Action :** Asstt.Res. Sci. (Pl. Path), CRS, JAU, Junagadh) | |
| 11.3.2.78 | | Management of fungal foliar diseases of cotton | | **Accepted with following suggestion**  1. Number of sprays, interval and combination formulations should be revised in consultation with Professor of Plant Pathology, JAU, Junagadh  (**Action :** Asstt.Res. Sci. (Pl. Path), CRS, JAU, Junagadh) | |
| 11.3.2.79 | | IDM package for tomato diseases | | **Approved**  (**Action :** Asstt.Res. Sci. (Pl. Path), VRS, JAU, Junagadh) | |

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| **NAVSARI AGRICULTURAL UNIVERSITY, NAVSARI** | | |
| **AGRICULTURAL ENTOMOLOGY** | | |
| **Sr. No.** | **Title/Centre** | **Suggestions** |
| **Dept. of Entomology, NMCA, NAU, Navsari** | | |
| 11.3.2.80 | Survey of Acari associated with different stored grains and by-products | **Approved**  **(Action:** Prof. and Head, Dept. of Ento., NMCA, NAU, Navsari) |
| 11.3.2.81 | Effect of cropping system on the population build-up of *Tetranychus urticae* (Koch.) infesting okra | **Accepted with following suggestions**  1. Release mites on 30 days old crop  2. Replace Foxtail millet with fingermillet  **(Action:** Prof. and Head, Dept. of Ento., NMCA, NAU, Navsari) |
| 11.3.2.82 | Survey for native entomopathogenic fungi (EPF) in south Gujarat condition. | **Approved**  **(Action:** Prof. and Head, Dept. of Ento., NMCA, NAU, Navsari) |
| 11.3.2.83 | Testing the compatibility of banana pseudostem enriched sap with insecticides against mango hopper | **Accepted with following suggestions**  1. Remove the word enriched from the treatment  **(Action:** Prof. and Head, Dept. of Ento., NMCA, NAU, Navsari) |
| 11.3.2.84 | 5(A): Survey of pollinator fauna in South Gujarat | **Accepted with following suggestions**  1. Combine experiment 5A and 5B  2. Also include niger crop  3. Record observation of honeybees species wise  **(Action:** Prof. and Head, Dept. of Ento., NMCA, NAU, Navsari) |
| **5(B):** Studies on the floral diversity in south Gujarat | **Accepted with following suggestion**  1**.** Combine experiment 5A and 5B  **(Action:** Prof. and Head, Dept. of Ento., NMCA, NAU, Navsari) |
| 11.3.2.85 | Study the activity period of honeybees in pointed gourd | **Accepted with following suggestion**  1. Observations on weather parameters may be recorded  **(Action:** Prof. and Head, Dept. of Ento., NMCA, NAU, Navsari) |
| **Gujarat Agril. Biotech Institute (GABI), NAU, Surat** | | |
| 11.3.2.86 | Molecular identification and genetic diversity of *Trichogramma chilonis* | **Approved**  **(Action:** Asstt. Prof. (Ento), GABI, NAU, Surat) |
| **Food Quality Testing Laboratory, NAU, Navsari** | | |
| 11.3.2.87 | Disssipation and persistence of combi-product of profenofos 40 % + cypermethrin 4 % in sapota and its distribution in edible parts of fruit | **Accepted with following suggestion**  1. Also record observations on ripen fruits  **(Action:** Asstt. Prof. (Pesticide Residue), FQTL, NAU, Navsari) |
| 11.3.2.88 | Disssipation and persistence of combi-product of chlorpyrifos 50 % + cypermethrin 5 % in sapota and its distribution in edible parts of fruit | **Accepted with following suggestion**  1. Also record observations on ripen fruits  **(Action:** Asstt. Prof. (Pesticide Residue), FQTL, NAU, Navsari) |
| **Main Rice Research Station, NAU, Navsari** | | |
| 11.3.2.89 | Study on assessment of losses due to insect-pest and diseases of rice crop | **Accepted with following suggestion**  1. Roving survey in rice growing areas of south Gujarat should be carry out  **(Action:** Assoc. Res. Sci. (Ento), MRRS, NAU, Navsari) |
| 11.3.2.90 | Study on losses in paddy due to store grain pests and diseases in storage | **Approved**  **(Action:** Assoc. Res. Sci. (Ento), MRRS, NAU, Navsari) |
| **Main Cotton Research Station, NAU, Surat** | | |
| 11.3.2.91 | Survey for assessment of losses due to Mealy bug infestations in the farmers’ fields | **Accepted with following suggestions**  1. Experiment should be conducted for three years  2. Record observations grade-wise  3. Observations on pink bollworm should be recorded  **(Action:** Assoc. Res. Sci. (Ento), MCRS, NAU, Surat) |
| 11.3.2.92 | Survey for assessment of losses due to pink bollworm infestations in the farmers’ fields | **Approved**  **(Action:** Assoc. Res. Sci. (Ento), MCRS, NAU, Surat) |
| **Main Sorghun Research Station, NAU, Surat** | | |
| 11.3.2.93 | Assessment of the crop loss due to insect-pests and diseases in sorghum | **Approved**  **(Action:** Assoc. Res. Sci. (Ento), MSRS, NAU, Surat) |
| 11.3.2.94 | Studies on bio efficacy of insecticides and botanicals against shoot fly and stem borer infesting sorghum crop | **Approved**  **(Action:** Assoc. Res. Sci. (Ento), MSRS, NAU, Surat) |
| 11.3.2.95 | To know the losses in sorghum due to store grain pests in storage | **Approved**  **(Action:** Assoc. Res. Sci. (Ento), MSRS, NAU, Surat) |
| **KVK, NAU, Vyara** | | |
| 11.3.2.96 | Standardization of number of pheromone traps for mass trapping of *Earias vitella* Fabricius in Okra | **Accepted with following suggestions**  1. Use the word validation instead of standardization in title  2. Use the traps 50/60/70 instead of 20/40/60 per ha  3. Remove the trade name (PCI)  **(Action:** SMS (Pl. Prot.), KVK, NAU, Vyara) |
| 11.3.2.97 | Studies on species composition of sugarcane shoot borer | **Approved**  **(Action:** SMS (Pl. Prot.), KVK, NAU, Vyara) |
| **PLANT PATHOLOGY** | | |
| **Dept. of Pl. Pathology, NMCA, NAU, Navsari** | | |
| 11.3.2.98 | Study of Plant Parasitic Nematodes (PPNs) in major crops of South Gujarat. | **Accepted with following suggestions**  1. Put the word root knot in place of plant parasitic in title and remove PPNs  2. Exclude the sugarcane  **(Action:** Prof. and Head, Dept. of Pl. Patho., NMCA, NAU, Navsari) |
| 11.3.2.99 | Isolation, identification, evaluation and mass production of native *Bacillus* spp. | **Approved**  **(Action:** Prof. and Head, Dept. of Pl. Patho., NMCA, NAU, Navsari) |
| **Aspee College of Horti. And Forestry, NAU, Navsari** | | |
| 11.3.2.100 | Assessment of crop loss due to complex of diseases and pests in bottle gourd | **Accepted with following suggestions**  1. Replace carbendazim and benomyl with dinocap and hexaconazole for powdery mildew disease  2. Replace thiophenate methyl and zineb with matalaxyl MZ and COC  **(Action:** Assoc. Prof. (Pl. Path), ACHF, NAU, Navsari) |
| **Main Rice Research Station, NAU, Navsari** | | |
| 11.3.2.101 | Study on assessment of yield losses due to diseases in rice crop | It was suggested to drop the experiment  **(Action:** Assitt. Res. Sci.(Pl.Path), MRRS, NAU, Navsari) |
| **AES, NAU, Paria** | | |
| 11.3.2.102 | Management of mango hoppers and thrips | **Accepted with following suggestion**  1. Replace RBD with CRD  **(Action:** Asstt. Res. Sci.(Pl. Path), AES, NAU, Paria) |
| 11.3.2.103 | Crop loss assessment by major insect-pests and diseases of mango | **Accepted with following suggestions**  1. Remove the trade name of Saaf with common name  2. Apply carbaryl 50 WP 0.2% on tree trunk in the month of October  3. Follow latest recommended schedule of patho and ento and remove all listed chemicals from the treatment  **(Action:** Asstt. Res. Sci.(Pl. Path), AES, NAU, Paria) |
| **College of Agriculture, NAU, Bharuch** | | |
| 11.3.2.104 | Evaluation of Bio-inoculants against Anthracnose of Banana | **Accepted with following suggestions**  1. Change the title as Isolation and *in-vitro* testing of bio-inoculants against Anthracnose of Banana  **(Action:** Assoc. Prof. (Pl. Path), College of Agri., NAU, Bharuch) |
| **FRS, NAU, Gandevi** | | |
| 11.3.2.105 | Assessment of yield losses due to pest and diseases in Banana | **Approved**  **(Action:** Asstt. Res. Sci.(Pl. Path), FRS, NAU, Gandevi) |
| 11.3.2.106 | Assessment of yield losses due to pest and diseases in Papaya | **Approved**  **(Action:** Asstt. Res. Sci.(Pl. Path), FRS, NAU, Gandevi) |
| **KVK, NAU, Waghai** | | |
| 11.3.2.107 | Assessment of yield losses due to diseases in finger millet crop under Dangs district of South Gujarat | **Approved**  **(Action:** SMS (Pl. Prot.), KVK, NAU, Waghai) |
| **Regional Rice Research Station, NAU, Vyara** | | |
| 11.3.2.108 | Evaluation of Groundnut genotypes to identify the sources of resistance against stem rot caused by *Sclerotium rolfsii* | **Accepted with following suggestion**  1. Record the observation as per AICRP groundnut for screening    **(Action:** Asstt. Res. Sci.(Pl. Path), RRRS, NAU, Vyara) |
| **AES, NAU, Paria** | | |
| 11.3.2.109 | Cost effective management of post-harvest anthracnose of mango by pre and post harvest treatments | **Accepted with following suggestion**  1. Use the design CRD  **(Action:** Assoc. Res. Sci. (Pl .Path), AES, NAU, Paria) |
| 11.3.2.110 | Management of Mango malformation at farmer’s field | **Accepted with following suggestion**  1. Remove the words at farmers field from title  **(Action:** Assoc. Res. Sci. (Pl. Path), AES, NAU, Paria**)** |
| **Agroforestry, NAU, Navsari** | | |
| 11.3.2.111 | Influence of weather parameters on foraging activity of stingless bees (*Tetragonula iridipennis* Smith) near the nests | **Approved**  **(Action:** Asstt. Prof. (Agroforestry), NAU, Navsari) |
| 11.3.2.112 | Nesting habitat and nest architecture of stingless bees (*Tetragonula iridipennis* Smith) in South Gujarat condition | **Approved**  **(Action:** Asstt. Prof. (Agroforestry), NAU, Navsari) |
| 11.3.2.113 | Pilot study on domestication of stingless bees (*Tetragonula iridipennis* Smith) | **Approved**  **(Action:** Asstt. Prof. (Agroforestry), NAU, Navsari |

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| **SARDARKRUSHINAGAR DANTIWADA AGRICULTURAL UNIVERSITY, SARDARKRUSHINAGAR** | | |
| **AGRICULTURAL ENTOMOLOGY** | | |
| **Sr. No.** | **Title /Centre** | **Suggestions** |
| **Department of Ento., CPCA, SDAU, SKNagar** | | |
| 11.3.2.114 | Management of white grub in groundnut | **Accepted with following suggestion**  **1.** Use chlorpyriphos 20 EC as check  **(Action :** Prof. and Head, Dept. of Ento., CPCA, SDAU, Sardarkrushinagar) |
| **Pulse Research Station, SDAU, SKNagar** | | |
| 11.3.2.115 | Evaluation of IPM module for management of sucking pest and borercomplex of mung bean | **Approved**  **(Action** : Asstt. Res. Sci. (Ento.) Pulse Res. Station, SDAU, Sardarkrushinagar) |
| **CRSS, SDAU, Jagudan** | | |
| 11.3.2.116 | Bio efficacy of newer molecules of insecticides against cumin aphid | **Approved**  **(Action:** Assoc. Res. Sci. (Ento.), CRSS, SDAU, Jagudan) |
| **Polytechnic in Agriculture, SDAU, Khedbrahma** | | |
| 11.3.2.117 | Development of biocontrol based management practices for mustard aphid in the tribal area of North Gujarat | **Accepted with following suggestions**  1. Remove the words “in the tribal area of North Gujarat” from title  2.Use the dose 2 kg/ ha instead of 2.5 kg/ ha in treatment 1 and 2  3. Use the dose 1 kg/ ha instead of 1.25 kg/ ha in treatment 5 to 8  4. Correct the net plot size  **(Action:** Asso. Res. Sci. (Pl. Path.), Polytechnic in Agri., SDAU, Khedbrahma ) |
| 11.3.2.118 | Chemical control of sucking pests of mustard | **Accepted with following suggestions**  1. Revise T-3 as T1 + Flonicamid  2. Revise T-4 as T1 + Dimethoate  3. Revise T-5 as T2 + Flonicamid  4. Remove T-6  **(Action :** Asso. Res. Sci. (Pl. Path.), Polytechnic in Agri., SDAU, Khedbrahma) |
| 11.3.2.119 | Survey and monitoring of major insect pests and diseases of mustard in the tribal areas of North Gujarat | **Approved**  **(Action :** Asso. Res. Sci. (Pl. Path.), Polytechnic in Agri., SDAU, Khedbrahma ) |
| **KVK, SDAU, Khedbrahma** | | |
| 11.3.2.120 | Survey, surveillance and monitoring of sucking pest and its natural enemies of Bt cotton hybrids in Sabarkantha District | **Accepted with following suggestions**  1. Remove the word “hybrid” from title  2. Remove the word “surveillance and monitoring from title  **(Action :** SMS (Pl. Prot.), KVK, SDAU, Khedbrahma**)** |
| **PLANT PATHOLOGY** | | |
| **Department of Plant Pathology, CPCA, SDAU, SKNagar** | | |
| 11.3.2.121 | Management of foliar disease of groundnut through fungicide | **Approved**  **(Action :** Prof. and Head, Dept. of Pl. Path., CPCA, SDAU, Sardarkrushinagar) |
| **Department of Nematology, CPCA, SDAU, SKNagar** | | |
| 11.3.2.122 | Integrated management of root knot nematode (*Meloidogyne incognita*) in potato | **Accepted with following suggestions**  1. Revise the treatments as under  T1: Seed treatment with carbosulfan 25 EC  T2: Castor cake @ 2 t/ ha  T3: Poultry manure @ 15 t/ ha  T4: *Paecilomyces lilacinus* @ 2 kg/ ha (talc formulation)  T5: T1 + T2  T6: T1 + T3  T7: T1 + T4  T8: Control  2.Conduct the expt. with LR variety  3. Remove scientific name from title  4. Keep replication 3 using RBD  5. Remove observation point 2, 3 and 4  **(Action :** Prof. and Head, Dept. of Nemato., CPCA, SDAU, Sardarkrushinagar) |
| 11.3.2.123 | Integrated management of root knot nematode (*Meloidogyne incognita*) in Pomegranate | **Accepted with following suggestions**  1. Remove scientific name from title  2. Revise the treatments as under  T1: Carbofuran 3G @ 1 kg a.i. / ha  T2: Neem cake @ 2 t/ ha  T3: Castor cake @ 2 t/ ha  T4: Poultry manure @ 5 t/ ha  T5: *T. viride* @ 2.5 kg/ ha enriched with 250 kg FYM  T6: *Paecilomyces lilacinus* @ 2.5 kg/ ha enriched with 250 kg FYM  T7: Pseudomonas flourescences @ 2.5 kg/ ha enriched with 250 kg FYM  T8: Control  3. Remove observation point 3 and 4  4. Add fruit yield  5. Plot size such that 5 plants/ plot  **(Action :** Prof. and Head, Dept. of Nemato., CPCA, SDAU, Sardarkrushinagar) |
| **Department of Microbiology, CPCA, SDAU, SKNagar** | | |
| 11.3.2.124 | Evaluation of various PGP (Plant Growth Promoting) agents on nodulation, protein content and seed yield of green gram | **Accepted with following suggestions**  1. PGPR to be included in title  2. Treatment Azotobacter to be replaced with rhizobium @ 10 ml/ kg seed in all the treatments;  3. Application of VAM should be 10 kg/ ha  4. All the observations related to PGR should be recorded (Root length, germination, chlorophyll etc.); Nodulation number and fresh and dry weight; ancillary observations of all the diseases; initial and harvest time population of biotypes  **(Action :** Asstt. Prof., Dept. of Micro., CPCA, SDAU, Sardarkrushinagar) |
| 11.3.2.125 | Evaluation of various PGP (Plant Growth Promoting) agents on nodulation, protein content and seed yield of chickpea | **Accepted with following suggestion**  1. Treatments and observations should be followed as per Expt-11  **(Action :** Asstt. Prof., Dept. of Micro.,CPCA, SDAU, Sardarkrushinagar) |
| 11.3.2.126 | Effect of different concentrations of pendimethalin and glyphosate on soil microbial communities and soil enzymatic activity | **Approved**  **(Action :** Asstt. Prof., Dept. of Micro.,CPCA, SDAU, Sardarkrushinagar) |
| **College of Horticulture, SDAU, SKNagar** | | |
| 11.3.2.127 | Management of Foot rot of papaya | **Approved**  **(Action :** Asso. Prof. (Pl. Path.), College of Horti., SDAU, Sardarkrushinagar) |
| 11.3.2.128 | *In vitro* and *in situ* Effect of seed bio-priming techniques on seed germination and seedling vigor of vegetable crops | **Accepted with following suggestions**  1. Bio-priming methods to be standardized and timing to be decided accordingly  2. All the observation related to PGR should be recorded for the plants  **(Action :** Asso. Prof. (Pl. Path.),College of Horti., SDAU, Sardarkrushinagar) |
| **Pulse Research Station, SDAU, SKNagar** | | |
| 11.3.2.129 | Management of root rot of cowpea | **Approved**  **(Action :** Asstt. Res. Sci. (PI. Path.), Pulse Res. Station, SDAU, Sardarkrushinagar) |
| **Arid Zone Fruit Research Station, SDAU, SKNagar** | | |
| 11.3.2.130 | Cost effective control of powdery mildew of Ber | **Approved**  **(Action :** Asstt. Res. Sci. (PI. Path.), AFRS, SDAU, SKNagar) |
| **Agricultural Research Station, SDAU, Ladol** | | |
| 11.3.2.131 | Management of fungal foliar diseases of potato through chemicals | **Approved**  **(Action :** Asstt. Res. Sci. (PI. Path.), Agril. Res. Station, Ladol and Potato Res. Station, Deesa) |
| **CRSS, SDAU, Jagudan** | | |
| 11.3.2.132 | Chemical management schedule for cumin blight | **Accepted with following suggestion**  1. One recommended treatment should be added  **(Action:** Asso. Res. Sci. (Pl. Path.), CRSS, SDAU, Jagudan**)** |
| **Potato Research Station, SDAU, Deesa** | | |
| 11.3.2.133 | Studies on rate of degeneration of potato varieties due to virus incidence | **Accepted with following suggestion**  1. Difference in characters due to degeneration should be recorded for all the varieties  **(Action:** Asstt. Res. Sci. (Pl. Path.), Potato Res. Station, SDAU, Deesa) |
| **Polytechnic in Agri., SDAU, Khedbrahma** | | |
| 11.3.2.134 | Management of mustard disease through biocontrol based management practices in tribal areas of North Gujarat | **Approved**  (**Action**: Asso. Res. Sci. (Pl. Path.), Polytechnic in Agri., SDAU, Khedbrahma) |

**11.3.3 General suggestions:**

1. Treatments should be presented in table form in future.

2. For all the chemical IRAC/ FRAC code should be included.

3. CIB guidelines should be followed for recommending pesticides.

4. Possibilities of irradiation to sterilize the soil may be carried out.

5. Consider scientific recommendations for farmers in future on availability of molecule in market calculating ICBR of the treatments and following CIB guidelines.

6. Mention the quantity of the product per tree in fruit crops.

7. Mention date of harvest in pesticides residue trials.