



AICRP-BC

PEST REPORT &

MEDIA COVERAGE 2018-19



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Cover image: Larva of FAW *Spodoptera frugiperda* (courtesy: U Amala) Copyright © Director, National Bureau of Agricultural Insect Resources, Bengaluru, 2019 This publication is under copyright. All rights reserved. No part of this publication may be reproduced, stored in retrieval system or transmitted in any form (electronic, mechanical, photocopying, recording or otherwise) without the prior written permission of the Director, NBAIR, Bengaluru. Due acknowledgement to be given for brief quotations for academic purposes. Cover page designed by: M. Sampath Kumar

CROP PEST REPORTS 2018-19





AICRP ON BIOLOGICAL CONTROL OF CROP PESTS ICAR- NATIONAL BUREAU OF AGRICULTUTRAL INSECT RESOURCES, BENGALURU



Contributors

Pest reports

AAU, Anand

AAU, Jorhat

ANGRAU, RARS, Anakapalle

HRS, Ambajipeta

ICAR-CTRI, Rajahmundry

OUAT, Bhubaneswar

PAU, Ludhiana

RARS, Kumarakom

YSPUHF, Solan

UBKV, Pundibari

Biocontrol news coverage

ICAR-NBAIR, Bengaluru

AAU, Jorhat

ANGRAU, RARS, Anakapalle

UAS, Raichur

HRS, Ambajipeta

MPKV, Pune

RARS, Kumarakom

YSPUHF, Solan

UBKV, Pundibari

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PREFACE

Pest survey and surveillance are integral to pest management strategies. Conducting regular pest monitoring is important for timely spotting of new pests and outbreak of existing pests. Pest surveillance is necessary for identification and eradication of invasives and indigenous pest species, fine tuning of pest management practices and at farm level contributes to generating essential information towards regional biosecurity efforts.

Location-specific and timely advisories based on scientific observations will help in the enhanced use of biological control agents and judicious use of chemical pesticides and thereby reducing the pesticide load. Information on pest incidence based on regular surveys and correlating the same with weather data will enable development of fore-warning systems for appropriate use in IPM strategies. Knowledge sharing is essential for the success of any pest management programme as it can facilitate decision-making by farmers and researchers.

Crop pest reports received from different AICRP-BC centers are compiled and reported systematically on monthly basis through web-based platform since 2017-18. This crop pest report is expected to benefit the researchers, extension officials and farmers to mitigate the damage caused by pests. Through newspaper reports in vernacular languages, AICRP-BC has created awareness amongst farmers and common public across the country on successful biocontrol-based pest management modules.

I place on record my deep appreciation for the team work of AICRP-BC PC cell at ICAR-NBAIR and the AICRP-BC centres and hope that this document will be useful in understating the pest scenario during 2018-19 in the country and the biocontrol outreach programmes that have been carried out by AICRP-BC centres in their respective states.

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(Chandish R. Ballal)

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CROP PEST REPORT

Location specific and timely advisories based on scientific observations will help in judicious use of biological and chemical pesticides and thereby, reducing the pesticide load. Based on regular surveys with weather data leads to development of forewarning system for appropriate use in IPM as well as BIPM strategy. Identification of major and emerging pest scenario under changing climatic situation will also be addressed from time to time. The efforts to generate information on pest scenario from different crops were initiated by this Bureau during 2017 and this is the third year of the trial under progress. The status of insect pests and diseases across different crops was monitored through Surveillance for pest outbreak and alien invasive pests - Crop Pest Outbreak Report (CPOR) on monthly basis by different AICRP-BC centres. The status of CPOR reported by the centres between June 2018 and April 2019 are presented hereunder.

1. AAU, ANAND

Wheat

During February 2019, green aphid incidence of 6-10% was recorded at Tarapur village in Sojitra taluk of Anand district. Coccinellid beetles were observed.

Maize

Surveys undertaken during the month of August 2018 recorded moderate incidence of stem borer in maize at Bedhiya in Kalol taluk of Panch Mahal district. Natural parasitization by parasitoid, *Cotesia* sp was observed. In Karena in Amod taluk of Bharuch district, moderate level of infestation of sucking insects was observed in Okra. During October 2018 to January 2019, moderate to severe incidence of fall armyworm, *Spodoptera frugiperda* was recorded in sweet corn in Chikodra, Vaghasi, Surkuva, Shihole, Sandesar, Sarole, Borsad, Sardarpura, AAU campus, Sojitra and Morai villages of Anand district. Natural enemies like *Chrysoperla carnea* and NPV and fungus infected larvae were observed. Sorghum crop grown at AAU campus at Anand recorded 3-4% incidence of fall armyworm during January 2019.

At Jitodiya, Karamsad, Sandesar, Sihol, Bhawanipura, Davalpura, Hadgood, Jhangirpura villages in Anand taluk, Dantali village in Petlad taluk, Bamanva, Piploi in Khambhat taluk of Anand district and Dhava village in Talala taluk of Somanath district recorded moderate to severe incidence of fall armyworm during March and April 2019. Parasitoid, *Chelonus* sp and NPV infected larvae were observed.



Extensive whorl and leaf damage caused by Chilo partellus in maize



Cotesia grub on parasitized C. partellus larva

Cotton

Cotton crop grown at Karena in Amod taluk of Bharuch district was infested with low infestation of jassids, whitefly and mealybug and leaf spot disease (10%) during August 2018. Moderate incidence of pink bollworm (6-8%), aphid (8-10%), mealybug (8-10%) was recorded during the month of November 2018 at Vadodara. Natural enemies like spiders, lady bird beetle, *Chrysoperla* and *Aenasius arizonensis* was recorded in the cotton fields. Wilt (8%) and powdery mildew (6-8%) disease incidence was also recorded.



Mealybug damage

Lady bird beetle eggs in cotton



Leaf spot disease in cotton

Sugarcane

Sugarcane grown at Vanoti Village in Thasra taluk in Kheda district was infested with shoot borer (10-13%). Low incidence of red rot disease was also observed.

Banana

Low incidence of banana aphid, pseudostem borer and red rot disease was observed at Koshindra Village in Anand taluk in Anand district during December 2018.

Chickpea

At AAU campus, Anand incidence of *Fusarium* wilt disease (5-8%) was observed. Incidence of pod borer (10-12%) and *Fusarium* wilt (8-10%) was recorded at AAU campus in Anand during February 2019.

Tomato

During February 2019, incidence of fruit borer, *Helicoverpa armigera* (6-8%) was recorded at Runaj in Sojitra taluk of Anand district.

Cabbage & Mustard

Moderate incidence of aphids (12-15%) and diamondback moth (2-4%) was recorded in the Jogan village in Petlad taluk of Anand district during January 2019. Severe incidence of aphid (30%) was recorded at AAU campus in Anand during February 2019.

Bhendi

Moderate level of sucking pests and low fruit borer incidence was observed at Karena in Amod taluk of Bharuch district during August 2018. Incidence of yellow vein mosaic virus (10-12%) was observed.

Mango

Hopper incidence (10-12%) was recorded at Tarapur in Sojitra taluk of Anand district during February 2019.

2. AAU, JORHAT

Rice

Lower incidence of swarming caterpillar was recorded at Rajabahar, Jorhat mandals in Jorhat district during August 2018. In the research farm at Jorhat, low incidence of hispa beetle was recorded.



Swarming caterpillar damage

Hispa damage

Brinjal

At Allengmora at Jorhat district, low incidence of shoot and fruit borer was recorded during March 2019.

3. ANGRAU, RARS, ANAKAPELLE

Rice

During September 2018, low infestation of leaf folder was recorded in Gurla, Goshada and Kotagandredu villages in Gurlamandal, Kothavalasa in Kothavalasa mandals. Similar infestation was also recorded at Bheemasingi village in Jami mandal and Kondalaxmipuram, Garividi in Garividi mandal, Kapusambham village in Cheepurupalli mandal of Vizianagaram district. Natural enemies like spiders, chrysopids and coccinellids were recorded. Blast disease (>10%) was recorded at Lakkavaram in Chodavaram mandal of Visakhapatnam district.

During October 2018, low to moderate infestation of BPH, WBPH, leaf folder and severe infestation of thrips was observed at Munagapaka, Veduruparthi, Vompolu villages in Munagapaka mandal and Pydipala village in Makavarapalem mandal of Visakhapatnam district. Severe incidence of BPH, WBPH with hopperburn symptoms and Panicle mite was recorded at Lakkavaram village in Chodavaram mandal of Visakhapatnam district and Vallapuram & Kella villages in Gurla mandal of Vizianagaram district. Moderate to severe incidence of sheath blight disease was recorded at Tummpala in Anakapalle mandal of Visakhapatnam district during November 2018.



WBPH feeding on rice culm



Sheath blight infested field and hill (Inset)

Sugarcane

Moderate to severe incidence of early shoot borer and low incidence of aphid was recorded in Lakkavaram, PS Peta villages in Chodavaram mandal of Visakhapatnam district during June and July 2018. Severe incidence of mosaic disease (>50%) was also recorded. Incidence of whip smut (15%), red rot (>10%) and yellow mosaic disease (>10%) was recorded at Jithada, Lakkavaram villages in Chodavaram mandal of Visakhapatnam district during September 2018. Low to moderate incidence of white grub was recorded at Peddapuram village in Peddapuram mandal and Chebrolu village in Chebrolu mandal of East Godavari district during July 2018.



White grub damage

Maize

Surveys conducted during August 2018 recorded sever incidence of fall armyworm (FAW) in Venkataraopeta, Neliwada villages in Ranasthalam mandal of Srikakulam district, Bharinikam, Pasupam villages in Pusapatirega mandal, Kondalaxmipuram, Kumaram, Vedulavalasa and KL Puram villages in Garividi mandal, Kapusambham village in Cheepurupalli mandal and Pedabathivalasa village in Pusapatirega mandal of Vizianagaram district, Thotakorapalem village in Ravikamatham mandal, Chinthapalli in Visakhapatnam district during August 2018. Occurrence of coccinellid beetles were observed in the damaged plants.

Severe incidence of FAW (100%) was recorded at Vedulavalasa village in Garividi mandal, G.Agraharam village in Cheepurupalli mandal of Vizianagaram district and Anakapalle mandal of Visakhapatnam district during October and November 2018.

At Pidisila village in Gajapathinagaram mandal of Vizianagaram District, lower incidence of FAW was recorded during January 2019.





Different stages of FAW in severely infested field

Coconut

At Patharlapilli village in Ranasthalam mandal of Srikakulam district and Kumili village in Pusapatirega mandal of Vizianagaram district, severe incidence (90-100%- > 20 egg spirals/adults/leaflet) of rugose spiralling whitefly was recorded during March 2019.



RSW adults and its damage on coconut leaflets

Bhendi

At Pydipala village in Makavarapalem mandal and Lakkavaram village in Chodavaram mandal of Visakhapatnam district, low incidence of YMV disease and leaf crinkle disease (<10%) was observed during June and July 2018.

Brinjal

Low infestation of shoot and fruit borer and *Epilachna* beetle was observed at Pydipala in Makavarapalem mandal of Visakhapatnam distrcit during June 2018. Natural enemies like spiders and coccinellids were also observed.

4. HRS, AMBAJIPETA

Coconut

During February 2019, severe incidence of rugose spiralling whitefly (>30 egg spirals/leaflet) was recorded at Ranasthalam, Kaviti, Etcherla, Laveru, Pusapatirega, Denkada, Bhogapuram, S.Kota, Vizianagaram, Nellimarla mandals of Srikakulam district, Munagapaka, Bheemili mandals of Vizianagaram district, Payakaraopet, Kotauratla, Nakkapalli, Rambilli, S. Rayavaram mandals of Visakhapatnam district, Kadiyam, Ravulapalem, Kotha peta, Ainavilli, Krilampudi mandals of East Godavari district and Chikkala, Kalavalapalli, Tadepalligudem, Kovvuru mandals of West Godavari district. Severe incidence of slug caterpillar was recorded at Kommachikkala in Poduru mandal, Penumantra in Penumantra mandal in West Godavari district and Veeravasarm in Veeravasarm mandal in East Godavari district during March 2019.



Severe rugose spiraling whitefly incidence



Slug caterpillar damage (aerial view)

5. ICAR-CTRI, RAJAHMUNDRY

Maize

Survey undertaken during January 2019 at Sangaigudem village of Yernagudem mandal at West Godavari district recorded incidence of fall armyworm.



Maize leaves damageD by FAW

6. KAU, KUMARAKOM

Rice

At Vechur in Kottayam district, outbreak of swarming caterpillar was observed during October 2018



Extensive damage (cattle graze appearance) by rice swarming caterpillar

7. OUAT, BHUBANESWAR

Rice

Severe infestation of swarming caterpillar (*Spodoptera mauritia*) was recorded during the month of July 2018 at Rasamtala village in Karanjia block of Mayurbhanj district in paddy nursery. Rice grown at Kudasingha, Sahajbahal villages in Bolangir Sadar block of Bolangir district was highly infested with brownplant hopper during October 2018. In Santarapur village at Chilika block of Khurda district, severe damage by hispa beetles was recorded. Severe BPH damage was recorded in the rice crop cultivated at Sarua village in Khurda block in Khurda district during December 2018.



High population of swarming caterpillar and its damage in paddy nursery



Hopperburn caused by BPH in Paddy



Field infested by Hispa

Maize

During September 2018, maize grown at Chheliguda, Patapani, Kandhadiha villages in R. Udayagiri block of Gajapati district were moderately infested with fall armyworm. Severe incidence of fall armyworm was recorded at AICRP trial plot in Khurda district of Bhubaneswar during November 2018.





Fall armyworm damage in maize

Sugarcane

Moderate incidence of early shoot borer was recorded Gogal village in Dharmasala block at Jajpur district during March and April 2019.



Dead heart caused by ESB in young sugarcane crop

Groundnut

At Lohosingha, Pataka, Dahimal and Tantulipadar villages in Atthamallik Block of Anugul district of Odisha, moderate to severe damage of cutworm was recorded during January 2019.



Cutworms in groundnut

Black gram

Severe incidence of stem fly, *Ophiomoyia phaseolia*, *Cercospora* leaf spot (30-40%) and root rot (20-30%) diseases was recorded during pod formation stage at Ballav, Bainsia villages in Gondia block of Dhenkanal district during February 2019.

8. ICAR-NCIPM, NEW DELHI

Cotton crop grown at Sriganganagr, Hanumangarh districts in Rajasthan, Sirsa in Haryana, Muktsar, Fazilka districts of Punjab recorded severe infestation of whitefly (30-35 nymphs/3 leaves plant), thrips and low incidence of jassids during July 2018. Natural enemies like spiders, chrysopids, *Geocoris* and *Orius* sp were recorded.

9. PAU, LUDHIANA

Rice

Low incidence of planthoppers was recorded at Sangrur, Ludhiana, Patiala, Amritsar districts during September 2018. Natural enemies like spiders, *Stenobracon* sp, *Trichogramma* sp were recorded.

Wheat

At Amritsar, Jalandhar, Ludhiana, Patiala districts, low incidence of aphids was recorded during February 2019.

Sugarcane

Survey conducted during June, September, October and November 2018 recorded low incidence of early shoot borer, top borer and stalk borer in Hoshiarpur, Fazilka, Jalandhar, Sangrur, Nawanshahr districts. Natural enemies like spiders, *Cotesia* sp, *Trichogramma* parasitoids were observed.

Cotton

During September 2019, low incidence of whitefly was recorded at Bathinda, Fazilka, Mansa, Muktsar districts. Predator, *Chrysoperla* sp was observed.

Mustard

Low incidence of aphid, *Lipaphis erysimi* was observed at Jalandhar, Ludhiana, Sangrur districts during January 2019. Predator, *Coccinella septempunctata* was observed.

10. UBKV, PUNDIBARI

Rice

Moderate infestation of leaf folder and stem borer was observed in the Huslurdanga village in Mainaguri block of Jalpaiguri Sadar mandal in Jalpaiguri district and Paschim Falakata village in Falakata of Alipurduar district during August and September 2018. During October 2018, severe damage of mealybug and moderate infestation of leaf folder was recorded at Bhagni Dwitiyo Khondo, Balika Bandar, Uttar Bara Sakdal, Kalmati villages in Dinhata block and Hoglabari, Sajherpaar, Dakshin Kalarayer Kuthi, Dhangdhinguri, Konamalli and Moranodir Kuthi,

Patlakhaowa, Singimari, Khagribari, Uttar Kalarayer Kuthi, Shooting Camp and Shakunibala villages in Coochbehar II block during October 2018. Moderate infestation of rice bug, WBPH, grasshopper and leaf folder was observed at Dhangdhinguri village of Coochbehar II district during November 2018.



Mealybug and severely affected field



Leaf folder damage in rice

Maize

Severe cutworm damage was recorded during January 2019 at Bhangamore, Hazrahat villages in Mathabhanga I Block. Low incidence of fall armyworm was recorded at Notuarpar (Garopara), Satmail and Howargari in Coochbehar I block during February 2019.



Cutworm damage



Southern and Northern Corn Leaf Blight



Fall armyworm damage

Tea

Moderate infestation of tea looper, tea mosquito bug and severe infestation of red spider mite was observed in the Gandapara, Banarhat in Dhupguri block of Jalpaiguri Sadar mandal in Jalpaiguri district during August 2018. Natural enemies like predatory mites and spiders were observed. During December 2018, moderate infestation of tea mosquito bug was recorded at Nagrakata.



Tea leaves infested by tea looper

Red spider mite damage



Tea mosquito bug damage

Gerbera

In Pundibari in Cooch Behar II block of Cooch Behar district, severe infestation of leaf beetle was observed during September 2018.



Gerbera leaf beetle

Gourds

Surveys undertaken in the Ikorchala, BairagirHaat in Coochbehar Sadar mandal and Barasimulguri, Ghokshadanga GP in Mathabhanga II mandal of Mathabhanga block of Coochbehar district recorded moderate to severe infestation of fruit fly in pointed gourd and ridge gourd during June and July 2018. Moderate infestation of aphid and low infestation of coreid bug was recorded in cucumber. Natural enemies like spiders, coccinellids and *Apanteles* sp were recorded. Incidence of vine rot and root rot diseases (7-8%) were also recorded.



Fruit fly damage in pointed gourd

In Chatjorepatki, Jorepatki GP in Mathabhanga II mandal of Mathabhanga block in Coochbehar district, severe infestation of fruit fly and root rot disease (12-15%) was recorded during July 2018.



Fruit fly damage in Bottle gourd

11. YSPUHF, SOLAN

Tomato

Low incidence of pinworm, *Tuta absoluta* was observed at Nauni in Solan district during October 2018.

Cauliflower

At Nauni in Solan district, low incidence of aphid were recorded during November 2018. Cauliflower crop grown at Nainatikkar taluk in Sirmaur district and Deothi taluk in Solan district were recorded with low incidence of aphid, *Brevicoryne brassicae* during January and February 2019.



NESWPAPER COVERAGE OF BIOCONTROL ACTIVITIES

1. ICAR-NBAIR, BENGALURU



On 31 October 2018, a workshop on rugose spiralling whitefly in coconut was conducted at Pochampalli taluk of Krishnagiir district. NBAIR experts Dr K. Selvaraj, Venkatesan and Dr K. Subaharan participated in the meeting and explained about the damage symptomsand its alternate management of the RSW.

Interactive meeting with farmers for the management of rugose spiraling whitefly in coconut and palm trees at Rajahmundry on December 2018

దేవరపల్లి, డిసెంబర్ 4: ఉత్తమ దోమ ఎక్కువగా కనిపిస్తోందని, వల్ల ఉత్పత్తి గణనీయంగా పడిపోతుం

యాజమాన్య పద్ధతులు పాటించి 2009లో అమెరికాలోని ఫ్లోరిడా దని, దీని నివారణకు ఉత్తమ యాజ కొబ్బరి, పామాయిలు తోటలను ఆశిం రాష్ట్రంలో తెల్లదోమను గుర్తించడం జరి మాన్య పద్ధతులు చేపట్టాలని సూచిం చిన తెల్లదోమను నివారించుకోవాలని గిందని తెలిపారు. భారతదేశంలో కేరళ చారు. పసుపురంగు కలిగిన జిగురు అంబాజీపేట కొబ్బరి పరిశోధనా సంస్థ రాష్ట్రం ద్వారా 2016లో మొదటిసారిగా అట్టలను చెట్టు ఆకు కింది భాగంలో చీఫ్ డాక్టర్ రామనాథ్, బెంగుళూరులో తూర్పు, పశ్చిమ గోదావరి జిల్లాల్లో గల వేలాడదీయాలని, దీని ద్వారా తెల్లదోమ గల ఎంబిఎఈఆర్కు చెందిన కీటక కొబ్బరి, పామాయిల్ తోటలకు తెల్ల జిగురు ఆట్లకు అంటుకుంటుందన్నారు. శాత్ర్రవేత్త డాక్టర్ సెల్వరాజ్ రైతులకు దోమ్ సోకిందన్నారు. తెల్లదోమ సోకిన పురుగు ఎక్కువగా ఉంటే ఆజాద్ డీర సూచించారు. దేవరపల్లిలో మంగళ కొబ్బరి, పామాయిలు ఆకుల అడుగు క్రివ్ 1000 పిపిఎం ఒక మిల్లీ లీటరు 10 వారం కూచిపూడి బుల్హారావుకు చెందిన భాగంలో తెల్లటి వలయాలు ఏర్పడతా గ్రాముల వేపనూనెలో కలిపి ఒక లీటరు కొబ్బరితోటలో కొబ్బరి, పామాయిల్ను యన్నారు. దూది వంటి తెల్లటి పదార్థం నీటిలో కలిపి ఆకులపై పిచికారి చేయా ఆశిస్తున్న తెల్లదోమ నీర్మూలనపై అవగా ఉంటుందన్నారు. ఈ తెల్లదోమ ఆకు లన్నారు. ఈవిధంగా దాదాపు 90 శాతం హన సదస్సు జరిగింది. ఈ సదస్సులో రసాన్ని పీల్చివేసి తేనెలాంటి జిగురు తెల్లదోమ నివారించ వచ్చని చెప్పారు. శాద్రవేత్తలు రాచునాథ్, సెల్వరాజ్ పదార్థాన్ని విసర్జిస్తుందని తెలిపారు. తెల్లదోచు నివారణకు రైతులకు అచగా ఫ్యాక్టరీ డిజిఎం విజయుప్రసాద్, ఉద్యా ఉండవల్లి సుభాష్టవంద్రటోస్, నందిశ చూట్వాడుతూ ఇటీచల కాలంలో దీనిచల్ల ఆకులపై మసి ఏర్పడి కిరణ హన మరింత కల్పిస్తామని సెల్వరాజ్, నవన శాఖ ఎడిఎ బాలాజీ, ఉద్యాన రామకృష్ణ, పలుపురు పామాయిల కొబ్బరి, పామాయిలు తోటల్లో తెల్ల జన్య సంయోగ క్రియ జరగదని, దాని రామనాథ్ తెలిపారు. ఈ సందర్భంగా అధికారి దేవదానం, రైతు నేతలు నరహ కొబ్బరి రైతులు పాల్గొన్నారు.



రైతుల సందేహాలను నివృత్తి చేశారు. రిశెట్టి రాజేంద్రబాబు, యాగంటి బు కార్యక్రమంలో కొబ్బరి పరిశోధనా బ్బాయి, పరిమీ శ్రీరామకృష్ణ, జ్యేక్త స్థానం శాస్త్రవేత్త చలపతి, పాపాయిల్ వెంకటేశ్వరరావు, కరుటూరి శ్రీనివాస్

Awareness program in Andhra Pradesh on utilization and conservation agents in coconut rugose spiraling whitefly management on 5 July 2018



ස්බ්ඞරාටල් සම්බ් පිමුර් බුරාර් ප්ඩූ යි

- వంద శాతం విజయవంతం బెంగళూరు ఎన్బీఏఐఆర్
 శాస్త్రవేత్తల బృందం కితాబు
- ఎం.రవి వెలడి

తపురం ఆభికల్పర్ : మొక్కజొన్నపై బేసి విధ్వంసం సృష్టిస్తున్న కత్తెర స (పాల్ ఆర్మీవార్మ్)ను ఆదుపులోకి



పదీప రవి, బెంగళూరు శాస్త్రవేత్తల బృందం ಪ್ರಯಾಗಾತ್ಮತ ಪಾಲಾಲ್

కత్తెర పురుగును టాఖినిడ్ నిర్నూలిస్తుంది

ి రాజ్మార్డ్ పో 10 శారం చార్యాలు మహేళాయి. ఎదే. కేటర్ల వీడికి కలిపె మొన్న మొద్దలో పోస్ట్ 7 నుంపి 10 రోజుల్లో ఇకేవి కూడా పైన తెలివన విధంగా పిరకాల్ చేస్తూ ఇక్తువుదుగు చార్యా మహేళుంది. ఆలాగే ఎదేమీ 50 మి.కీ విధికం ఉంటంది. ఎంటనా పాత్రిశేజ్క్ విమర్ కో టీర్ పిటికి టిటి పిరికార్ లేయనలు వ్యాహ్మార్తా అమ్ములోకి క) పద్ధకిలి విషయానికి వస్తే 2 శిలోలు ఈమీమ్ 200

NBAIR Scientists made a visit on 14 December 2018 to the villages viz. Balijapalli, Morumpalli in Hindupur district of Andhra Pradesh where rabi maize is cultivated which was infected with Fall Armyworm (FAW). NBAIR team provided Trichogramma pretiosum cards, Bt, Metarhizium entomopathogenic anisopliae, nematode formulations and pheromone traps for the management of FAW. The treatments were imposed in collaboration with Assistant Director of Agriculture (Hindupur), Department of Agriculture, Government of Andhra Pradesh. A team of officials including Assistant Director of Agriculture (Hindupur), five Agricultural Officers from Department of Agriculture, Government of Andhra Pradesh visited NBAIR on 24 December 2018 and got acquainted with biological control agents.

జీవనియంత్రణతో 'కత్తెర'కు కట్టడి

- అత్యంత ప్రమాదకరమైన జాబితాలోకి పాల్ఆర్మీవార్మ్
- వ్యవసాయశాఖ హిందూపురం ఏడీఏ ఎం.రవి వెల్లడి

అనంతపురం అగ్రికల్చర్ : అత్యంత స్రమాదకర మైన 'కత్తెర పురుగు'ను జీవనియంత్రణతో కట్టడి చేయొచ్పు అని, పాల్ఆర్మీవార్మ్ పంటలపై దాడి చేస్తూ విధ్వంసం సృష్టిస్తోందని, పంటలు నాశనం అవుతున్నాయని వ్యవసాయశాఖ హిందూపురం సహాయ సంచాలకులు (ఏడీ) ఎం.రవి తెలిపారు. ఈ ఖరీఫ్లో దేశంలో కర్ణాటక తర్వాత 'అనంత 'లో మొక్కజౌన్న పంటలో పురుగు కనిపించింద న్నారు. కత్తెర పురుగు నివారణకు పలు రకాల చర్యలు చేపడుతున్నా అదుపులోకి రాని పరిస్థితి అన్నారు. నిరంతరం అడ్రమత్తతతోనే ఈ పురుగు జారి నుంచి పంటలను కాపాడుకోవచ్చన్నారు. ఇప్పటికే ఎన్నో నివారణ చర్యలు చేపడుతుండగా ఇప్పుడు పురుగును పురుగుతోనే నియం,తించే జీవ నియంత్రణ పద్ధతి పాటించినా ఫలితం අංහාංසුව මුව්බාහ

కత్తెర పురుగు నివారణకు జీవ నియంత్రణ పద్ధతులు

• మొక్కజొన్న, జొన్న తదితర పంటల్లో కత్తెర మర్శన్ని, జెన్ని తదితర విరదల్ల కత్తిం పురుగు నివారణకు ఎకరాకు 10 ఫిరమోన్ ట్రాప్స్ (లింగాకర్షక బుట్టలు) అమర్చాలి. ఈ మాస్ టాపింగ్ ద్వారా మగరెక్కల పురుగులు రింగాక ర్తక బుట్టలో పడి చనిపోతాయి. దీని వల్ల ఆడరె ష్ట్రల పురుగుతో సంపర్కం జరగక గుడ్డు దశ జర గకుండా నివారించుకోవచ్చు.







- లార్వా దశలోనే చంపేస్తుంది:

 ఎగ్లార్వల్పాల్సాట్ కింద ఖెలోనిస్ అనే పార ైుట్ వాడితే గుడ్డు దశలో కత్తెర పురుగు గుడ్లపై డ్రవేశించి లార్వా దశలోనే చంపేస్తుంది. • టాఖినిడ్ అనేది లార్వల్ పారసూట్. ఇది
- కూడా లార్వా దశలో ఉన్న కత్తెర పురుగును సమ
- ర్థవంతంగా నిర్మూలిస్తుంది. మెటరైజియం అనేది ఎంటమోపాథోజెనిక్ ఫంగై. 5 గ్రాములు మెటరైజియం ద్రావణం 200 లీటర్ల నీటికి కలిపి మొక్కజొన్న పంట మొవ్వలో పోసినట్లు బాగా పిచికారీ చేస్తే రెండు మూడు రోజుల్లోపు 70 శాతం లార్వాలు చనిపో ತ್ಯಾಯ.











బెంగకూరు ఎన్జీపవిఆర్ ఎదుట డైరెక్టర్, సీనియర్ శాస్త్రవేత్తలతో పడీప ఎం.రవి, పవోలు

- పిచికారీ చేసినా మంచి ఫలితం ఉంటుంది. మొవ్వకుళ్లు నివారించుకోవాలి
- లీటర్ల నీటికి కలిపి మొవ్వ మొదళ్లలో పోస్తే 7 నుంచి 10 రోజుల్లో కత్తెరపురుగు లార్వా చనిపో
- బెంగళూరులో ఉన్న నేషనల్ బ్యూరో ఆఫ్ ప్లాంట్ ఇంసెక్ట్ రిసోర్స్ (ఎన్టీఏఐఆర్) డైరెక్టర్

• బెవేరీయా అనేది కూడా పైన తెలిపిన విధంగా డాక్టర్ చండీష్ ఆర్ బల్లాల్తో పాటు విభాగాల డ్రిన్సిపల్ సైంటిస్టలు ఇటీవల హిందూపురం ప్రాంతంలో పర్యటించి కత్తెర ఎంటమో పాథోజేనిక్ నెమటోడ్ (ఈపీఎన్) ప్రరుగు వ్యాప్తి, లక్షణాలు, నష్టం తీవ్రత, నివారణ పద్ధతి విషయానికి వస్తే 4 కిలోలు ఈపీఎస్ 200 పర్యల గురించి పరిశీలించారు. అనంతరం వారి ఆహ్వానం మేరకు హిందూపురం డివిజన్ ఏవోల తో కలిసి రెండు రోజుల కిందట బెంగళూరులో ఉన్న ఎన్బీఏఐఆర్ను సందర్శించి అక్కడ జరుగు తున్న పరిశోధనలు, ఇక్కడి అనుభవాలు తెలియ

Dr. Ravi, Assistant Director, Dept of Agriculture, Ananthapur, along with his team of Division Extension Officers, visited ICAR-NBAIR, Bengaluru to upraise the status of incidence of FAW on maize in his region and seek advisory. The dreaded FAW incidence in Ananthapur, Andhra Pradesh, was first observed on Rabi maize. The team interacted with Dr. Chandish Ballal, Director, Dr. B. Ramanujam, I/C, AICRP Biocontrol and Heads of Divisions on its containment of spread and protection of crop from serious losses for the benefit of farmers in the region. Dr. Ballal and Dr. Ramanujam explained the biological control strategies using egg parasitoids, microbial biocontrol agents including Bt, Metarhizium anisopliae, Beaveria bassiana, entomopathogenic nematodes and NPV etc., and the need to share the information far and wide among the farmers so that the dreaded pest is contained below ETL with minimal use of pesticides.

2. AAU, ANAND

આઈસીએઆર યોજના અંતર્ગત ખેડૂતો અને વૈજ્ઞાનિકો વચ્ચે યર્યા સભા

ઓર્નિથોલોજી અને જૈવિક નિયંત્રણ યોજના, આઈસીએઆર, યુનિટ-૯, આકૃયુ, આણંદ ના સંયુક્ત ઉપક્રમે ટ્રાઈબલ સબ પ્લાન યોજના અંતર્ગત ખેડ્રત શિબિર તથા કીટવિતરણનો કાર્યક્રમ તા. 0૨/03/૨૦૧૯ના રોજ કૃષિ વિજ્ઞાન કેન્દ્ર, નર્મદા-દેડીયાપાડા ખાતે ગોઠવવામાં આવેલ. જેમાં નર્મદા જીલ્લાના કુલ ૧૦૦ ખેડ્રત ભાઈઓ તથા બહેનોએ ભાગ લીધેલ. આ ખેડ્રત શિબિરમાં પાક સંરક્ષણમાં જૈવિક નિયંત્રકોનો ઉપયોગ અને પક્ષીઓની ઉપયોગીતા જેવા વિષયો પર જુદા વૈજ્ઞાનિકો દ્વારા ખૂબ જ ઉંડાણપૂર્વક ખેડ્રતોને માર્ગદર્શન આપવામાં આવ્યું હતું. ખેડ્રતોને પાક સંરક્ષણમાં ઉપયોગી થઈ શકે તે મુજબ બાયોપેસ્ટીસાઈડ તથા પક્ષીઓના સંરક્ષણ માટે માળા અને નાના ખેડ્રતોને ઉપયોગી એવા ખેતઓજારોનું વિતરણ કરવામાં આવ્યું હતું.

ડૉ. ડી. એમ. મફેતા, યુનિટ અધિકારીશ્રી આઈસીએઆર, યુનિટ-૯, આફ્યુ, આણંદના તેમજ ડૉ. સી. કે. બોરડ, ઓર્નિથોલોજીસ્ટ ના સીધા માર્ગદર્શન હેઠળ આ ખેડૂત શિબિરનું આયોજન કરવામાં આવેલ હતું. સદર ખેડૂત શિબિરમાં ઓર્નિથોલોજી યોજનાના ડૉ. જે. જી. દુલેરા, જુનિયર ઓર્નિથોલોજીસ્ટ અને જૈવિક નિયંત્રણ યોજનાના ડૉ. નેહા પટેલ, રીસર્ચ એસોસિયેટ તેમજ ડૉ. મીનાક્ષી વી. તિવારી, મદદનીશ વૈજ્ઞાનિક, કેવીકે, દેડીયાપાડા એ ઉપરોક્ત વિષયો પર વ્યાખ્યાન રજુ કર્યા હતા અને ખેડૂતોના પ્રશ્નોનું નિરાકરણ કર્યું હતું. સંપુર્ણ કાર્યક્રમનું સુબધ્ધ રીતે સંયાલન ડૉ. હીતેશ જાદવ, એસએમએસ, કેવીકે (પાક સંરક્ષણ), દેડીયાપાડા દ્વારા કરવામાં આવ્યું.

સમગ્ર કાર્યક્રમની રૂપરેખા અને ઈનપુટ કીટનું આયોજન જૈવિક નિયંત્રણ યોજનાના ડૉ. રધુનંદન બી. એલ. તથા ઓર્નિથોલોજી યોજનાના શ્રી આશિષ નાયી દ્વારા કરવામાં આવેલ હતું.

Training cum distribution programme of inputs under Tribal Sub Plan (TSP) was jointly organized by AICRP on Biological Control of Crop Pests and AINP on Vertebrate Pest Management, Anand Agricultural University, Anand on 02-03-2019 at Krishi Vigyan Kendra, Dediyapada (NAU, Navsari). Hundred tribal farmers from different villages of Narmada district attended the programme and input kits were distributed to them.

Dr. N.M. Patel, Research Associate, briefed the farmers on use of biocontrol inputs and different bio-pesticides. Dr. J. G. Dulera, Jr. Ornithologist gave information on importance of insectivorous birds in agricultural ecosystem and demonstrated the use of different inputs provided for the

conservation of birds and for the management of depredatory birds in agricultural ecosystem. The programme was organized under the guidance of Dr. D.M. Mehta, Principal Research Scientist, AICRP on Biocontrol, and Dr. C. K. Borad, Assoc. Research Scientist, AINP on Vertebrate Pest Management. The biocontrol input kits were prepared and distributed under the guidance of Dr. Raghunandan, B. L. Asstt. Research Scientist, AICRP on Biocontrol, AAU, Anand.

કેવીકે-નર્મદા દેડીયાપડા ખાતે ટીએસપી-આઈસીએઆર યોજના અંતર્ગત ખેડૂત શિબિર







ડૉ. મીનાક્ષી વી. તિવારી. દ્વારા ટીએસપી યોજના

વિષેની માહિતી



ડૉ. નેહા પટેલ દ્વારા પાક સંરક્ષણમાં જૈવિક નિયંત્રકોના ઉપયોગ વિષય પર વિસ્તૃત યર્યા



ડૉ. જે. જી. દુલેરા દ્વારા પાક સંરક્ષણમાં પક્ષીઓની ઉપયોગીતા વિષય પર વ્યાખ્યાન



ડૉ. જે. જી. દુલેરા દ્વારા પાક સંરક્ષણ કીટની સમજણ



કીટવિતરણ



કીટવિતરણ





કીટવિતરણ

Farmers-Scientists interaction meeting on "Large scale demonstration on bioagent based IPM module for white grub in groundnut" at Mahuva, Bhavnagar District, Gujarat

On 23rd October 2018, a 'Farmers-scientists interaction meeting on large scale demonstration on bioagent based IPM module for white grub in groundnut was held at Mahuva, Bhavnagar District, Gujarat in association with Pidilite Industries Limited, Mumbai, Triveni Kalyan Foundation (TKF), Gram Nirman Samaj (GNS) and Agricultural Produce Marketing Committee (APMC), Mahuva. One hundred-seven farmers of two villages (Konjli and Gundarna) participated in the programme. During the programme, farmers/scientists interaction was organized to thoroughly discuss the impact of area-wide control of white grub taken up in approximately 100 ha. The farmers feedback was highly encouraging as they expressed their full satisfaction on biocontrol technology used for the management of white grubs in groundnut. The Chairman APMC, Mahuva, Gujarat, requested us to provide biopesticides for entire taluka.

He also agreed for financial support for such farmers' oriented programme. Dr. S. K. Jalali, Principal Scientist, ICAR-NBAIR, Bengaluru, briefed about the role of AICRP-Biological Control in spreading non-chemical method of pest control. Dr. D. M. Mehta, Dr. V. P. Ramani and Dr. B. D. Patel delivered the technical information on how to increase groundnut production. Dr. B. L.

Raghunandan and Dr. G. M. Patel briefed about the IPM programme taken up by AAU, Anand. Dr. Mayank Patel, Shri. Ajithbhai Jadav and Shri. Mahendra Singh

Gohel handled the entire programme. Shri Ganshyambhai Patel, Chairman, APMC Mahuva, said in his concluding remarks that we should widely follow the use of entomopathogenic fungi and nematodes for the management of white grubs in groundnut. He also claimed that he has full trust on the results obtained in the area and expressed his full satisfaction on "the white grubs management" in the area because it was the coordinated efforts by scientists, NGO, APMC and farmers.



2. AAU, JORHAT

Forewarning of insect pest appearance in different crops for different months has been done in collaboration with Meteorology Department, AAU, Jorhat and published in local daily newspapers during 2018-19.



Insect pests forecasting for the month of May 2018

Rahman, A. and Borkakati, R. N. (08.05.2018). May Mahaor Keet Potanga Pratirudhar Bybasthapona. Dainik Assam: 11



Insect pests forecasting for the winter months December 2018

Rahman, A. and Borkakati, R. N. (04.12.2018). Xeet Kalor Keet Potanga Pratirudhar Bybasthapona. Dainik Assam: 11



Insect pests forecasting for the winter months February 2019

Rahman, A. and Borkakati, R. N. (05.02.2019). February Mahor Keet Potangar Bybasthapona. Dainik Assam: 11

Two training programmes were conducted with cooperation from KVK, Baksa at Kachukata and Khatpara area of Baksa B. T. A. D. area on 05.02.19 and 06.02.19 respectively. A total of 100 numbers of farmers participated in this training programme. The main subjects covered in the training were insect pest of rice and vegetables. The eco-friendly way of management of insect pests were emphasized along with the proper use of biopesticides with knapsack sprayer. They asked various question regarding insect pests of *rabi* & *kharif* crops and their biological control approach. They were happy with the practical of training.



3. ANGRAU, RARS, ANAKAPALLE

First noticed fall armyworm incidence in maize fields of Pedabathivalasa village, Pusapatirega mandal, Vizianagaram district on 11.08.2018 along with DAATT Centre scientists and Department, explained farmers on identification of fall armyworm and demonstrated method of spraying insecticide in maize whorls for management of fall armyworm.







Noticed Fall armyworm in maize fields of Nelivada village, Ranasthalam mandal, Srikakulam district on 13.08.2018 along with DAATT Centre scientists and NGO staffs.







Field visit and demonstration on maize fall armyworm management in Pusapatirega mandal, Vizianagaram district on 23.08.2018 along with DAATT Centre scientists and Department of agriculture.



Field visit and awareness on maize fall armyworm to agricultural college students, field staff of NGO (Reddy foundation) and farmers in Ranasthalam mandal, Srikakulam district on 23.08.2018.



Field visit in maize crop in Garividi and training programme on maize fall armyworm for farmers and department of agriculture of Cheepurupalli division, Vizianagaram district on 17.08.2018.



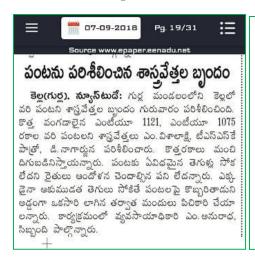
Diagnostic Field Visit in Fall armyworm affected maize field in Vedulavalasa, Garividi mandal along with JDA, Vizianagaram PD, ATMA, Vizianagaram and Extension staff of cheepurupalli sub division on 30.10.18.



Awareness on maize fallarmy worm management practices along with Joint Director of Agriculture, Vizianagaram, Project Director (ATMA) and department of Agriculture field staff in Cheepurupalli division, Vizianagarm district on 30.10.18.



Diagnostic field visit conducted in Gurla mandal, Vizianagaram district along with team of scientists in rice, observed new rice varieties MTU 1121, MTU 1075 are free from blast disease and advised farmers on management of leaf folder.



వలి పంట పలిశీలన

గుర్ల, సెప్టెంబరు6:కెల్ల గ్రామంలో నూతన వరి వంగడాలైన ఎంటీయు 1121, ఎంటిమో 1075 రకాల సాగును వ్యవసాయ శాస్త్రవేత్తలు ఎం.విశాలాక్షి, అనకాపల్లి వ్యవసాయ రంగ విశ్వవిద్యాలయం శాస్త్రవేత్త టి.ఎస్.ఎస్.కె.పాత్రో, డి.నాగార్జునలు గురు వారం పరిశీలించారు. ఈ వంగడాలతో అధిక దిగుబడి వస్తుందని, తెగుళ్లు సోకవని వారు తెలిపారు. ఆకుముడత పురుగు ఉన్నట్లయితే కొబ్బరి తాడుతో వరి చేనుకు అడ్డుగా ఒక్కసారిగా లాగి తర్వాత క్రిమి సంహారక మందు వేయాలని సూచించారు.



Diagnostic field visit in maize in Garvidi mandal and created awareness on fall armyworm management on 24.9.18.



Trichocards as biological control agents in pest management in rice, sugarcane, maize and vegetables published in March 2019 in state edition Andhrajyothi newspaper.



4. UAS, RAICHUR



Adhoc recommendations were given to farmers in Hagaribommanahalli taluk of Ballari district for the management of FAW in maize.



Team of Scientists from AECC, Hadagali conducted roving survey in Kasab Hobli suggested management practices for FAW in maize.

Team of scientists from KVK, Bidar conducted roving survey on the incidence of FAW in Bidar district and it was the first report of FAW in Bidar district on 08-11-2018.



5. HRS, AMBAJIPETA



Training programme was conducted on usage of drone technology for the management of rugose spiraling whitefly to the nursery farmers at Kadiyapulanka on 24 May, 2018. Director of CPCRI Dr. Chowdappa, CPCRI, Dr. Dhillon Singh, Dr. YSRHU, Director of Research, Dr.J.Dileep Babu, Dr.Bhagavan, Dr. Kalidas, Dr.N.B.V.Chalapathi Rao, Chairman of Indian Nursery Farmer's Association Subramanyam, Chairman of Kadiyam Nursery Farmer's Association Pulla Satyanarayana, APM S.Rammohan, Associate Director of Horticulture K.Chittibabu have participated in the meeting. Demonstration was given on how drones were used to spray coconut trees of about 40 feet height. Nursery farmer's showed interest towards working of drones and their application.



Two days training programme on "Human Resource Development on Rugose Spiraling Whitefly" was conducted at Ambajipeta of East Godavari district on 13th June, 2018. The meeting was organized by the Department of Horticulture. Associate Director of Horticulture, C.H.Srinivasulu, Central Integrated Pest Management Centre officers M.K.Sankara Rao, Dr. Sinthil, S.Pavan, Board member of Dr.YSRHU, Bonam Nageshwara Rao have participated in the meeting. Horticultural Research Station, Ambajipeta, Dr.G.Ramanandham (Principal Scientist &Head), Dr.N.B.V.Chalapathi Rao (Principal Scientist) have explained reasons for the spread of rugose spiralling whitefly and suggested that this pest can be managed at early stages by following management practices suggested by the scientists and agriculture and horticulture officers.



Farmer's meet was conducted at Horticultural Research Station, Ambajipeta on Biological Control of Invasive Rugose Spiralling Whitefly on 5th July 2018. Dr. YSRHU, Director of Research, Dr.J.Dileep Babu and Director of NBAIR Dr. Chandish R. Ballal have participated in the meeting. Dr.Chandish R. Ballal suggested that insecticides should not be used for the management of pest which kills many of the natural enemies and insisted to use bioagents for the management of different pests of coconut and other crops.

One day training programme was conducted on mass production of entomopathogenic fungi *Isaria fumasorosea* against rugose spiraling whitefly to farmers on 8th February, 2019, at Horticultural Research Station, Ambajipeta. Assistant Director of Horticulture, Amalapuram, C.H.Srinivasulu, Scientists of HRS., Ambajipeta, Dr.N.B.V.Chalapathi Rao, Dr. G.Ramanandham, Dr B. Neerja participated in the meeting. Dr.N.B.V.Chalapathi Rao, C.H.Srinivasulu, explained about symptoms of damage and management practices of rugose spiraling whitefly. B. Neerja explained mass production of entomopathogenic fungi *Isaria fumasorosea*. Finally, kits required for mass production of entomopathogenic fungi *Isaria fumasorosea* were distributed to the farmers.







day training programme conducted on Management of Rugose Spiralling Whitefly on 12th, February, 2019 Horticultural Research Ambajiprta farmers. Dr. G.Ramanandham (Principal Scientist & Head), Assistant Director of Horticulture, Amalapuram, explained about management practices of rugose spiraling whitefly and Dr.N.B.V.Chalapathi Rao (Principal Scientist), Pathology scientist, B.Neerja suggested that the rugose spiralling whitefly can be effectively managed by entomopathogenic fungi Isaria fumasorosea and gave training to the farmers on mass production entomopathogenic fungi Isaria fumasorosea.



On 21st, April, 2019, awareness programme was conducted on origin and distribution, symptom of damage and management practices of rugose spiralling whitefly. Insecticides should not be sprayed in RSW infested fields. Installation of yellow sticky traps around the tree trunk to attract and kill the adult insects. Spraying starch solution @10% for removal of sooty mould. Clipping of leaflets containing parasitized pupae by Encarsia guadeloupae in RSW infested field. Spraying neem oil @5ml/liter along with 10g of detergent powder per litre of water. Dr. YSRHU, Director of Research, Dr.J.Dillep Babu and Director of Extension Dr. R.V.S.K. Reddy have suggested to follow above management practices not only in coconut and also in oil palm and other crops.



Awareness programme was conducted on rugose spiraling whitefly on 24th April, 2019 at Kaviti village of Srikakulum district. Awareness was created to the farmer's of Srikakulum district on non procurement coconut seedlings infested with rugose spiralling whitefly which were bought to the villages in some vehicles for selling by local vendors and also insisted them to buy seedlings suitable to their their locality.



Farmer's meet was conducted at M.P.D.O office at Kadiyam on 11th May, 2019. National Horticulture Board M.D. Dr. M.Aziz Ahmed IAS, appreciated Kadiyam nursery farmer's for their effort to maintain nurseries on thousands of acres at one place and suggested them to adopt modern technology and insisted them, for the development of Kadiyam nurseries it is necessary to join with National Horticulture Board and obtain accreditation. Dr. N.B.V.Chalapathi Rao and Dr. Bhagavan explained the farmer's about rugose whitefly management. APMIP PD Rammohan explained about the Government schemes. At last Kadiyam nursery farmer's promised that they will not supply whitefly infested seedlings to the farmers of other places in our country as insisted by district level officer's and horticulture officer's.



On 11th May, 2019, farmer's meet was conducted at M.P.D.O office at Kadiyam. Scientists of National Horticulture Board and Horticulture officer's insisted the nursery farmer's to follow strict quarantine rules for not to export and import seedlings infested with pests and diseases and suggested them to buy seedlings and seeds recognized by the National Horticulture Board. At last a notice is given to the nursery famers stating that they should supply seedlings free from rugose whitefly infestation declared by spiralling horticulture department otherwise seedlings can be sized by the government.

6. KAU, KUMARAKOM

വിളയും, മുന്നുറേക്കറിൽ യന്ത്രവത്കൃത -പരിസ്ഥിതി സൗഹൃദ നെല്ല്

ആലത്തൂർ ► ഗ്രാമപ്പഞ്ചായ ത്തിലെ മുന്നൂറേക്കറിൽ യന്ത്ര വര്ക്കത-പരിസ്ഥിതി സൗര്യദ നെൽക്കൃഷി നടപ്പാക്കും. കുമ്പ ഉക്കോട്, മരുതക്കാട്, കിട്ടാം പാരോടി, കാട്ടുശ്ശേരി, കുരോ ട്മനും, ചേന്ദകോട് പാടശേഖര

ദേശീയ ഭക്ഷ്യസുരക്ഷാമിഷ ഒൻറ യന്ത്വവർക്കത നെൽക്കു ഷി വ്യാപനപദ്ധതി, കാർഷിക സർവകലാശാലയുടെ വിഷര ഹിത നെൽക്കൃഷി വ്യാപനപ ദ്ധതി എന്നിവ പദ്ധതിയുമായി സാഹംശിക്കും

കൂരോട്മന്ദം പാടശേഖര ത്തിൽ കെ.ഡി. പ്രസേനൻ എ .എൽ.എ. നടിലുത്സവം ഉദ്ഘട ടനംചെയ്തു; ഗ്രാമപ്പഞ്ചായത്ത് പ്രസിഡൻറ് ടി.ജി. ഗംഗാധരൻ

കാർഷിക സർവകലാ താല ജെവിക കീടരോഗനിയ ത്രണവിഭാഗം മേധാവി ഡോ: മധു സുബ്രഹ്മണും, കെ. രമ, ക്ഷി അസിസ്റ്റൻറ ഡാറക്ക് ഠാണ് പ്രകാൾ, വിനുനാഥ്, ടർൻസി ജോൺ എന്നിവർ സം



കാർഷികവികസന പലമാ നിറ്യുടെ കീഴിൽ രൂപറ ത്കരിച്ച ഹരിതമിത്ര സംഘ ത്തിനാണ് നടത്തിപ്പുചു! ലെ ആലത്തുർ ഗ്രത്മ്യങ്ങ യത്തിൽ നടുത്ത ഘട്ടത്തിൽ ഉറ്റ് ഗ്രാമപ്പങ്ങായത്തുകള് ലക്കോ, വുാവിച്ചിക്കും -എം.വി. മശ്മീ.

യന്ത്രവത്കരണവും ജൈവകീടനിയന്ത്രണവും

നെൽക്യപ്പിയിൽ യന്ത്രവത്ഷ രണവും ജൈവകിടനിയന്ത്രണ ഉപാധികളും സമന്വയിപ്പിക്കും ചെളിയിൽപ്പോലും സുഗമമായ പ്രവർത്തിക്കുന്ന പാഡിഹാരോ എന്ന യന്ത്രം ടാക്ലറിൽ ഘടിപ്പി ച്ച് നിലമുഴുത് ഞാറ്റട്ടി നഴ്സറ തയ്യാറാക്കും.



യന്ത്രവത്കത-പരിസ്ഥിതിസൗഹദ നെൽക്ക്യഷിയുടെ നടിലുത്സവ

ജൈവ കുമീഠംനാശിനി ഉപ യോഗിച്ച് വിത്തിന് പരിചരണ മൊരുക്കും. മണ്ണുപരിശോധന യുടെ അടിസ്ഥാനത്തിലായിരി ക്കും വളപ്രയോഗവും സൂക്ഷ

കളനിയന്ത്രണത്തിന് കോ ണോവീഡറും യന്ത്രവത്കത കളപറിക്കൽ യന്ത്രവും ഉപ യോഗിക്കും. കടന്നലിനെ ഉപ യോഗിച്ച് കീടത്തെ കൊല്ലുന്ന മുട്ടകാർഡ്, നെല്ലിലെ തണ്ടു തുരപ്പൂർ പുഴുവിനെതിരേ ഫിറ മോൺ രക്ണി, ചാഴിക്കെതിരേ ബ്യൂവേറിയ ജൈവക്ടനാശ്മിത് തുടങ്ങിയ പരിസ്ഥിങ്ങ് സൗഹൃദ ഉപാധികഠം അവലംബിക്കും. കാർഷിക കലങ്ങറിന്റെം അടി സ്ഥാനത്തിൽ വിള ജലപരിപാ Biontensive pest management BIPM programme jointly by the Thrissur centre of AICRP on BCCP at KAU and Department of Agriculture Development and Farmers' Welfare over an area of 150 ha at Alathur Grama Panchayat n Palakkad District of Kerala. programme combined BIPM practices with mechanisation in paddy to ensure timely completion of farm operations as well as to demonstrate savings in production costs. Here Sri Prasenan, K.D is seen inaugurating the mechanised transplanting of paddy seedlings.

Outbreak of FAW covered in newspapers





मक्यावर अमेरिकन लष्कर आळी रोखा: डॉ शरद गलांडे

जावली : फ लटण तालुक्यातील मका ज्वारी विकांबर सच्या मोठ्या प्रमाणावर अमेरिकन लष्कर आळी चा प्रादुर्भाव झाला आमुन शेतकयोगी वेळीच काळजी येणे गरंजेच असल्याचे मत कृषी महाविद्यालय, पुणे येथील अखिल भारतीय समन्वयक, जैविक किडनियंत्रक फ्रक्लपाचे किटकशास्त्रझ डॉ. शरद गलांड यांगी केले आहे

नकसानीची तीव्रता भयंकर असुन अमेरिके मधुन अफ्रिका आणि तेथन भारतात ही कीड आली आहे आंध्र तेलंगणा राज्यात मोठ्या प्रमाणावर कीड आसुन फलटण तालक्यात ही मका ज्वारी पिकांवर ही किडे आहे शेतकऱ्यां नी त्वरीत उपाययोजना करणे गरजेचे आहे या कीडीच्या बंदोबस्तासाठी वी टी फॉर्म्यूंलोशन २ग्राम प्रतिलिटर मेट्रा मेंटेरिझम ॲनॅसोपली ५ ग्राम प्रतिलिटर वापरावे तसेच अंडी आवस्थेत किडी साठी ट्रायक्लोग्रामा प्रिटीओसम १ लाख प्रतिहेक्टरी चार ते सहा प्रसारणे करावी रासायनिक मध्ये इमबेक्टीम बेन्झाइट ४ ग्राम प्रति लिटर वापरण्याचे आवाहन डॉ शरद गलांडे यांनी केले आहे

अमेरिके तील मका पांछरे चट्टे दिसून येतात. तद्नंतर ही पिकावरील पाने खाणारी आळी आळी पोग्यामध्ये जाते व त्यातील

स्पोडप १३, फुगी परडा (फॉलआमीं१) या कीडीचा प्राद्मांव २०१६ साली अमेरिकेतन अफ्रिकन देशात झाला. ब्राझील देशात दिसून आला, तदनंतर २०१८ साली या किडीचा प्रादर्भाव भारतात दिसन आला. या किडीने अफ्रिका खंडातील अनेक देशामध्ये किडीने मोठ्या प्रमाणात नुकसान केले असून या किडीची नकसान करण्याची क्षमता प्रचंड आहे. पिक उगवल्यानंतर ती कीड भारतामध्ये कर्नाटक राज्यामध्ये दिसून आली. तदनंतर कोल्हापूर जिल्ह्यात मका पिकावर दिसून आली व किडीने महाराष्ट्रामध्ये जवळपास साडेगाच हजार हेक्टर क्षेत्रावर नुकसान केल्याची प्राथमिक नोंद आहे. सर्वात जास्त नुकसान जालना जिल्ह्यात दिसून आले. त्याच्या खालोखाल सोलापूर जिल्ह्यात दिसून आले. महाराष्ट्रातील १० ते १५ जिल्ह्यात या कीडीचा प्रादर्भाव दिसन येत असन या किडीच्या सर्वेक्षणाचे काम शासन

पीक उगवल्यानंतर लगेचच या किडीचा प्रादुर्भाव दिसण्यास सुरुवात होते. प्रथमतः या किडीची आळी पाने खरवडते, त्यामुळे पानावर पांढरे चट्टे दिसून येतात. तद्नंतर ही

व कृषी विद्यापीठाने हाती घेतले आहे.



पाने खाण्यास सुख्वात करते. त्यामुळे पोगा उमलल्यानंतर पानावर मोठ्या प्रमाणावर छिद्रे दिसून वेतात. नंतर हो किंड मक्याच्या कणसातील दाणेसुडा खाते. परंतु महाराष्ट्रामध्ये या किंडोने पाने खाल्ल्याचे दिसून आले आहे.

या किडीचो मादी पानावर १०० ते २०० व जास्तीत जास्त १००० अंडी घालते. अंडी झुबक्यामध्ये घालते. आळी ही कुस्तान कणारी अवस्था असून होची पूर्ण वाड होण्यासाठी ती सहा अवस्थेतुन जाते. यासाठी १४ ते ३० दिवस लागतात. आळीच्या डोक्याबर कल्ट वाय आकाराची खूण असून शेवटच्या टोकाला चौकोनी आकारात चार स्पष्ट टिएके दिसुन येतात. त्या ाठवस्याद्भ् कस बाह्र यतात. हरूउचा कोषावस्य विमनीत अस्त त्या कोषाचा रंग लालसर तपिकती आहे. २ ते ८ से मी. वर कोष विमनीत दिस्म् येतो. आळीची पूर्ण वाढ होण्यासाठी २० ते ३० दिवस लागतात. हवामानानुसार या कालावधीत बदल होतो.

किडीच्या नियंत्रणासाठी इमामेक्टींग बेन्ह्रोएट ०.४ ग्रॅम प्रति लिटा किंवा ५% निवोळी आर्क किंवा अझाडोरॅक्टीन (निवोळीयुक्त) औषध १५ पीपीएम या किटकनाशकांची आलटन पालटन फवारणी करावी.

पिकावर फवारणी करताना शक्यतो संध्याकाळी फवारणी करावी औषधे पोम्यात पड़तील याची काळजी घ्यावी. मका जनावरांना खाद्य म्हण-वापरत असल्याने शक्यती किटकनाशकांचा वापर टाळावा. निंबोळीयक किडनाशकांचा व मेटॅरिशियम ॲनीसोपली ५ ग्रॅम प्रतिलीय या प्रमाणे फवारणी करावी. कीडीची नुकसान क्षमता लक्षात घेता व घोका टाळण्यासाठी महाराष्ट्र शासनाने कीडनाशके अनदानाक उपलब्ध करून दिली आहेत. त्यासाठी कृयी विभागाशी संपर्क साधावा, असे आवाहनहीं डॉ.शस्ट गलांडे यांनी केले आहे

Prevent the incidence of fall armyworm

The incidence of Fall armyworm (FAW) was noticed on maize and sorghum crop in Phaltan Tahasil of Satara district of Maharashtra state. Fall armyworm was noticed in 2016 in Africa Continent and recorded heavy losses in African countries. It is also reported in Brazil too. In India, FAW incidence is also seen in 2018 in Karnataka state.

In Maharashtra, the first incidence of FAW is seen in Kolhapur district in July 2018. FAW is spread in 10 districts of Maharashtra state near about 5500 ha has been affected by this pest up to November 2018. Maximum incidence of FAW is noticed in Jalana district followed by Solapur district. The State Dept of Agriculture undertook the FAW Survey on top priority level.

FAW incidence was started from the seedling stage, larvae feed on leaves, and the large quantity of fecal matter is seen on leaves. It attacks whorl part of the crop. Considering losses due to the pest, due care should be taken to prevent the attack of FAW. The detail life cycle is also given in the article.

To prevent the attack of the pest, spray the crop with emamectin benzoate @ 0.4 g/l, 5% NSKE / neem formulation 1500ppm @ 5ml/l of water. Spraying should be undertaken at evening time while spraying focus on the whorl of the crop and care should be taken that the application of insecticides fall in the whorl of the crop. Government of Maharashtra has provided the insecticides on 50% subsidy rate.

কর্মশালা

পুণ্ডিবাড়ি, ১৪ মে : জৈবিক উপায়ে ফসলের অপকারী কীট নিয়ন্ত্রণের বিষয়ে কর্মশালার আয়োজন করেছে উত্তরবঙ্গ কৃষি বিশ্ববিদ্যালয়ের কীটতত্ত্ব বিভাগ। জৈবিক উপায়ে ফসলের পোকামাকড় কীভাবে নিয়ন্ত্রণ করা যায়, তা কোচবিহার, আলিপুরদুয়ার ও দক্ষিণ দিনাজপুর জেলার ১৫০ জন চাষিকে দেখান বিশ্ববিদ্যালয়ের কীটতত্ত্ব বিভাগের বিজ্ঞানীরা। সেইসঙ্গে আর্থিকভাবে পিছিয়ে থাকা আদিবাসী চাষিদের স্বাবলম্বী করে তোলার জনা মৌমাছি পালনের প্রশিক্ষণ ও বিভিন্ন জৈববস্তু দেওয়া শুরু হয়েছে বলে বিশ্ববিদ্যালয়ের কীটতত্ত্ব বিভাগের অধ্যাপক নুপেন্দ্র লস্কর, শ্যামলকুমার সাহু, দেবাঞ্জন চক্রবতী ও মৌলিতা চট্টোপাধ্যায় জানান। অধ্যাপক নৃপেন্দ্র লশ্কর বলেন, 'জৈবিক উপায়ে ফসলের কীটশক্রকে নিয়ন্ত্রণের বিষয়ে আমাদের বিভাগ কাজ করছে। এদিন ১৫০ জন কৃষক কর্মশালায় অংশ নিয়েছেন। ফলের মাছি নিয়ন্ত্রণের জন্য তৈরি করা স্বল্পগুলার ফেরোমেন ফাঁদ কৃষকদের মধ্যে জনপ্রিয় হয়েছে। আগামী দিনে আমরা উত্তরবঙ্গের বিভিন্ন জায়গায় এই ধরনের কর্মশালার আয়োজন করব।°



Uttar Banga Krishi Viswavidyalaya (UBKV), Pundibari has been arranging different training programmes on "Biological Control of insect pests of crops" for the farmers (in collaboration with AICRP, Biological Control of Crop Pests) in the northern districts of West Bengal. The teachers and the scientists engaged in these training programmes demonstrate the techniques of the control methods, too. Add to this, honey bee boxes are distributed during training under TSP programme for Upliftment of the financially backward tribal farmers. The teachers of the Department of Entomology, UBKV, Dr. N. Laskar, Dr. S.K. Sahoo, Mr. D. Chakraborty and Ms. M. Chatterjee informed that the 'Low Cost pheromone Traps' prepared by the department has become very popular among the farmers of Coochbehar, Alipurduar and South Dinajpur districts. They assured about more such programmes will be arranged in different districts of northern part of West Bengal in near future.

9. YSPUHF, SOLAN

बागवानों को सेबों व फसलों में आ रही बीमारियों की जानकारी दी

खणी में किसानों-बागवानों के लिए प्रशिक्षण शिविर आयोजित

भरमौर, 25 अक्तूबर (उत्तम): खणी पंचायत में भरमौर जनजातीय क्षेत्र के किसानों-बागवानों के लिए एकदिवसीय प्रशिक्षण शिविर का आयोजन किया गया, जिसमें वैज्ञानिक तरीके से बगीचे लगाने तथा सेबों में आ रही बीमारियों की जानकारी बागवानों को दी।शिविर में बागवान एवं वानिकी विश्वविद्य सोलन के प्रमुख वैज एवं वानिका विश्वविद्यालय नाणा सोलन के प्रमुख वैज्ञानिक डा. पी.एल. शर्मा व डा. सुभाष चंद वर्मा तथा कृषि विज्ञान केंद्र चम्बा के तथा कृष । पहाल कर चम्बा क वैज्ञानिक डा. के.एस. ठाकुर ने किसानों-बागवानों को कई जानकारियां दीं। उन्होंने कहा कि सेब के पौधों के आकार को सही बनाने के लिए पौधे की प्रूर्तिंग का विशेष ध्यान रखें, ताकि पौधे को कोई नुक्सान न हो। टहनियों को काटने के बाद उसमें पेस्ट लगाना न भूलें। माइट, स्केल, बूली एफिड,



भरमौर : बागवानी एवं वानिकी विश्वविद्यालय नौणी सोलन तथा चम्बा के वैज्ञानिकों के साथ किसान सामूहिक चित्र में।

स्कैब व कैंकर आदि सेब की स्कव व कंकर आदि सब का बीमारियों की जानकारी और उन का उपाय बागवानों को सुज्ञाए गए। उन्होंने बागवानों को बताया कि सेब की फसल के तुड़ान के बाद नवम्बर महीने में तने में चूना अवश्य लगाएं, जिसमें। किलो नीला थोथा, 3 किलो चूना तथा 1 किलो अलसी का तेल 20 लीटर पानी में घोल बनाकर पौधे के तने पर लगाएं, जो सेब के पौधों को कई बीमारियों से बचाता है।मार्च

या अप्रैल महीने में भी पौधों को च जप्रशेष महान में भी भीवा का चूना जरूर लगाएं। उन्होंने कहा कि फलों व सब्जियों के अधिक उत्पादन के लिए किए जा रहे कैमिकलों के प्रयोग से हटकर जैविक खेती की ओर लोगों को लाना इन शिविरों का

आर लागा का लाग इनाशावरा का मुख्य उद्देश्य है। आर सेबों पर फूल आने के समय कीटनाशकों का कम प्रयोग तथा मधुमक्खी के डिब्बे ब्याचि में रखे जाएं तो पोलीनाइजर की कमी

(जन) दूर होगी तथा अधिक फसल होगी। उन्होंने सेब के जैन्सें को दूर हागा पथा आवफ कसल हागा। उन्होंने सेब के पौधों को कच्ची खाद देने से इंकार करते हुए कहा कि अधिकांश बीमारियों का कारण यही कच्ची खाद, गोबर होता है।

इसलिए पक्की खाद ही बगीचे में डालें। उन्होंने सभी बागवानों से आह्वान किया कि इसके अतिरिक्त अगर कोई भी समस्या आती है तो वे उन्हें फोन कर इसके समाधान की जानकारी ले सकते हैं। AICRP BC centre of Dr YS Parmar University of Horticulture & Forestry, Nauni, Solan (HP) in collaboration with KVK Chamba organised training and demonstration programmes for farmers of Khani and Holi villages of Bharmaur district Chamba under TSP on 25 and 26 October 2018. In these trainings 100 farmers participated and were benefited through receipt of inputs like Metarhizium anisopliae, Beauveria bassiana, Neem Baan, Trichoderma viride, literature (Package of practices for fruit crops), etc. and technologies to use these inputs in different crops. The activities demonstrated to the farmers were covered in local newspaper 'Punjab Kesari'.

पंजाब केसरी ई-पेपर epaper.punjabkesari.in/c/33517765





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