

ಕರ್ನಾಟಕ ಸರ್ಕಾರ

ಕೃಷಿ ಇಲಾಖೆ

ಸಂ:ಸಸಂವಿ/ತಾಂ-1/ಸೈ.ಹು:ಪೀ.ಸ.&ನಿ/2019-20

ಕೃಷಿ ಆಯುಕ್ತರ ಕಾರ್ಯಾಲಯ
ಶೇಷಾದ್ರಿರಸ್ತೆ, ಬೆಂಗಳೂರು.

ದಿನಾಂಕ: 19-12-2019.

ಇವರಿಗೆ,

ಎಲ್ಲಾ ಜಿಲ್ಲಾ ಜಂಟಿ ಕೃಷಿ ನಿರ್ದೇಶಕರುಗಳಿಗೆ

- ವಿಷಯ: ಜೋಳದ ಬೆಳೆಯಲ್ಲಿ ಸೈನಿಕ ಹುಳು ಹೊಸ ಪ್ರಬೇಧ (*Spodoptera frugiperda*) ನಿರ್ವಹಣೆ ಕುರಿತು
- ಉಲ್ಲೇಖ: 1. ಕೇಂದ್ರ ಸರ್ಕಾರದ ಪತ್ರ ಸಂಖ್ಯೆ F. No.3-15/2018-19/IPM/DAC & FW(Pt) ದಿನಾಂಕ: 16-12-2019.
2. ಕೇಂದ್ರ ಸರ್ಕಾರದ ಪತ್ರ ಸಂಖ್ಯೆ F. No.3-1/2019-20/IPM/FAW ದಿನಾಂಕ: 17-12-2019.

ಮೇಲ್ಕಂಡ ವಿಷಯಕ್ಕೆ ಸಂಬಂಧಿಸಿದಂತೆ, ರಾಜ್ಯದ ವಿವಿಧ ಜಿಲ್ಲೆಗಳಲ್ಲಿ ಪ್ರಮುಖವಾಗಿ ಮೆಕ್ಕೆಜೋಳ ಬೆಳೆಯಲ್ಲಿ ಕಂಡುಬಂದಿರುವ ಸೈನಿಕ ಹುಳುವಿನ ಹೊಸ ಪ್ರಬೇಧ (*Spodoptera frugiperda*) ಸಮೀಕ್ಷೆಯನ್ನು ಕೈಗೊಳ್ಳಲು ಹಾಗೂ ನಿರ್ವಹಣಾ ಕ್ರಮಗಳ ಬಗ್ಗೆ ರೈತರಲ್ಲಿ ಅರಿವು ಮೂಡಿಸಿ ಕೀಟ ಬಾಧೆಯನ್ನು ತಡೆಗಟ್ಟಲು ಅನೇಕ ಬಾರಿ ಪತ್ರಗಳ ಹಾಗೂ ವಿಡಿಯೋ ಕಾನ್ಫರೆನ್ಸ್‌ಗಳ ಮೂಲಕ ಜಿಲ್ಲೆಗಳಿಗೆ ಈಗಾಗಲೇ ಸೂಚನೆಯನ್ನು ನೀಡಲಾಗಿರುತ್ತದೆ.

ಸದರಿ ಕೀಟದ ಬಾಧೆ ಕಳೆದ ಸಾಲಿನಲ್ಲಿ ಜೋಳದ ಬೆಳೆಯಲ್ಲಿ ಕಂಡುಬರುತ್ತದೆ ಈ ಹಿನ್ನೆಲೆಯಲ್ಲಿ ಕೀಟ ನಿರ್ವಹಣೆಗೆ ಕೈಗೊಳ್ಳಬೇಕಾದ ಕ್ರಮಗಳ ಮಾಹಿತಿಯನ್ನು ಕೇಂದ್ರ ಸರ್ಕಾರ ಉಲ್ಲೇಖಿತ ಪತ್ರಗಳ ಮೂಲಕ ನೀಡಿದ್ದು, ಈ ಹಿನ್ನೆಲೆಯಲ್ಲಿ, ಜಿಲ್ಲಾ ಪೀಡೆ ಸರ್ವೇಕ್ಷಣಾ ಮತ್ತು ಸಲಹಾ ಘಟಕವು ಜಿಲ್ಲೆಯಾದ್ಯಂತ ವ್ಯಾಪಕವಾಗಿ ಪೀಡೆ ಸರ್ವೇಕ್ಷಣೆಯನ್ನು ಕೈಗೊಂಡು, ಕೆಳಕಂಡಂತೆ ನಿರ್ವಹಣಾ ಕ್ರಮಗಳನ್ನು ವಹಿಸುವಂತೆ ಹಾಗೂ ಸಂಬಂಧಿಸಿದ ಮಾಹಿತಿಯನ್ನು ಕರಪತ್ರಗಳ, ಭಿತ್ತಿ ಪತ್ರಗಳ ಮತ್ತು ಸಮೂಹ ಮಾಧ್ಯಮಗಳ (ರೇಡಿಯೋ, ದೂರದರ್ಶನ, ದೈನಂದಿನ ಪತ್ರಿಕೆ) ಮೂಲಕ ರೈತರಿಗೆ ಒದಗಿಸಿ ಸಂಭವನೀಯ ಹಾನಿಯನ್ನು ತಡೆಗಟ್ಟುವುದು. ಈ ಬಗ್ಗೆ ಕೈಗೊಂಡ ಕ್ರಮಗಳ ಮಾಹಿತಿಯನ್ನು ಕೇಂದ್ರ ಕಛೇರಿಗೆ ತಪ್ಪದೆ ಸಲ್ಲಿಸಲು ಸೂಚಿಸಿದೆ.

(ಅಡಕ: ಕೇಂದ್ರ ಸರ್ಕಾರ ನೀಡಿರುವ ಪೀಡೆ ನಿರ್ವಹಣಾ ಕ್ರಮಗಳು)

ಅಪರ ಕೃಷಿ ನಿರ್ದೇಶಕರು
(ಸಾವಯವ ಕೃಷಿ)



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पत्रसं./F. No. 3-1/2019-20/IPM/FAW

भारतसरकार/Government of India

कृषि एवं किसान कल्याण मंत्रालय/Ministry of Agriculture & Farmers Welfare
(कृषि, सहकारिता एवं किसान कल्याण विभाग)/(Department of Agriculture, Cooperation & Farmers Welfare)

वनस्पति संरक्षण, संगरोध एवं संग्रह निदेशालय
Directorate of Plant Protection, Quarantine & Storage

एनएच4, फरीदाबाद (हरियाणा)/N.H.-IV, FARIDABAD (HARYANA) - 121001


दिनांक/Date: 17th December, 2019

Office Memorandum No. 44/2019

Sub: Package of Practice (POP) for the management of Fall Army Worm (FAW) in Sorghum-reg.

Officers-in-charge, RCIPMCs/CIPMCs may refer to Office Memorandum issued vide F. No. 3-15/2018-19/IPM/DAC&FW(Pt.) dated 16th December, 2019 on the above cited subject (copy enclosed) in this connection. Indian Institute of Millets Research has developed POP for the management of FAW in Sorghum for incorporation in the management strategies (copy enclosed). Therefore, you are directed to incorporate the POP in the management strategies for FAW in all your ongoing Training/HRD/awareness programmes and give wide publicity among all the concerned stake holders.

Further, as per directions at S. No. 4 of the above said Office Memorandum, you are also directed to follow up the matter with the State Agriculture Department and submit Action Taken Report (ATR) at fortnightly interval to Head Quarter, Dte. Of PPQ&S (e-mail address: appa.ipm-ppqs@gov.in).


(N. Sathyanarayana)
Joint Director (PP-IPM)

Officers-in-charge,
RCIPMCs/CIPMCs

Copy for information to: PPS to PPA



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F. No. 3-15/2018-19/IPM/DAC&FW(Pt.)

भारत सरकार/Government of India

कृषि एवं किसान कल्याण मंत्रालय/Ministry of Agriculture & Farmers Welfare

कृषि सहकारिता एवं किसान कल्याण विभाग /Department of Agriculture, Cooperation & Farmers Welfare

वनस्पति संरक्षण, संगरोध एवं संग्रह निदेशालय/ Directorate Of Plant Protection, Quarantine And Storage

एन.एच.-4, फरीदाबाद, हरियाणा / N.H.IV. FARIDABAD (HARYANA)

Date: 16th December, 2019

Office Memorandum

Sub:- Package of Practice (POP) for the management of Fall Army Worm (FAW) in Sorghum-reg.

The incidence of FAW is noticed on Maize and Sorghum crops. The FAW is an invasive pest, which need to be controlled by timely interventions.

2. A meeting to review the present status of FAW was held on 1st October, 2019 under the Chairmanship of Secretary (DAC&FW) at Krishi Bhawan, New Delhi. It was decided in the meeting to develop separate POPs for Fodder maize, Sweet corn, Baby corn and Sorghum. Accordingly, Indian Institute of Millets Research has developed POP for the management of FAW in Sorghum. These management strategies need to be promoted in various Training/HRD/awareness programmes.
3. It is requested that the same may be disseminated to all the stakeholders through the Extension bodies of the State such as ATMA, KVKs, etc.
4. The Central Integrated Pest Management Centers (CIPMCs) in all the concerned States is directed to follow up the matter with State Agriculture Departments and to submit an ATR fortnightly to Head Quarter, Dte. of PPQ&S (e-mail address: appa.ipm-ppqs@gov.in)

Encl: As above


(Rajesh Malik)
Plant Protection Adviser

Distribution:

1. Princip. Secretary Agriculture Commissioner of all the States.
2. Director (Extension), DAC&FW with a request to issue necessary directions to all the Extension functionaries.
3. JD (IPM), DPPQ&S with a request to issue directions to all the CIPMCs for para 4 above.

Copy for information:

1. PPS to Secretary, DAC&FW
2. PPS to JS (PP)

Package of Practice for the management of Fall Armyworm in Sorghum

Crop stage	Integrated Pest Management tools for fall army worm	Intervention
Before sowing	<ul style="list-style-type: none"> ❖ Deep ploughing to expose pupae to sun light and predatory birds ❖ Maintain clean field bunds and plant flowering plants, viz., <i>Tagetes</i> spp. <i>Cosmos</i> spp, etc. to attract the natural enemies. ❖ Planting Napier grass/hybrid Napier in border and intercropping sorghum with pigeon pea. cow pea in 2:1 to 4:1 ratio is advisable. 	Precautionary measures to be followed before planting of the crop
Sowing and post sowing cultural and mechanical practices	<ul style="list-style-type: none"> ❖ Follow ridge and furrow planting method instead of flat sowing ❖ Deploy pheromone traps at 10/ha soon after sowing and monitor the pest incidence at weekly intervals. ❖ Erect bird perches @25/ha to encourage insectivorous bird soon after emergence. ❖ Nutritional management: Apply recommended dose of NPK. Balanced application of fertilizers helps to reduce the incidence of FAW ❖ Clean cultivation by removing weeds which serve as alternate host of FAW. ❖ Treat the seed with Cyantraniliprole 19.8% + Thiamethoxam 19.8% FS @6ml/kg seed for protection during seedling stage. 	Better sowing method, pheromone installation, clean cultivation and mechanical measures
Seedling stage (0 to 30 days old crop)	<ul style="list-style-type: none"> ❖ Most vulnerable stage, very crucial period for management. Spray neem formulation (Azadiractin, 1500 ppm) @5 ml/l or one lit/acre or 5 % Neem seed kernal extract (NSKE) immediately after observation of one moth/trap/day or 10 % plant infestation at papery windows stage. ❖ Hand collection and destruction of larvae and egg in patchy incidence ❖ Erection of pheromone traps @15/ac for mass trapping of adults (effectiveness of lure last for 30-45 days) ❖ Release of <i>Telenomus remus</i> (4000/ac) or <i>Trichogramma pretiosum</i> @ 50,000/ac at 7 and 14 days after planting. Parasitoid release may be alternated with neem spray at weekly intervals but not together. ❖ For management of early instars, whorl application of <i>Bacillus thuringiensis v kurstaki</i> formulations 2% @ 2g/l or <i>Metarhizium anisopliae</i> or <i>Beauveria bassiana</i> @ 5 g /liter is recommended. ❖ If incidence is more than 10%, any of the recommended synthetic pesticides, viz., Spinetoram 11.7% SC @ 0.5 ml/l or 	Application of neem based pesticide, bio pesticides and bioagents; minimize use of chemical pesticides.

	Chlorantraniliprole 18.5 SC @0.4 ml/l or Thiamethoxam 12.6 % + Lambada Cyhalothrin 9.5 % ZC @0.25 ml/l is recommended.	
Early whorl stage (30-50 day)	<ul style="list-style-type: none"> ❖ Very crucial period for management. Spray neem formulation (Azadiractin, 1500 ppm) @ 5 ml/l or one lit/acre or 5% Neem seed kernal extract (NSKE) immediately after observation of one moth/ trap/ day or 10 % plant infestation at early whorl stage. ❖ Spray (Whorl application) <i>Bacillus thuringiensis v. kurstaki</i> formulations/ 2% @ 2g/l or <i>Metarhizium anisopliae</i> or <i>Beauveria bassiana</i> @ 5g/ liter at 5-10% infestation. Repeat the spray based on weekly scouting at >10% fresh infestation. ❖ If incidence is 10 -20 % any of the recommended synthetic pesticides, viz., Spinetoram 11.7 % SC @ 0.5 ml/l or Chlorantraniliprole 18.5 SC @ 0.4 ml/ l or Thiamethoxam 12.6 % + Lambda cyhalothrin 9.5 % ZC @ 0.25 ml/l is recommended. 	Application of neem based pesticide, bio pesticides and bioagents; minimize use of chemical pesticides.
Late whorl to boot stage window (50-70 day old crop)	<ul style="list-style-type: none"> ❖ Timely management measures at seedling and early whorl stage reduces FAW damage to greater extent. ❖ If incidence is more than 20%, any of the recommended synthetic pesticides, viz., Spinetoram 11.7% SC @ 0.5 ml/l or Chlorantraniliprole 18.5 SC @ 0.4 ml/l or Thiamethoxam 12.6 % + Lambda cyhalothrin 9.5% ZC @ 0.25 ml/l is recommended 	No chemical intervention

Precautions for pesticide use:

1. Insecticide sprays should be rotated with another recommended chemical in subsequent sprays to avoid build up of resistance in FAW to insecticides.
2. Enter the field only 48 hours after spraying the pesticide.
3. Harvesting should be done 30 days after last spray of pesticide and the left over fodder may be fed to animals.