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कृषि एवं किसान कल्याण मंत्रालय / Ministry of Agriculture & Farmers Welfare कृषि एवं किसान कल्याण विभाग / Department of Agriculture & Farmers Welfare वनस्पति संरक्षण, संगरोध एवं संग्रहनिदेशालय / Directorate of Plant Protection, Quarantine & Storage एनएच4, फरीदाबाद(हरियाणा) – 121 001/ NH-IV, Faridabad (Haryana) – 121 001

Dated: 22 .07.2022

To

The Directors of Agriculture All States/ Union Territories

Sub: Advisory on Fall Army Worm (FAW) Spodoptera frugiperda on Maize - regarding.

Sir,

I have the honour to bring to your kind notice that the Fall Armyworm (Spodoptera frugiperda) is an invasive, polyphagous economically important insect pest could cause substantial damage especially in maize crop. The pest is native to tropical and sub-tropical regions of America. In India it spread from South India to other parts of the country. Nevertheless its damage intensity is under control by continuous efforts of DPPQ&S, FAO, ICAR and State Agriculture/ Horticulture departments. Keeping in view the favourable climatic conditions, availability of maize crop throughout country and previous year observations there is possibility that the pest may cause extensive damage therefore the following strategies are suggested to prevent the pest attack well in advance

- Extensive surveys need to be initiated to map the prevalence and spread of the pest. Food and Agriculture Organization (FAO), Rome, Italy developed the FAW Monitoring and Early Warning System (FAMEWS) mobile app can used by farmers, and extension agents to send vital data about FAW infestation levels. This helps generate detailed and reliable information that can be used to manage FAW. This app works offline and provides farmers with advice on how to manage FAW
- Follow clean cultivation i.e, removal of alternate hosts helps to break down life cycle of FAW and hand picking and destruction of egg masses and larvae in mass by crushing or by immersing in water
- Deep ploughing before sowing will expose FAW pupae to predators.
- Timely and uniform sowing over a large area is advised. Avoid staggered sowing.
- Follow intercropping of maize with suitable pulse crops such as pigeon pea, black gram/green gram
- Erection of bird perches @ 10/acre during early stage of the crop (up to 30 days) as birds acts as good predator on lepidopteran larvae

- Sowing of 3-4 rows of trap crops (e.g. Napier) around maize field and spray with 5% NSKE or Azadirachtin 1500 ppm as soon as the trap crop shows symptom of FAW damage.
- Application of Sand + lime in 9:1 ration in whorls in first thirty days of sowing soon after the observation of FAW incidence restricts larval feeding
- Install pheromone traps @ 15/acre in field for mass trapping and destruction of male moths
- Eggs parasitoids such as *Trichogramma pretiosum* and *Telemonus remus* can be released for destroying the egg stage of FAW @ 50000 per acre at weekly intervals (avoid spraying chemical pesticides for few days during the time of release in the field)
- Entomopathogenic fungi such as *Metarhizium anisopliae*, *Nomuraea rileyi*, *Beauveria bassiana and Verticilium lecani* at 1×10^8 CFU/g @ 5 g/litre whorl application & repeat after 10 days if required could be used for management of the pest.
- Bacillus thuringiensis ver. Kurstaki, NPV formulation @ 2 g/l (or) 400 g/acre could be used
- IPM package of practices for Maize need to be promoted. The IPM package of practices can be downloaded from http://ppqs.gov.in/ipm-packages.
- Insecticides must be used as recommended by Registration Committee of CIB&RC. The recommended list of Pesticides are available at link http://ppqs.gov.in/divisions/cib-rc/major-uses-of-pesticides.

In view of the above, it is requested to monitor the maize crop on regular basis and if major incidence of FAW is reported by the farmers, extension functionaries and even through newspapers or other sources, survey of the affected fields may be conducted immediately and the concerned officials at the district/ division/ block may be advised to take the suitable plant protection measures immediately. The detailed information may also be sent to the Directorate through email ppa@nic.in or appa.ipm-ppqs@gov.in urgently to apprise the same to Department of Agriculture & Farmers Welfare.

Encl: as above

Yours faithfully

Plant Protection Adviser

Copy for information:

- 1. PPS to Joint Secretary(PP), DA & FW, Krishi Bhawan, New Delhi- 110001
- 2. PPS to PPA for information
- 3. Officer In-charges, All CIPMCs with directions to conduct regular survey in the area to ensure and necessary follow-up with the state authorities.