



# FAW: CONTROL AND MANAGEMENT STRATEGIES



Bureau of Plant Industry,  
Department of Agriculture

## **GENERAL STRATEGIES**

### **from Farmers Level to National Level**

1. Implement pre-emptive measures to avoid and prevent occurrence and spread of FAW.
2. Empower and capacitate the farmers to take early detection and actions.
3. Proactively identify high risks areas and hotspots for FAW and implement intensified surveillance and monitoring.
4. Build capacity of farmers and local technicians to manage early stage of FAW spread.
5. Prepare contingency measures and actions to manage and contain large scale FAW outbreak.
6. Establish support programs to sustain capacity building and awareness in managing FAW.
7. Engage various stakeholders in the management of FAW through effective communication by using available tools/strategies.
8. Undertake Research for Development on FAW Integrated Pest Management.

# CORE STRATEGIES

## **A. PREVENTION/AVOIDANCE**

## **B. MONITORING**

B.1. Early Detection

B.2. Surveillance

## **C. SUPPRESSION**

C.1. Early Infestations (Localize/Small Areas)

C.2. Outbreak (Large Areas)

## **D. RESEARCH FOR DEVELOPMENT**

## **E. SUSTAINABILITY MEASURES**

E.1. Capacity Building

E.2. Networking

# FAW Protocol (1/10)

STRATEGIES	ACTION	DETAILS	RESPONSIBLE AGENCY / PERSON	BENEFICIARIES
<b>A. PREVENTION / AVOIDANCE</b>	1. FAW Awareness Campaign	1. Dissemination of information thru meetings/ briefings seminars, caravans, multi-media platforms (print, broadcast, TV, Social Media)	<b>Lead:</b> BPI, ATI, PhilRice, RFO-RCPC, NCPCC <b>Support:</b> AFID, Commodity Programs, LGU	Farmers Cooperatives and Association (FCAs), Farmers, LGU-AEWs, and other stakeholders
	2. Pest Advisory	2. Issuance of pest advisories before the cropping season	<b>Lead:</b> RFO-RCPC, LGU <b>Support:</b> BPI, Commodity Programs,	FCAs, Farmers
	3. Plant Quarantine (PQ) Regulation	3. Strict enforcement of PQ Order	<b>Lead:</b> BPI -NPQSD <b>Support:</b> Commodity Programs, LGU	FCAs, Individual Farmers, RFOs, LGUs

# FAW Protocol (2/10)

STRATEGIES	ACTION	DETAILS	RESPONSIBLE AGENCY / PERSON	BENEFICIARIES
<b>A.PREVENTION / AVOIDANCE</b>	4. Crop Diversification	4. Intercropping, relay cropping, sequential/alternate cropping, multiple cropping	<b>Lead:</b> Farmers, FCAs <b>Support:</b> Commodity Programs, LGUs	Farmers
	5. Synchronous Planting	5.1. Zoning or clustering of areas into different pest risk outbreaks considering weather and cropping pattern	<b>Lead:</b> RFO-RCPC, LGUs <b>Support:</b> FCAs, Commodity Programs	Farmers
		5.2. Simultaneous or Close Season Planting	<b>Lead:</b> Farmers, FCAs, <b>Support:</b> Commodity Programs, LGUs	Farmers
	6. Field Sanitation	6. Practice clean culture (weeding and plowing under of stubbles just after harvest)	<b>Lead:</b> FCAs, Farmers <b>Support:</b> LGUs, Commodity Programs	FCAs, Farmers

# FAW Protocol (3/10)

STRATEGIES	ACTION	DETAILS	RESPONSIBLE AGENCY / PERSON	BENEFICIARIES
<b>B. MONITORING</b>  <b>B.1. Early Detection</b>	1. Use of trap crops	1. Planting of trap crops (such as legumes) ahead of the main crop (20 days before planting)	<b>Lead:</b> FCAs, Farmers <b>Support:</b> Commodity Programs, LGUs	FCAs, Farmers
	2. Field Inspection	2. Observe presence of FAW's frass (feces), egg masses, larvae, and adult and its initial damages present in trap crops and surrounding plants	<b>Lead:</b> Farmers <b>Support:</b> RFO-RCPC, LGUs	FCAs, Farmers
	3. Use of Pest Attractants	3.1 Use of organic bait trap (Molasses with Vinegar)	<b>Lead:</b> Farmers <b>Support:</b> RFO-RCPC, LGUs	Farmers
		3.2 Use of commercial pheromones and lures	<b>Lead:</b> RFO-RCPCs, <b>Support:</b> BPI, LGUs, NCPC	Farmers

# FAW Protocol (4/10)

STRATEGIES	ACTION	DETAILS	RESPONSIBLE AGENCY / PERSON	BENEFICIARIES
<b>B.2. Surveillance</b>	1. Identification of Hotspots	1.1. Prioritize the conduct of survey in areas planted to Open Pollinated Varieties (OPVs) and in the early stages of crops (seedling to vegetative stages)	<b>Lead:</b> RFO-RCPCs, LGUs <b>Support:</b> BPI, NCPC, Commodity Programs, Farmers	Farmers
		1.2. Check the presence of FAW's frass (feces), egg masses, larvae, adults, and damages following the FAO protocol	<b>Lead:</b> RFO-RCPC <b>Support:</b> BPI, NCPC, Commodity Programs	Farmers
	2. Field Scouting/ Survey	2.1. Validate the presence and damages of FAW following the FAO protocol	<b>Lead:</b> RFO-RCPC, LGU <b>Support:</b> Commodity Programs, BPI, NCPC	Farmers

# FAW Protocol (5/10)

STRATEGIES	ACTION	DETAILS	RESPONSIBLE AGENCY / PERSON	BENEFICIARIES
<b>C. SUPPRESSION</b>  <b>C.1. Early Infestation (Localized/ Small Areas)</b>	1. Physical and Cultural Methods	1.1. Synchronous Planting	<b>Lead:</b> RFO-RCPC <b>Support:</b> Commodity Programs, LGUs	Farmers
		1.2. Manual eradication (Tiris-Cide) and incentivize collection of larvae	<b>Lead:</b> LGUs <b>Support:</b> RFO-RCPC	Farmers
		1.3. Add sand or ashes in leaf whorl	<b>Lead:</b> Farmers, LGUs <b>Support:</b> RFO-RCPC, BPI	Farmers
	2. Biological Control	2.1. Mass production and release pure/virulent culture of different Biological Control Agents ( <i>Metarhizium</i> , <i>Trichogramma</i> , earwigs)	<b>Lead:</b> RFO-RCPC <b>Support:</b> BPI, LGUs, Commodity Programs	Farmers
	3. Pesticides Control	3.1. Provision and spot application of organic and inorganic pesticides	<b>Lead:</b> RFO-RCPC <b>Support:</b> BPI, LGUs, Commodity Programs, Farmers	Farmers



# FAW Protocol (6/10)

STRATEGIES	ACTION	DETAILS	RESPONSIBLE AGENCY / PERSON	BENEFICIARIES
<b>C.2. Outbreak (Large Areas)</b>	1. Chemical and Biological Control	1. Provision and application of chemical and biological pesticides approved by the FPA or BAFS, respectively for “Stopgap” application	<b>Lead:</b> RFO-RCPC, Farmers <b>Support:</b> LGUs, Commodity Programs	Farmers
	2. Integrated Pest Management (IPM)	2. Combined use of cultural, physical, biological, and organic/inorganic pesticides	<b>Lead:</b> BPI, RFO-RCPC, Farmers <b>Support:</b> LGUs,	Farmers

# USE OF BIOLOGICAL CONTROL AGENTS



For Larvae: (L to R) Entomopathogens, Nuclear Polyhedrosis Virus (NPV), Lacewing



For eggs: Parasitoid wasp



For eggs and larvae: Ladybird beetle



**REPUBLIC OF THE PHILIPPINES**  
**DEPARTMENT OF AGRICULTURE**  
**FERTILIZER AND PESTICIDE AUTHORITY**  
**LIST OF REGISTERED AGRICULTURAL PESTICIDES**  
**(For the control of fall armyworm in corn)**

NAME OF COMPANY	ACTIVE INGREDIENT	PRODUCT NAME	CONCENTRATION	FORMULATION TYPE	USE/S	TOXICITY CATEGORY	REGISTRATION NO.	EXPIRY DATE	MODE OF ACTION	CROPS	PESTS / WEEDS / DISEASES	RECOMMENDED RATE
AVC CHEMICAL CORPORATION	CHLORFLUAZURON	ATABRON 5 E	50 g/L	EC	INSECTICIDE	4	060-207-0401	09 17 2020		Corn	Fall armyworm	(20-40) mL/16L water; (0.5-1.0)/ha
BAYER CROPS SCIENCE, INC.	TETRANILIPROLE	YEOVAL SC 200	200 g/L	SC	INSECTICIDE	3	284-515-4869	08 06 2020	-	Corn	Fall armyworm	6-8 mL product/16L water, 200-250 mL product/ha
DOW AGRO SCIENCES B.V.	SPINETORAM	EXALT 60 SC	60g/L	SC	INSECTICIDE	4	013-452-3600	08 27 2020	-	Corn	Fall armyworm	500 mL product/ha
FMC AGRO PHILIPPINES INC.	CARBOSULFAN	MARSHAL 200 SC	200g/L	SC	INSECTICIDE	2	598-223-4184	08 20 2020	-	Corn	Fall armyworm	(30-40) mL product/16Liters water, Spray volume 240 Liters (15 tankloads)/ha
FMC AGRO PHILIPPINES INC.	CHLORANTRANILIPROLE	PREVATHON SC	50 g/L	SC	INSECTICIDE	4	598-393-4410	08 20 2020	-	Corn	Fall armyworm	(30-40) mL product/16Liters water, Spray volume 240 Liters (15 tankloads)/ha
FMC AGRO PHILIPPINES INC.	CYANTRANILIPROLE	BENEVIA	100 g/L	OD	INSECTICIDE	4	598-485-4577	08 20 2020	-	Corn	Fall armyworm	67 mL product/16 Liters water, Spray volume 240 Liters (15 tankloads)/ha
FMC AGRO PHILIPPINES INC.	INDOXACARB	AMMATE 15 EC	150 g/L	EC	INSECTICIDE	2	598-353-4411	08 20 2020	CONTACT	Corn	Fall armyworm	(10-15) mL product/16Liters water, Spray volume 240 Liters (15 tankloads)/ha
FMC AGRO PHILIPPINES INC.	INDOXACARB	STEWART 30 WDG	300 g/Kg	WDG	INSECTICIDE	3	598-353-4412	08 20 2020	CONTACT	Corn	Fall armyworm	4 grams product/16Liters water, Spray volume 240 Liters (15 tankloads)/ha
LEADS AGRICULTURAL PRODUCTS CORPORATION	BACILLUS THURINGIENSIS SUBSP. AIZAWAI	AZTRON WDG	103 g/kg	WDG	INSECTICIDE	4	099-094-2518	08 06 2020		Corn	Fall army worm	10-20 grams product/16 liter, 250-500 grams product/ha
LEADS AGRICULTURAL PRODUCTS CORPORATION	BACILLUS THURINGIENSIS VAR. KURSTAKI	DIPEL WP	32 g/Kg	WP	INSECTICIDE	4	099-094-2965	08 06 2020		Corn	Fall army worm	50 grams product/16L knapsack sprayer, 1250 grams/ha
LEADS AGRICULTURAL PRODUCTS CORPORATION	PYRIDALYL	PLEO 10 EC	100 g/L	EC	INSECTICIDE	4	099-381-2519	08 06 2020	CONTACT	Corn	Fall armyworm	40-60 mL product/16Liter, 1-1.5 L product/ha
MONSANTO PHILIPPINES INC.	CRY1A.105 & CRY2AB2	MON 89034 (YIELD GARD 2)	-	-	PIP	-	PIP-02-03-04	08 05 2020	-	Corn	Fall armyworm	-
SYNGENTA PHILIPPINES INC.	CHLORANTRANILIPROLE + THIAMETHOXAM	VIRTA KO 40 WG	200+200 g/Kg	WG	INSECTICIDE	4	011-416-2681	08 06 2020	CONTACT		Fall armyworm	(150-200) grams product/ha, Spray volume (160-190) Liters/ha
SYNGENTA PHILIPPINES INC.	EMAMECTIN BENZOATE	PROCLAIM OPTI 5 WG	50 g/kg	WG	INSECTICIDE	3	011-503-4752	08 06 2020	CONTACT	Corn	Fall armyworm	25 grams product/16L Knapsack sprayer; 10-12 Tankloads/ha
SYNGENTA PHILIPPINES INC.	LUFENURON	MATCH 050 EC	50g/L	EC	INSECTICIDE	-	011-321-0918	08 06 2020	-	Corn	Fall armyworm	0.60-0.80) Liters product/ha
TEXICON AGRIVENTURES CORPORATION	LAMBDA CYHALOTHRIN	ARIBA 2.5 EC	25 g/L	EC	INSECTICIDE	2	242-204-1802	09 10 2020	-	Corn	Fall armyworm	2 Liters product/16L water; Spray Volume 5 Liters/ha
VERCA AGRO CHEM, INC.	(E,Z) 9,11 TETRADECADIENYL ACETATE	SPODO-LURE	975.2 g/Kg	-	OTHERS	4	647-509-4794	05 20 2020	-	Corn	Fall armyworm	5 traps/hectare
VERCA AGRO CHEM, INC.	(Z)-9-TETRADECENYL ACETATE	FALL ARMY-LURE	2 mg/Lure	-	INSECTICIDE	4	647-519-4926	10 02 2020	-	Corn	Fall armyworm	90 mg A.I./HA or Lures/ha

# FAW Protocol (7/10)

STRATEGIES	ACTION	DETAILS	RESPONSIBLE AGENCY / PERSON	BENEFICIARIES
<b>D. RESEARCH FOR DEVELOPMENT</b>	1. Basic Research	1. FAW biology, ecology, morphology, molecular studies, etc.	<b>Lead:</b> Academe, NCPC, PhilRice, DOST, PCAARRD	Farmers
	2. Applied Research	2.1. Yield and monetary loss assessment, efficacy trials of pesticides (organic and inorganic) approved by FPA, insecticides resistance management	<b>Lead:</b> BPI, NCPC, ROS <b>Support:</b> BAR, PCCAARD	Farmers
		2.2. Location specific/cultural management technology verification and application	<b>Lead:</b> ROS, BPI, NCPC <b>Support:</b> BAR	Farmers

# FAW Protocol (8/10)

STRATEGIES	ACTION	DETAILS	RESPONSIBLE AGENCY / PERSON	BENEFICIARIES
<b>E. SUSTAINABILITY</b>  <b>E.1.Capacity Building</b>	1.Training (Farmer Empowerment)	1.1. Conduct of Training of Trainers (TOT) for Technicians	<b>Lead:</b> ATI <b>Support:</b> BPI, RFO-RCPC, LGUs	LGU-AEWs
		1.2. Conduct of Farmers Field School (FFS) for Farmers	<b>Lead:</b> Regional ATI, RFO-RCPC, <b>Support:</b> LGUs	Farmers
		1.3. Conduct of Farmers' Field Day	<b>Lead:</b> RFO-RCPC, Commodity <b>Programs</b> <b>Support:</b> LGUs,	Farmers

# FAW Protocol (9/10)

STRATEGIES	ACTION	DETAILS	RESPONSIBLE AGENCY / PERSON	BENEFICIARIES
<i>'Cont.</i> <b>E.1.Capacity Building</b>	2.Infographics	2. Development and distribution of infographics about the identification and management of FAW	<b>Lead:</b> ATI, AFID <b>Support:</b> RFO-RCPC, AFIS	LGUs, Farmers
	3.Documentation	3.1. Generate information on FAW best management practices including indigenous knowledge	<b>Lead:</b> ATI, AFID <b>Support:</b> RFO-RCPC, AFIS	RFO and Farmers
		3.2. Establish and maintain database on FAW information	<b>Lead:</b> BPI, RFO-RCPC <b>Support:</b> LGUs, Farmers,	Farmers

# FAW Protocol (10/10)

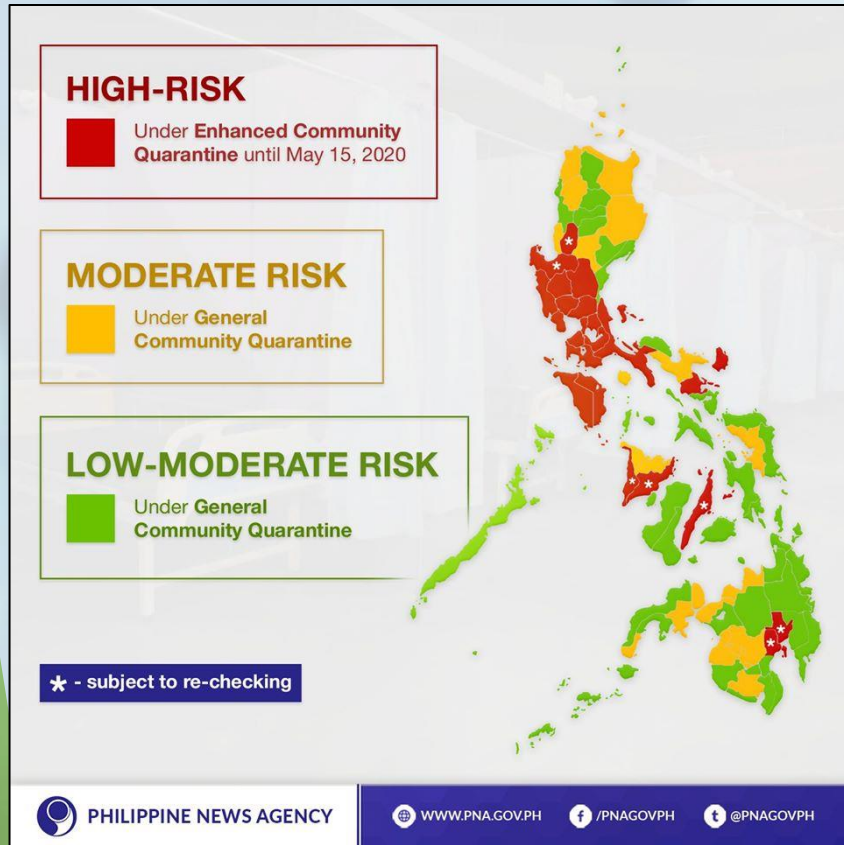
STRATEGIES	ACTION	DETAILS	RESPONSIBLE AGENCY / PERSON	BENEFICIARIES
<b>E.2 Networking</b>	1. Linking with all stakeholders in Crop Protection	1. Sharing information and continuous collaboration	<b>Lead:</b> BPI, RFO-RCPC, ATI <b>Support:</b> LGUs, FCAs	Farmers

# Challenges





# Status of DA Regional Offices re FAW Monitoring viz-a-vis COVID-19



- Most of the personnel of Regional DA have limited movement.
- Some are implementing skeletal staffing.
- Coordination with Local Government Units is also limited.
- Resources are scarce like vehicles
- Most needed supplies are not yet available since the processing of requests were not completed due pandemic related regulation
- Some of the budgets were realigned such that some activities were curtailed

# Strategies on Managing FAW while on Community Quarantine



A. Release of FAW Advisories



B. Regular coordination with the Regional Crop Protection Centers who are on top of FAW monitoring through phones, email etc.



C. Development and release of FAW infographics which served as reminders for regional, provincial and farmers who are concerned with FAW



D. Coordinating closely on the mass production, maintenance and release of Biological Control Agents (BCA) in the region. BCA are sustainable agents for FAW management as long as the environment where they are released are conducive for their multiplication

# THANK YOU

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