RECORD SECTION
Ministry of Agriculture, Fisheries and Agrarian Reform
Bangsamoro Autonomous Region in Muslim Mindanao

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Name and Agency of Sender/Recipient: Engr. Ismail A. Guiamel, Ronjamin M. Maulana, Ph.D., Jamer Guimba

Document Title/Subject: MO No. 048-07 Pest Advisory on Corn Pets and Diseases in Maguindanao

Type of Transaction:	*Date*	*Time*	*Released by Records Section:*	*Date*	*Time*
Released	26/07/2021	2:44 pm	Sittie Almira Ali	26/07/2021	3:20 PM

No.	SIGNATURE OVER PRINTED NAME	DIVISION/SECTOR/UNIT SERVICES	DATE	TIME	REMARKS	
					Departure(Date&Time)	*Arriving (Date&Time)*
1	ALI MOHAMMAD ASRAFH N.	DG Agriculture	7/26/21	4:41PM		
2	Samsodin M. Bunca	Regulatory	7/26/21	4:45pm		
3	Bricon M. Matud	MAFAR-MAG.	7/27/21		7/27/21	
4						
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Republic of the Philippines
Bangsamoro Autonomous Region in Muslim Mindanao
MINISTRY OF AGRICULTURE, FISHERIES AND AGRARIAN REFORM
BARMM Compound, Gov. Gutierrez Ave., RH-7, Cotabato City, Philippines, 9600

MEMORANDUM ORDER
No. 048-07
Series of 2021

BANGSAMORO AUTONOMOUS REGION IN MUSLIM MINDANAO
MINISTRY OF AGRICULTURE, FISHERIES, AND AGRARIAN REFORM
Office of the Minister
RELEASED
Date: JUL 26 2021 Time: 2:05 PM
By:
MINISTRY OF AGRICULTURE, FISHERIES AND AGRARIAN REFORM
Maguindanao Provincial Office
RECORDS SECTION

TO: **ENGR. ISMAIL A. GUIAMEL**
Director II, Agriculture Services

RONJAMIN M. MAULANA, Ph.D
Provincial Head, MAFAR-Maguindanao

Cc: **JAMER GUIMBA**
Chief, Regulatory Division

FROM: **MINISTER**

RECEIVED
Date: 07/27/21 Time:
By: Control No. 043

DATE: **July 12, 2021**

SUBJECT: **Pest Advisory on Corn Pests and Diseases in Maguindanao**

In reference to the **Corn Pest Monthly Bulletin** of Bureau of Plant Industry-Crop Pest Management Division (BPI-CPMD) for the month of June 2021, and based on the result of the data analysis on research project titled " **Development of Early Warning System and Database Management of Corn Arthropod Pest and Diseases in the Bangsamoro Autonomous Region in Muslim Mindanao"** funded by the Bureau of Agricultural Research (DA-BAR) in collaboration with Bureau of Plant Industry-Crop Pest Management Division (BPI-CPMD), you are hereby advise to disseminate information generated to alert corn farmers on crop protection and management.

Take note also of the **Leaf spot** as recorded alarming disease with moderately severe damage observed in Tuayan, Datu Hoffer, Maguindanao.

Attached are the profile of corn arthropod pest and diseases, and the management options for the betterment of the farming communities in the region.

For reference.

MINISTRY OF AGRICULTURE, FISHERIES AND AGRARIAN REFORM
RELEASED
2021 -07- 26
Time: 2:44PM
By:

MOHAMMAD S. YACOB, Ph.D.
Minister

PEST ADVISORIES FOR CORN IN THE BANGSAMORO AUTONOMOUS REGION IN MUSLIM MINDANAO

Location: DATU HOFFER AMPATUAN, MAGUINDANAO

INSECT PESTS

Common Name: **Fall Armyworm (FAW)**
Order/ Family: **Lepidoptera: Noctuidae**
Scientific Name: ***Spodoptera frugiperda***

Source: Datu Hoffer, Maguindanao

Stages of Development:
Eggs: 2-3 days
Larva: 14-22 days (6 larval instars)
Pupa: 8-30 days
Adult: 10-22 days

Damage Characteristics:
Feed on whole plant above soil level

Management Strategies:
- Ploughing under corn stubbles after harvest
- Strictly follow synchronous planting
- Field sanitation
- Hand picking
- Release of *Trichogramma chilonis* at different intervals
- Release of Earwig, *Euborella sp.* at different intervals
- Application of *Metarhizium sp.* at different intervals
- Application of FDA approved and recommended insecticide with contact and stomach activity

Common Name: **Common Cutworm**
Order/ Family: **Lepidoptera/ Noctuidae**
Scientific Name: ***Spodoptera litura*** Fabricius

image source: https://www.flickr.com/photos/58716552@N02/8703665147/

Stages of Development:
Eggs- 2-3 days
Larva- 20 days
Pupa- 8-11 days
Adult- 5-7 days

Damage Characteristics
Young corn plants may be completely defoliated, cut stem and leaves including veins and midribs almost consumed.

Management Strategies:
- Plow fields to remove weeds which may serve as alternate hosts
- Use light traps or sex pheromone traps for monitoring
- Practice crop rotation
- Plant Bt corn hybrids
- Release of Braconid egg parasitoid
- Spray nucleopolyhedrosis virus (NPV)
- Use pyrethroids, carbamates, and organophosphates
- Collection and crush egg masses and early larval stages

- Frequent rainfall
- Infected leaves on soil
- Warm temperature ranging from 22^{0}C to 30^{0}C

Management Strategies:
- ➢ Use varieties against this fungus (resistant varieties)
- ➢ Field sanitation (clean plowing, remove infected debris and decayed plant parts)
- ➢ Balance soil fertility
- ➢ Low plant populations
- ➢ Crop rotation
- ➢ Importance in irrigation system

Disease Name: **Leaf Blight**
Causal Type: **Fungi**
Scientific Name: ***Diplodia macrospora*** Earle

Crop Stage of Corn Affected:
Vegetative and post flowering stage

Favorable Environmental Condition:
- Dry conditions in the early stage
- Warm wet environment at 2-3 weeks after silking (promote disease development)
- High nitrogen and low phosphorus levels
- High plant density and short planting distance

Image source: https://www.realagriculture.com/2020/07/corn-school-diplodia-leaf-streak-heading-north/

Management Strategies:
- ➢ Use varieties or hybrid seeds with at least moderate resistance
- ➢ Deep plowing and field sanitation, it helps in reducing the initial source of inoculum
- ➢ Use of fungicides

Disease Name: **Brown spot**
Causal Type: **Fungi**
Scientific Name: ***Physoderma maydis***

Crop Stage of Corn Affected:
Leaf, leaf sheath and stalk

Favorable Environmental Condition:
- Flooded field
- Strong winds
- Warm temperature

Management Strategies:
- ➢ Field sanitation
- ➢ Crop rotation
- ➢ Tillage
- ➢ Foliar fungicides labeled for *Physoderma* brown spot

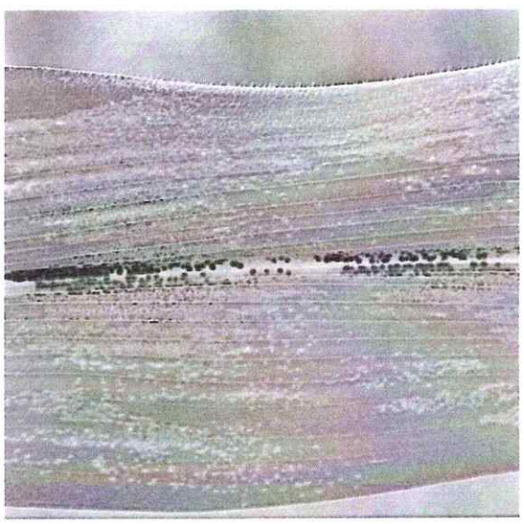


Image source: https://cropprotectionnetwork.org/resources/articles/diseases/physoderma-brown-spot-of-corn

Common Name: **Corn Planthopper**
Order/ Family: **Hemiptera: Delphacidae**
Scientific Name: ***Stenocranus pacificus*** Kirkaldy


Source: Datu Hoffer, Maguindanao

Stages of Development:
Egg: 4-10 days
Nymph: 16 days
Adult: 2-27 days (winged male), 3-18 days (wingless male); 7-14 days (winged female), 8-39 days (wingless female).

Damage Characteristics:
Drying up of leaves due to sucking. Blackening of leaves due to sooty molds. Hopper burn bug when infestation level is very high.

Management Strategies:
- Practice follow period, if crop rotation is not possible (other non-graminaceous crop) this is to break the cycle of the planthoppers
- Plow under or burn corn stubbles or plant debris immediately after harvest to kill remaining eggs, nymphs and some adults
- Follow recommended fertilizer requirement and split nitrogen application. Excessive use of nitrogen-based fertilizers makes plant susceptible and attractive
- Increase planting distance enough to sunlight to penetrate (shady areas favorable to planthoppers)
- Intercrop leguminous plants as refuge for natural enemies, soil conditioner and added income
- Planthopper eggs are parasitized by fairy wasp (*Anagrus sp.)*
- Mirid bugs (*Cyrtorhinus lividipennis*) prey on eggs
- Dragon flies and damselflies prey on moving adults
- Spider prey on nymphs and adults
- Seed treatment with neonicotinoids, organophosphates and carbamates

DISEASES OF CORN

Disease Name: **Leaf Spot**
Causal Type: **Fungi**
Scientific Name: ***Cercospora zeae-maydis*** Tehon & E.Y. Daniels


Source: Upi, Maguindanao

Crop Stage of Corn Affected:
Flowering stage, fruiting stage and vegetative growing stage

Affected Plant Parts:
Fruit- reduced size
Leaf- abnormal colors, yellowed or dead, necrotic areas, fungal growth
Seed- Shriveled
Stem- lodging, broken stems
Whole pant- early senescence, plant dead, dieback

Favorable Environmental Condition:
- High humidity (90% to 98%)

CORN PEST MONTHLY BULLETIN

June 2021

Volume 1. Issue No. 6

TOTAL ACTIVE DATA

9,814

as of June 30, 2021 | 8:00 pm

NO. OF ALARMING SITES

5

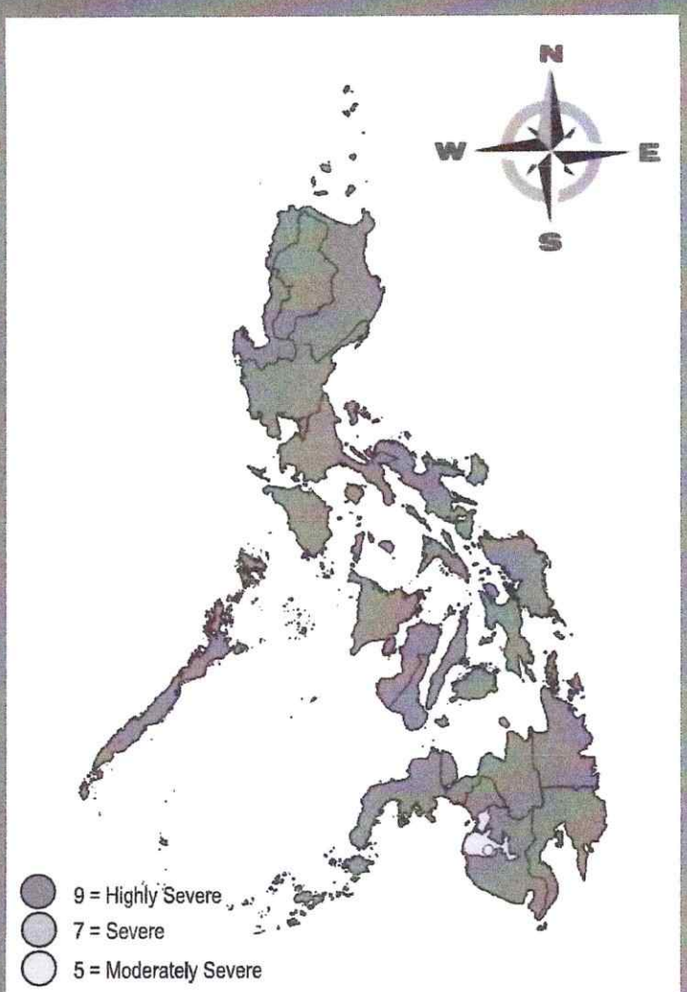
as of June 30, 2021 | 8:00 pm

TOP THREE (3) MAJOR ARTHROPOD PEST

1. Fall Armyworm - 10.20 %
2. Cutworm - 2.48 %
3. Corn Planthopper - 2.28 %

TOP THREE (3) MAJOR DISEASES

1. Leaf Spot - 6.06 %
2. Leaf Blight - 2.41 %
3. Brown Spot - 1.45 %



SEVERITY	% INCIDENCE (REGIONAL LEVEL)	ALARMING PEST/ ALARMING DISEASES	NO. OF ALARMING SITES/LOCATION	REGION	PROVINCE	MUNICIPALITY	BARANGAY	FARM ID
5	20.76	Leaf Spot	5	BARMM	MAGUINDANAO	DATU HOFFER AMPATUAN	TUAYAN	15801456015
			5	BARMM	MAGUINDANAO	DATU HOFFER AMPATUAN	TUAYAN	15801456016
			5	BARMM	MAGUINDANAO	DATU HOFFER AMPATUAN	TUAYAN	15801456017
			5	BARMM	MAGUINDANAO	DATU HOFFER AMPATUAN	TUAYAN	15801456018
			5	BARMM	MAGUINDANAO	DATU HOFFER AMPATUAN	TUAYAN	15801456021

RECOMMENDATIONS

- Alert staff to monitor nearby areas with high infestations of recorded pest.
- Give technical assistance and disseminate pest advisories to farmers.
- Information campaign thru multimedia, distribution of IEC materials
- Regular and on-time validation should be done by Regional data managers to avoid delayed reflection of data to the system.

ANNOUNCEMENT

What: Regional Data Managers Monthly Meeting
When: July 22, 2021 | 9:00 am to 11:00 am
Via **Google Meet**

bpi.cornsurveillanceproject@gmail.com
(8) 236-0598
0915-517-9306