PRE-SEMESTER BULLETIN

December 2020

REGION IV - MIMAROPA

Common pests and rice varieties planted in the region

TABLE 1. Commonly observed pests in the region for the 1st semesters of 2019 and 2020.

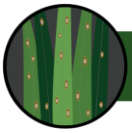
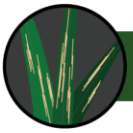
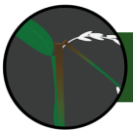
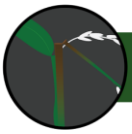
2019 | Semester 1	2020 | Semester 1
 Whitehead	 Whitehead
 Bacterial leaf blight	 Brown spot
 Bacterial leaf streak	 Bacterial leaf blight
 Neck blast	 Sheath blight
 Sheath blight	 Neck blast

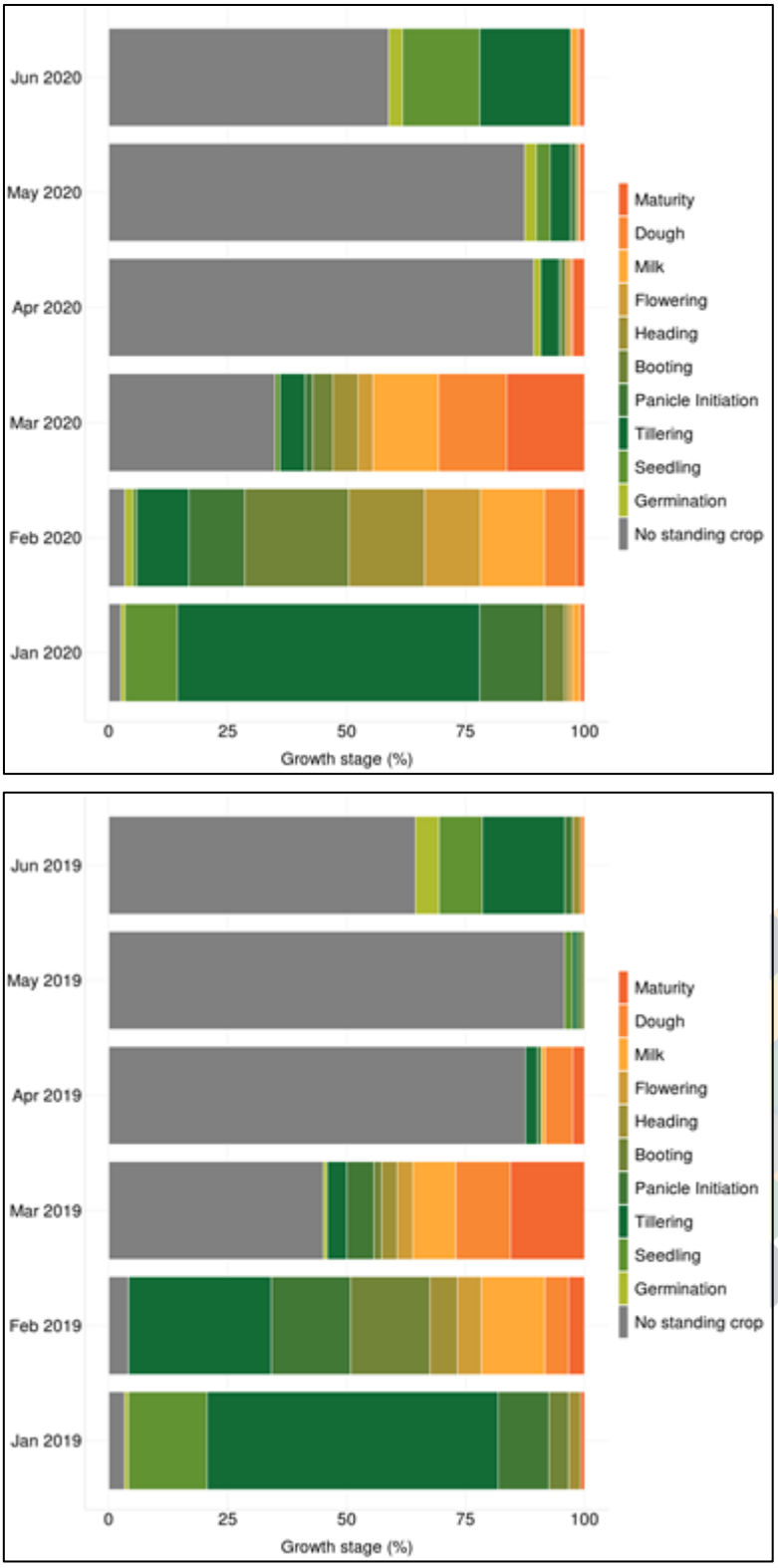
TABLE 2. Commonly planted varieties in the region for the 1st semesters of 2019 and 2020.

2019 | Semester 1	2020 | Semester 1
NSIC Rc218 SR	NSIC Rc218 SR
PSB Rc18	NSIC Rc132H
	PSB Rc18
Based on 89 monitoring fields	Based on 94 monitoring fields

Disclaimer: All the data presented in this report are based on the monthly monitoring of farmers' fields by regional data collectors of PRIME.

Growth stages

FIGURE 1. Percentage of crop growth stage of fields by month.



Disclaimer: All the data presented in this report are based on the monthly monitoring of farmers' fields by regional data collectors of PRIME.

Monitored fields and data collectors

Municipalities surveyed	**Occidental Mindoro**: Rizal, Sablayan, and Santa Cruz **Oriental Mindoro**: Bongabong, Gloria, and Naujan
Monitoring date	January 2020 - June 2020
Number of monitoring fields	212
Data collectors	Crisner Carino, Crispin Magluyan, Jeherson Alejos, Jofel Barrion, John Paul Alcobera, Mark Wisdom Gayares, Raffy Malimata, Robert Jayson Rica, and Thomie Vidal

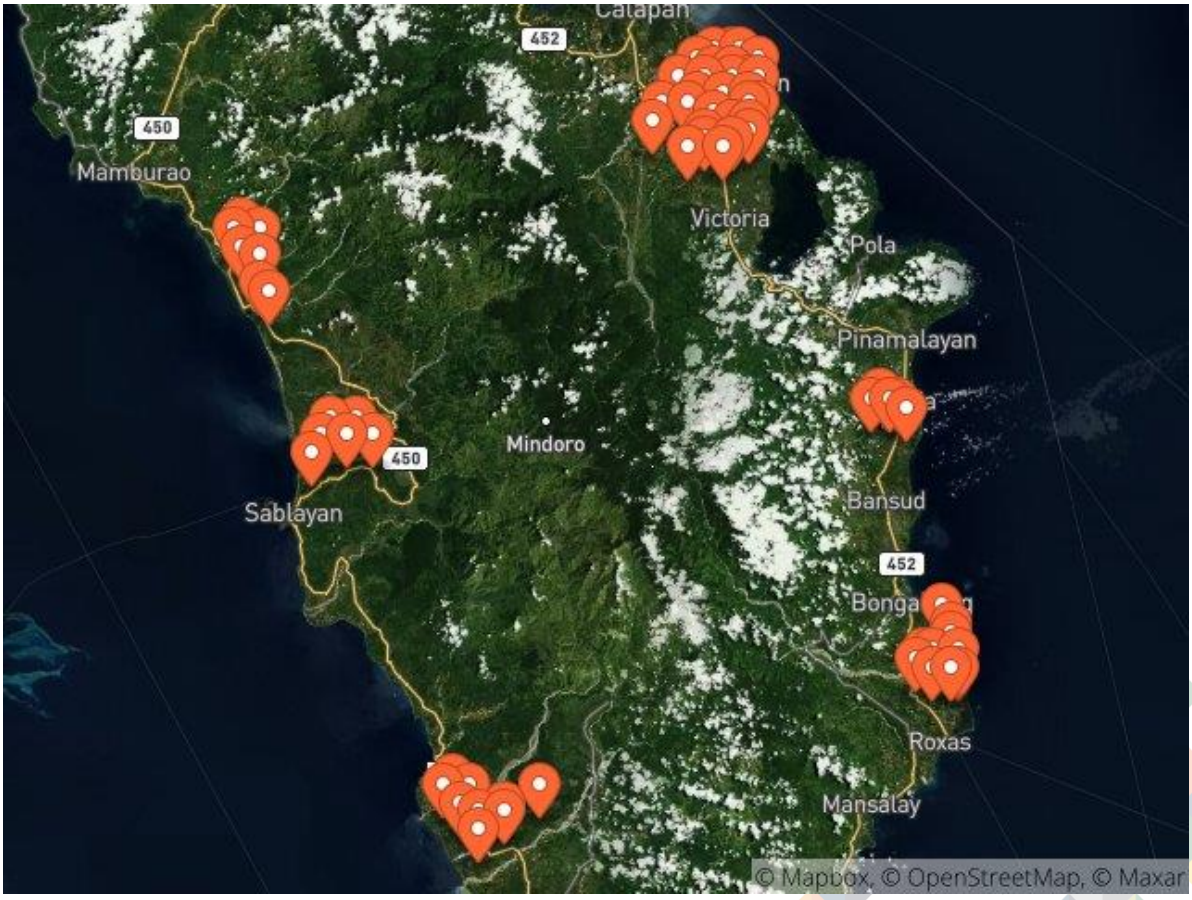


FIGURE 2. Monitored barangays in MIMAROPA from January 2020 to June 2020. Each barangay is represented by 1 marker.

Disclaimer: All the data presented in this report are based on the monthly monitoring of farmers' fields by regional data collectors of PRIME.

Municipalities surveyed	**Oriental Mindoro**: Bongabong, Gloria, and Naujan
Monitoring date	January 2019 - June 2019
Number of monitoring fields	123
Data collectors	Crisner Carino, Crispin Magluyan, Jeherson Alejos, Jofel Barrion, John Paul Alcobera, Raffy Malimata, and Thomie Vidal

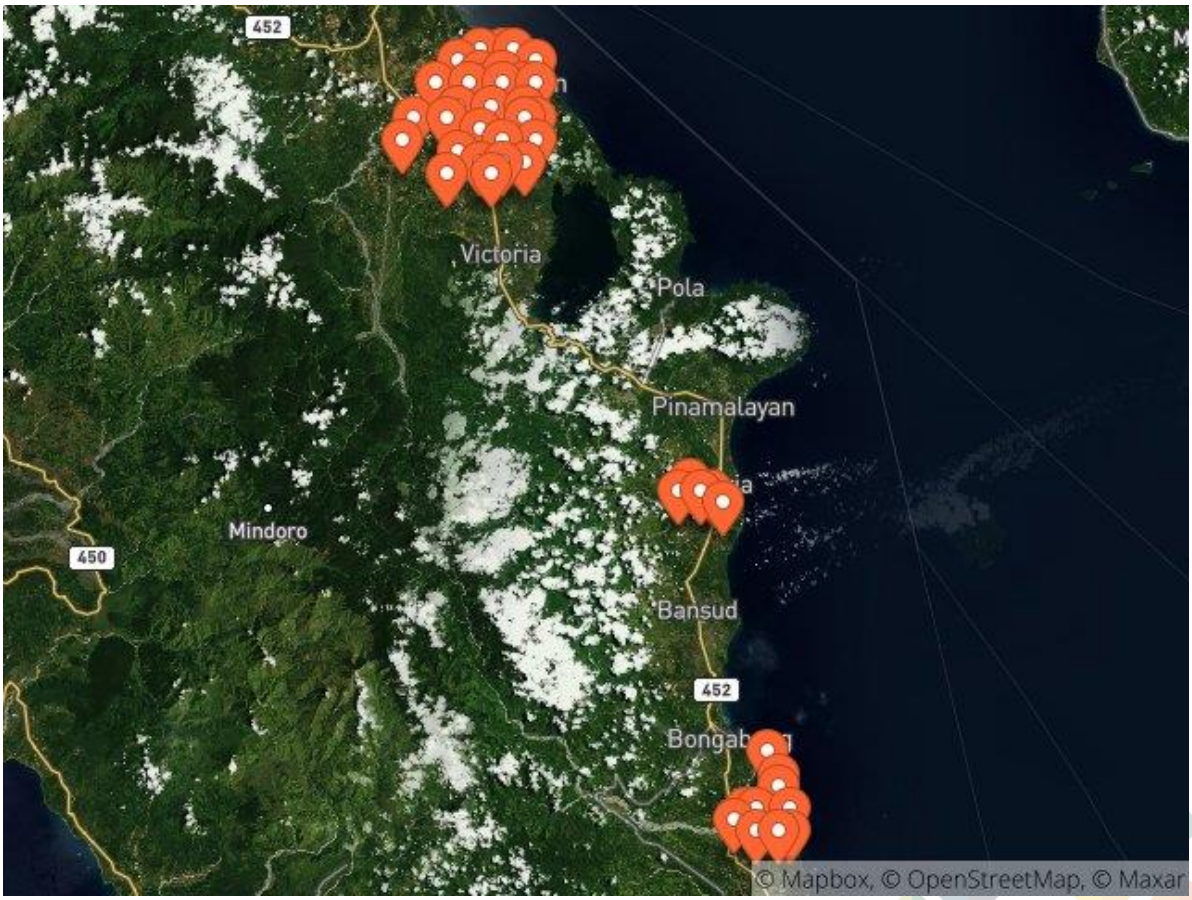


FIGURE 3. Monitored barangays in MIMAROPA from January 2019 to June 2019. Each barangay is represented by 1 marker.

Disclaimer: All the data presented in this report are based on the monthly monitoring of farmers' fields by regional data collectors of PRIME.

At a glance

Table 3. Mean incidence of pest injuries, count of insect pests, and percentage of weed cover by month from January to June 2020.

MIMAROPA	2020					
	JAN	FEB	MAR	APR	MAY	JUN
A. FOLIAR DISEASES						
Bacterial leaf blight	0.4	1.4	1.3	1.3	0.9	0.4
Bacterial leaf streak	0.4	1.1	1.2	0.5	0.1	0.2
Brown spot	0.0	0.3	2.9	4.2	1.0	0.5
Leaf blast	0.0	0.3	0.9	0.8	0.1	0.2
Red stripe	0.0	0.0	0.2	0.4	0.3	0.2
B. DISEASE OR PEST INJURY ON TILLERS						
Deadheart	0.3	0.3	0.2	0.2	0.1	0.2
Sheath blight	0.0	0.7	2.1	1.2	0.5	0.3
C. DISEASE OR PEST INJURY ON PANICLES						
Neck blast	0.0	0.0	0.9	0.1	0.4	8.3
Whitehead	0.3	2.2	2.2	2.7	1.3	0.0
D. SYSTEMIC DISEASE OR PEST INJURY						
Bugburn	0.0	0.0	0.0	0.0	0.0	0.0
Hopperburn	0.0	0.0	0.0	0.0	0.0	0.0
Tungro	0.1	0.0	0.0	0.0	0.0	0.0
E. INSECT COUNT						
Brown planthopper	0.0	0.0	0.1	0.0	0.1	0.0
Green leafhopper	0.0	0.2	0.2	0.2	0.1	0.0
Rice black bug	0.0	0.0	0.0	0.1	0.0	0.0
Rice bug	0.0	0.4	1.3	0.9	0.4	0.6
Rice grain bug	0.0	0.0	0.0	0.0	0.0	0.0
F. RAT INJURY	0.0	0.1	0.2	0.2	0.1	0.1
G. WEED COVER	0.5	3.1	1.9	1.0	0.6	0.5

Mean of all monitoring fields.

Disclaimer: All the data presented in this report are based on the monthly monitoring of farmers' fields by regional data collectors of PRIME.

Table 4. Mean incidence of pest injuries, count of insect pests, and percentage of weed cover by month from January to June 2019.

MIMAROPA	2019					
	JAN	FEB	MAR	APR	MAY	JUN
A. FOLIAR DISEASES						
Bacterial leaf blight	0.6	2.0	1.9	0.8	1.3	0.4
Bacterial leaf streak	0.5	1.0	0.7	0.6	0.1	0.1
Brown spot	0.2	0.4	0.8	0.5	0.1	0.3
Leaf blast	0.1	0.3	0.6	0.2	0.6	0.1
Red stripe	0.0	0.0	0.0	0.0	0.0	0.0
B. DISEASE OR PEST INJURY ON TILLERS						
Deadheart	0.5	0.4	0.3	0.9	0.0	0.2
Sheath blight	0.1	0.5	0.7	1.7	0.0	0.8
C. DISEASE OR PEST INJURY ON PANICLES						
Neck blast	1.4	0.2	0.4	2.0	0	0.0
Whitehead	1.7	1.9	1.1	1.2	0	1.0
D. SYSTEMIC DISEASE OR PEST INJURY						
Bugburn	0.0	0.0	0.0	0.0	0.0	0.0
Hopperburn	0.0	0.0	0.0	0.0	0.0	0.0
Tungro	0.0	0.0	0.0	0.0	0.0	0.0
E. INSECT COUNT						
Brown planthopper	0.0	0.0	0.2	0.0	0.0	0.0
Green leafhopper	0.0	0.1	0.2	0.2	0.0	0.0
Rice black bug	0.0	0.0	0.0	0.1	0.0	0.0
Rice bug	0.0	0.1	0.1	0.5	0.0	0.1
Rice grain bug	0.0	0.0	0.0	0.0	0.0	0.0
F. RAT INJURY	0.1	0.1	0.0	0.1	0.0	0.1
G. WEED COVER	0.3	1.9	3.7	4.4	5.3	0.9

Mean of all monitoring fields.

Disclaimer: All the data presented in this report are based on the monthly monitoring of farmers' fields by regional data collectors of PRIME.

Management of major pests

This section describes the management of the most important pests during the reporting period. A pest is operationally considered important if the mean incidence in at least one month was 5% or higher.

Bacterial leaf blight

1. The most practical and economical approach to manage blast is to grow a resistant variety. Rotate varieties with different levels of resistance because a resistant variety may later become susceptible if grown continuously across several cropping seasons.
2. Use optimum seeding rate (80 kg per hectare) for direct-seeded rice and optimum plant spacing (e.g., 20cm x 20cm) for transplanted rice. A dense plant canopy creates a favorable microclimate for disease development (reduced sunlight penetration, longer leaf wetness duration and cooler temperature).
3. Apply only the recommended amount of nitrogen. Excessive amount of nitrogen favors the development of most rice diseases.
4. Manage the application of nutrient fertilizer. Apply the required amount of nitrogen in splits instead of applying all the required amount at the start of the cropping season. Nitrogen makes the plant tissues softer and creates a dense canopy that results in favorable microclimate for disease development.
5. Apply potassium and other required nutrients in addition to nitrogen. Potassium reduces the amount of most rice diseases.
6. Apply calcium silicate fertilizer or silicon fertilizer when feasible.
7. Remove weeds from the field because the pathogen can survive and cause disease on several weed species.
8. Use copper fungicides as last resort in controlling the disease. Copper fungicides should be applied with caution because copper accumulates in the soil surface (does not leach easily) and in the roots. Copper toxicity deforms roots and may eventually reduce yield.
9. Avoid using antibiotics because bacteria easily develop resistance to antibiotics. IRRI plant pathologists have observed that several strains of isolates collected from farmers' fields in the Philippines are resistant to antibiotics.

10. If plants had severe disease, cut the stubbles close to the ground and remove them from the field. A less laborious option is to immediately plow or rotavate the field after harvest to incorporate infected stubbles and crop residues in the soil.
11. Avoid ratooning because the pathogen can survive on ratoon.
12. Keep the field dry during the fallow period to control the pathogens in infected stubbles.

Brown spot

1. The most practical and economical approach to manage brown spot is to grow a resistant variety
2. When feasible, improve soil fertility by regularly monitoring nutrients in the soil and the application of required fertilizers.
3. If possible, the investigate the occurrence of Akiochi, a nutritional disorder which is caused by excessive concentration of hydrogen sulfide in the soil and results in reduced nutrient uptake in some surveyed fields. Brown spot develops on plants affected by Akiochi and has, in fact, been used as its indicator. It occurs in irrigated fields that are poorly drained and have excessive organic matter. Low decomposition of stubbles, which usually occurs in areas with short fallow period, results in high organic matter.
4. Use certified seeds or clean seeds to prevent infected seeds. Brown spot is a seedborne disease, which means that growing an infected seed will result in diseased plants during the cropping season. Clean seeds can be cleaned manually using flotation method which consists of the following steps:

    a. Dissolve 1.5 kg salt in 40 liters of water.
    b. Soak seeds in the salt solution.
    c. Stir to float diseased, unfilled and broken seeds.
    d. Remove floating seeds by hand or with a sieve.
    e. Wash seeds 3 to 4 times with clean water.
    f. Dry in the shade thoroughly before sowing.

5. Use optimum seeding rate (80 kg per hectare) for direct-seeded rice and optimum plant spacing (e.g., 20 cm x 20 cm) for transplanted rice. A dense plant

canopy reduces sunlight penetration, increases leaf wetness duration and lowers temperature in the plant canopy, creating a favorable microclimate for disease development.

6. Apply potassium and other required nutrients in addition to nitrogen. Potassium reduces the amount of most rice diseases.
7. Apply calcium silicate fertilizer or silicon fertilizer if this is available in the area.
8. Apply fungicides, such as iprodione, propiconazole, azoxystrobin, trifloxystrobin, and carbendazim. Seeds may also be treated with fungicides. Use fungicides as a last resort in controlling the disease. Pathogens become resistant to chemical pesticides if these are not used properly. Avoid repetitive use of a single active ingredient and mix or alternate an active ingredient with an appropriate partner. Integrate the use of chemical pesticides with cultural practices or non-chemical methods. Wherever feasible, several strategies should be used together.
9. If possible, irrigate the field continuously until one week before harvest. Do not drain the field for long periods because drought stress favors brown spot
10. If harvested plants had severe disease, immediately plow or rotavate the field after harvest to incorporate infected stubbles and crop residues in the soil.
11. Dry grains immediately after harvest to moisture content of at least 14%.
12. Store grains in sealed containers with moisture content of at least 14%.

Leaf blast and neck blast

1. The most practical and economical approach to manage blast is to grow a resistant variety. Rotate varieties with different levels of resistance because a resistant variety may later become susceptible if grown continuously across several cropping seasons.
2. Practice planting synchrony with defined fallow period in your area. If this is not possible, a farmer who intends to grow a susceptible variety should not plant rice later than most farmers' fields.
3. Use optimum seeding rate (80 kg per hectare) for direct-seeded rice and optimum plant spacing (e.g. 20 cm x 20 cm) for transplanted rice. A dense plant canopy creates a favorable microclimate for disease development (reduced sunlight penetration, longer leaf wetness duration and cooler temperature).

4. Apply only the recommended amount of nitrogen. Excessive amount of nitrogen favors the development of most rice diseases.
5. Manage the application of nutrient fertilizer. Apply the required amount of nitrogen in splits instead of applying all the required amount at the start of the cropping season. Nitrogen makes the plant tissues softer and creates a dense canopy that results in favorable microclimate for disease development.
6. Apply potassium and other required nutrients in addition to nitrogen. Potassium reduces the amount of most rice diseases.
7. Apply calcium silicate fertilizer or silicon fertilizer when feasible.
8. Irrigate the field continuously until one week before harvest. Do not drain the field for long periods because drought stress favors blast.
9. Use fungicides as last resort in controlling the disease. To control neck blast, apply fungicide at late booting and heading stages if leaf blast increases before booting stage and if it is always raining. Pathogens become resistant to chemical pesticides if these are not used properly. Avoid repetitive use of a single active ingredient and mix or alternate an active ingredient with an appropriate partner. Integrate the use of chemical pesticides with cultural practices or non-chemical methods. Wherever feasible, several strategies should be used together.
10. If plants had severe disease, cut the stubbles close to the ground and remove them from the field. A less laborious option is to immediately plow or rotavate the field after harvest to incorporate infected stubbles and crop residues in the soil.
11. Avoid ratooning because the pathogen can survive on ratoon.
12. Keep the field dry during the fallow period to control the pathogens in infected stubbles.

Sheath blight

1. There is currently no variety with reliable resistance to sheath blight. Varieties are either moderately or highly susceptible.
2. Use optimum plant spacing (e.g., 20 cm x 20 cm) for transplanted rice. A dense plant canopy creates a favorable microclimate for disease development (reduced sunlight penetration, longer leaf wetness duration and cooler temperature).

3. Manage the application of nutrient fertilizer. Apply only the recommended amount of nitrogen. Excessive amount of nitrogen favors the development of sheath blight. Nitrogen makes the plant tissues softer and creates a dense canopy that results in favorable microclimate for disease development.
4. Apply the required amount of nitrogen in splits instead of applying all the required amount at the start of the cropping season.
5. Apply potassium and other required nutrients in addition to nitrogen. Potassium reduces the amount of most rice diseases.
6. Apply calcium silicate fertilizer or silicon fertilizer when feasible.
7. Apply Trichoderma spp. to control sheath blight. The application of Trichoderma may also increase plant vigor. Purchase a product that has been formulated and maintained according to strict quality control measures. Follow the directions on how to use and store the product as recommended by the manufacturer to maintain its viability.
8. Keep the field free from weeds because the pathogen can infect most of the weed species in rice fields.
9. Use fungicides as last resort in controlling the disease. If necessary, apply fungicides, such as azoxystrobin or ready mixture of difenoconazole and propiconazole at 7 days after panicle differentiation to heading.
10. Avoid repetitive use of a single active ingredient and mix or alternate an active ingredient with an appropriate partner. Integrate the use of chemical pesticides with cultural practices or non-chemical methods. Wherever feasible, several strategies should be used together.
11. If plants had severe disease, cut the stubbles close to the ground and remove them from the field. A less laborious option is to immediately plow or rotavate the field after harvest to incorporate infected stubbles and crop residues in the soil.
12. Avoid ratooning because the pathogen can survive on ratoon.
13. Keep the field dry during fallow period. Drying may reduce the survival of the pathogen but may not completely control the disease because it can survive on dead plant tissues.

Deadheart and whitehead caused by stemborer

1. Know the peak of yellow stem borer population in the area. This can be done using light traps. Do not transplant or sow seeds when insect population is high.
2. Consider the use of pheromones to control stemborers.
3. The most practical and economical approach to manage whitehead is to grow a resistant variety. Rotate varieties with different levels of resistance because a resistant variety may later become susceptible if grown continuously across several cropping seasons.
4. Practice planting synchrony with defined fallow period in your area. Asynchronous planting results in overlapping generations of stemborer throughout the year. If this is not possible, a farmer who intends to grow a susceptible variety should not establish his crop later than most farmers' fields.
5. Raise level of irrigation water periodically to submerge the eggs on the lower parts of the plant.
6. Manage the application of nutrient fertilizers. Apply the required amount of nitrogen in splits instead of applying all the required amount at the start of the cropping season. Nitrogen makes the plant tissues softer and facilitates penetration of stemborer larvae.
7. Remove alternate hosts during the cropping season and fallow period.
8. If high infestation occurred, cut stubbles close to the ground and dry or remove stubbles from the field. A less laborious option is to plow the field during fallow to bury stubbles.
9. Do not apply insecticides during the early vegetative stage. Systemic insecticides may be applied after the vegetative stage. Systemic insecticides were found to be more effective than contact insecticides because the larvae and pupae are inside the stem. Insecticides should be used with extreme caution. Monitor the population of stemborers and intensity of deadheart or whitehead prior to the application of insecticides because its efficacy is low when generations of stemborer overlap and when damage is already severe. Insecticides should be used as the last resort and should be integrated with other methods to conserve natural enemies.

Rice bug

1. Rice bug feeds only in developing panicles of rice and grasses. Avoid early and late planting that prolongs availability of rice bug food supply. If possible, farmers should target _month_here_ crop harvest. Discourage out of season cropping.
2. Remove grassy weeds from rice fields, levees, and surrounding areas that served as alternate host of rice bug.
3. Practice two months fallow period to further limit rice bug food supply.
4. Use contact insecticide as last resort in controlling rice bug. Use foul odor attractants like dead snails, frog or rats to aggregate rice bug population to facilitate easy insecticide application. Do not use insecticide to manage rice bug in rice younger than heading stage.

Weeds

1. Plow and harrow the field several times before crop establishment. If feasible, start land preparation 3-4 weeks before planting.
2. If weedy rice is a problem, apply glyphosate before land preparation or seeding. The application of pretilachlor with fenchlorim during final land preparation or levelling has also been reported to reduce weedy rice.
3. Practice stale seedbed technique. According to the IRRI Knowledge Bank (http://www.knowledgebank.irri.org/step-by-step-production/growth/weed-management/stale-seedbed-technique), this technique is done as follows:

    a. Perform tillage operations. Plow, harrow, and level the field.

    b. Stimulate weed emergence by light irrigation.

    c. Irrigate the field at least two weeks before sowing.

    d. Maintain enough soil moisture to allow weeds to germinate.

    e. Kill the emerged seedlings using non-selective herbicides (e.g., glyphosate) or light cultivation.

    f. If the soil condition is suitable for sowing, broadcast seeds without further tillage operations. Tillage could bring more weed seeds near the soil surface, thus promoting weed germination.

4. Level the field to ensure a constant water level that controls weeds. Avoid high spots where weeds can grow.

5. Apply pre-emergence herbicide (e.g., pretilachlor + fenclorim 2-3 days after sowing). Follow recommended amount and timing of product and water condition in the field as indicated in the label. Do not use the same herbicide over long periods to prevent herbicide resistance.
6. If grass weeds are the main weed problem, apply early post-emergence herbicide.
7. Maintain a 2-5 cm water level in the field to minimize weed emergence. If water is sufficient, flood the fields until closure of the plant canopy.
8. Apply nitrogen fertilizer just after weeding to minimize rice-weed competition for nitrogen.
9. If feasible, consider the use of biological control agents to suppress growth or reduce population of weeds.
10. If feasible, plow the field during fallow to kill weeds and prevent the build-up of weed seeds in the soil.

Annexes

Annex 1. Incidence of diseases or pest injuries during the previous 1st semesters.

MIMAROPA		2019						2020					
Occidental Mindoro		JAN	FEB	MAR	APR	MAY	JUN	JAN	FEB	MAR	APR	MAY	JUN
A. FOLIAR DISEASES													
Bacterial leaf blight	mean	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.4	2.0	0.7
	median	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.4	0.0
	maximum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.5	10.9	7.3	4.5
	no. of fields	0	0	0	0	0	0	0	0	60	10	7	12
Bacterial leaf streak	mean	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.7
	median	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	maximum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.0	0.0	4.3
	no. of fields	0	0	0	0	0	0	0	0	60	10	7	12
Brown spot	mean	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.7	7.9	2.9	1.7
	median	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	3.4	1.0	1.2
	maximum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	45.1	24.1	13.8	6.3
	no. of fields	0	0	0	0	0	0	0	0	60	10	7	12
Leaf blast	mean	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	0.2	0.2
	median	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
	maximum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.3	5.1	1.2	1.5
	no. of fields	0	0	0	0	0	0	0	0	60	10	7	12
Red stripe	mean	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.8	0.8	1.1
	median	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8	0.9
	maximum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	3.1	1.3	3.7
	no. of fields	0	0	0	0	0	0	0	0	60	10	7	12
B. DISEASE OR PEST INJURY ON TILLERS													
Deadheart	mean	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.0
	median	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	maximum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.7	0.6	0.0	0.0
	no. of fields	0	0	0	0	0	0	0	0	60	10	7	12
Sheath blight	mean	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	1.3	1.4	1.2
	median	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	maximum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.5	4.7	5.2	14.9
	no. of fields	0	0	0	0	0	0	0	0	60	10	7	12

LEGEND	
Blue font	5 to 10 % incidence of diseases, insect pest injuries or weed cover or 5 to 10 insects.
Red font	> 10 % incidence of diseases, insect pest injuries or weed cover or > 10 insects.

Disclaimer: All the data presented in this report are based on the monthly monitoring of farmers' fields by regional data collectors of PRIME.

Annex 2. Incidence of diseases or pest injuries during the previous 1st semesters.

MIMAROPA		2019						2020					
Occidental Mindoro		JAN	FEB	MAR	APR	MAY	JUN	JAN	FEB	MAR	APR	MAY	JUN
C. DISEASE OR PEST INJURY ON PANICLES													
Neck blast	mean	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**1.6**	**0.2**	**0.0**	**16.7**
	median	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**18.6**
	maximum	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**41.3**	**1.0**	**0.0**	**20.4**
	no. of fields	0	0	0	0	0	0	0	0	47	5	0	3
Whitehead	mean	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.8**	**3.5**	**0.0**	**0.0**
	median	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	maximum	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**10.0**	**15.6**	**0.0**	**0.0**
	no. of fields	0	0	0	0	0	0	0	0	47	5	0	3
D. SYSTEMIC DISEASE OR PEST INJURY													
Bugburn	mean	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	median	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	maximum	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	no. of fields	0	0	0	0	0	0	0	0	60	10	7	12
Hopperburn	mean	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	median	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	maximum	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	no. of fields	0	0	0	0	0	0	0	0	60	10	7	12
Tungro	mean	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	median	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	maximum	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	no. of fields	0	0	0	0	0	0	0	0	60	10	7	12

LEGEND	
Blue font	5 to 10 % incidence of diseases, insect pest injuries or weed cover or 5 to 10 insects.
Red font	> 10 % incidence of diseases, insect pest injuries or weed cover or > 10 insects.

Disclaimer: All the data presented in this report are based on the monthly monitoring of farmers' fields by regional data collectors of PRIME.

Annex 3. Incidence of pest injuries, count of insect pests, and percentage of weed cover during the previous 1st semesters.

MIMAROPA		2019						2020					
Occidental Mindoro		JAN	FEB	MAR	APR	MAY	JUN	JAN	FEB	MAR	APR	MAY	JUN
E. INSECT COUNT													
Brown planthopper	mean	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.2**	**0.1**
	median	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.0**
	maximum	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.5**	**0.2**	**0.4**	**0.4**
	no. of fields	0	0	0	0	0	0	0	0	60	10	7	12
Green leafhopper	mean	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.2**	**0.1**	**0.1**
	median	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.2**	**0.0**
	maximum	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**2.3**	**0.7**	**0.3**	**0.6**
	no. of fields	0	0	0	0	0	0	0	0	60	10	7	12
Rice black bug	mean	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.1**	**0.0**	**0.0**
	median	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	maximum	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**3.8**	**0.8**	**0.0**	**0.0**
	no. of fields	0	0	0	0	0	0	0	0	60	10	7	12
Rice bug	mean	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**1.5**	**1.1**	**0.6**	**1.9**
	median	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.3**	**0.5**	**0.3**	**0.0**
	maximum	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**12.7**	**4.0**	**1.7**	**10.0**
	no. of fields	0	0	0	0	0	0	0	0	60	10	7	12
Rice grain bug	mean	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	median	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	maximum	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.4**	**0.0**	**0.0**
	no. of fields	0	0	0	0	0	0	0	0	60	10	7	12
F. RAT INJURY	mean	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.4**	**0.4**	**0.1**	**0.5**
	median	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.5**
	maximum	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**3.5**	**1.0**	**1.0**	**1.0**
	no. of fields	0	0	0	0	0	0	0	0	60	10	7	12
G. WEED COVER	mean	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.7**	**0.0**	**0.5**	**0.4**
	median	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	maximum	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**10.0**	**0.0**	**3.3**	**5.0**
	no. of fields	0	0	0	0	0	0	0	0	60	10	7	12

LEGEND	
Blue font	5 to 10 % incidence of diseases, insect pest injuries or weed cover or 5 to 10 insects.
Red font	> 10 % incidence of diseases, insect pest injuries or weed cover or > 10 insects.

Disclaimer: All the data presented in this report are based on the monthly monitoring of farmers' fields by regional data collectors of PRIME.

Annex 4. Incidence of diseases or pest injuries during the previous 1st semesters.

MIMAROPA		2019						2020					
Oriental Mindoro		**JAN**	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JAN**	**FEB**	**MAR**	**APR**	**MAY**	**JUN**
A. FOLIAR DISEASES													
Bacterial leaf blight	mean	0.6	2.0	1.9	0.8	1.3	0.4	0.4	1.4	1.6	0.2	0.4	0.4
	median	0.0	0.4	0.7	0.2	0.6	0.0	0.0	0.9	1.3	0.0	0.0	0.0
	maximum	7.0	15.3	11.5	5.3	4.0	5.7	3.3	15.7	5.2	0.8	2.3	10.7
	no. of fields	116	115	66	15	5	37	114	113	63	9	14	68
Bacterial leaf streak	mean	0.5	1.0	0.7	0.6	0.1	0.1	0.4	1.1	2.0	1.1	0.2	0.1
	median	0.0	0.4	0.3	0.0	0.0	0.0	0.0	0.4	0.7	0.2	0.0	0.0
	maximum	5.4	7.7	3.0	2.2	0.3	1.6	8.0	9.3	44.1	5.7	1.4	3.8
	no. of fields	116	115	66	15	5	37	114	113	63	9	14	68
Brown spot	mean	0.2	0.4	0.8	0.5	0.1	0.3	0.0	0.3	0.3	0.0	0.0	0.2
	median	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	maximum	2.4	7.7	8.8	3.1	0.4	6.0	0.3	11.7	3.4	0.2	0.1	7.8
	no. of fields	116	115	66	15	5	37	114	113	63	9	14	68
Leaf blast	mean	0.1	0.3	0.6	0.2	0.6	0.1	0.0	0.3	0.6	0.4	0.0	0.2
	median	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	maximum	1.9	8.4	6.4	0.8	3.0	1.7	0.7	3.6	7.4	2.5	0.4	3.9
	no. of fields	116	115	66	15	5	37	114	113	63	9	14	68
Red stripe	mean	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	median	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	maximum	0.3	0.7	0.8	0.0	0.0	0.0	0.7	1.1	0.4	0.2	0.2	0.8
	no. of fields	116	115	66	15	5	37	114	113	63	9	14	68
B. DISEASE OR PEST INJURY ON TILLERS													
Deadheart	mean	0.5	0.4	0.3	0.9	0.0	0.2	0.3	0.3	0.2	0.3	0.1	0.2
	median	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	maximum	7.9	5.3	2.2	4.6	0.0	3.8	6.1	3.0	1.6	2.0	1.0	3.7
	no. of fields	116	115	66	15	5	37	114	113	63	9	14	68
Sheath blight	mean	0.1	0.5	0.7	1.7	0.0	0.8	0.0	0.7	0.8	1.0	0.0	0.1
	median	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	maximum	3.1	9.9	11.5	15.2	0.0	28.7	1.3	19.5	16.4	9.2	0.0	6.9
	no. of fields	116	115	66	15	5	37	114	113	63	9	14	68

LEGEND	
Blue font	5 to 10 % incidence of diseases, insect pest injuries or weed cover or 5 to 10 insects.
Red font	> 10 % incidence of diseases, insect pest injuries or weed cover or > 10 insects.

Disclaimer: All the data presented in this report are based on the monthly monitoring of farmers' fields by regional data collectors of PRIME.

Annex 5. Incidence of diseases or pest injuries during the previous 1st semesters.

MIMAROPA		2019						2020					
Oriental Mindoro		JAN	FEB	MAR	APR	MAY	JUN	JAN	FEB	MAR	APR	MAY	JUN
C. DISEASE OR PEST INJURY ON PANICLES													
Neck blast	mean	1.4	0.2	0.4	2.0	0.0	0.0	0.0	0.0	0.3	0.0	0.4	0.0
	median	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0
	maximum	5.4	3.8	4.9	12.1	0.0	0.0	0.0	0.6	5.5	0.0	0.6	0.0
	no. of fields	4	39	52	11	0	3	5	59	53	3	3	3
Whitehead	mean	1.7	1.9	1.1	1.2	0.0	1.0	0.3	2.2	3.5	1.6	1.3	0.0
	median	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	1.4	0.0
	maximum	5.0	21.0	9.7	5.5	0.0	3.1	0.7	40.0	31.1	4.7	2.4	0.0
	no. of fields	4	39	52	11	0	3	5	59	53	3	3	3
D. SYSTEMIC DISEASE OR PEST INJURY													
Bugburn	mean	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	median	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	maximum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	no. of fields	116	115	66	15	5	37	114	113	63	9	14	68
Hopperburn	mean	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	median	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	maximum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	no. of fields	116	115	66	15	5	37	114	113	63	9	14	68
Tungro	mean	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
	median	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	maximum	0.0	0.0	0.0	0.0	0.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0
	no. of fields	116	115	66	15	5	37	114	113	63	9	14	68

LEGEND	
Blue font	5 to 10 % incidence of diseases, insect pest injuries or weed cover or 5 to 10 insects.
Red font	> 10 % incidence of diseases, insect pest injuries or weed cover or > 10 insects.

Annex 6. Incidence of pest injuries, count of insect pests, and percentage of weed cover during the previous 1st semesters.

MIMAROPA		2019						2020					
Oriental Mindoro		JAN	FEB	MAR	APR	MAY	JUN	JAN	FEB	MAR	APR	MAY	JUN
E. INSECT COUNT													
Brown planthopper	mean	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
	median	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	maximum	0.1	0.5	1.7	0.0	0.0	0.2	0.0	0.8	1.5	0.1	0.0	0.0
	no. of fields	116	115	66	15	5	37	114	113	63	9	14	68
Green leafhopper	mean	0.0	0.1	0.2	0.2	0.0	0.0	0.0	0.2	0.2	0.2	0.1	0.0
	median	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	maximum	0.5	1.1	1.5	0.7	0.1	0.3	0.4	1.4	2.5	0.5	0.9	0.5
	no. of fields	116	115	66	15	5	37	114	113	63	9	14	68
Rice black bug	mean	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	median	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	maximum	0.3	1.4	0.2	0.9	0.0	0.0	1.3	0.3	0.1	0.0	0.0	0.5
	no. of fields	116	115	66	15	5	37	114	113	63	9	14	68
Rice bug	mean	0.0	0.1	0.1	0.5	0.0	0.1	0.0	0.4	1.1	0.7	0.3	0.4
	median	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	maximum	2.3	1.3	2.3	2.7	0.0	2.7	1.7	5.7	6.7	5.3	1.7	11.7
	no. of fields	116	115	66	15	5	37	114	113	63	9	14	68
Rice grain bug	mean	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	median	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	maximum	0.0	0.2	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.0	0.0	0.0
	no. of fields	116	115	66	15	5	37	114	113	63	9	14	68
F. RAT INJURY	mean	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0
	median	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	maximum	1.0	1.0	1.0	1.0	0.0	3.5	1.0	1.0	1.0	0.0	0.0	1.0
	no. of fields	116	115	66	15	5	37	114	113	63	9	14	68
G. WEED COVER	mean	0.3	1.9	3.7	4.4	5.3	0.9	0.5	3.1	2.9	2.0	0.6	0.6
	median	0.0	0.0	1.7	3.3	1.7	0.0	0.0	1.7	1.7	1.7	0.0	0.0
	maximum	3.3	45.0	56.7	20.0	20.0	20.0	10.0	36.7	28.3	5.0	5.0	20.0
	no. of fields	116	115	66	15	5	37	114	113	63	9	14	68

LEGEND	
Blue font	5 to 10 % incidence of diseases, insect pest injuries or weed cover or 5 to 10 insects.
Red font	> 10 % incidence of diseases, insect pest injuries or weed cover or > 10 insects.

Disclaimer: All the data presented in this report are based on the monthly monitoring of farmers' fields by regional data collectors of PRIME.