



PRIME

PRE-SEMESTER BULLETIN

June 2020

MIMAROPA

AT A GLANCE

Table 1. Mean incidence of pest injuries, count of insect pests, and percentage of weed cover by month from July to December 2019.

MIMAROPA	2019					
	JUL	AUG	SEP	OCT	NOV	DEC
A. FOLIAR DISEASES						
Bacterial leaf blight	0.3	0.6	1.1	1.4	0.4	0.1
Bacterial leaf streak	0.4	0.5	0.7	0.6	0.0	0.0
Brown spot	0.2	0.2	0.7	0.9	0.4	0.0
Leaf blast	0.2	0.3	0.5	0.4	1.1	0.0
Red stripe	0.0	0.0	0.0	0.1	0.0	0.0
B. DISEASE OR PEST INJURY ON TILLERS						
Deadheart	0.2	0.5	0.3	2.1	0.0	0.1
Sheath Blight	0.1	0.7	1.2	0.4	0.4	0.0
C. DISEASE OR PEST INJURY ON PANICLES						
Neck Blast	0.0	1.3	2.7	3.3	0.0	0.0
Whitehead	0.0	0.9	1.1	2.6	14.8	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	0.0	0.0	0.0	0.0	0.0	0.0
E. INSECT COUNT						
Brown Planthopper	0.0	0.0	0.1	0.0	0.0	0.0
Green Leafhopper	0.0	0.1	0.1	0.1	0.0	0.0
Rice Black Bug	0.0	0.0	0.0	0.0	0.0	0.0
Rice Bug	0.0	0.1	0.2	0.9	0.5	0.1
Rice Grain Bug	0.0	0.0	0.0	0.1	0.0	0.0
F. RODENT INJURY						
	0.0	0.0	0.0	0.0	0.0	0.0
G. WEED COVER						
	0.8	3.2	4.2	3.9	0.5	0.2

Mean of all monitoring fields.

LEGEND

1-5 % or 1-5 insects

>5 % or 5 insects

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

Table 2. Mean incidence of pest injuries, count of insect pests, and percentage of weed cover by month from July to December 2018.

MIMAROPA	2018					
	JUL	AUG	SEP	OCT	NOV	DEC
A. FOLIAR DISEASES						
Bacterial leaf blight	2.4	2.1	3.0	1.4	0.0	0.0
Bacterial leaf streak	0.2	0.5	1.7	1.2	0.0	0.0
Brown spot	0.4	0.3	0.8	0.9	0.1	0.0
Leaf blast	0.3	0.2	0.6	1.1	0.1	0.0
Red stripe	0.0	0.2	0.2	0.1	0.0	0.0
B. DISEASE OR PEST INJURY ON TILLERS						
Deadheart	0.2	1.5	1.1	0.9	3.5	0.3
Sheath Blight	0.2	1.6	3.0	2.4	0.2	0.1
C. DISEASE OR PEST INJURY ON PANICLES						
Neck Blast	0.0	0.8	0.5	0.3	0.0	0.6
Whitehead	0.0	2.6	1.3	3.8	0.0	1.7
D. SYSTEMIC DISEASE OR PEST INJURY						
Bugburn	0.0	0.0	0.0	0.0	0.0	0.0
Hopperburn	0.0	0.1	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	0.0	0.0	0.0	0.0
Green Leafhopper	0.0	0.0	0.2	0.2	0.1	0.3
Rice Black Bug	0.0	0.0	0.0	0.1	0.2	0.0
Rice Bug	0.2	0.4	1.2	1.9	0.1	0.0
Rice Grain Bug	0.0	0.0	0.0	0.0	0.0	0.0
F. RODENT INJURY						
	0.4	0.3	0.3	0.2	0.0	0.1
G. WEED COVER						
	1.3	2.0	4.0	2.1	4.5	0.1

Mean of all monitoring fields.

LEGEND

1-5 % or 1-5 insects

>5 % or 5 insects

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: Oriental Mindoro: Bongabong, Gloria, and Naujan

Monitoring date: July 2019 - December 2019

Number of monitoring fields: 121 monitoring fields

Data collectors: Crisner Carino, Crispin Magluyan, Jeherson Alejos, Jofel Barrion, John Paul Alcobera, Raffy Malimata, and Thomie Vidal

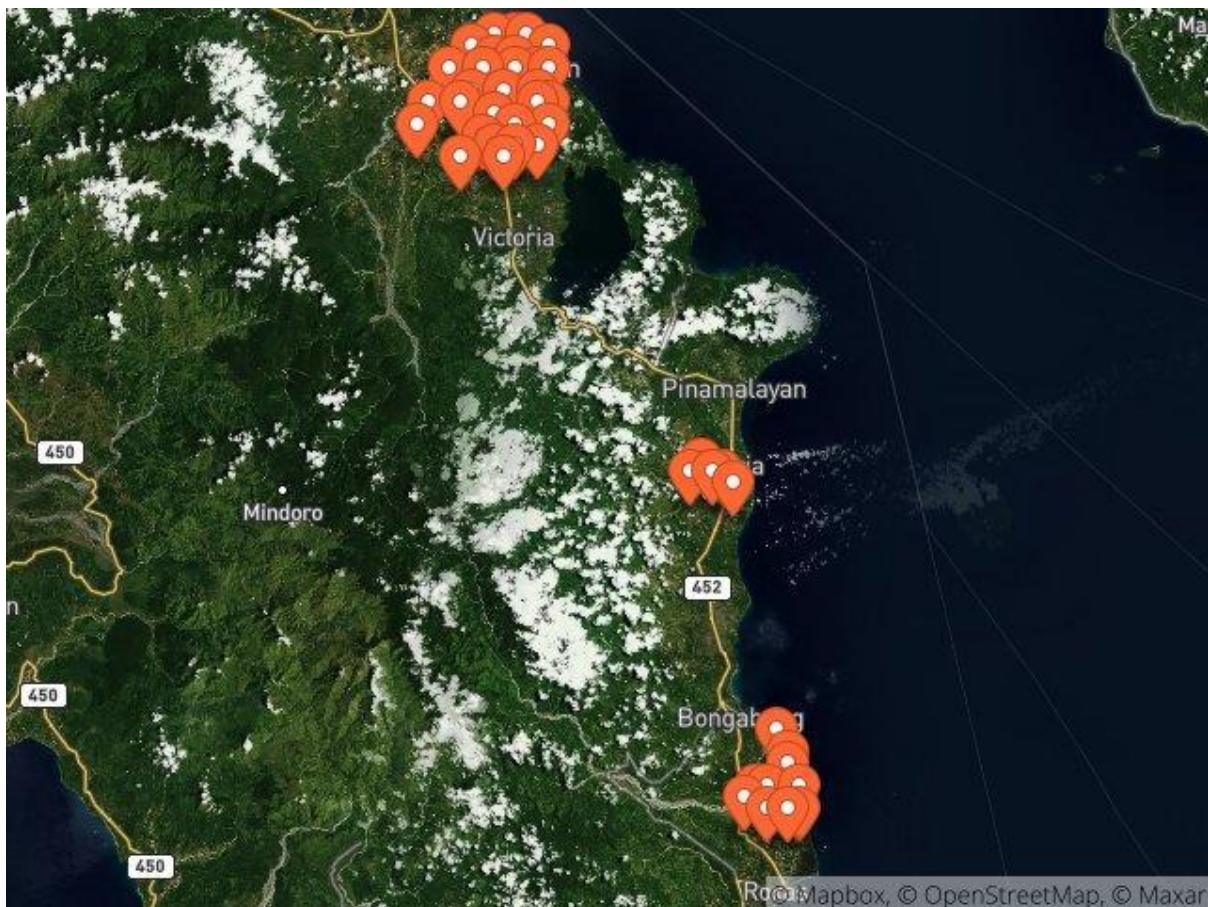


Figure 1. Monitored barangays in MIMAROPA from July 2019 to December 2019. Each barangay is represented by 1 marker.

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

Municipalities surveyed: Oriental Mindoro: Bongabong, Gloria, and Naujan

Monitoring date: July 2018 - December 2018

Number of monitoring fields: 125 monitoring fields

Data collectors: Crisner Carino, Crispin Magluyan, Jeherson Alejos, Jofel Barrion, John Paul Alcobera, Raffy Malimata, and Thomie Vidal

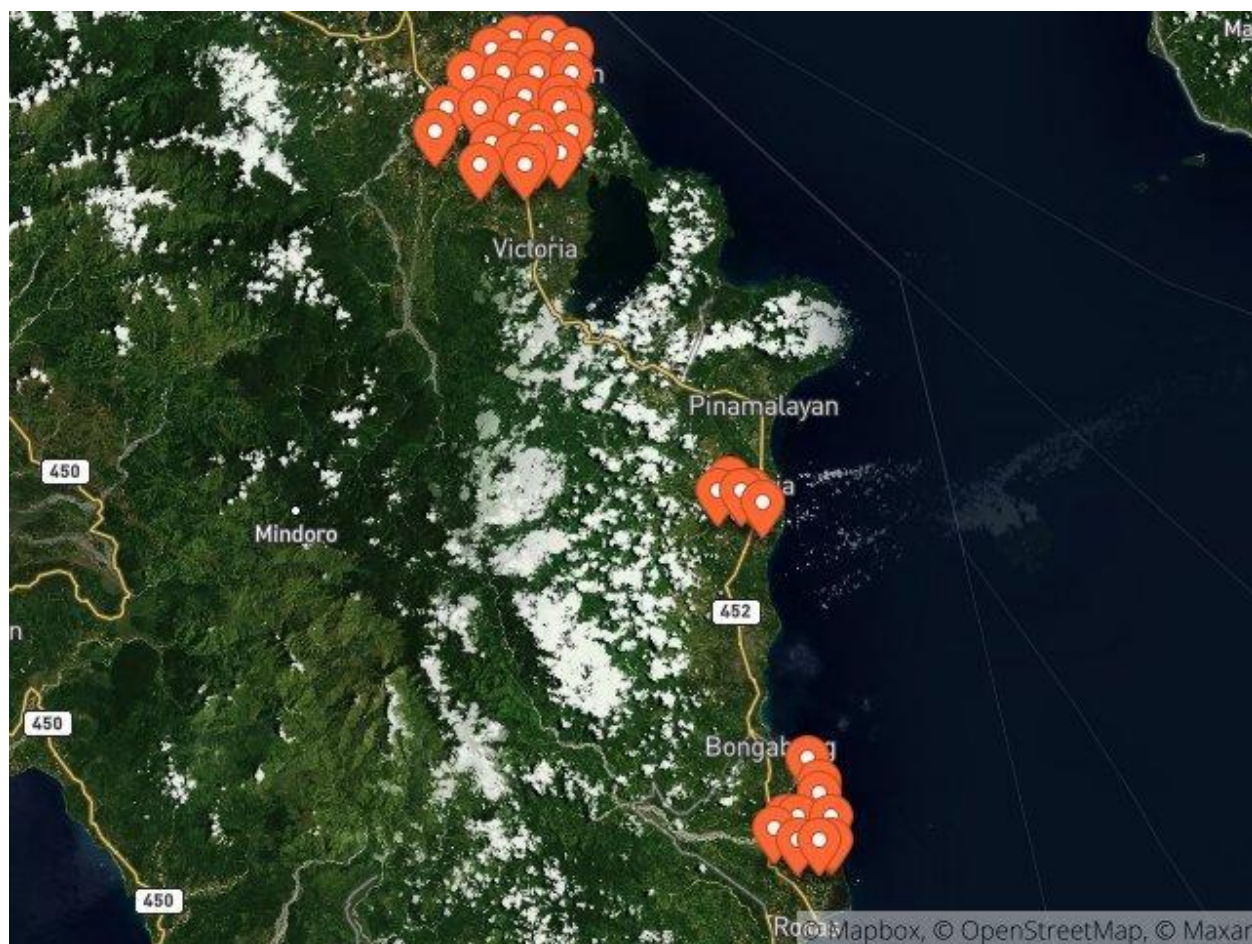


Figure 2. Monitored barangays in MIMAROPA from July 2018 to December 2018. Each barangay is represented by 1 marker.

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

Growth stage

Most of the fields monitored from July 2019 to December 2019 were at the vegetative stage in July and at reproductive stage in September. The peak of harvest occurred in September to October 2019 (Figure 3). Majority of the fields were fallow in October to November 2019.

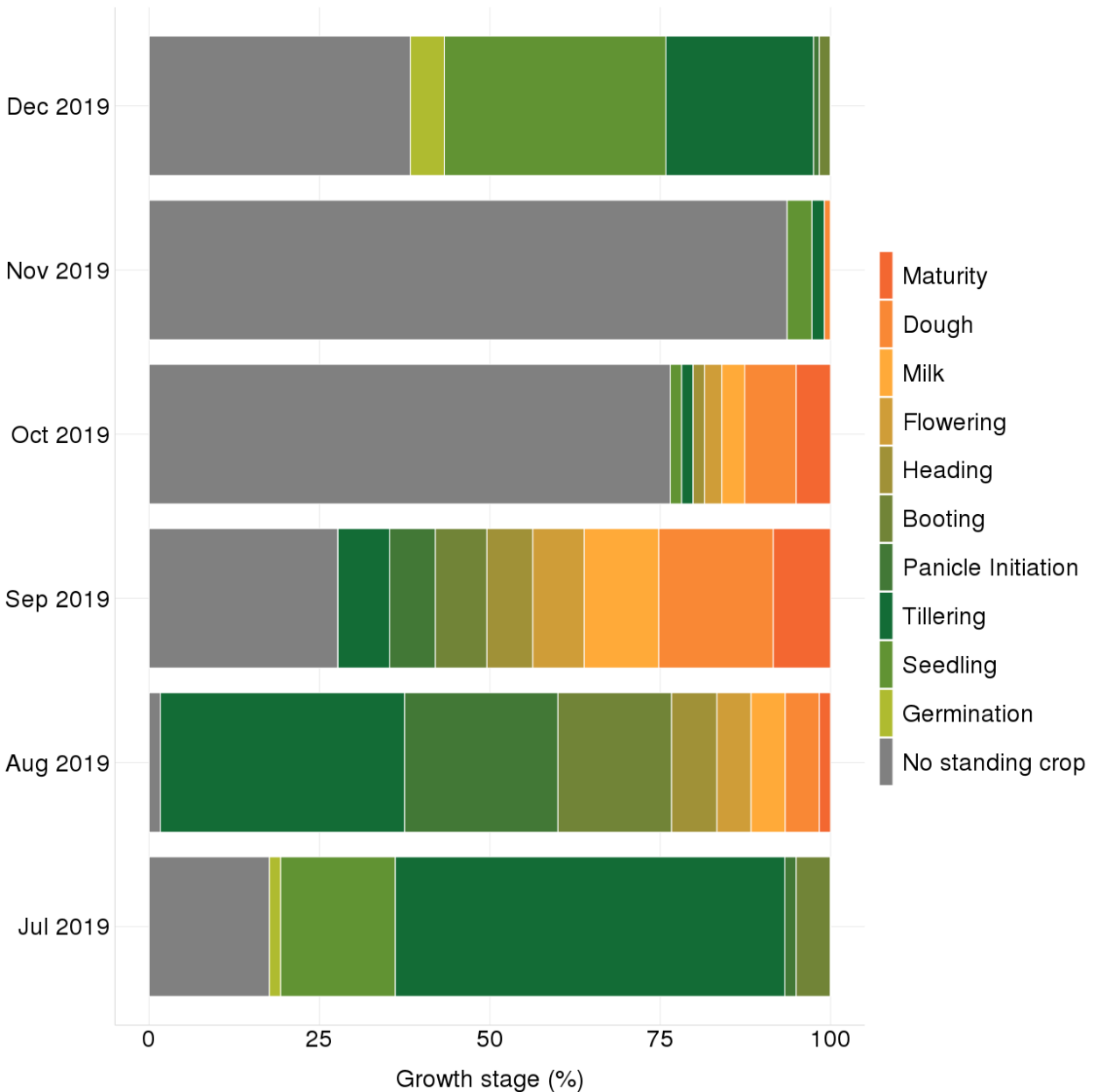


Figure 3. Proportion of crop growth stages of fields by month.

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

Most of the fields monitored from July to December 2018 were at the vegetative stage in July to August and at reproductive stage in September to October. The peak of harvest occurred in September (Figure 4). Majority of the fields were fallow in October to November 2018.

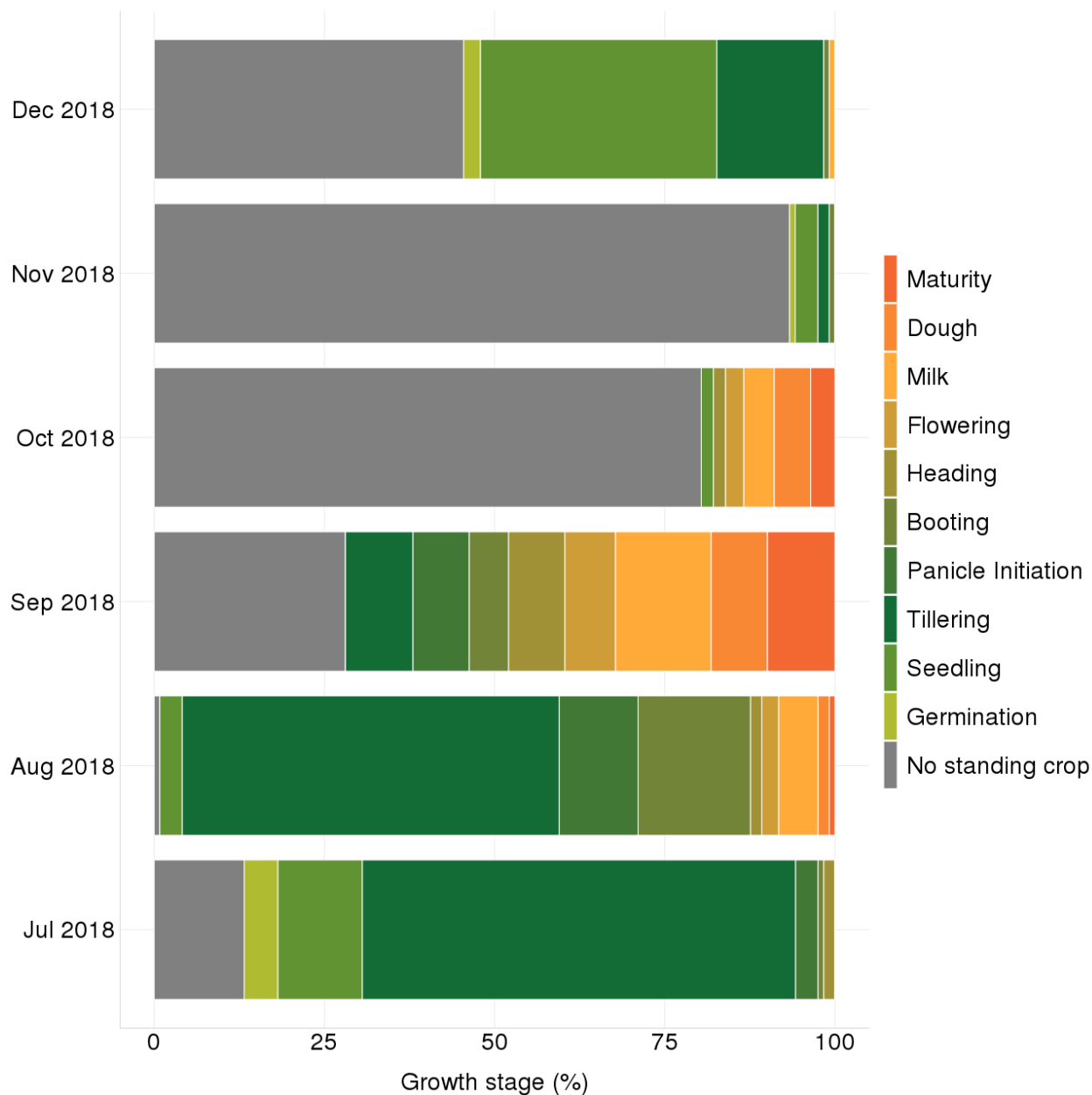


Figure 4. Proportion of crop growth stages of fields by month.

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Incidence of pest injuries, count of insect pests, and weed cover

Box plots, also known box-and-whisker plots, are presented to facilitate the visualization of the distribution or range of collected data (Figures 5 to 18). The black closed circle in or near each bar represents the mean of each pest injury. The black vertical line in each bar represents the median which refers to the midpoint of the range of data. Since it is not affected by extreme values or outliers like the mean, the median represents the most common value of a variable.

A. Foliar diseases

In the second semester of 2019, the average incidence of foliar diseases was negligible and the median was 0 in most months.

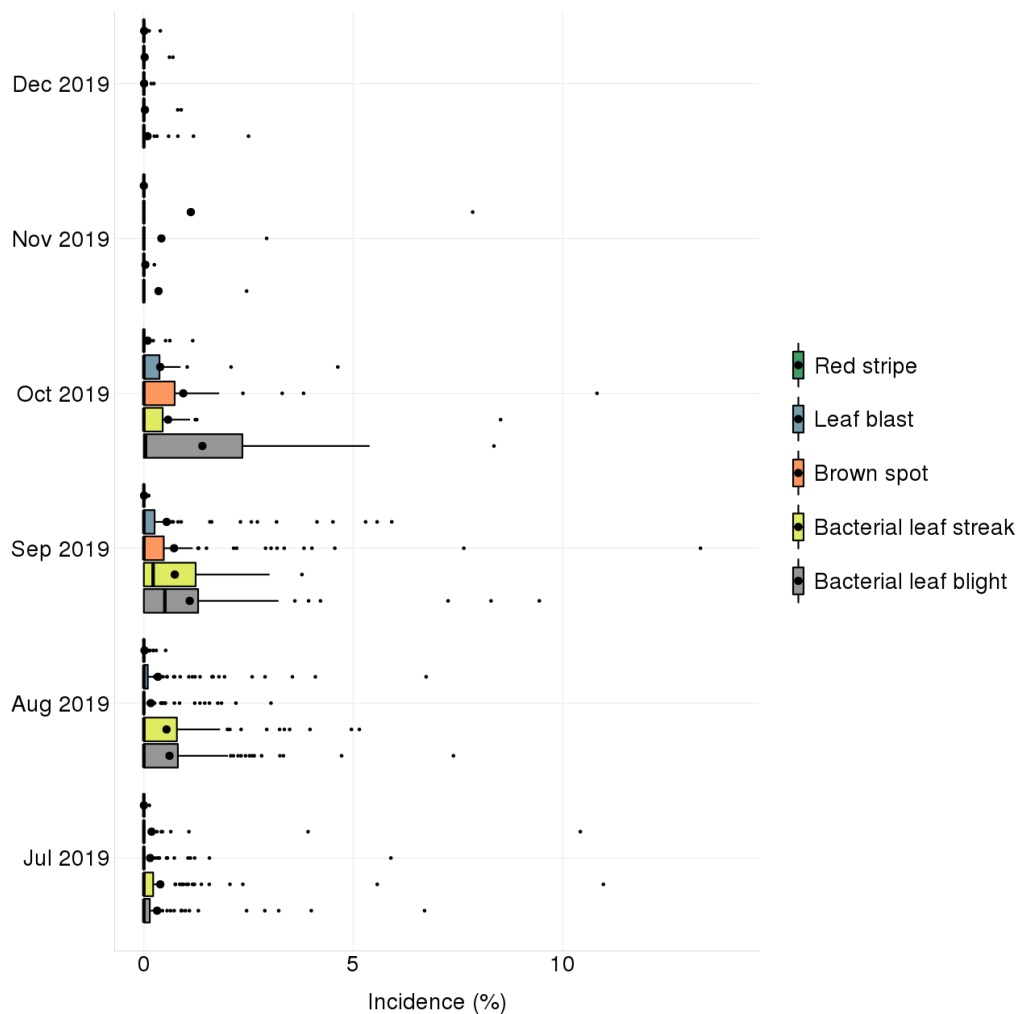


Figure 5. Incidence of foliar diseases in MIMAROPA, July 2019 to December 2019.

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

The incidence of bacterial blight was the highest among foliar diseases. The highest incidence of 3% was observed in September 2019. The incidence of the other foliar diseases was negligible.

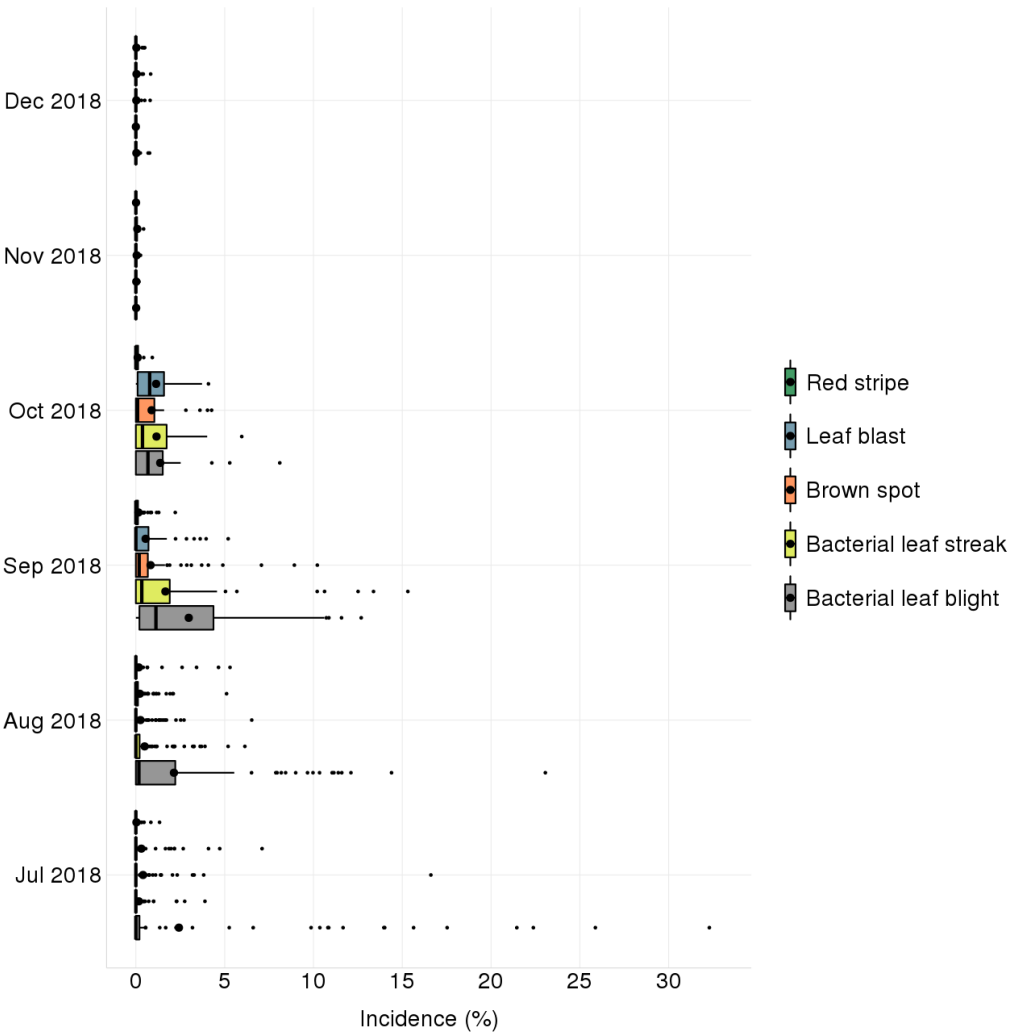


Figure 6. Incidence of foliar diseases in MIMAROPA, July 2018 to December 2018.

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B. Insect pest injuries and diseases on tillers

The incidences of sheath blight and deadheart were negligible during the second semester of 2019.

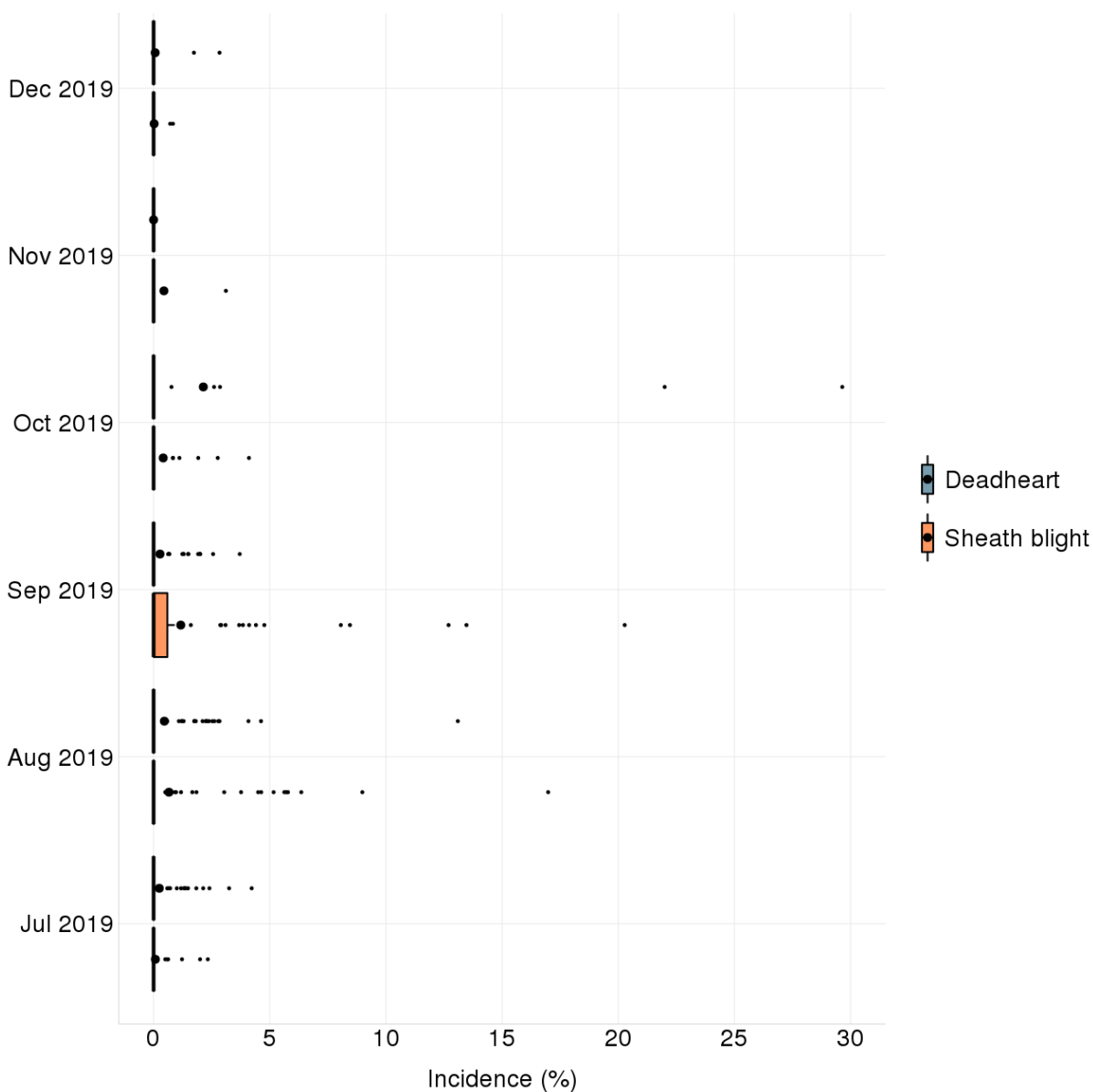


Figure 7. Incidence of deadheart and sheath blight in MIMAROPA, July 2019 to December 2019.

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

The highest incidence of deadheart was observed in November 2018 (4%) when the plants were at early vegetative stage. Sheath blight peaked at 3% in September 2018 when most of the plants were at reproductive stage.

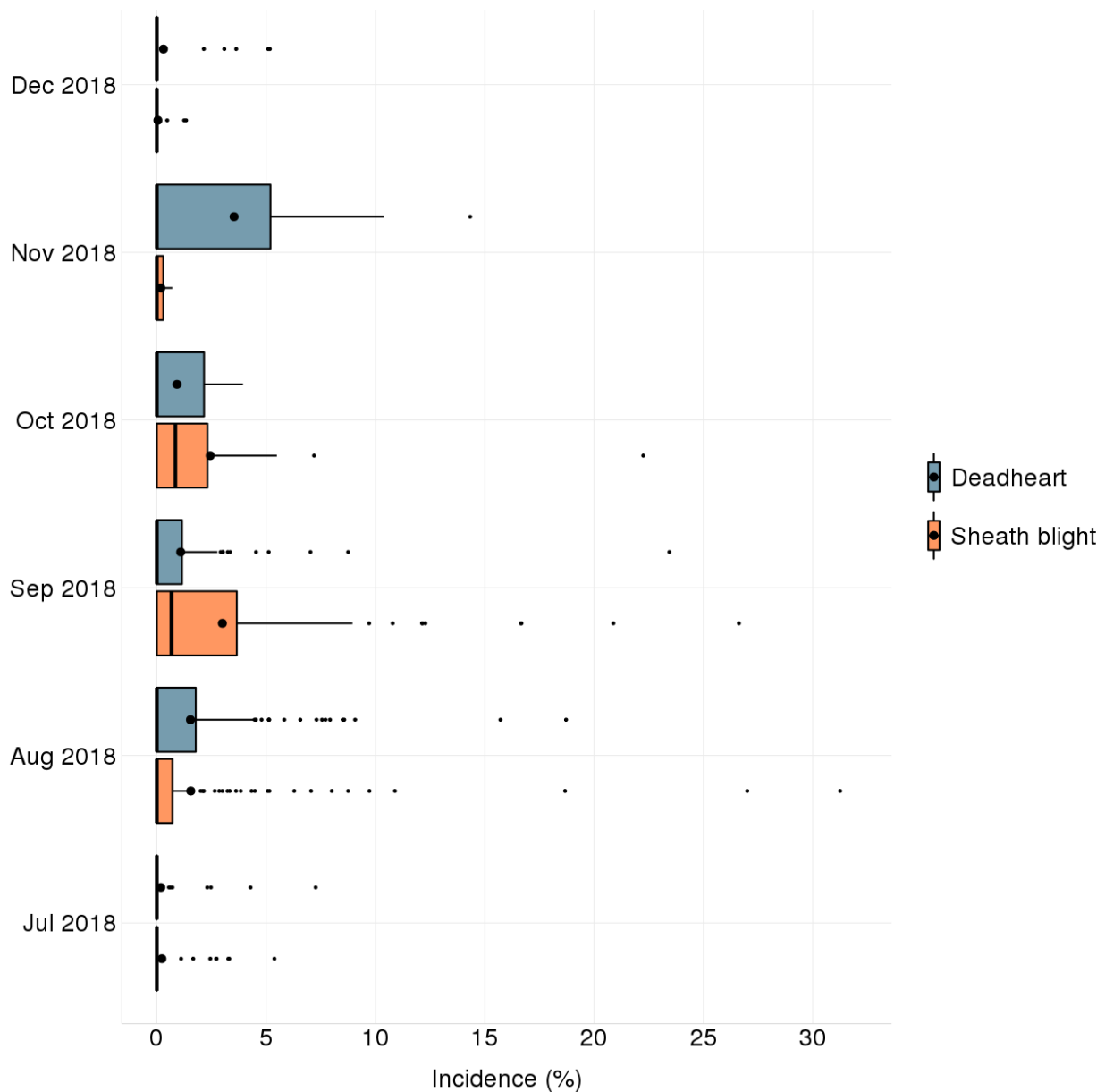


Figure 8. Incidence of deadheart and sheath blight in MIMAROPA, July 2018 to December 2018.

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C. Insect pest injuries and diseases on panicles

The incidence of whitehead was 15% in November 2019, but this incidence was based on only one monitored field and may not be representative of the whitehead incidence in the region.

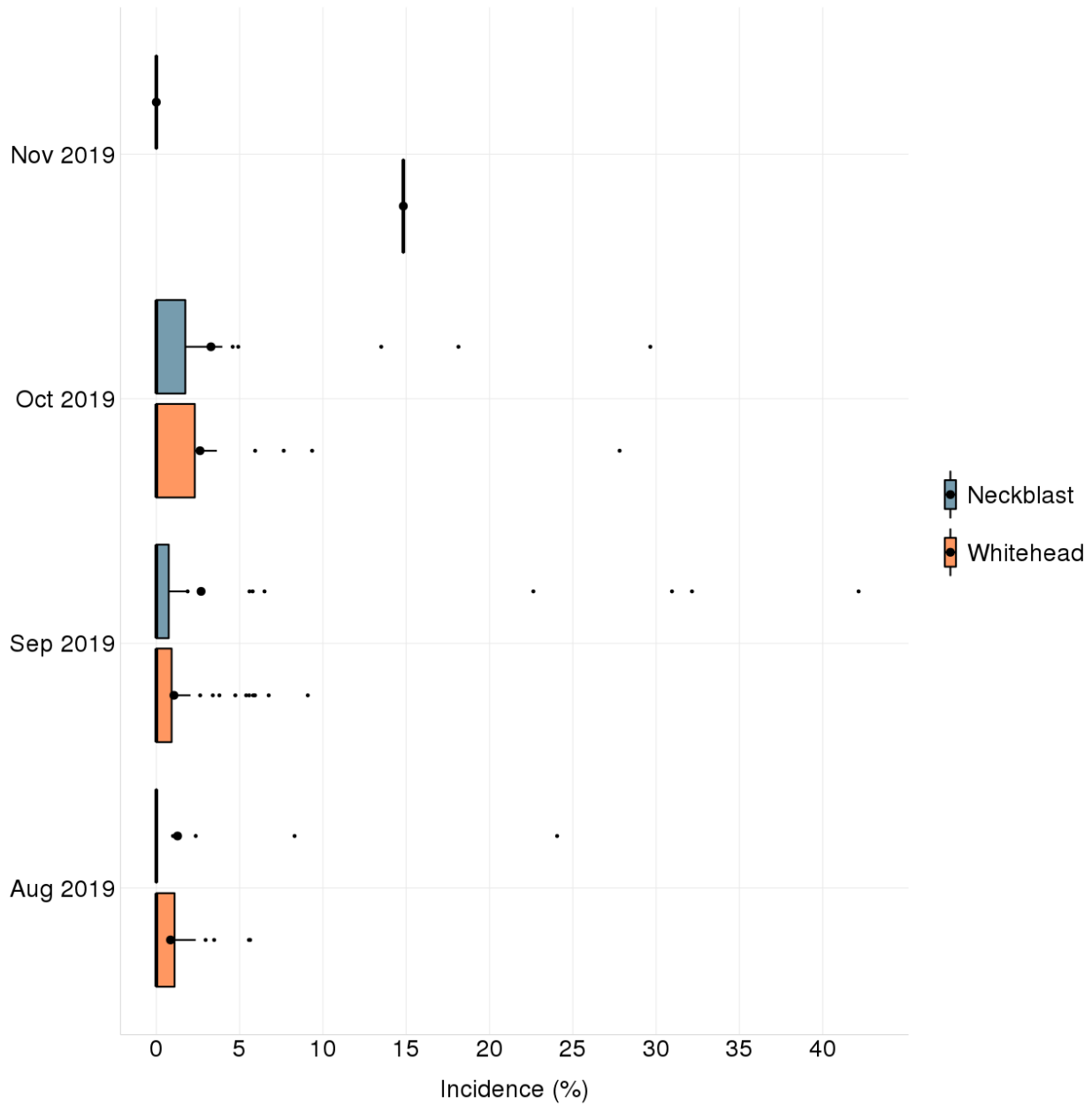


Figure 9. Incidence of neck blast and whitehead in MIMAROPA, July 2019 to December 2019.

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Neck blast was negligible in 2018. Whitehead was 4% in October. The affected plants appear to be those that were transplanted late.

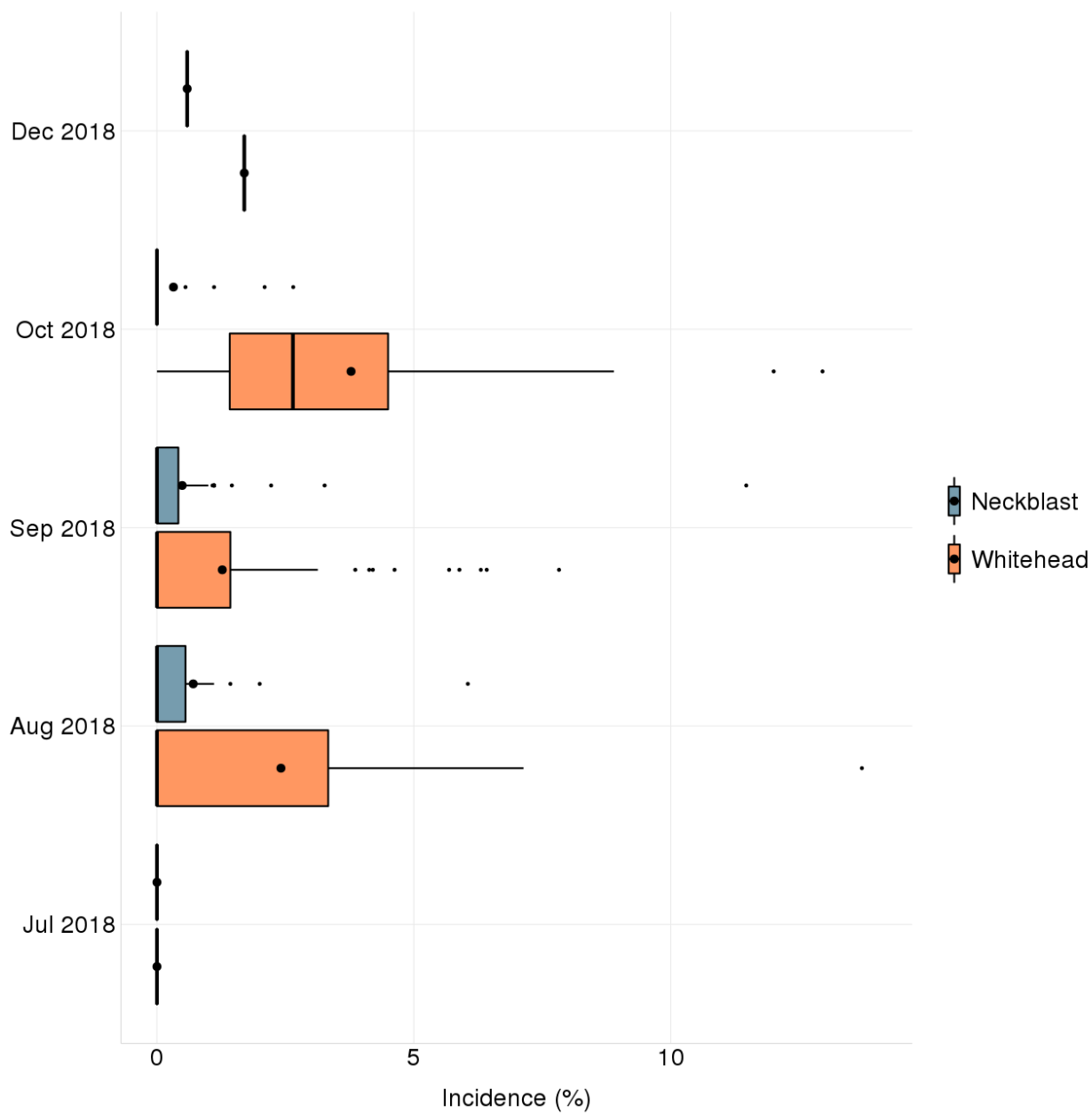


Figure 10. Incidence of neck blast and whitehead in MIMAROPA, July 2018 to December 2018.

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D. Systemic diseases and insect pest injuries

The incidence of bugburn and hopperburn caused by stem borers and tungro in 2019 was negligible (Figure 11).

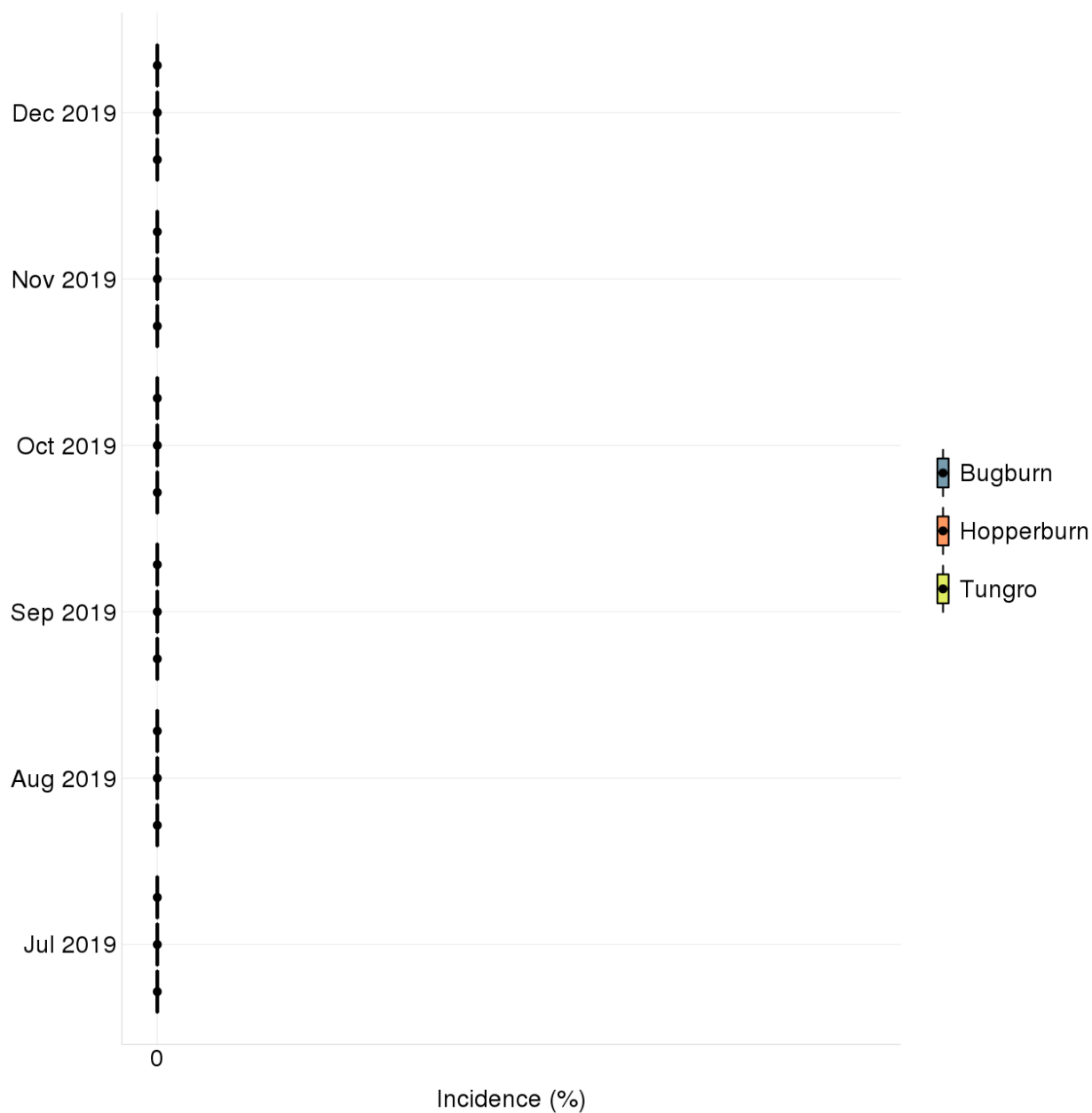


Figure 11. Incidence of bugburn, hopperburn and tungro in MIMAROPA, July 2019 to December 2019.

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

The incidence of bugburn and hopperburn caused by stem borers and tungro in 2018 was negligible (Figure 12).

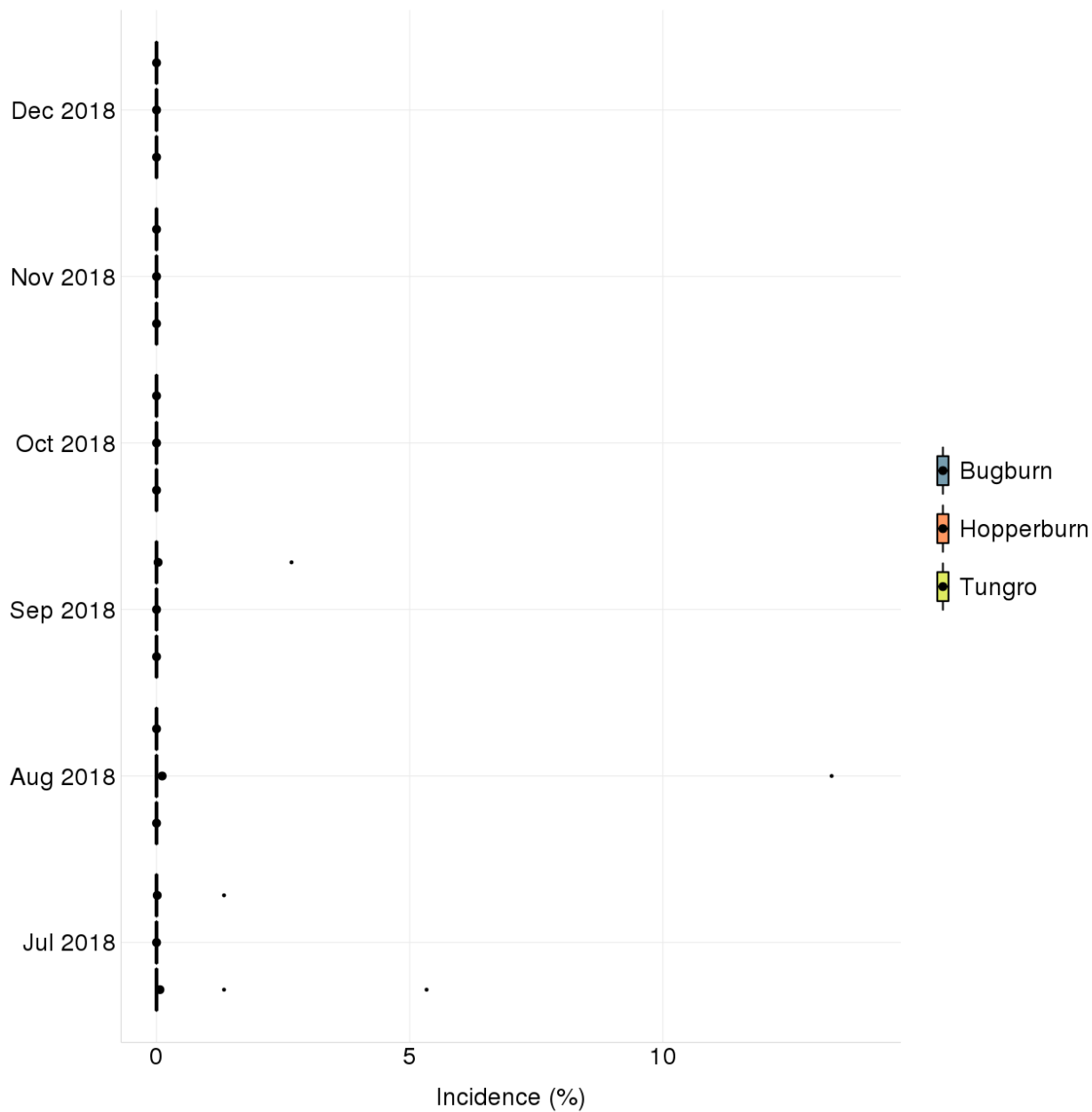


Figure 12. Incidence of bugburn, hopperburn and tungro in MIMAROPA, July 2018 to December 2018.

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E. Insect count

The number of monitored insect pests was negligible in 2018.

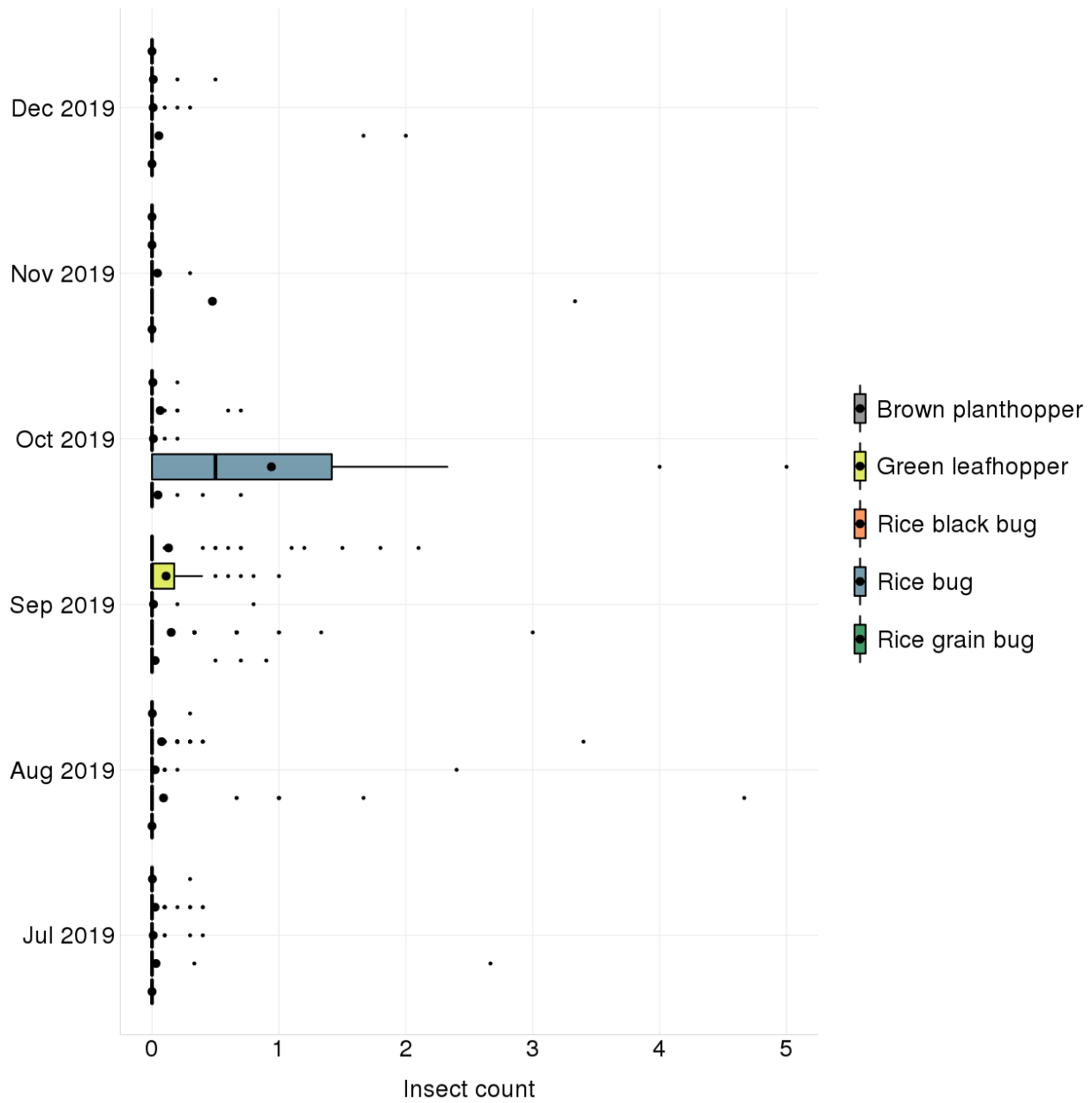


Figure 13. Count of insect pests in MIMAROPA, July 2019 to December 2019.

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

The number of monitored insect pests was also negligible in 2019.

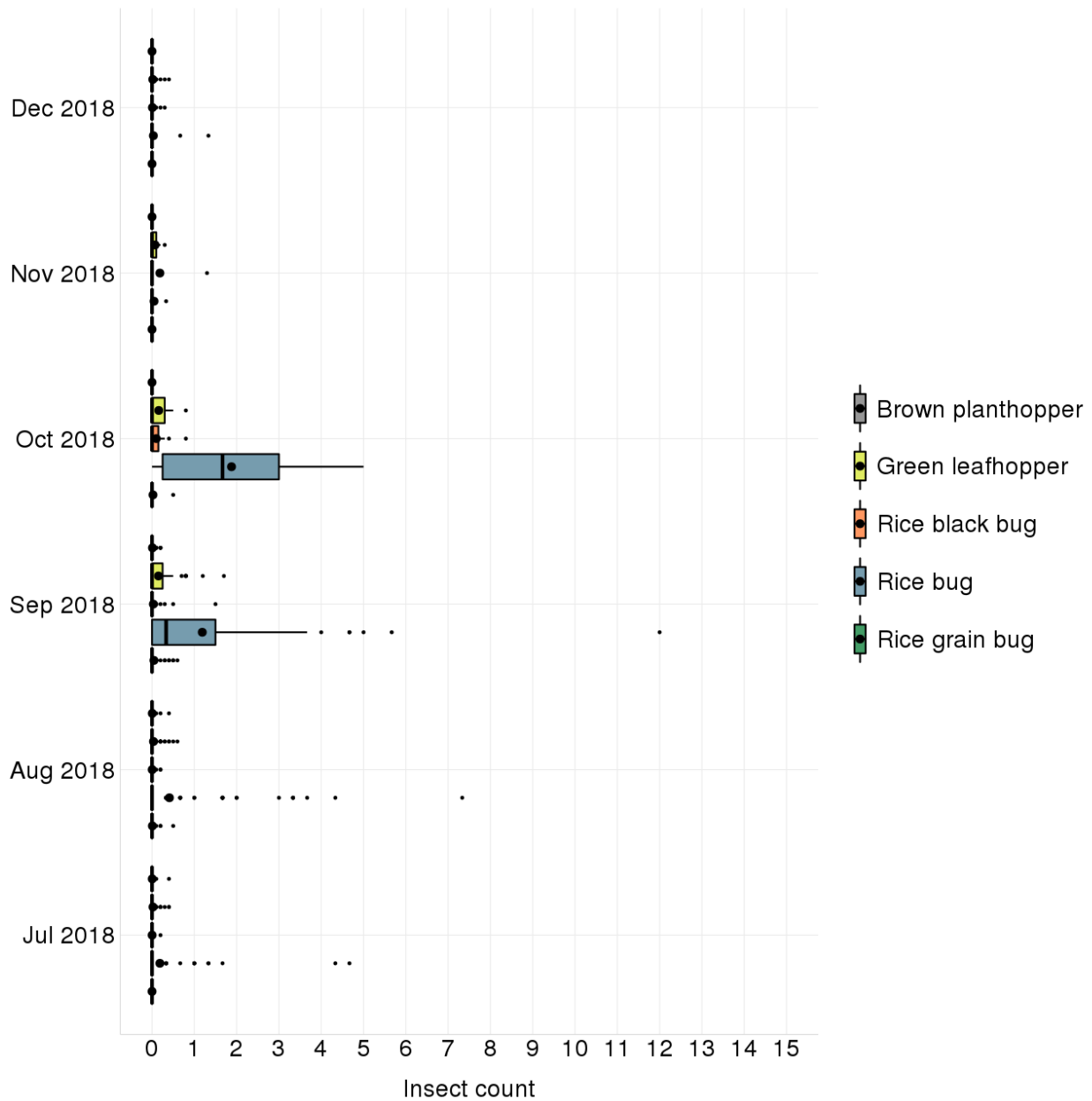


Figure 14. Count of insect pests in MIMAROPA, July 2018 to December 2018.

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F. Rodent injury

Rodent injury was not observed in any of the monitored fields(Figure 15).

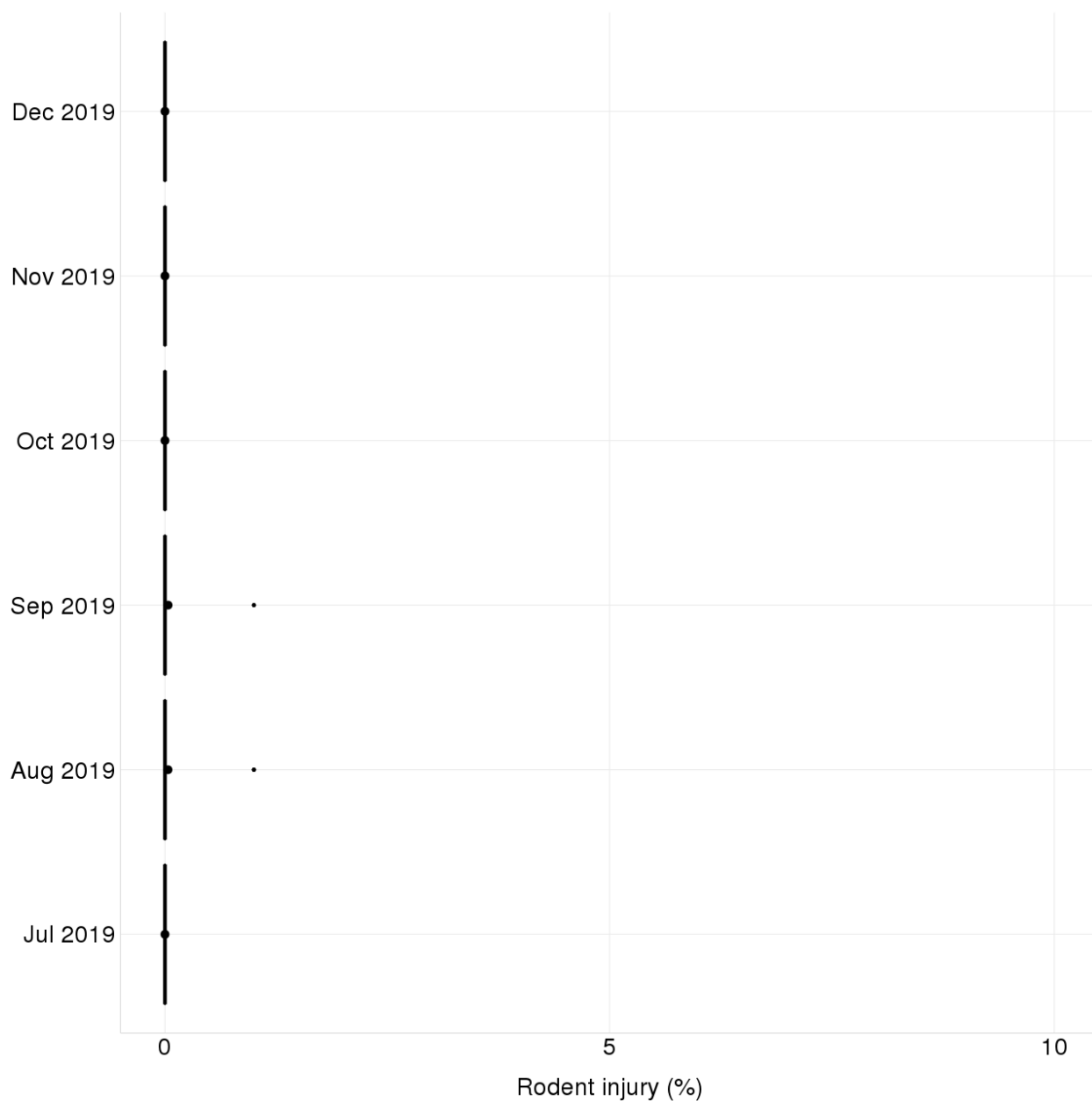


Figure 15. Incidence of rodent injury in MIMAROPA, July 2019 to December 2019.

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In 2019, rodent injury was observed, but the incidence was negligible (Figure 16).

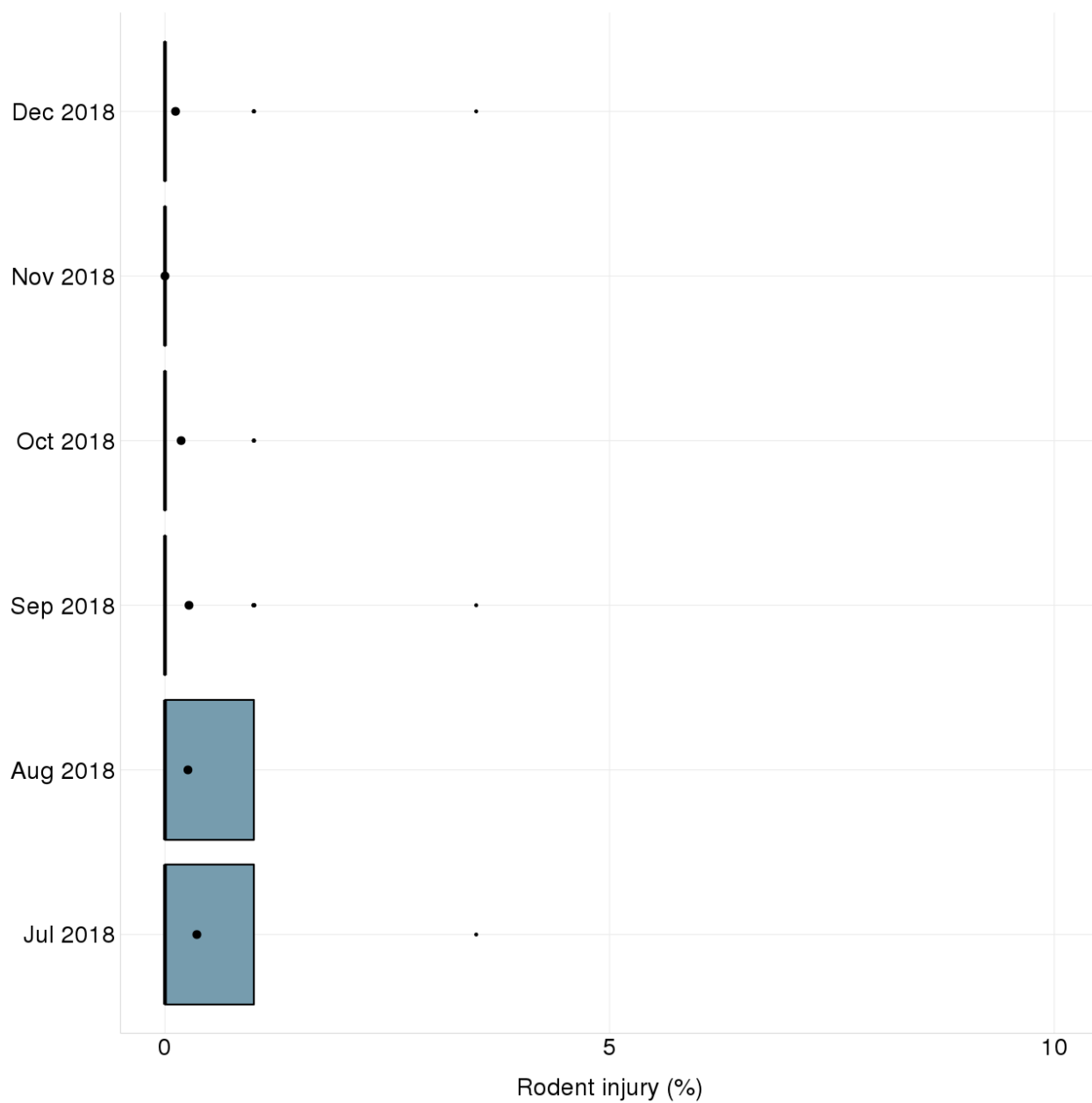


Figure 16. Incidence of rodent injury in MIMAROPA, July 2018 to December 2018.

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G. Weed cover

Relative to the other months during the second semester of 2019, high intensity of weed cover was observed in August to October 2019, but the intensity did not reach 5%.

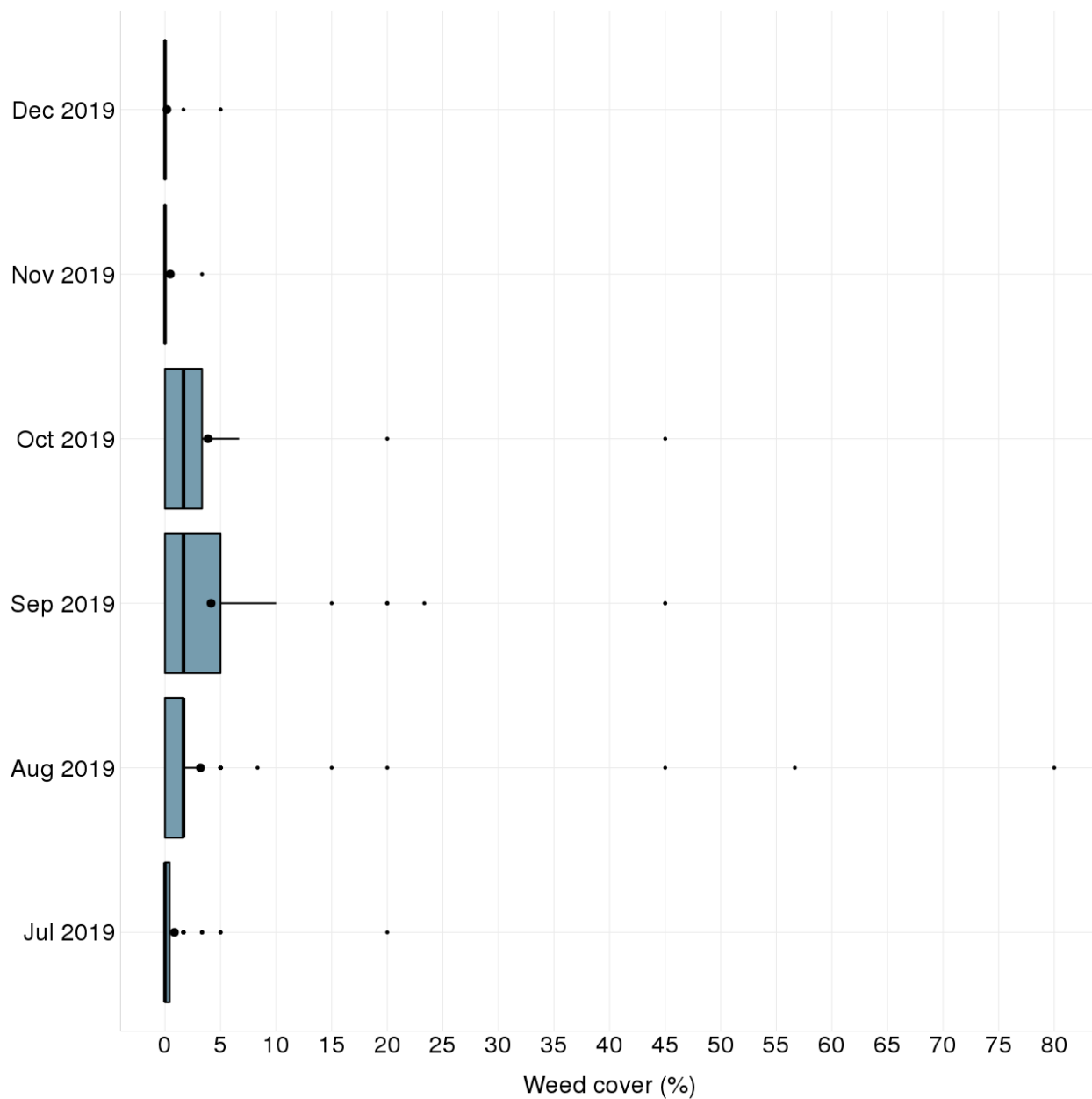


Figure 17. Percentage of weed cover in MIMAROPA, July 2019 to December 2019.

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

The intensity of weed cover in 2018 was 4% in August and 5% in October which were slightly higher than that observed in 2019.

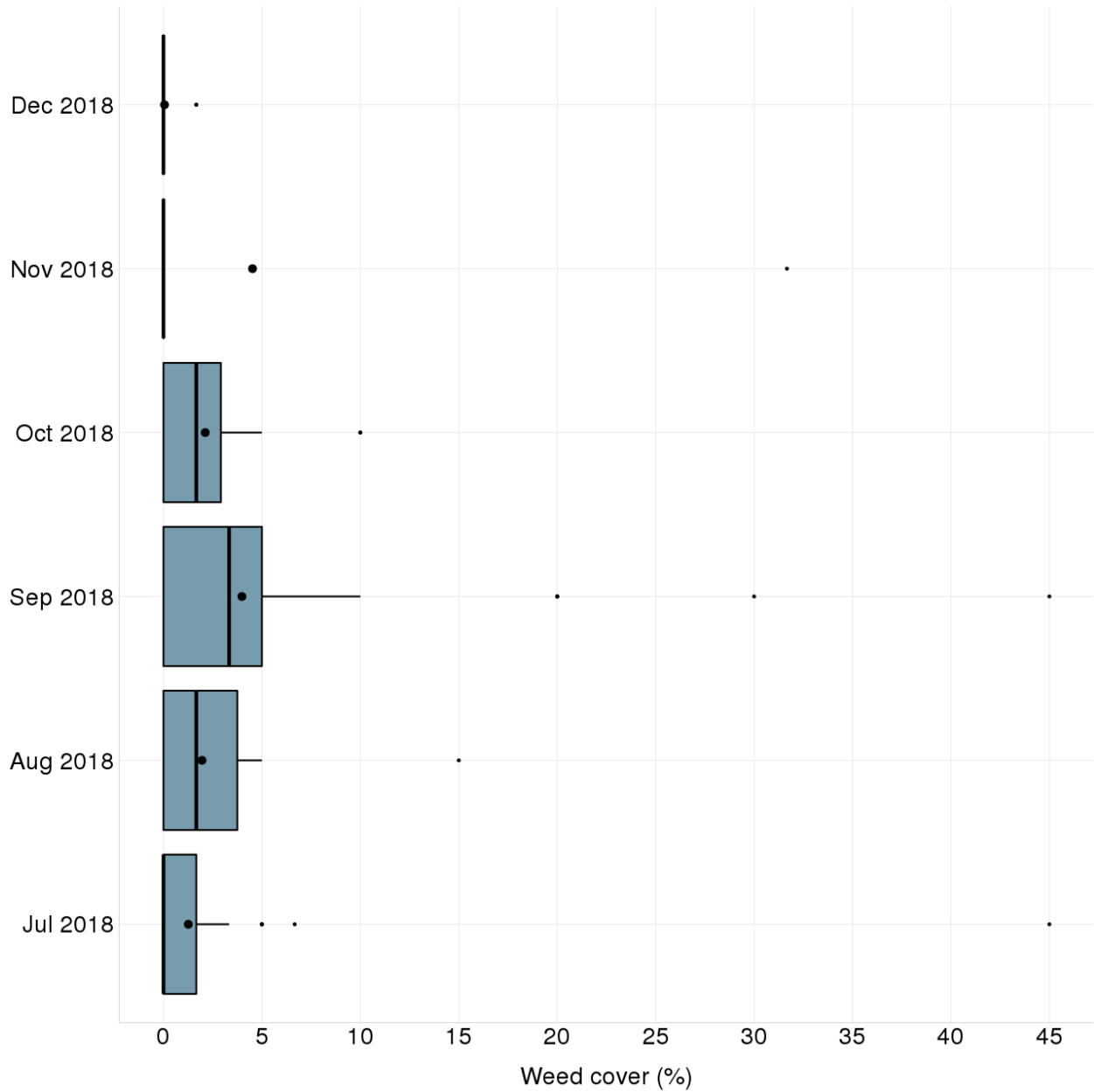


Figure 18. Percentage of weed cover in MIMAROPA, July 2018 to December 2018.

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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.

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.

Annexes

MIMAROPA		2018						2019					
Oriental Mindoro		JUL	AUG	SEP	OCT	NOV	DEC	JUL	AUG	SEP	OCT	NOV	DEC
A. FOLIAR DISEASES													
Bacterial leaf blight	mean	2.4	2.1	3.0	1.4	0.0	0.0	0.3	0.6	1.1	1.4	0.4	0.1
	median	0.0	0.2	1.1	0.7	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0
	maximum	32.3	23.1	12.7	8.1	0.1	0.8	6.7	7.4	9.5	8.4	2.5	2.5
	count	99	120	87	22	7	63	96	118	86	28	7	68
Bacterial leaf streak	mean	0.2	0.5	1.7	1.2	0.0	0.0	0.4	0.5	0.7	0.6	0.0	0.0
	median	0.0	0.0	0.3	0.4	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
	maximum	3.9	6.1	15.3	6.0	0.2	0.0	11.0	5.2	3.8	8.5	0.3	0.9
	count	99	120	87	22	7	63	96	118	86	28	7	68
Brown spot	mean	0.4	0.3	0.8	0.9	0.1	0.0	0.2	0.2	0.7	0.9	0.4	0.0
	median	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	maximum	16.6	6.5	10.2	4.3	0.3	0.8	5.9	3.0	13.3	10.8	2.9	0.2
	count	99	120	87	22	7	63	96	118	86	28	7	68
Leaf blast	mean	0.3	0.2	0.6	1.1	0.1	0.0	0.2	0.3	0.5	0.4	1.1	0.0
	median	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	maximum	7.1	5.1	5.2	4.1	0.4	0.8	10.4	6.7	5.9	4.6	7.9	0.7
	count	99	120	87	22	7	63	96	118	86	28	7	68
Red stripe	mean	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	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	1.3	5.3	2.2	0.9	0.1	0.5	0.1	0.5	0.1	1.2	0.0	0.4
	count	99	120	87	22	7	63	96	118	86	28	7	68
B. DISEASE OR PEST INJURY ON TILLERS													
Deadheart	mean	0.2	1.5	1.1	0.9	3.5	0.3	0.2	0.5	0.3	2.1	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	7.3	18.7	23.4	3.9	14.3	5.2	4.2	13.1	3.7	29.6	0.0	2.8
	count	99	120	87	22	7	63	96	118	86	28	7	68
Sheath Blight	mean	0.2	1.6	3.0	2.4	0.2	0.1	0.1	0.7	1.2	0.4	0.4	0.0
	median	0.0	0.0	0.7	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	maximum	5.4	31.3	26.6	22.3	0.7	1.3	2.3	17.0	20.3	4.1	3.1	0.8
	count	99	120	87	22	7	63	96	118	86	28	7	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 Table 1. Incidence of diseases or pest injuries during the previous 2nd semesters.

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

MIMAROPA		2018						2019					
Oriental Mindoro		JUL	AUG	SEP	OCT	NOV	DEC	JUL	AUG	SEP	OCT	NOV	DEC
C. DISEASE OR PEST INJURY ON PANICLES													
Neck Blast	mean	0.0	0.8	0.5	0.3	0.0	0.6	0.0	1.3	2.7	3.3	0.0	0.0
	median	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0
	maximum	0.0	6.1	11.5	2.7	0.0	0.6	0.0	24.1	42.2	29.7	0.0	0.0
	count	2	14	56	20	0	1	0	28	60	24	1	0
Whitehead	mean	0.0	2.6	1.3	3.8	0.0	1.7	0.0	0.9	1.1	2.6	14.8	0.0
	median	0.0	0.3	0.0	2.7	0.0	1.7	0.0	0.0	0.0	0.0	14.8	0.0
	maximum	0.0	13.7	7.8	13.0	0.0	1.7	0.0	5.6	9.1	27.8	14.8	0.0
	count	2	14	56	20	0	1	0	28	60	24	1	0
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	1.3	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	count	99	120	87	22	7	63	96	118	86	28	7	68
Hopperburn	mean	0.0	0.1	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	13.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	count	99	120	87	22	7	63	96	118	86	28	7	68
Tungro	mean	0.1	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	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	count	99	120	87	22	7	63	96	118	86	28	7	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 Table 2. Incidence of diseases or pest injuries during the previous 2nd semesters.

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

MIMAROPA		2018						2019					
Oriental Mindoro		JUL	AUG	SEP	OCT	NOV	DEC	JUL	AUG	SEP	OCT	NOV	DEC
E. INSECT COUNT													
Brown Planthopper	mean	0.0	0.0	0.0	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	0.4	0.4	0.2	0.0	0.0	0.0	0.3	0.3	2.1	0.2	0.0	0.0
	count	99	120	87	22	7	63	96	118	86	28	7	68
Green Leafhopper	mean	0.0	0.0	0.2	0.2	0.1	0.3	0.0	0.1	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	0.4	0.6	1.7	0.8	0.3	15.1	0.4	3.4	1.0	0.7	0.0	0.5
	count	99	120	87	22	7	63	96	118	86	28	7	68
Rice Black Bug	mean	0.0	0.0	0.0	0.1	0.2	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	0.2	0.2	1.5	0.8	1.3	0.3	0.4	2.4	0.8	0.2	0.3	0.3
	count	99	120	87	22	7	63	96	118	86	28	7	68
Rice Bug	mean	0.2	0.4	1.2	1.9	0.1	0.0	0.0	0.1	0.2	0.9	0.5	0.1
	median	0.0	0.0	0.3	1.7	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
	maximum	4.7	7.3	12.0	5.0	0.3	1.3	2.7	4.7	3.0	5.0	3.3	2.0
	count	99	120	87	22	7	63	96	118	86	28	7	68
Rice Grain Bug	mean	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.5	0.6	0.5	0.0	0.0	0.0	0.0	0.9	0.7	0.0	0.0
	count	99	120	87	22	7	63	96	118	86	28	7	68
F. RODENT INJURY	mean	0.4	0.3	0.3	0.2	0.0	0.1	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	3.5	1.0	3.5	1.0	0.0	3.5	0.0	1.0	1.0	0.0	0.0	0.0
	count	99	120	87	22	7	63	96	118	86	28	7	68
G. WEED COVER	mean	1.3	2.0	4.0	2.1	4.5	0.1	0.9	3.2	4.2	3.9	0.5	0.2
	median	0.0	1.7	3.3	1.7	0.0	0.0	0.0	1.7	1.7	1.7	0.0	0.0
	maximum	45.0	15.0	45.0	10.0	31.7	1.7	20.0	80.0	45.0	45.0	3.3	5.0
	count	99	120	87	22	7	63	96	118	86	28	7	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 Table 3. Incidence of pest injuries, count of insect pests, and percentage of weed cover during the previous 2nd semesters.

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