



PRIME

PRE-SEMESTER BULLETIN

July 2018 to June 2019


REGION IVB – MIMAROPA Region

AT A GLANCE

Table. Mean incidence of pest injuries, count of insect pests, and percentage of weed cover by month.

MIMAROPA

	2018						2019					
	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
A. FOLIAR DISEASES												
Bacterial leaf blight	2.4	2.1	2.9	1.4	0.0	0.0	0.5	2.0	1.9	0.8	1.3	0.4
Bacterial leaf streak	0.2	0.5	1.7	1.2	0.0	0	0.5	1.0	0.7	0.6	0.1	0.1
Brown spot	0.4	0.2	0.8	0.9	0.0	0.0	0.2	0.4	0.8	0.5	0.1	0.3
Leaf blast	0.3	0.2	0.6	1.1	0.1	0.0	0.1	0.3	0.6	0.2	0.6	0.1
Red stripe	0.0	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0	0	0
B. DISEASE OR PEST INJURY ON TILLERS												
Deadheart	0.2	1.5	1.1	0.9	3.5	0.3	0.5	0.4	0.3	0.9	0	0.2
Sheath Blight	0.2	1.5	3.1	2.4	0.2	0.0	0.1	0.5	0.7	1.7	0	0.8
C. DISEASE OR PEST INJURY ON PANICLES												
Neck Blast	0	0.7	0.5	0.3	0	0.6	1.4	0.2	0.4	2.0	0	0
Whitehead	0	2.5	1.3	3.8	0	1.7	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	0	0
Hopperburn	0	0.1	0	0	0	0	0	0	0	0	0	0
Tungro	0.1	0	0	0	0	0	0	0	0	0	0	0
E. INSECT COUNT												
Brown Plant Hopper	0.0	0.0	0.0	0	0	0	0.0	0.0	0.2	0	0	0.0
Green Leaf Hopper	0.0	0.0	0.2	0.2	0.1	0.3	0.0	0.1	0.2	0.2	0.0	0.0
Rice Black Bug	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.1	0	0
Rice Bug	0.2	0.4	1.2	1.9	0.0	0.0	0.0	0.1	0.1	0.5	0	0.1
Rice Grain Bug	0	0.0	0.0	0.0	0	0	0	0.0	0	0	0	0
F. RODENT INJURY												
	0.4	0.3	0.3	0.2	0	0.1	0.1	0.1	0.0	0.1	0	0.1
G. WEED COVER												
	1.3	1.9	4.1	2.1	4.5	0.1	0.3	1.9	3.7	4.4	5.3	0.9

LEGEND  1-5 %  5 %

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 2018 - June 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

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Growth stages

Most of the monitored fields in the second semester of 2018 were at the vegetative stage in July to August and were harvested in October (Figure 1). Majority of the fields were fallow in October to November. Most of the fields during the first semester of 2019 were at vegetative stage in January and the majority was harvested in March. A large proportion of the fields were fallow in April to June 2019.

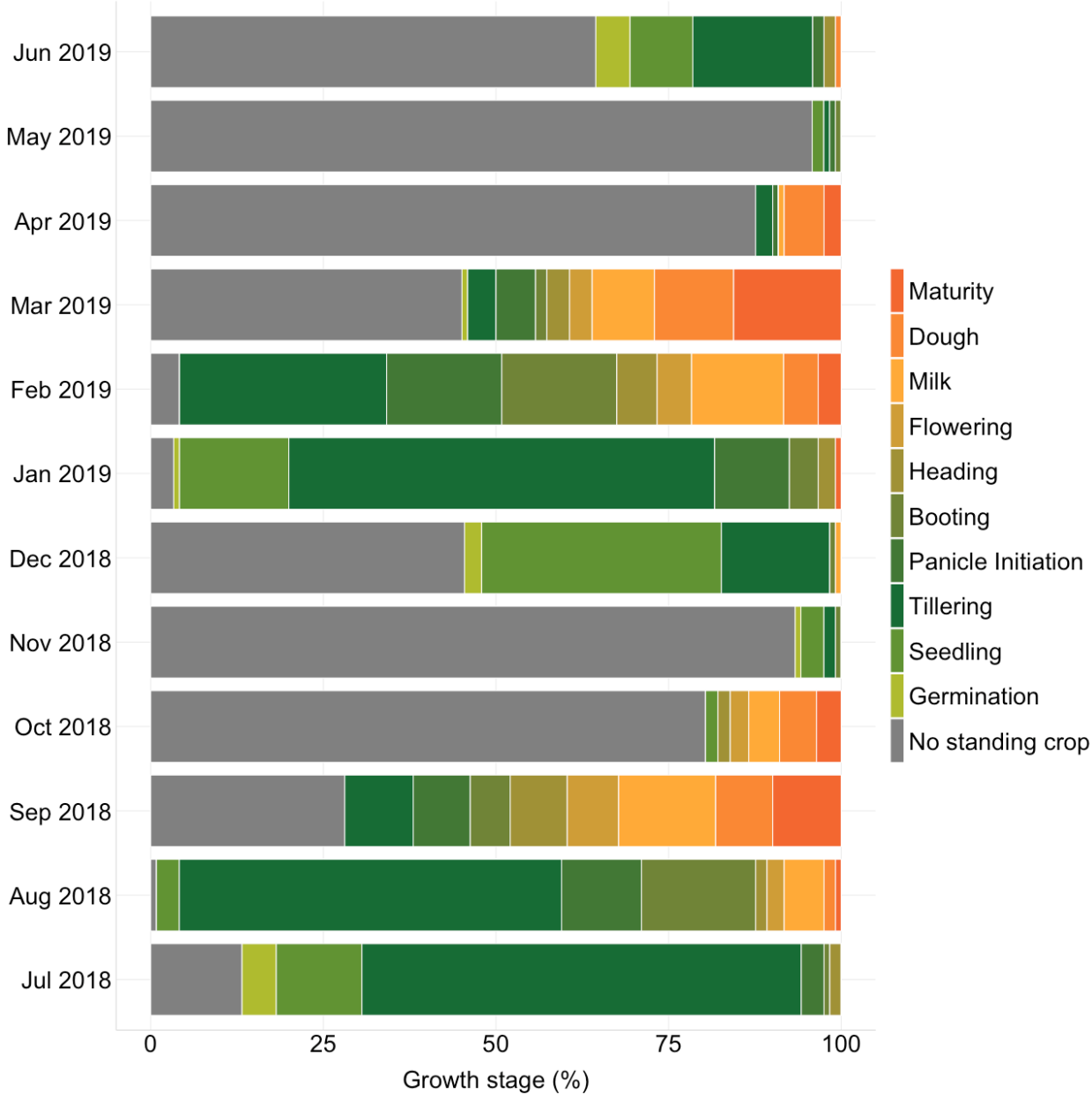


Figure 1. Proportion of crop growth stage of fields by month.

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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 2 to 8). 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

The mean incidence of foliar diseases was negligible during the year (Figure 2). The foliar disease with the highest mean incidence was bacterial blight. The mean incidence was 2% in July 2018 and April 2019 and 3% in August and September 2018.

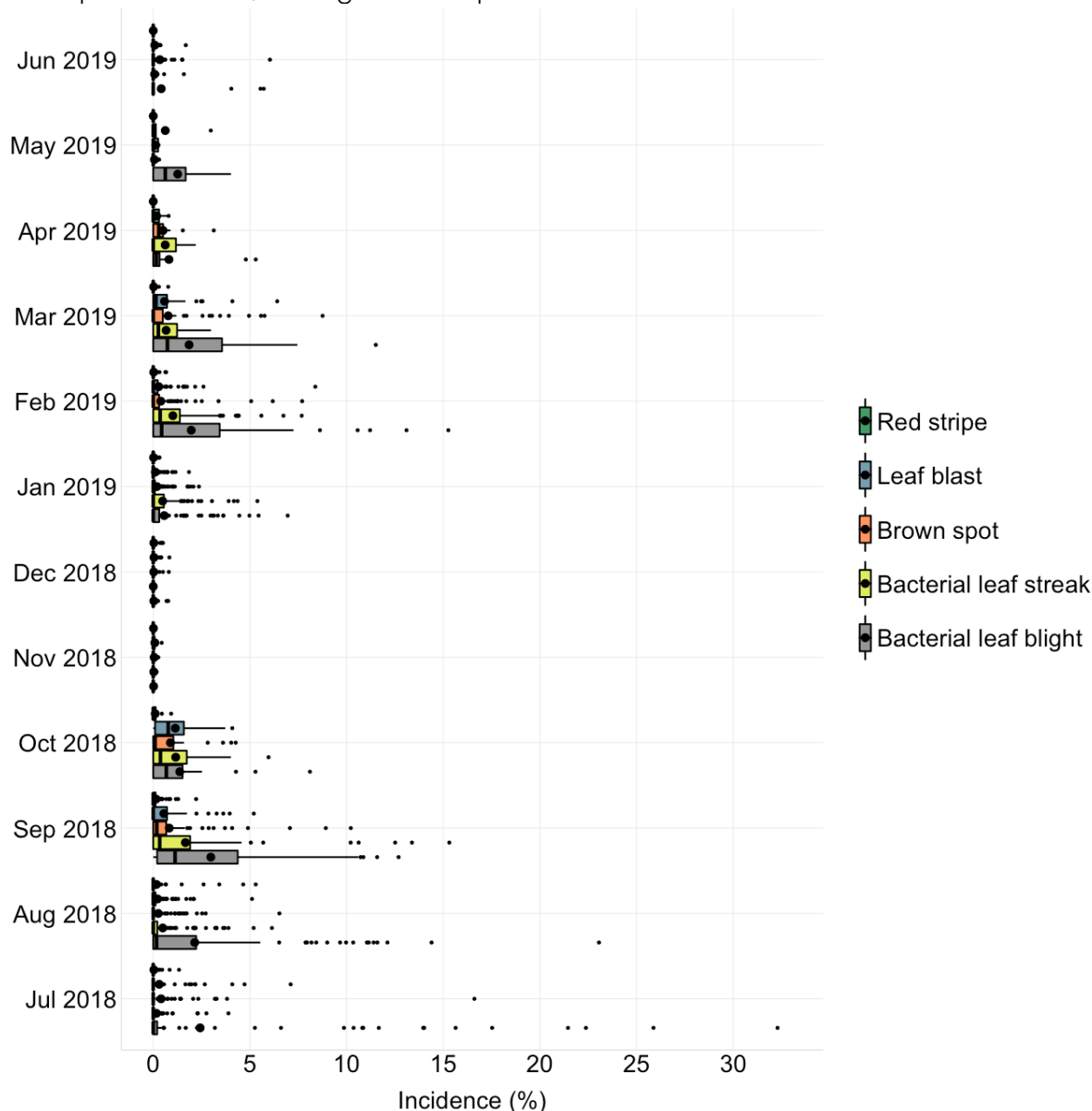


Figure 2. Incidence of foliar diseases in MIMAROPA, July 2018 to June 2019.

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A. Insect pest injuries and diseases on tillers

The highest mean incidence of deadheart (4%) was observed in November 2018. The median incidence was 0 in all months. The highest mean incidence of sheath blight was observed in September 2018 (3%) and October (2%) but the median was lower than 1% in both months. The median incidence was 0 in all the other months.

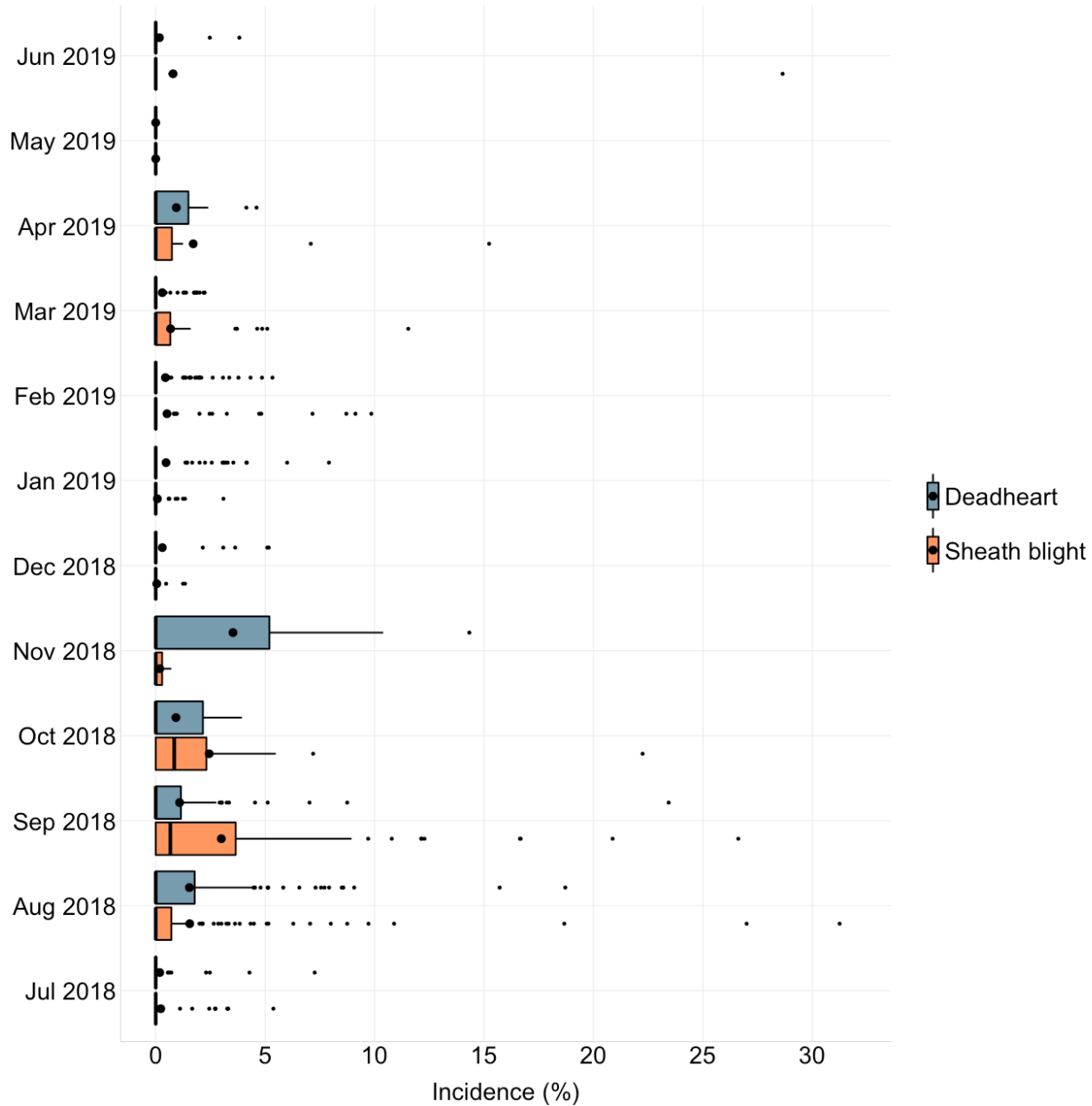


Figure 2. Incidence of deadheart and sheath blight in MIMAROPA, July 2018 to June 2019.

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B. Insect pest injuries and diseases on panicles

Neck blast incidence during the year was negligible (Figure 4). The highest mean and median incidences of 2% and 0.77%, respectively, was observed in April 2019. On the other hand, the mean and median incidences of whitehead caused by stemborer of 4% and 3%, respectively, were observed in October 2018. The second highest mean incidence of 2% was observed in August 2018. The mean whitehead incidence was 2% or lower in the other months.

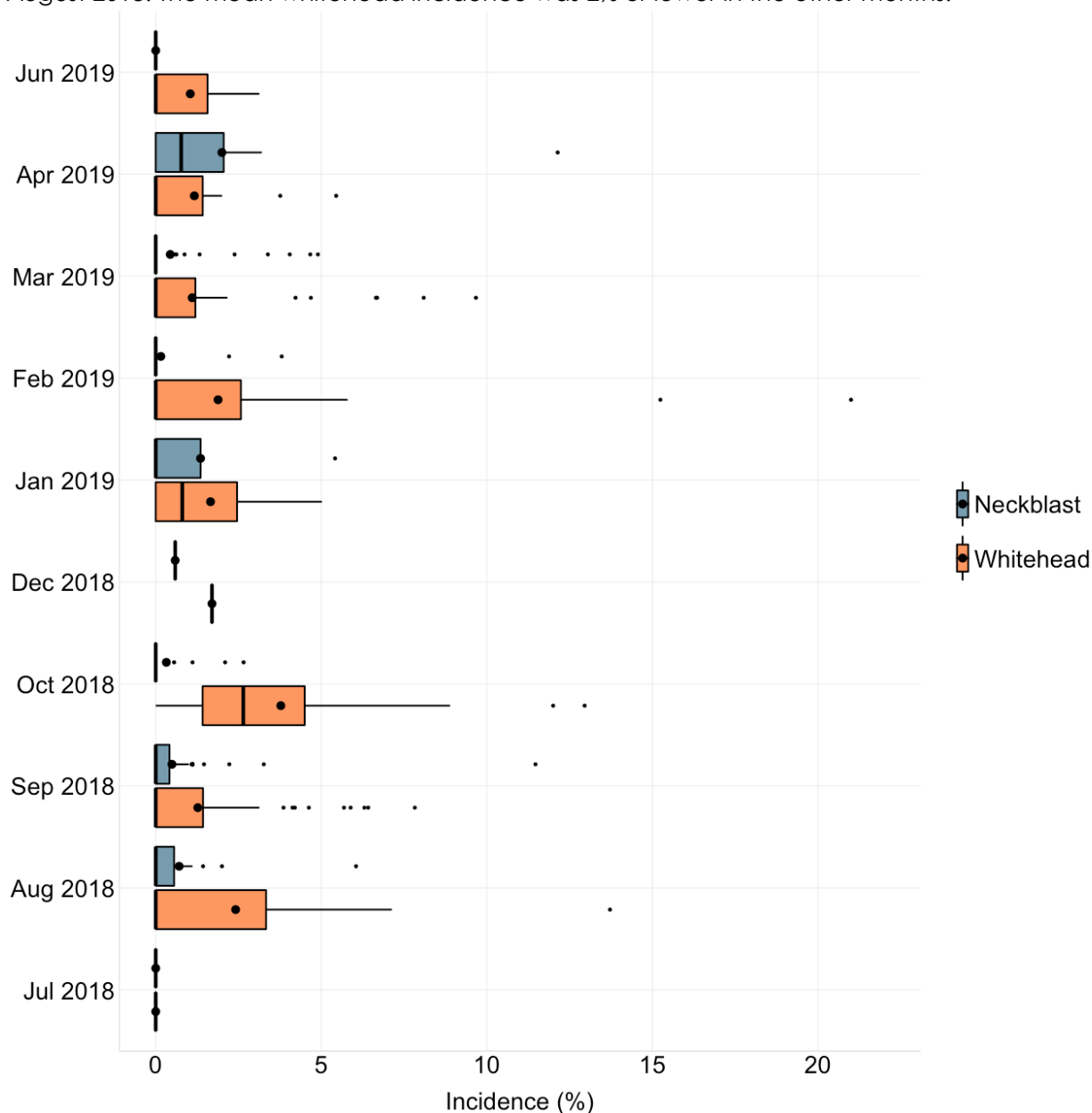


Figure 4. Incidence of neck blast and whitehead in MIMAROPA, July 2018 to June 2019.

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C. Systemic diseases and insect pest injuries

The incidence of bugburn, hopperburn and tungro during the year was negligible (Figure 6).

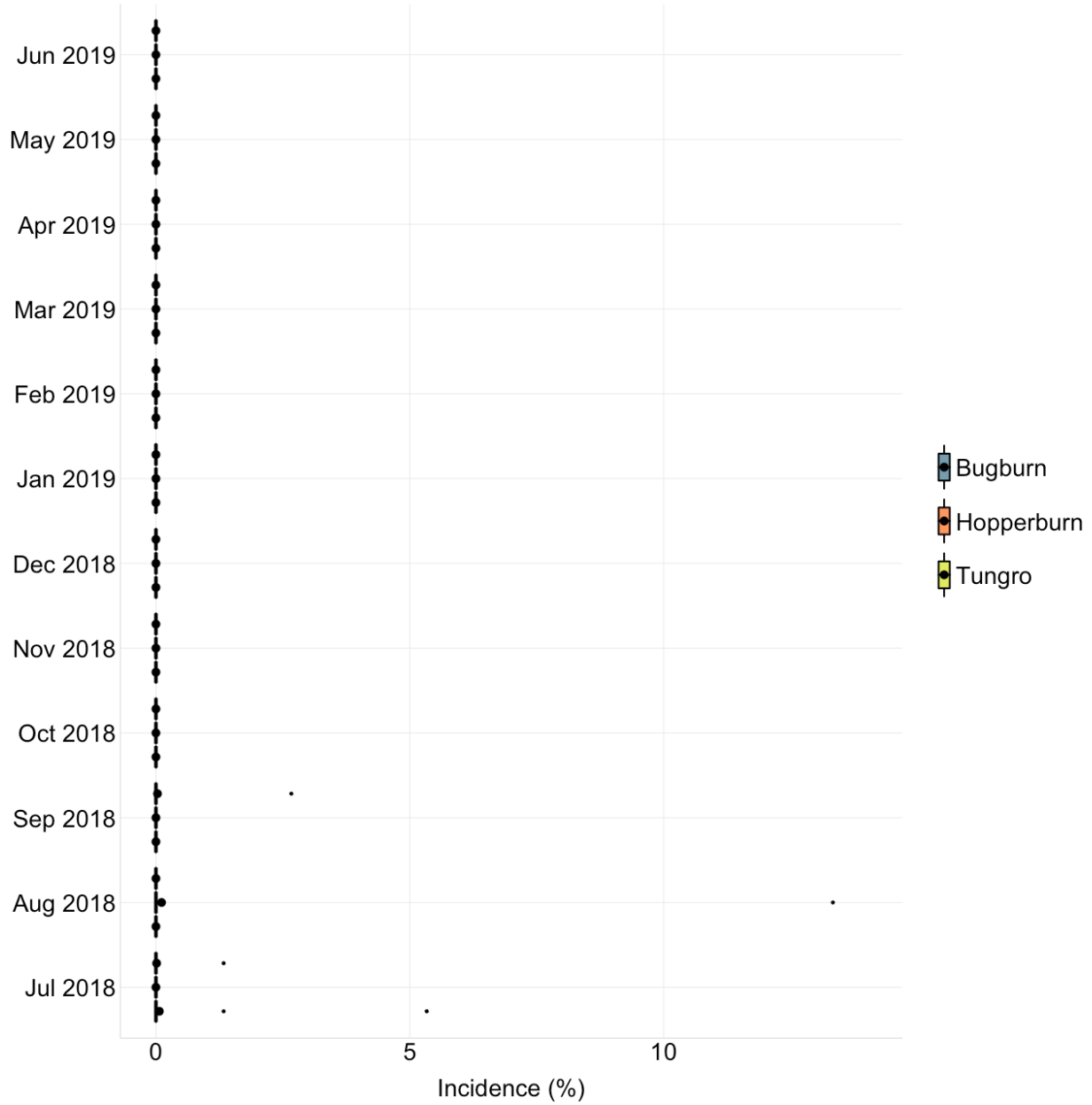


Figure 5. Incidence of bugburn, hopperburn and tungro in MIMAROPA, July 2018 to June 2019.

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D. Count of insect pests

The number of insect pests during the year was negligible (Figure 6). One and two rice bugs per square meter were observed in September and October 2018, respectively.

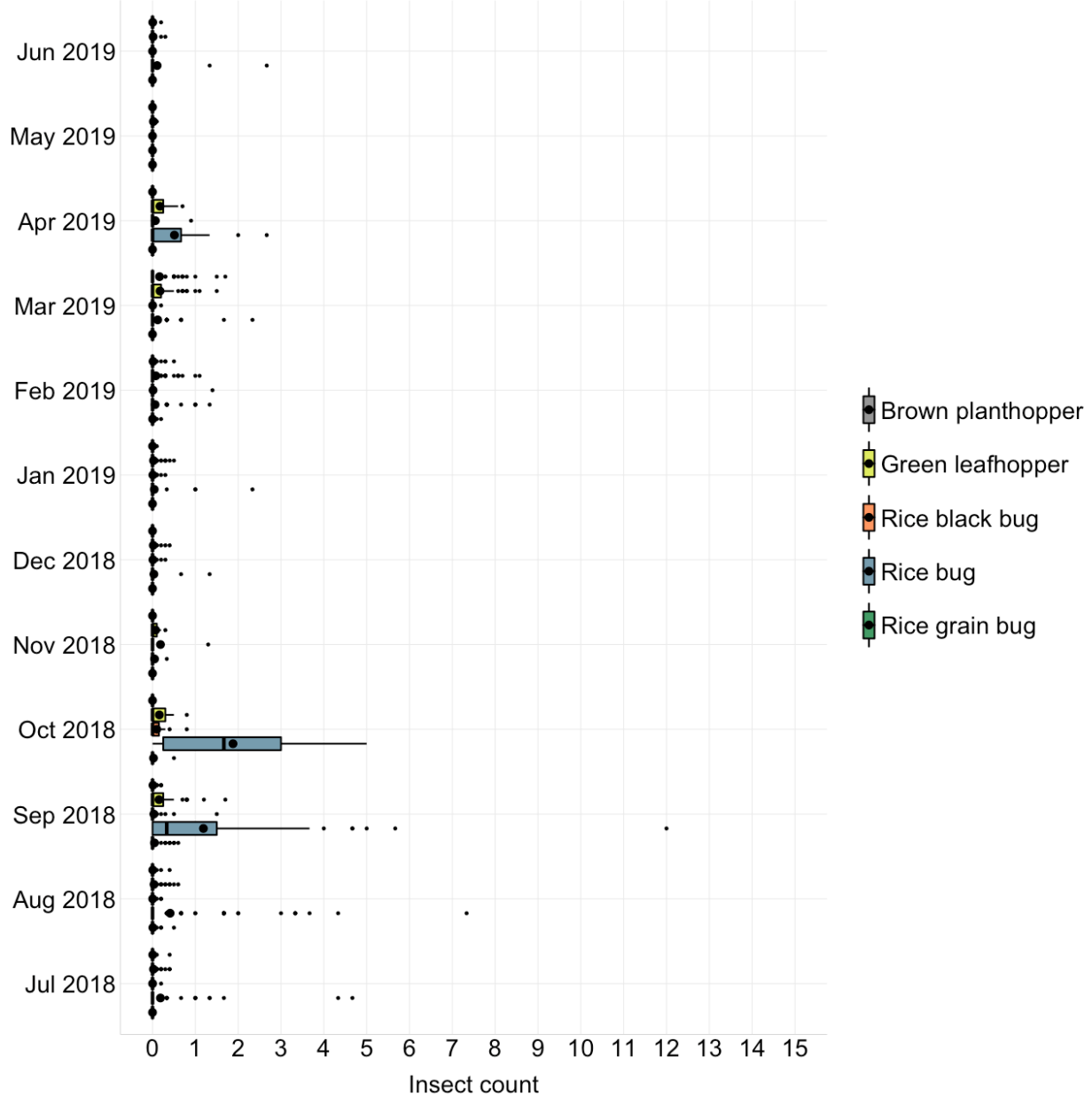


Figure 6. Count of insect pests in MIMAROPA, July 2018 to June 2019.

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E. Rat injury

The incidence of rat injury during the year was negligible.

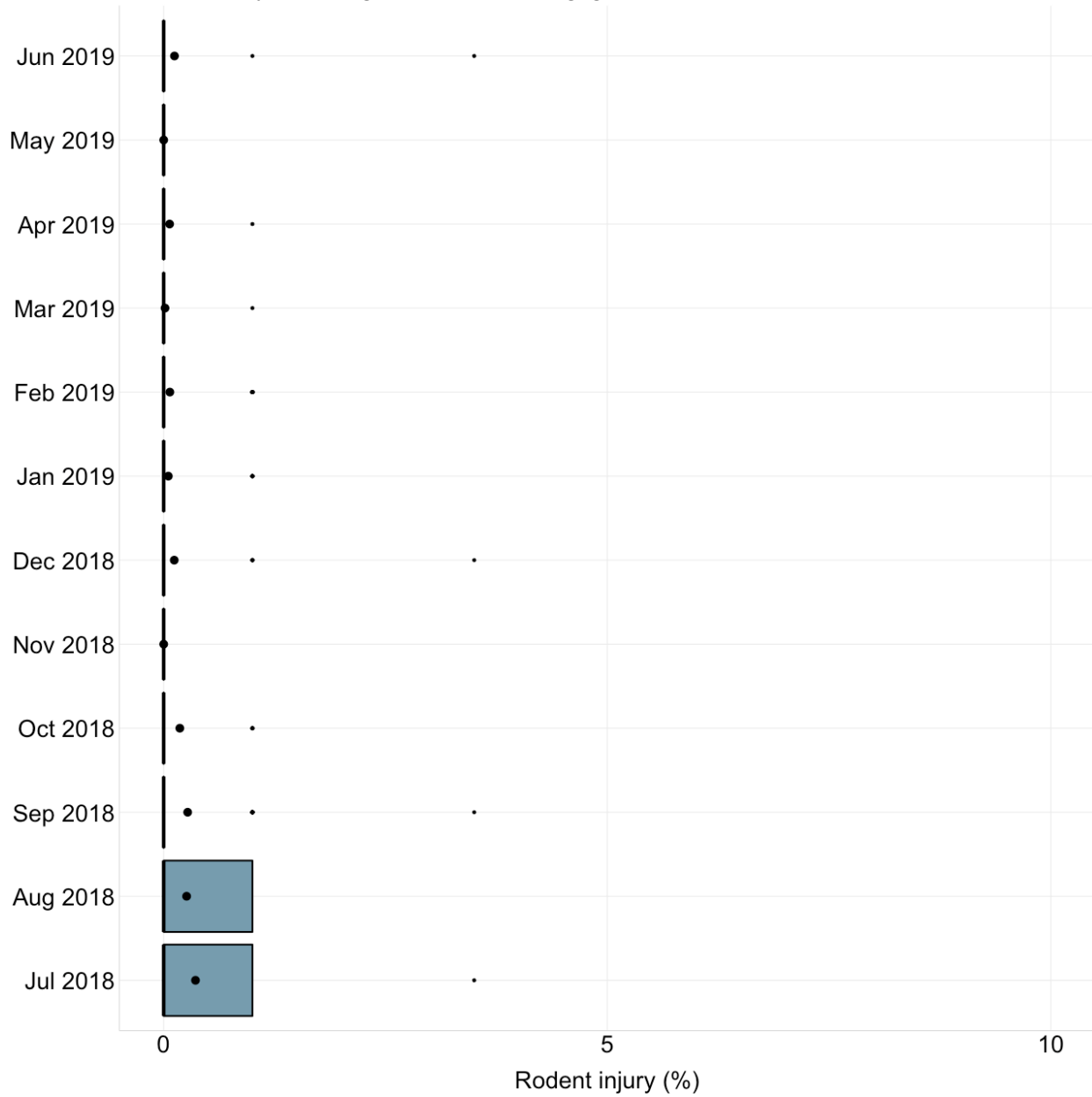


Figure 7. Incidence of rat injury, July 2018 to June 2019.

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F. Weed cover

The highest mean of weed cover of 5% was observed in November 2018 and May 2019 when a vast majority of the fields were fallow. The mean of weed cover was 4% in September 2018 and April 2019. The median percentage of weed cover did not exceed 3% in any month.

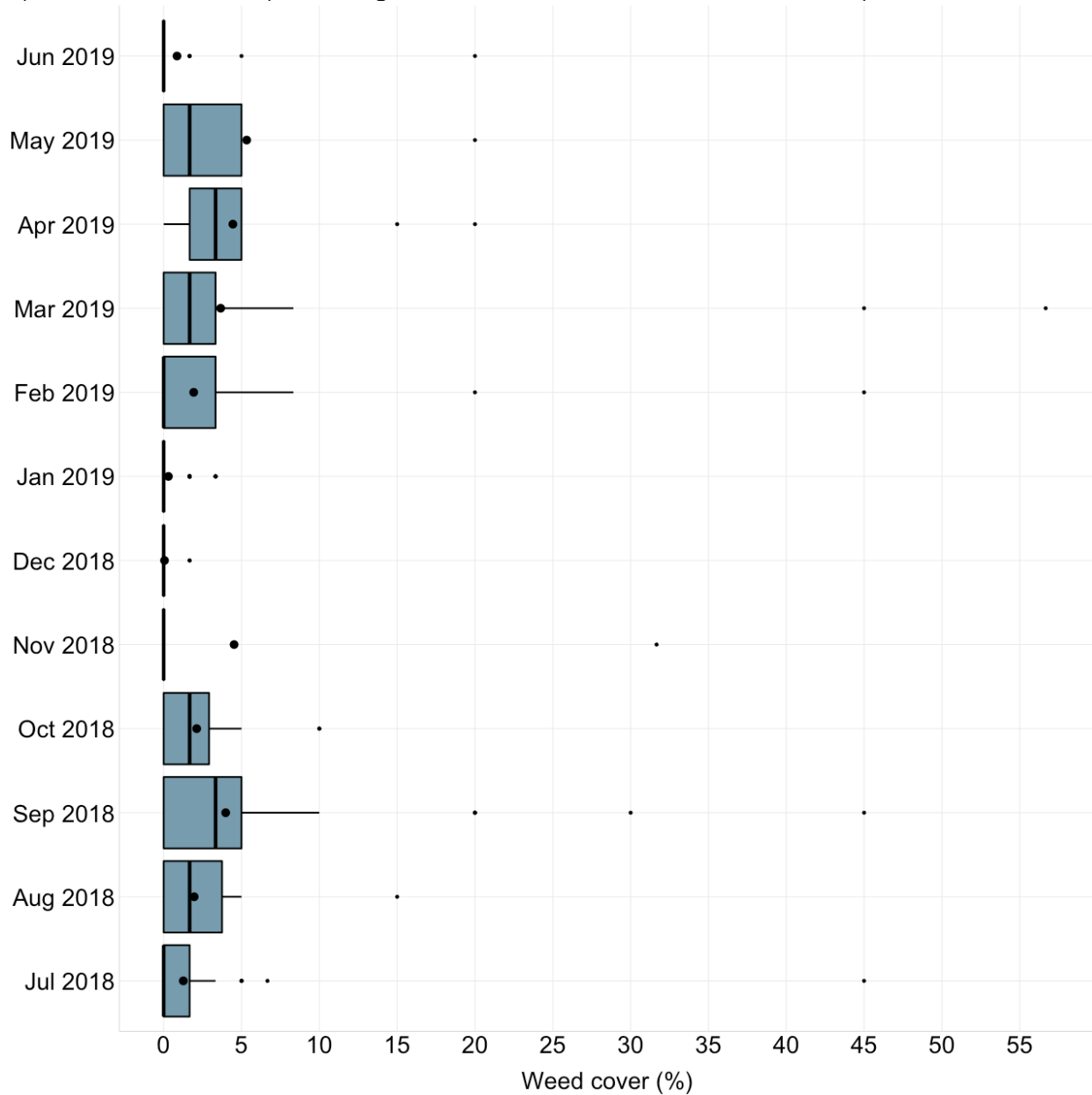


Figure 8. Percentage of weed cover in MIMAROPA, July 2018 to June 2019

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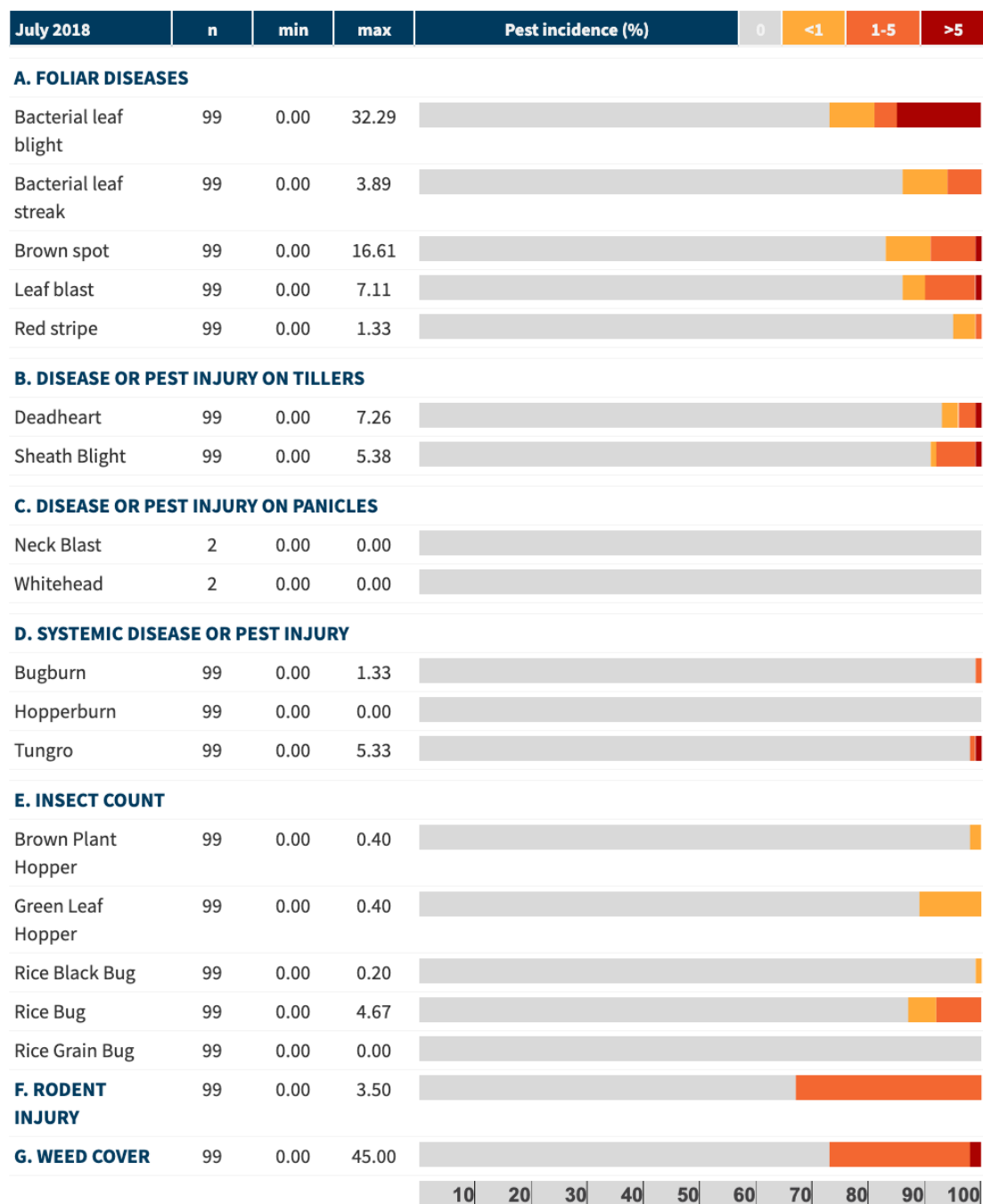
Management of major pests

This section describes the management of the most important pests during the reporting period. A pest is operationally considered important if the mean incidence of injury (for insect pests and diseases) or percentage of cover (for weeds) in at least one month was at least 5%, or in the case of insect pests, the count was at least 5 per square meter.

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 fenclorim 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. 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.

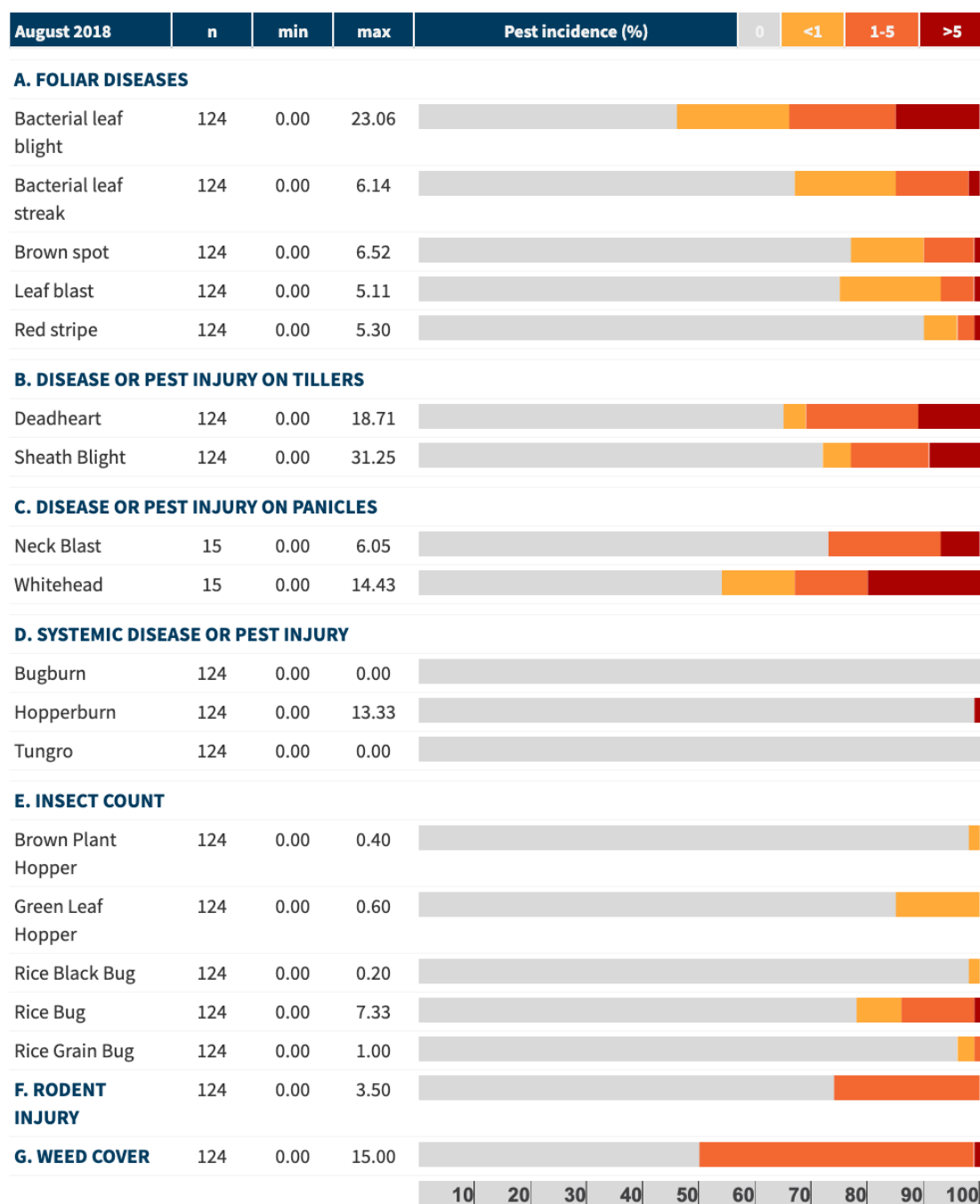
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Annex Figure 1. Incidence of pest injuries, count of insect pests, and weed cover in July 2018. Horizontal bar shows the proportion of fields in each range of pest injury incidence, insect count, or weed cover.

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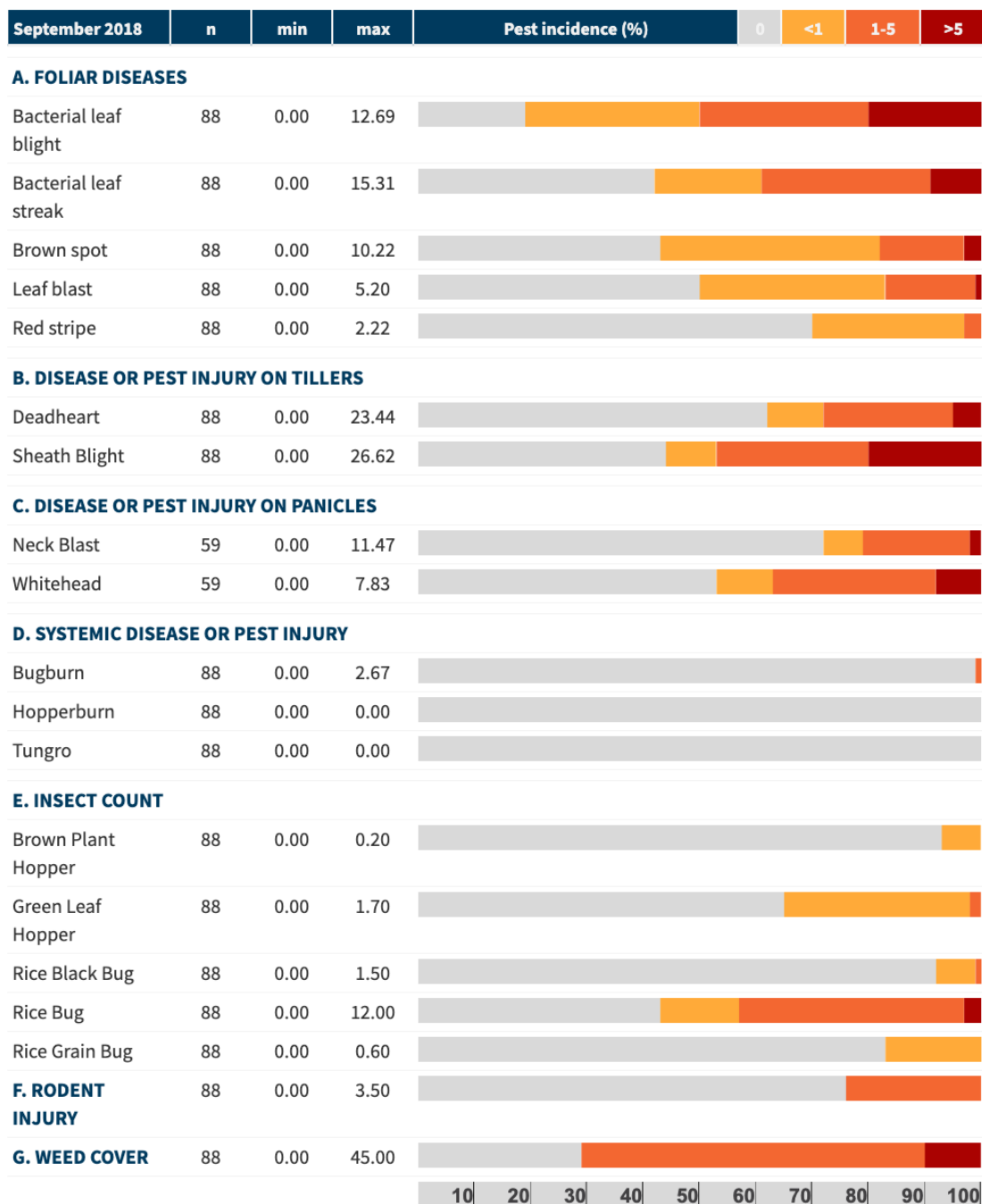
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Annex Figure 2. Incidence of pest injuries, count of insect pests, and weed cover in August 2018. Horizontal bar shows the proportion of fields in each range of pest injury incidence, insect count, or weed cover.

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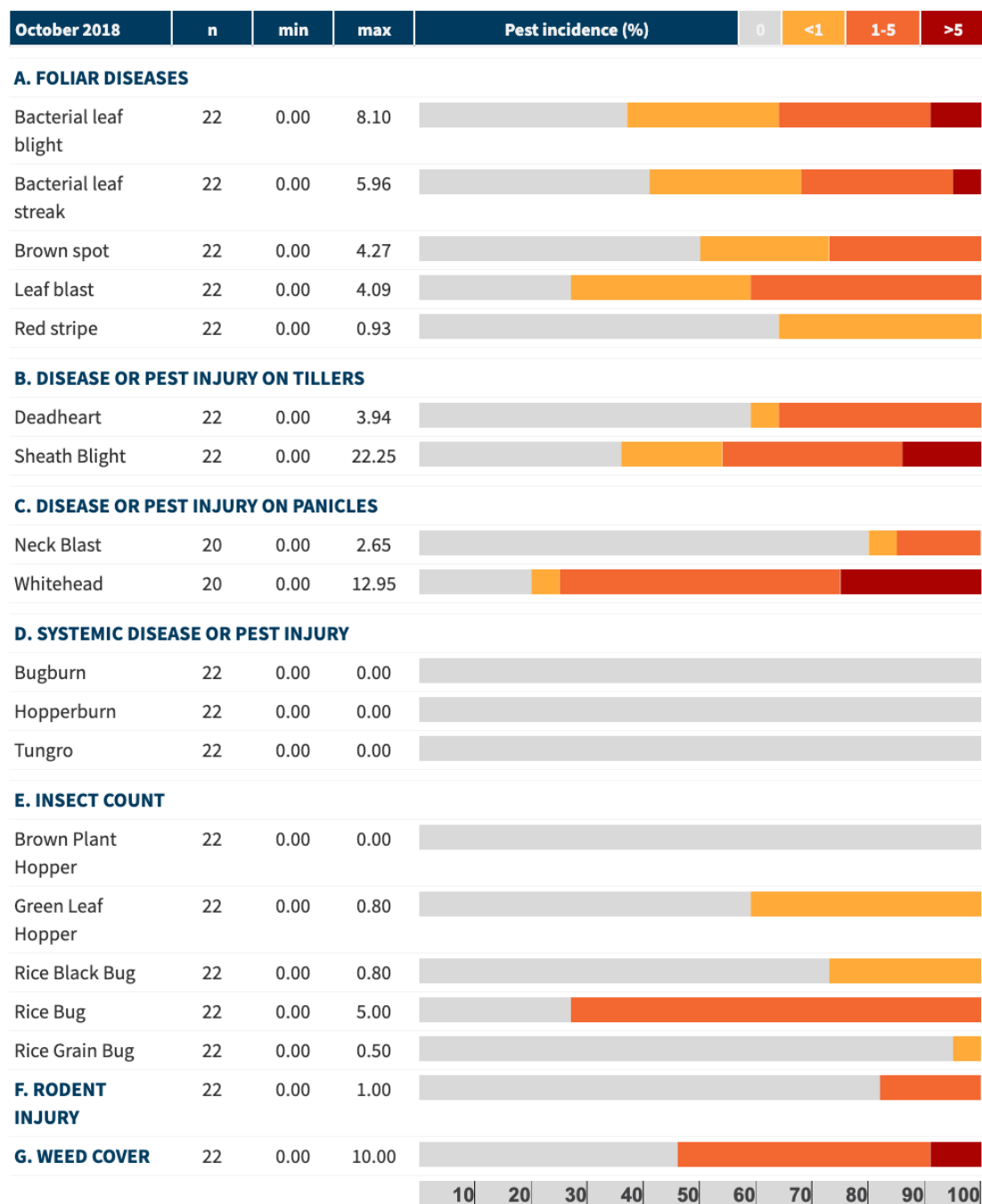
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Annex Figure 3. Incidence of pest injuries, count of insect pests, and weed cover in September 2018. Horizontal bar shows the proportion of fields in each range of pest injury incidence, insect count, or weed cover.

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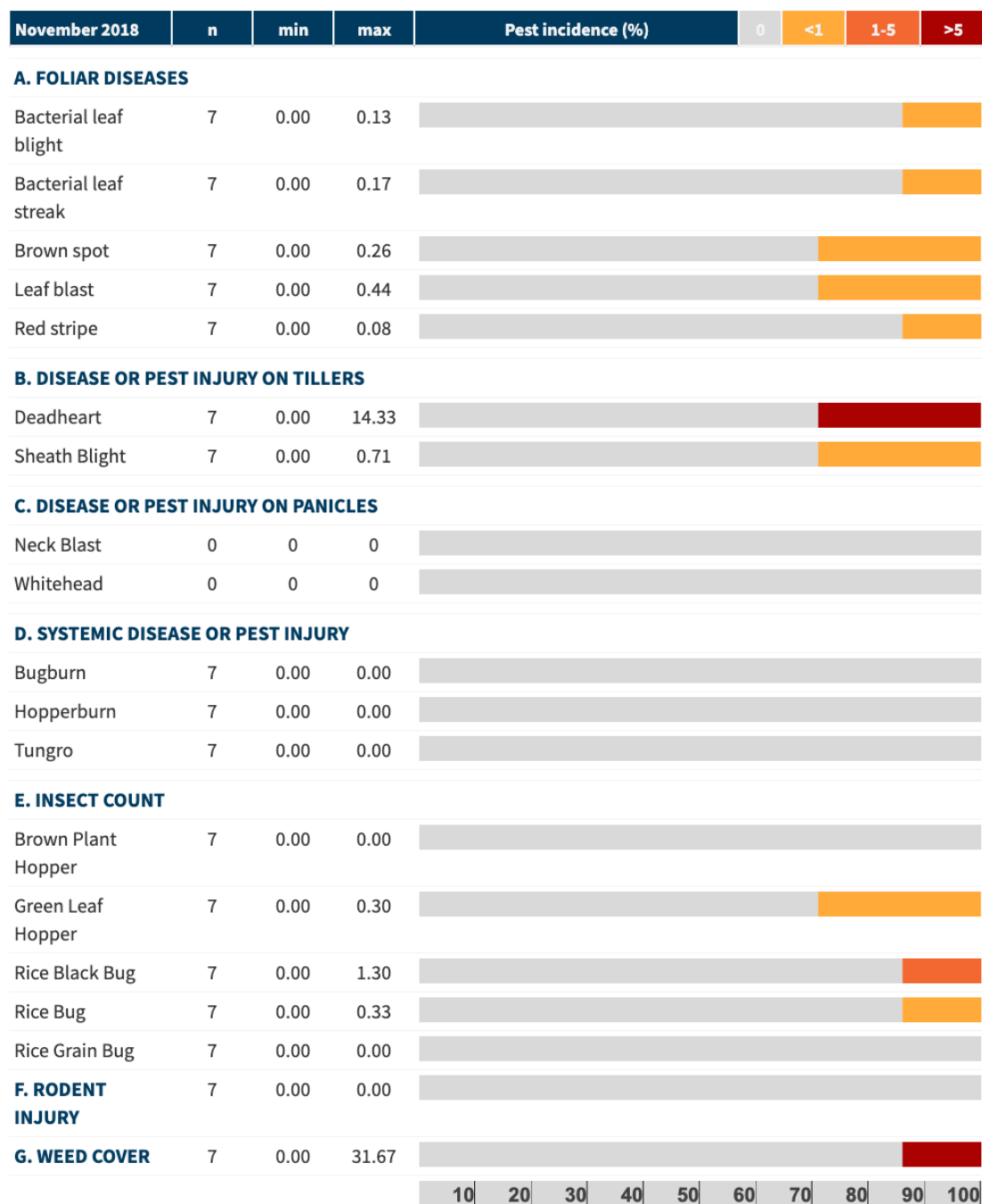
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Annex Figure 4. Incidence of pest injuries, count of insect pests, and weed cover in October 2018. Horizontal bar shows the proportion of fields in each range of pest injury incidence, insect count or weed cover.

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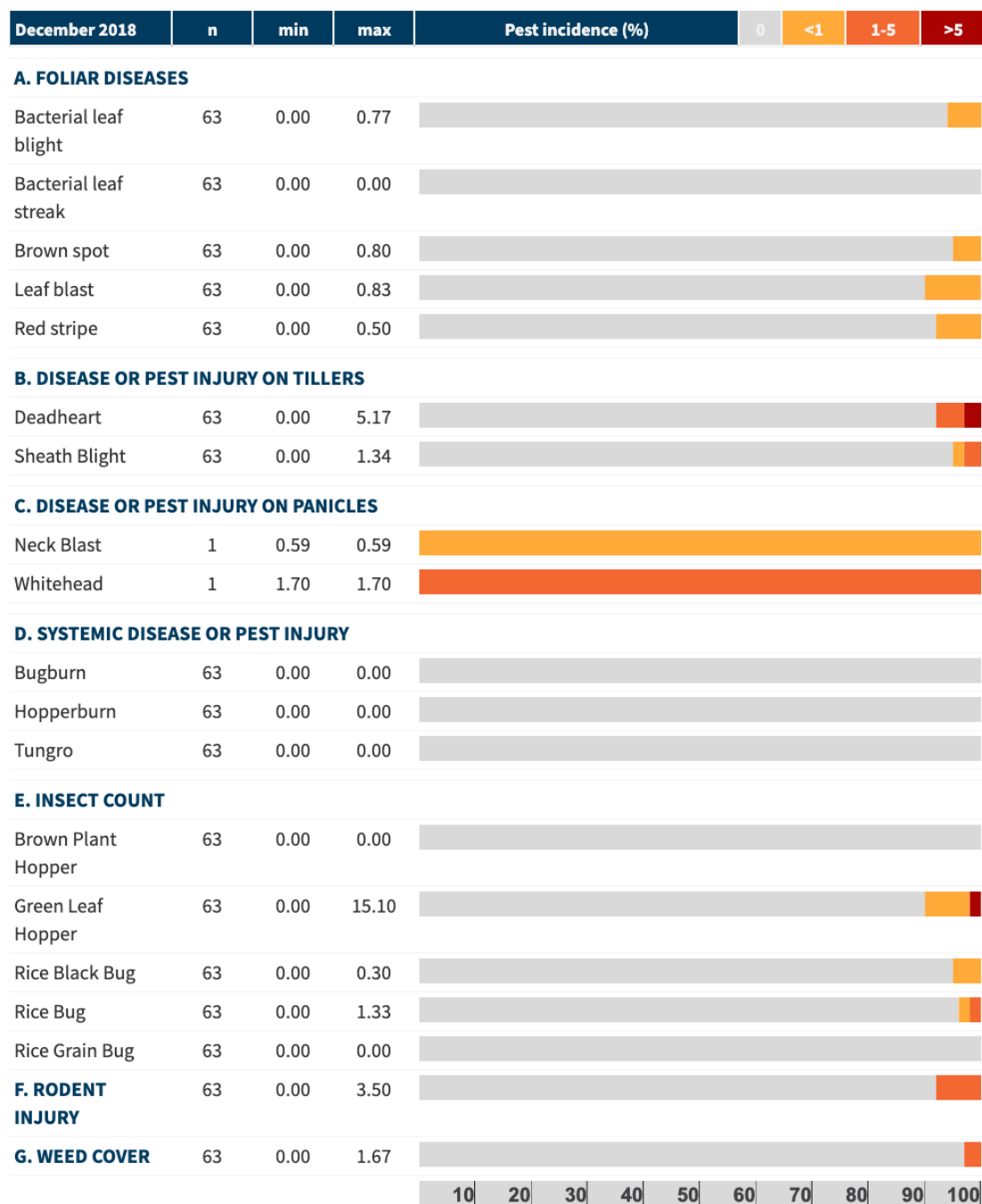
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Annex Figure 5. Incidence of pest injuries, count of insect pests, and weed cover in November 2018. Horizontal bar shows the proportion of fields in each range of pest injury incidence, insect count or weed cover.

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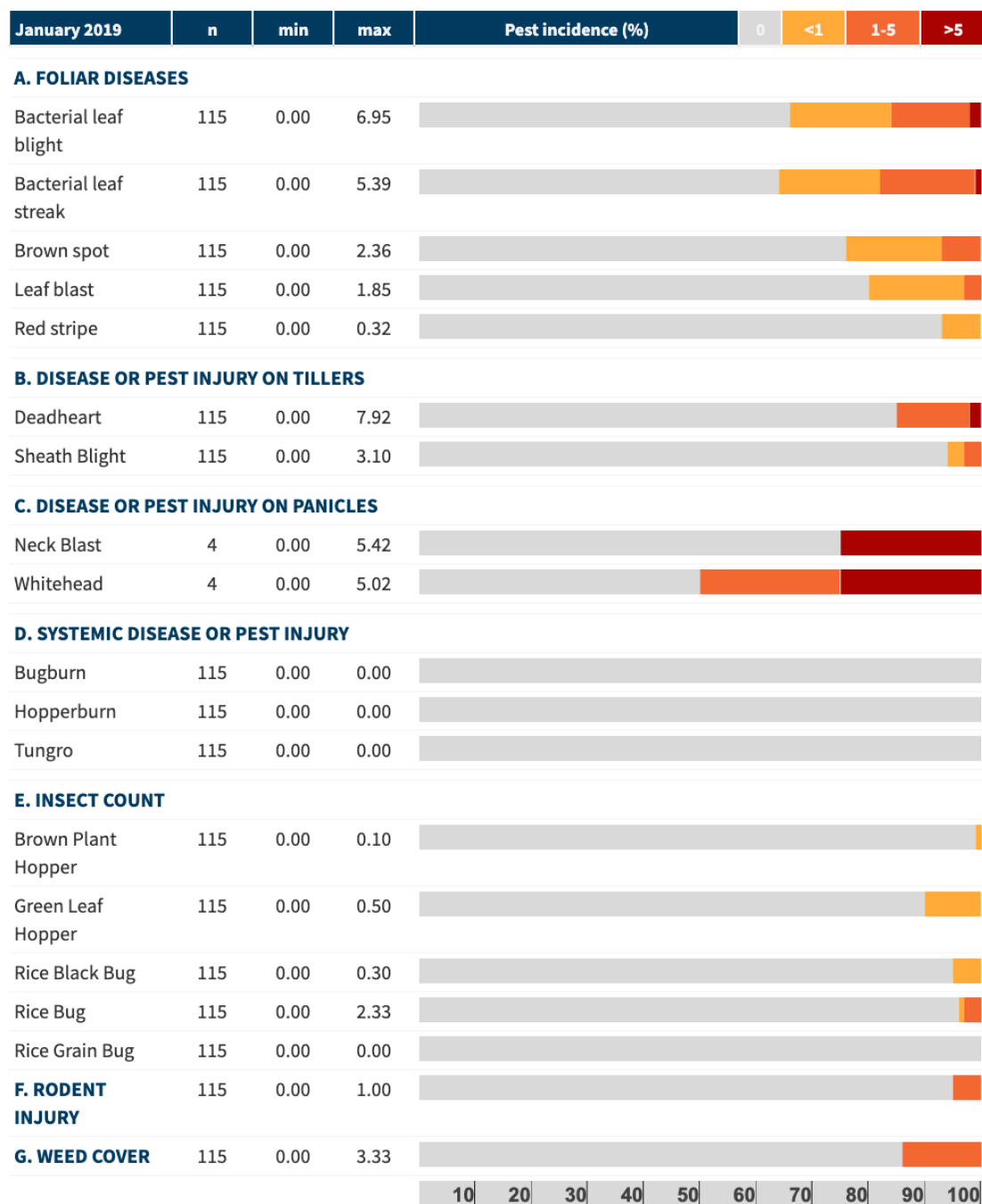
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Annex Figure 6. Incidence of pest injuries, count of insect pests, and weed cover in December 2018. Horizontal bar shows the proportion of fields in each range of pest injury incidence, insect count or weed cover.

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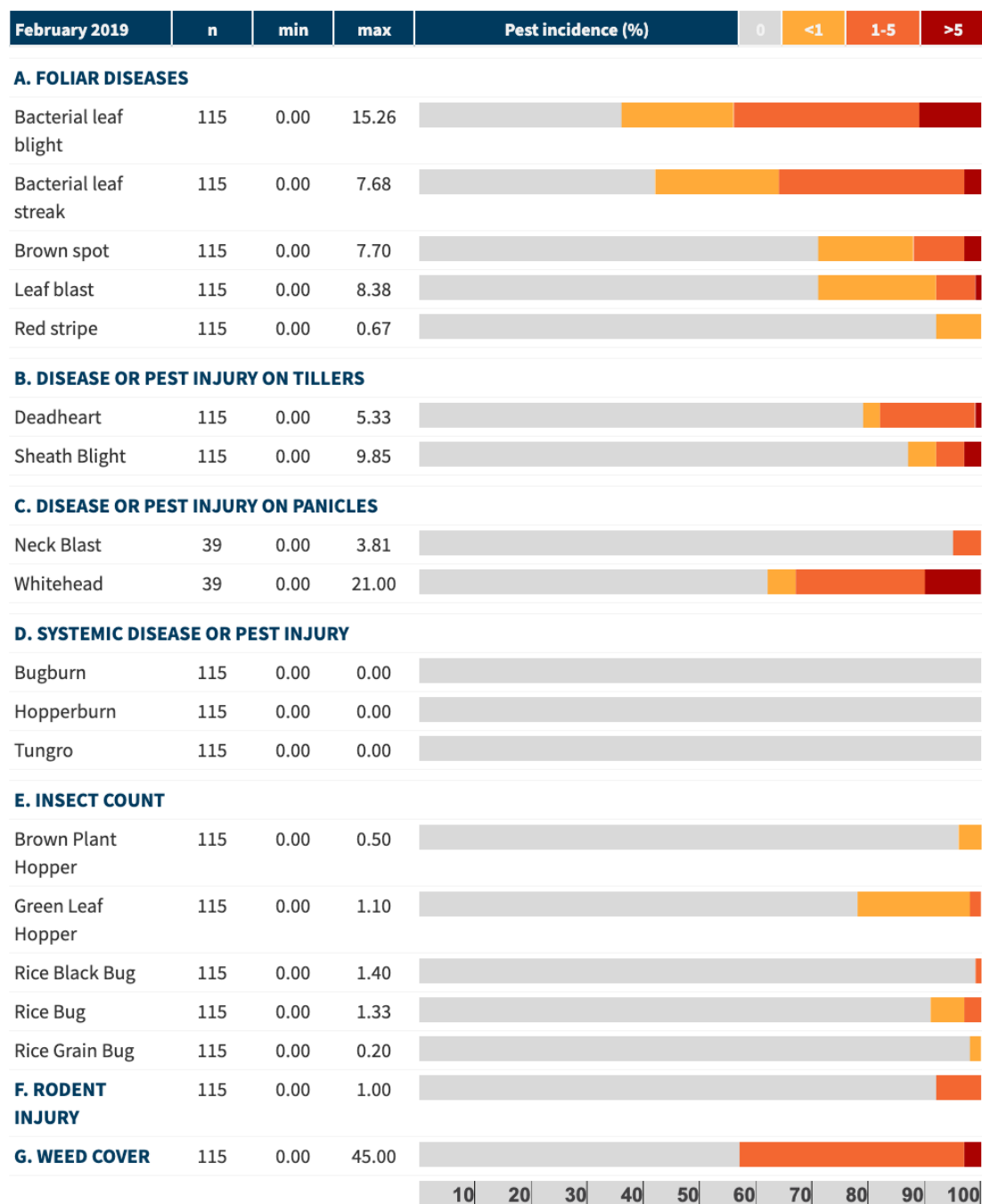
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Annex Figure 7. Incidence of pest injuries, count of insect pests, and weed cover in January 2019. Horizontal bar shows the proportion of fields in each range of pest injury incidence, insect count or weed cover.

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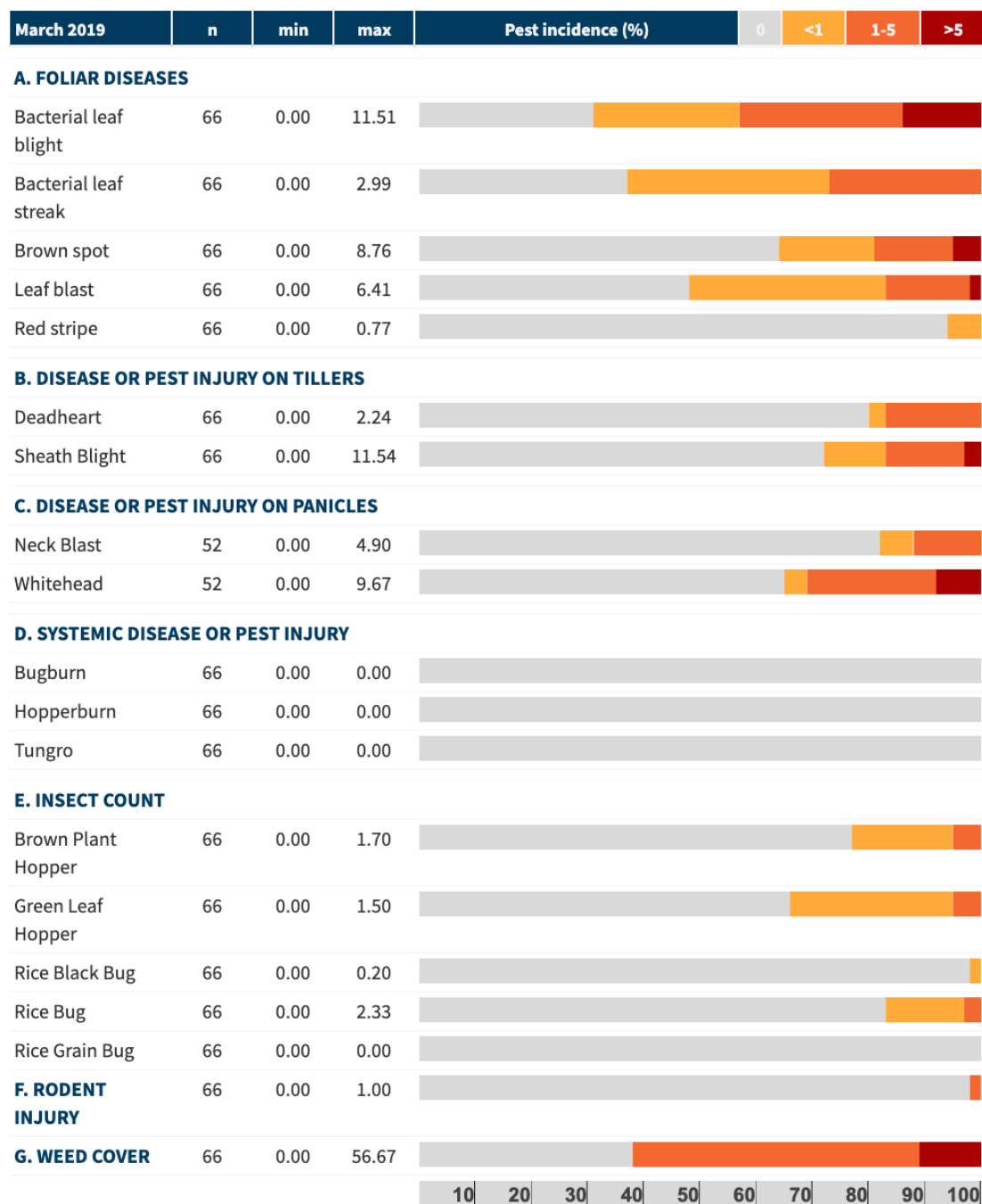
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Annex Figure 8. Incidence of pest injuries, count of insect pests, and weed cover in February 2019. Horizontal bar shows the proportion of fields in each range of pest injury incidence, insect count or weed cover.

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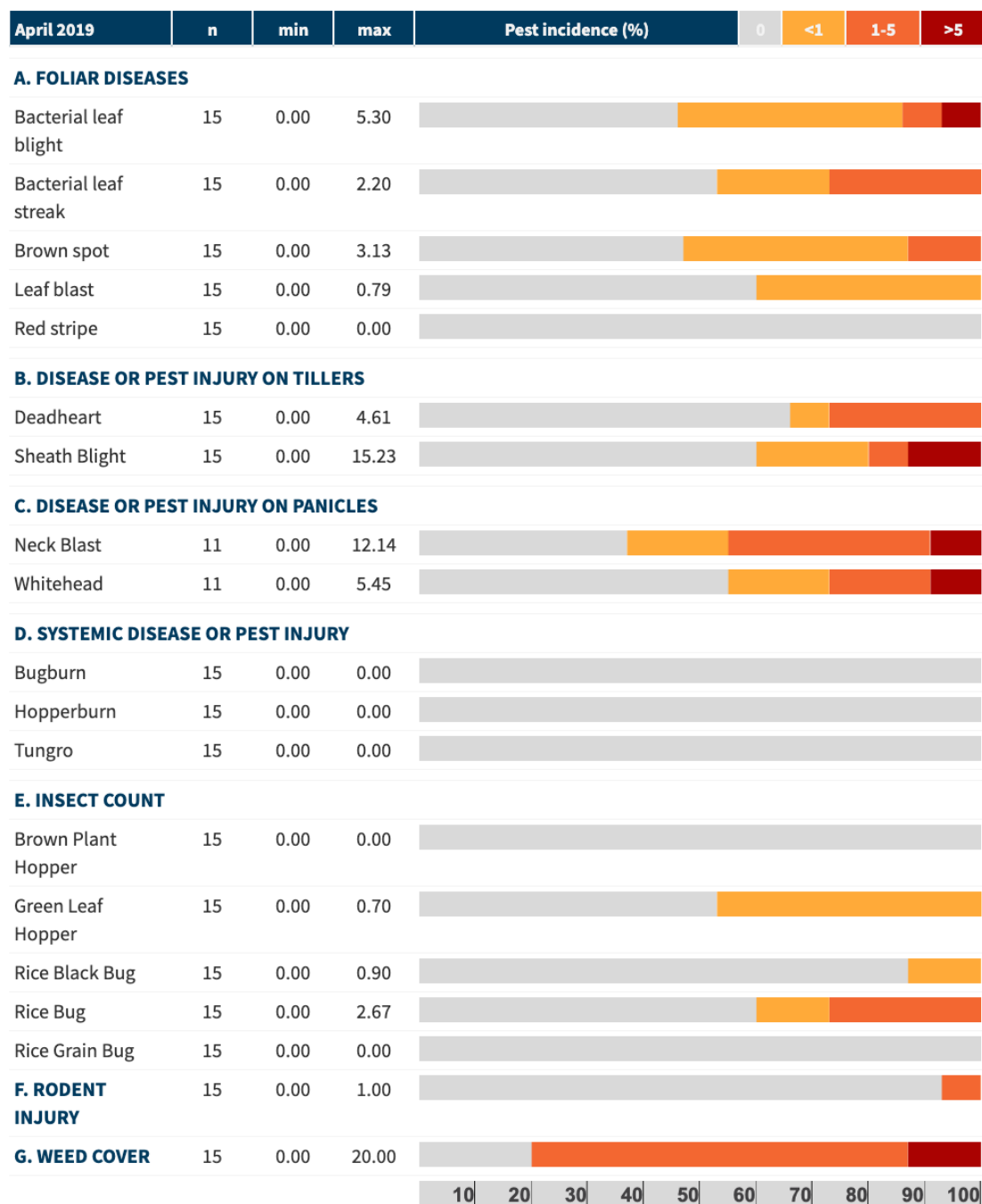
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Annex Figure 9. Incidence of pest injuries, count of insect pests, and weed cover in March 2019. Horizontal bar shows the proportion of fields in each range of pest injury incidence, insect count or weed cover.

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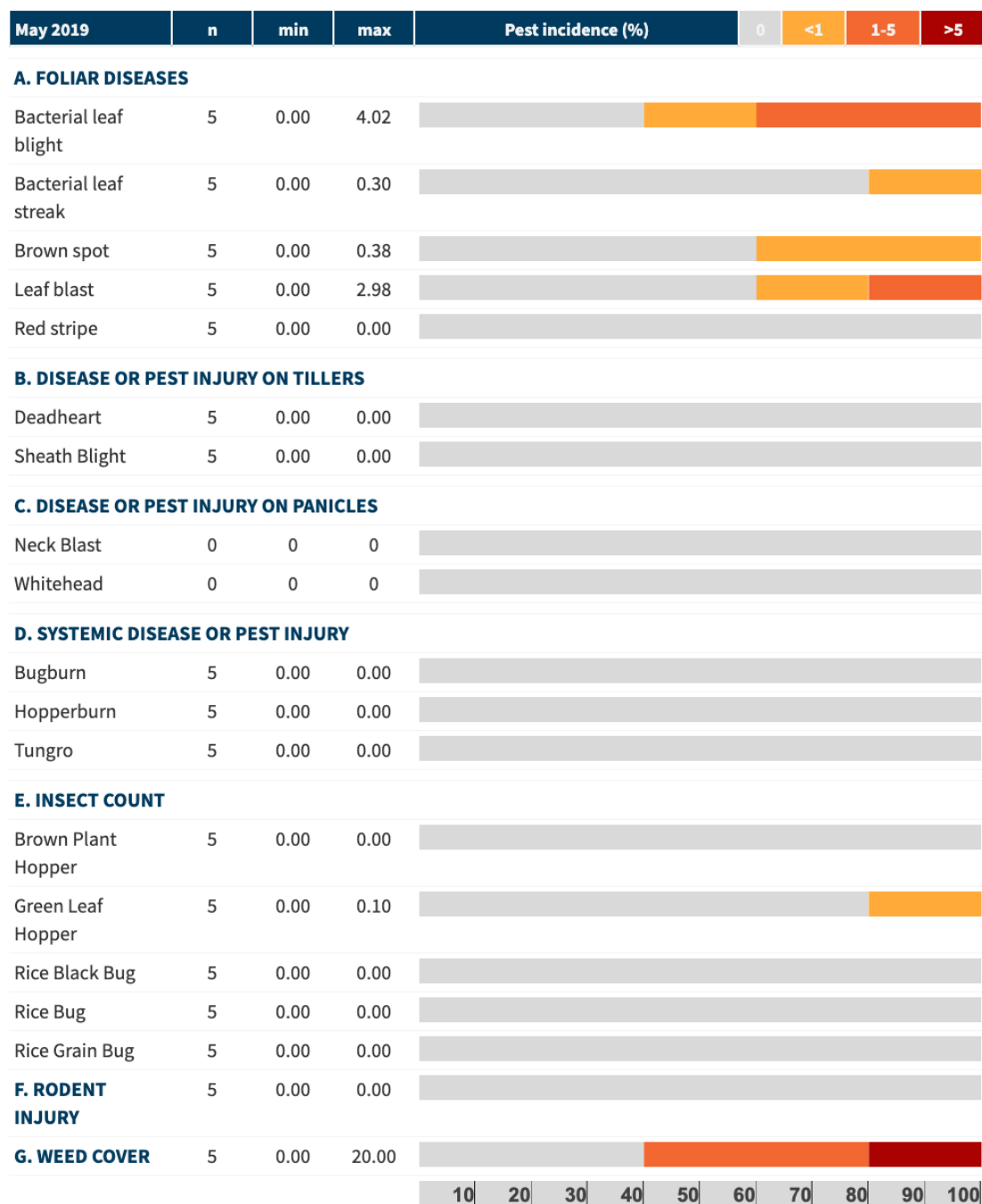
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Annex Figure 10. Incidence of pest injuries, count of insect pests, and weed cover in April 2019. Horizontal bar shows the proportion of fields in each range of pest injury incidence, insect count or weed cover.

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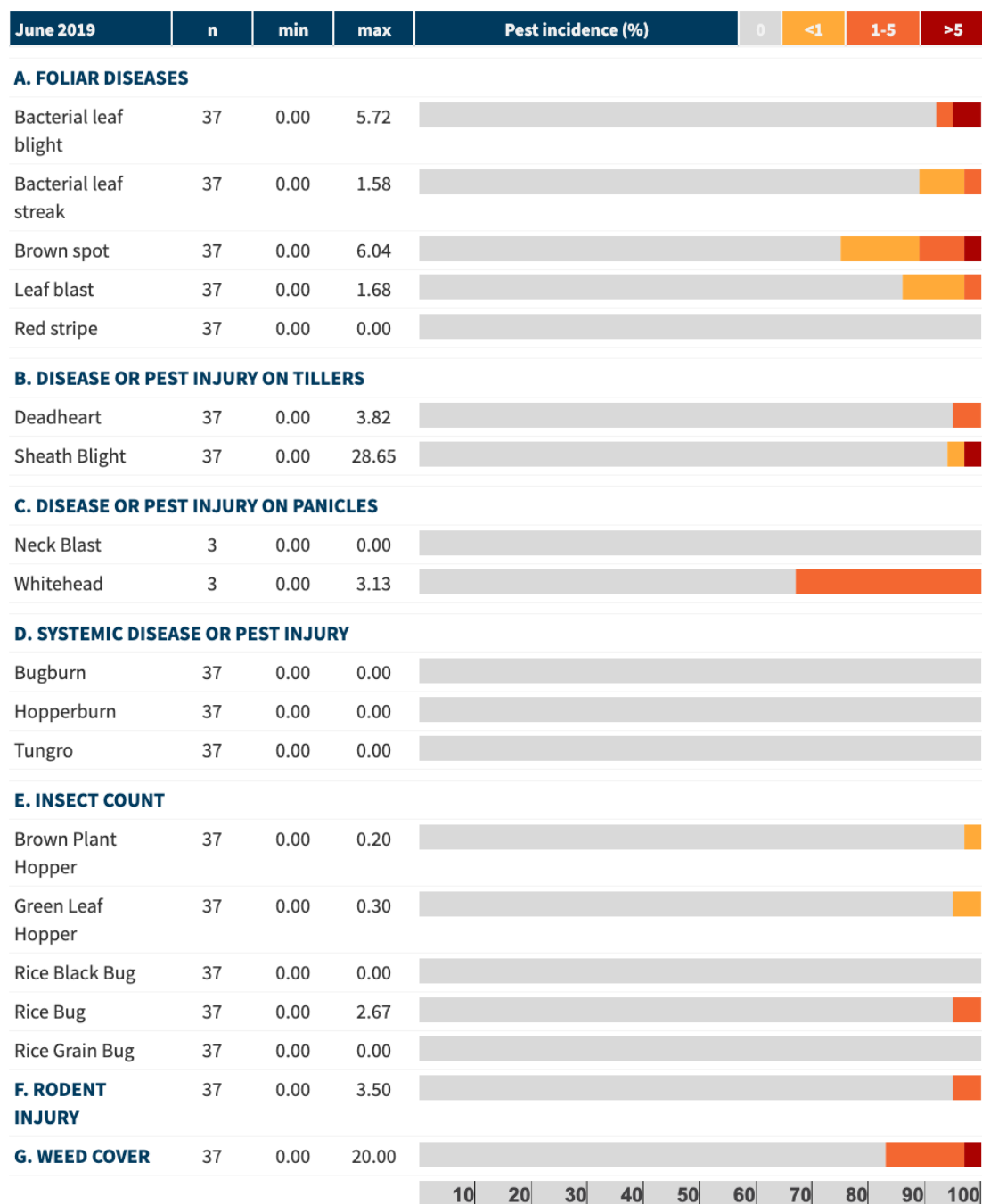
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Annex Figure 11. Incidence of pest injuries, count of insect pests, and weed cover in May 2019. Horizontal bar shows the proportion of fields in each range of pest injury incidence, insect count or weed cover.

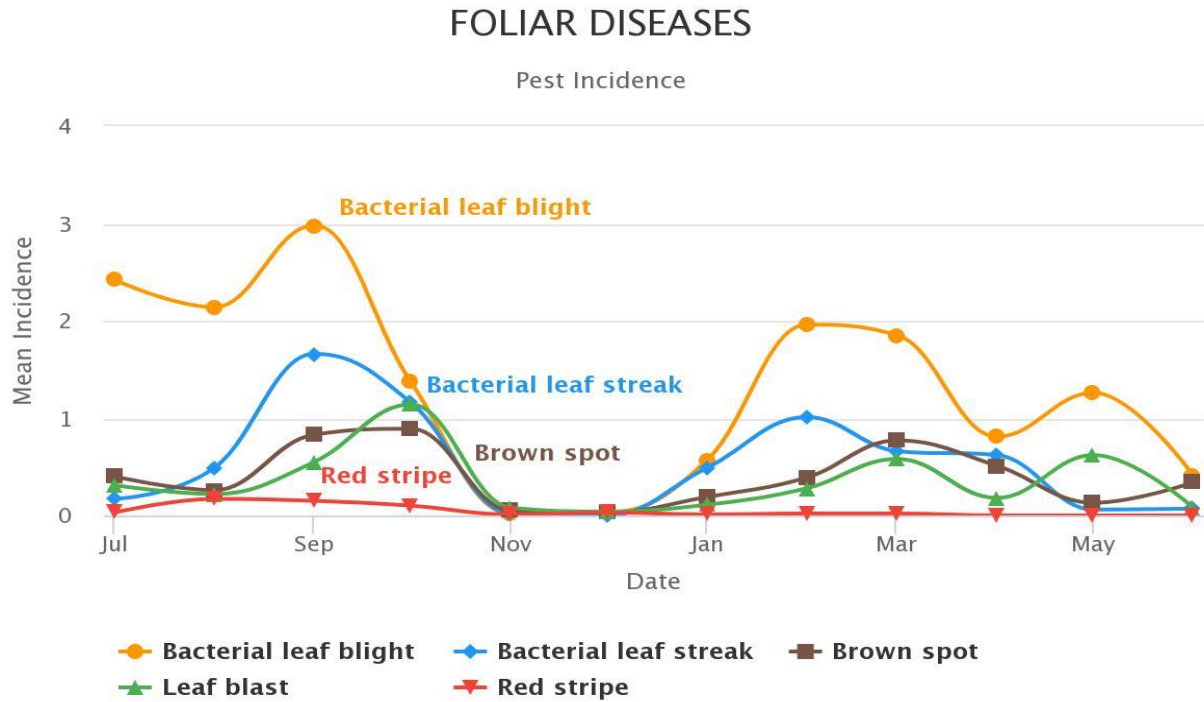
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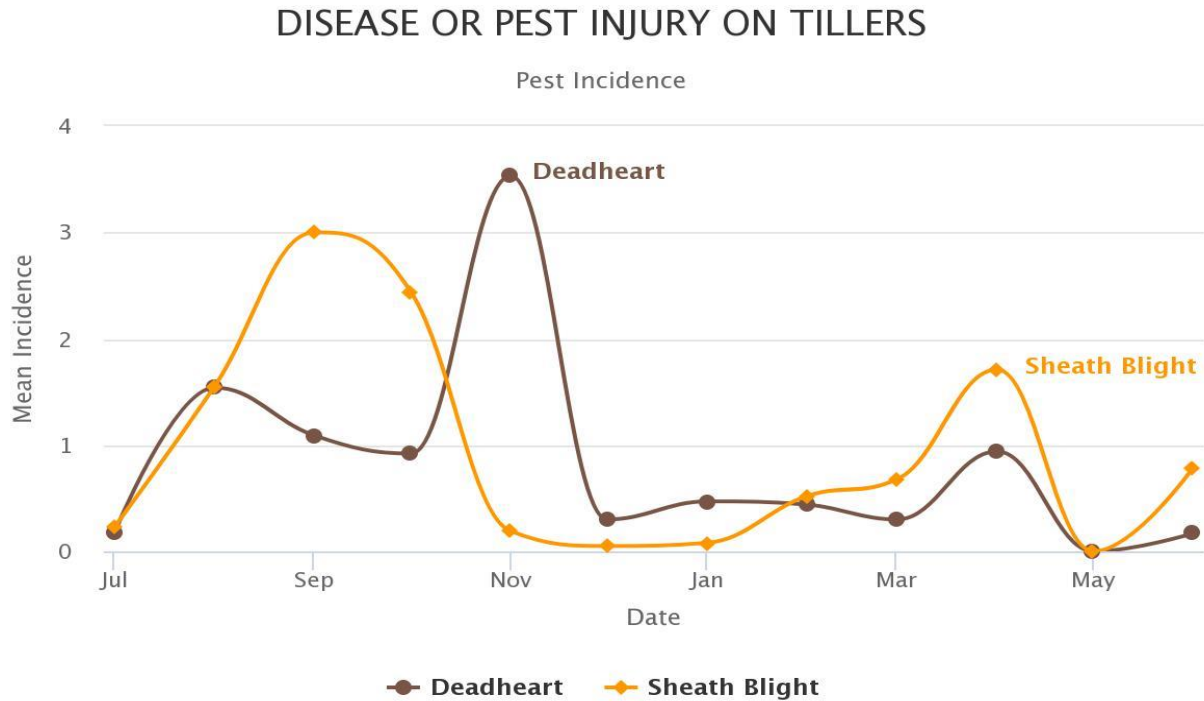


Annex Figure 12. Incidence of pest injuries, count of insect pests, and weed cover in June 2019. Horizontal bar shows the proportion of fields in each range of pest injury incidence, insect count or weed cover.

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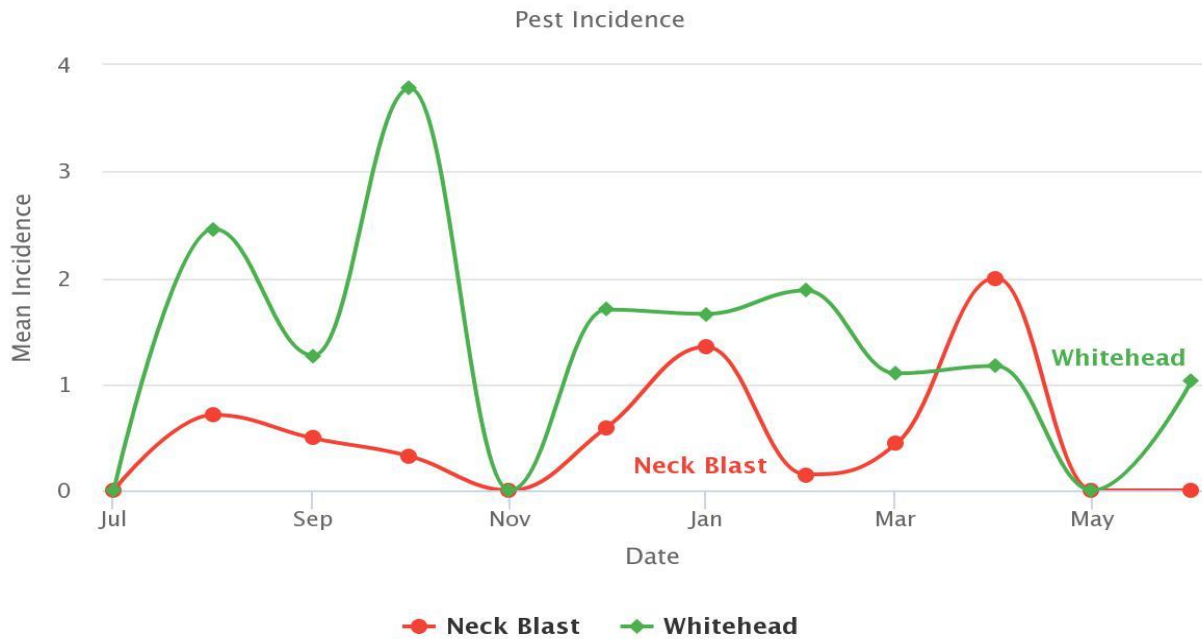
Annex Figure 13. Mean incidence of foliar diseases in MIMAROPA, July 2018 to June 2019.



Annex Figure 14. Mean Incidence of deadheart and sheath blight in MIMAROPA, July 2018 to June 2019.

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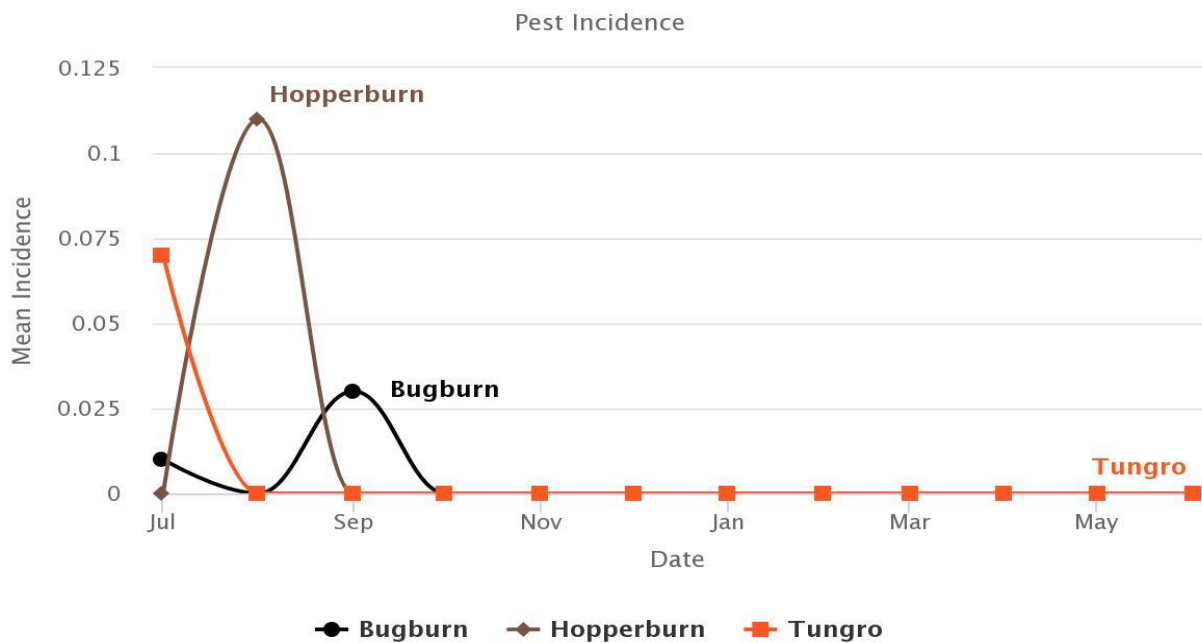
DISEASE OR PEST INJURY ON PANICLES



Highcharts.com

Annex Figure 15. Mean incidence of neck blast and whitehead in MIMAROPA, July 2018 to June 2019.

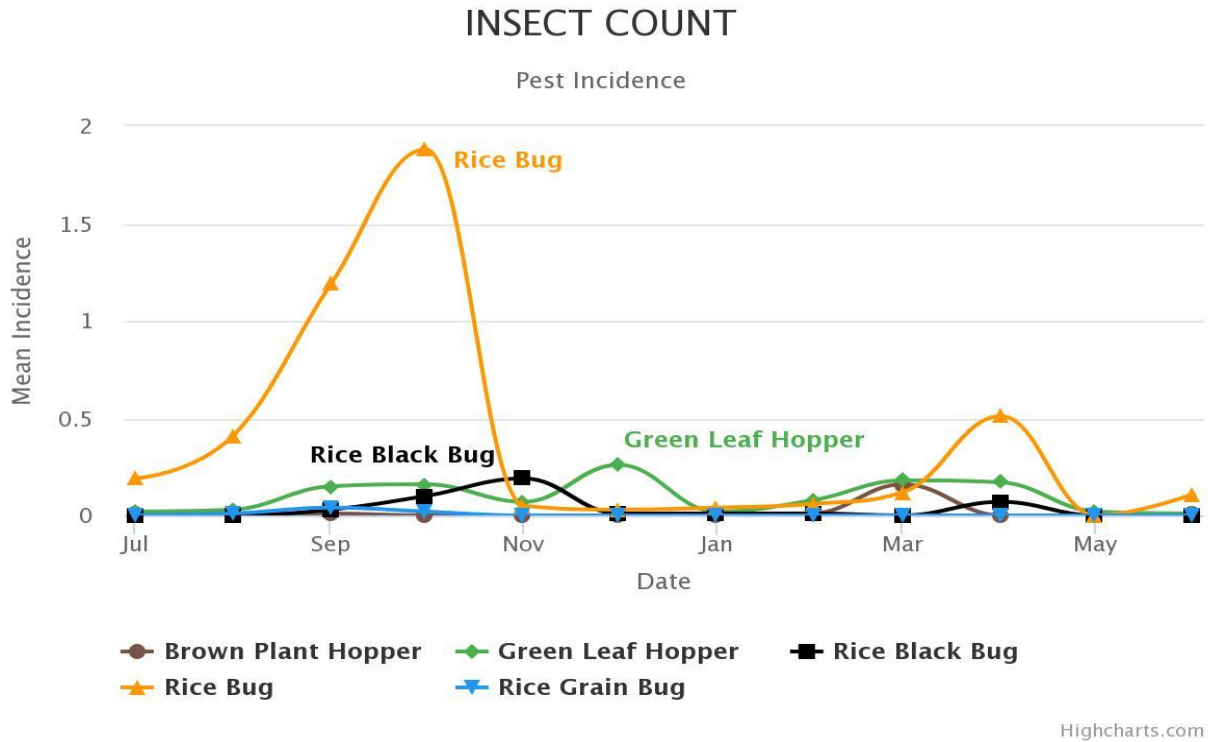
SYSTEMIC DISEASE OR PEST INJURY



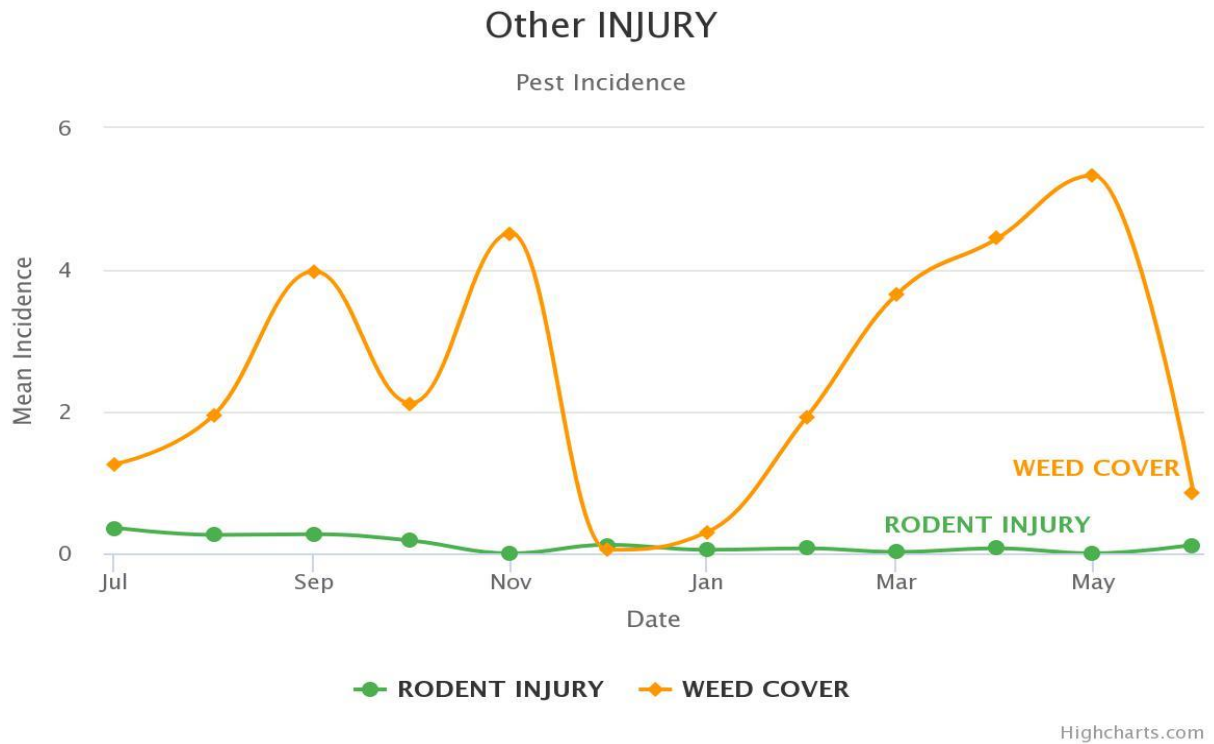
Highcharts.com

Annex Figure 16. Mean incidence of bugburn, hopperburn and tungro in MIMAROPA, July 2018 to June 2019.

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Annex Figure 17. Mean count of insect pests in MIMAROPA, July 2018 to June 2019.



Annex Figure 18. Mean incidence of rat injury and weed infestation in MIMAROPA, July 2018 to June 2019.

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