INTRODUCTION

Gmelina arborea is one of fast growing tree species that have been widely planted in small scale forest plantation. Its drought tolerance and excellent wood properties make this species plantation increase rapidly and become as one of dominant species in community forest. The outbreak of sap sucker Tingis beesoni in recent years become a serious threat for gmelina plantation. The heavy infestation of T. beesoni can make severe defoliation of gmelina and make serious problem in gmelina plantation. In this paper, we try to compare the infestation of T. beesoni on gmelina in two different geographic condition, the dry lowland and wet highland area.

RESULTS

Since 2010, a new Hemipteran was recorded to infest large scale of gmelina plantation. The insect pest then was identified as Tingis beesoni Drake (Figure 1) (Anggraeni and Mindawati 2011; Sumantoro et al., 2012).

![Figure 1: a) Symptom of T. beesoni infestation; b) Tingis beesoni nymph](image)

Based on the survey, the outbreak of T. beesoni tend to occur in dry lowland area but not in wet highland area. Based on our survey in Situbondo, Province of East Java and Karangasem, Province of Bali, representing of dry lowland area, the percentage of infestation of T. beesoni in both of two areas reached 100%. In some plantation area, especially 1-2 years old gmelina plantation, the severity was 100% (very heavy) which characterized by totally defoliated. This heavy defoliation could lead plant death if occurred in long dry season.

![Table 2. T. beesoni infestation per surveyed area](image)

Table 2. T. beesoni infestation per surveyed area

<table>
<thead>
<tr>
<th>District</th>
<th>Geographical condition</th>
<th>Percentage of infestation [%]</th>
<th>Severity</th>
<th>Cropping</th>
</tr>
</thead>
<tbody>
<tr>
<td>Situbondo</td>
<td>dry lowland</td>
<td>100</td>
<td>heavy-very heavy</td>
<td>Monoculture</td>
</tr>
<tr>
<td>Karangasem</td>
<td>dry lowland</td>
<td>80-100</td>
<td>moderate-heavy</td>
<td>monoculture</td>
</tr>
<tr>
<td>Garut</td>
<td>wet highland</td>
<td>no infestation</td>
<td>-</td>
<td>mixture</td>
</tr>
<tr>
<td>Sukabumi</td>
<td>wet highland</td>
<td>no infestation</td>
<td>-</td>
<td>mixture</td>
</tr>
</tbody>
</table>

CONCLUSIONS

The outbreak of T. beesoni on gmelina tend to occur in lowland area with dry condition. Although gmelina still have good growth performance in drought condition but it is susceptible to lace bug T. beesoni attack. To avoid heavy infestation of T. beesoni, it is better for not planting gmelina in dry condition.

REFERENCES


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