

MANAGEMENT OF PESTALOTIOPSIS OUTBREAK IN A RUBBER PLANTATION IN NORTH SUMATRA

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Natural Rubber Systems and Climate Change

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North Sumatra, Indonesia



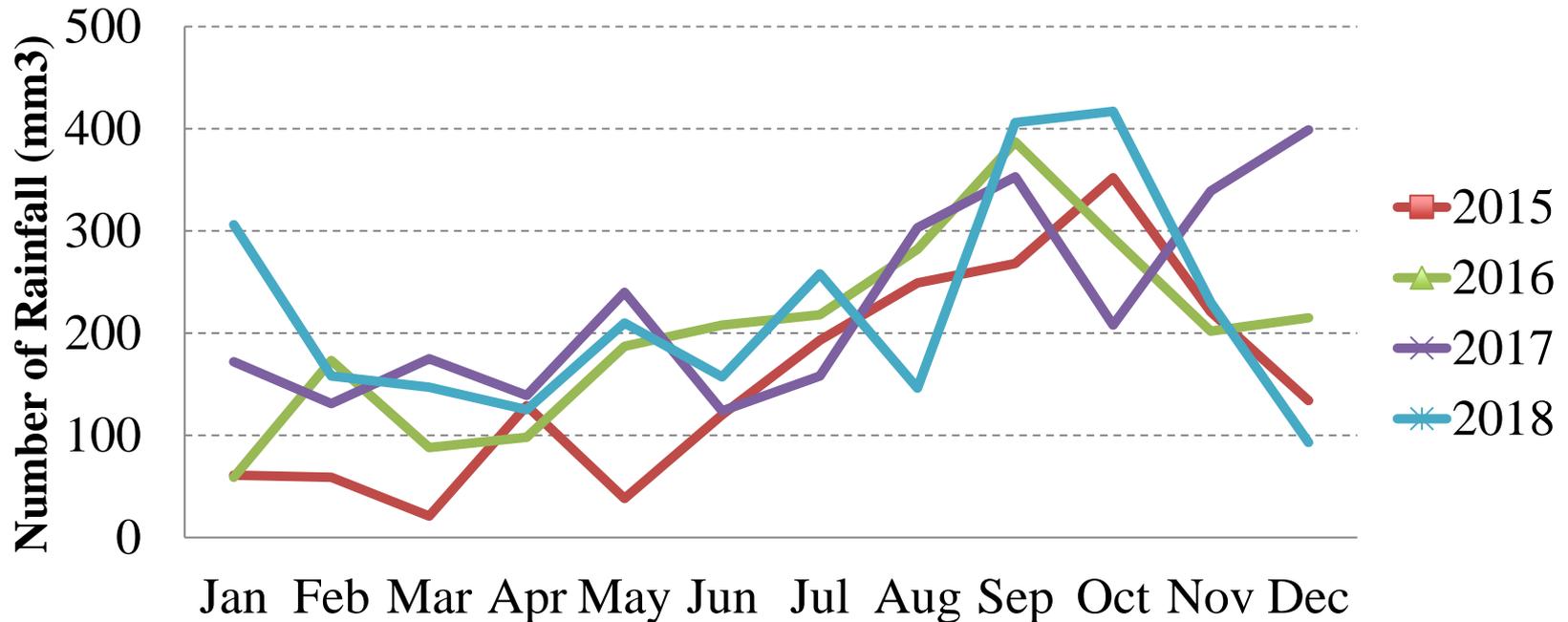
Source :

https://en.wikipedia.org/wiki/North_Sumatra#/media/File:North_Sumatra_in_Indonesia.svg

Rubber Plantation in North Sumatra, Indonesia is about 409088 Ha

The Global Climate Change

Climate Pattern in Simalungun Regency



There was an increase in temperature, changes in seasonal precipitation patterns in Sumatra which were 10-30% wetter than before, and a reduction in dry months in the northern part of Indonesia (Case *et al.*, 2007)





Yellowing Leaves



Leaves fall



The symptoms



Poor Canopies

The Outbreak of The Pestalotiopsis

The Impact of The *Pestalotiopsis* Outbreak



ANNUAL YIELD (KG/HA)

2014

1527.9

2015

1513.1

2016

1814.14

2017

1462.32

2018

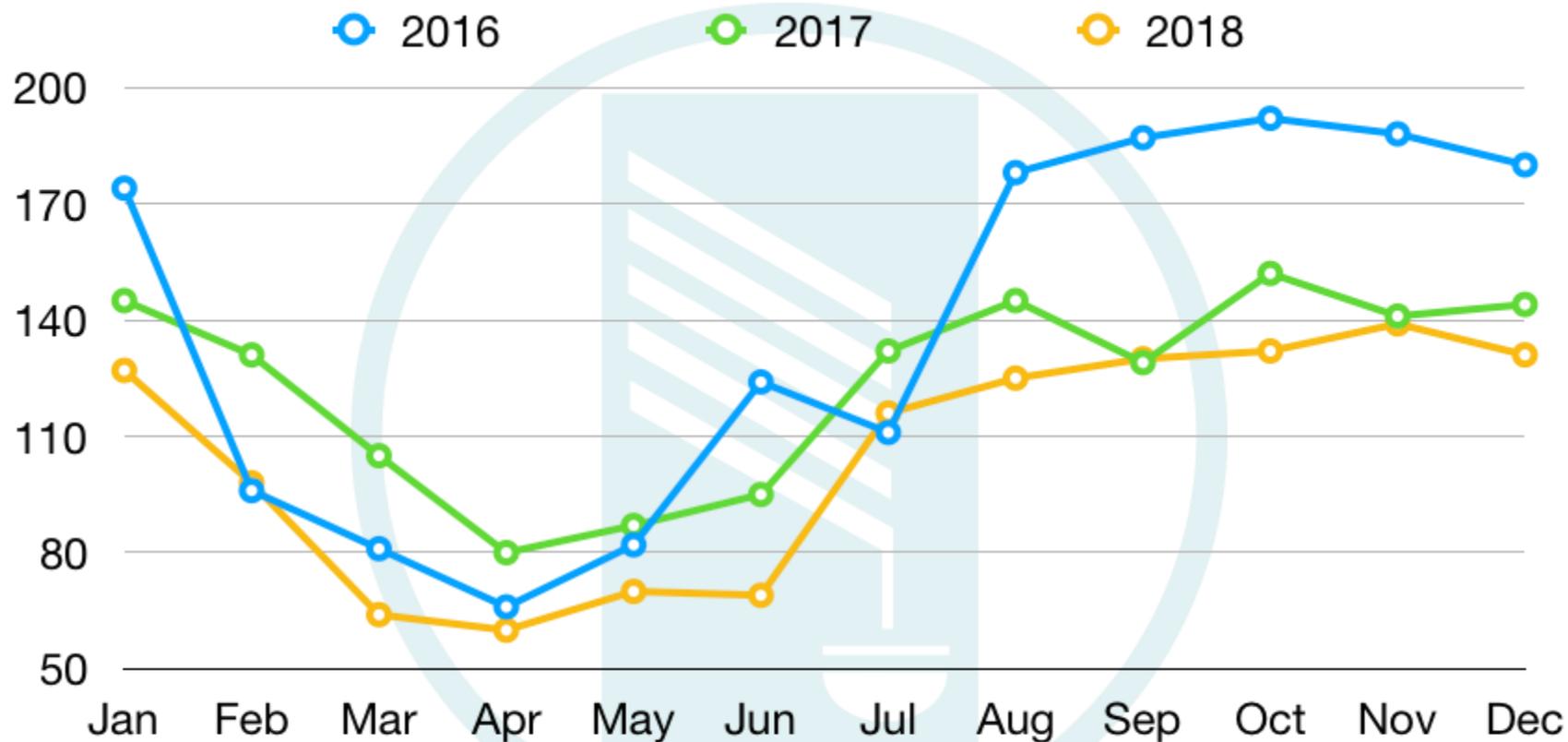
1351

2019

1220

The decreasing of production of 2019 compared with 2016 before the *Pestalotiopsis* outbreak reaches ± 600 Kg/ Ha



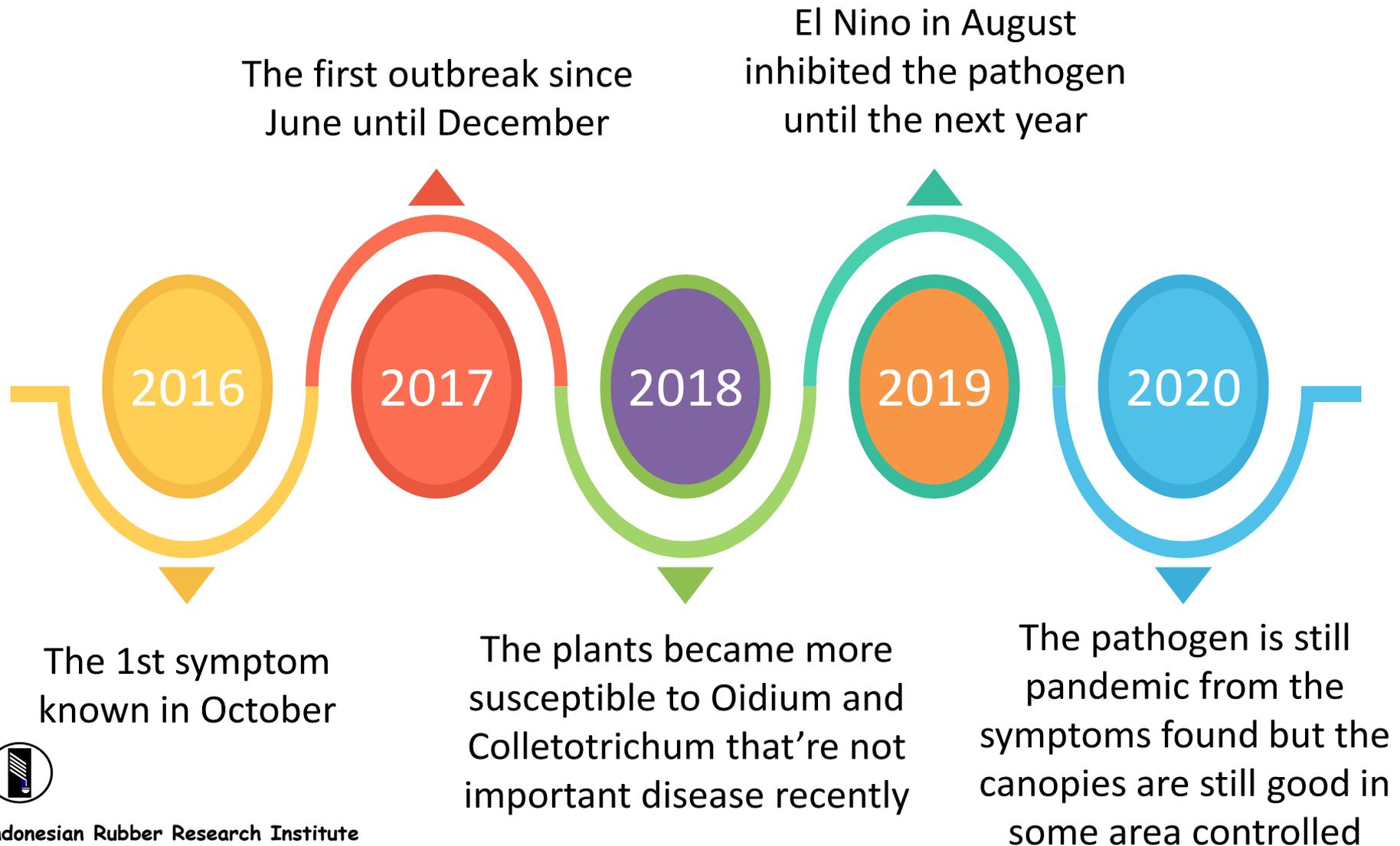


The decreasing of production compare with 2016 (%)

Tahun	Aug	Sep	Oct	Nov	Dec
2017	18.54	31.02	20.83	25.00	20.00
2018	29.78	30.48	31.25	26.06	27.22



The Chronology of *Pestalotiopsis* Outbreak in North Sumatra



The Management Strategies to Control The *Pestalotiopsis* Outbreak in North Sumatra



0

Fogging Application

1

Ground Spraying

0



2

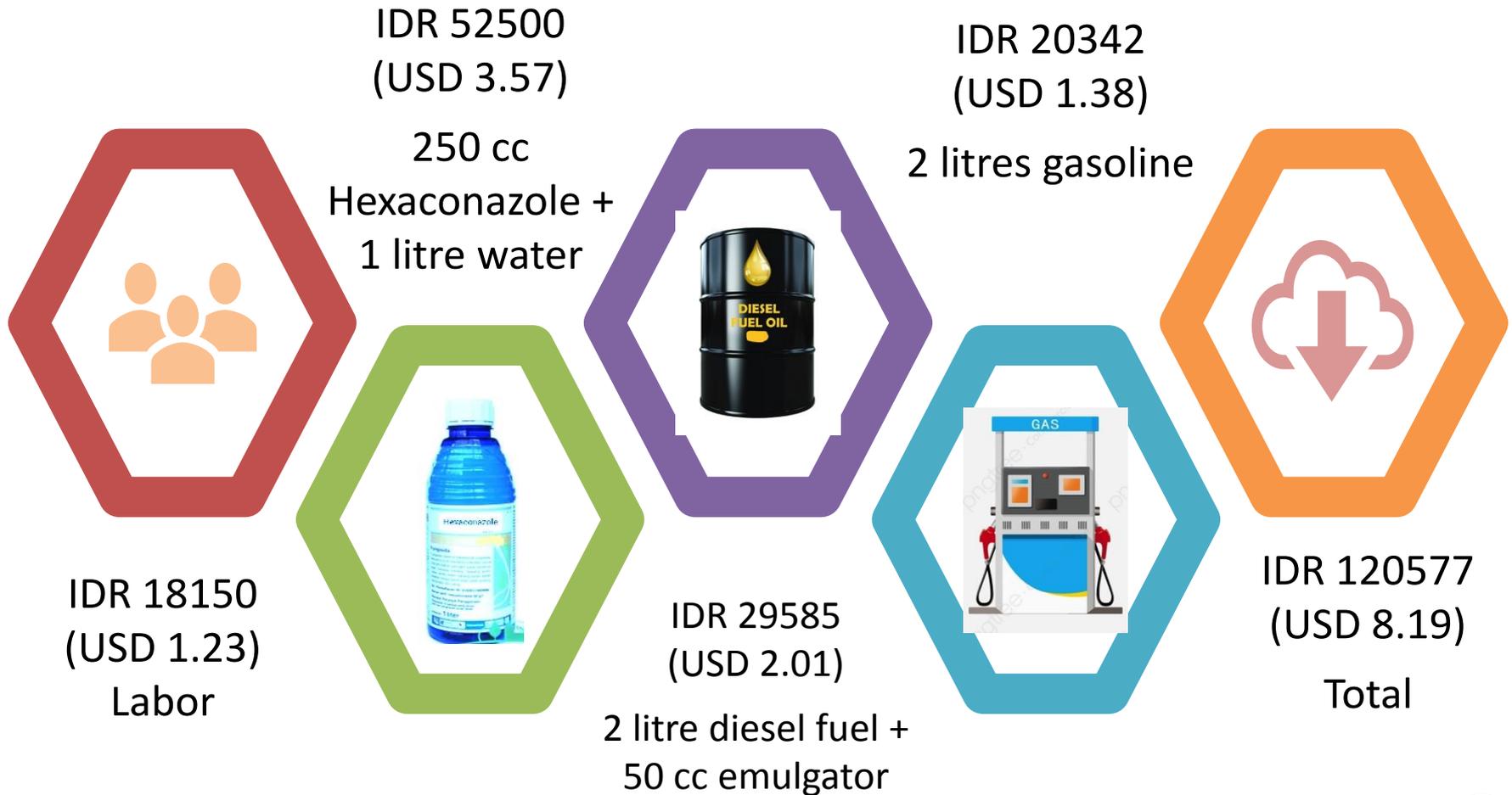


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Fertilizing

3

The Fogging Application as The Cheapest Management Strategy

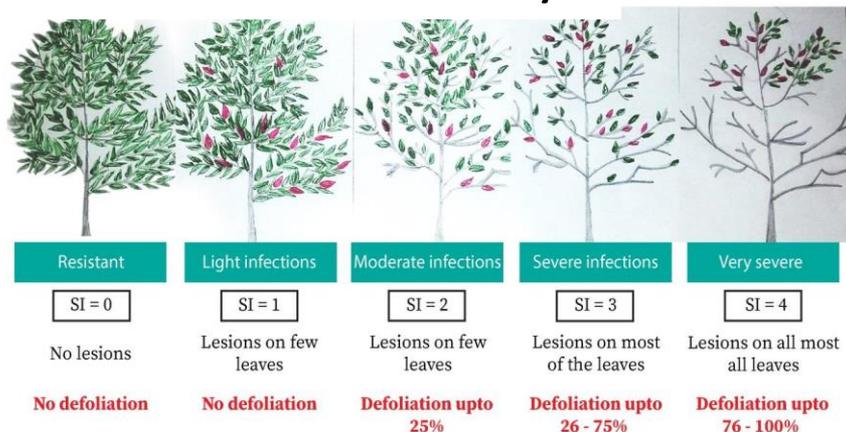


The Cost Of Fogging Application/ Ha

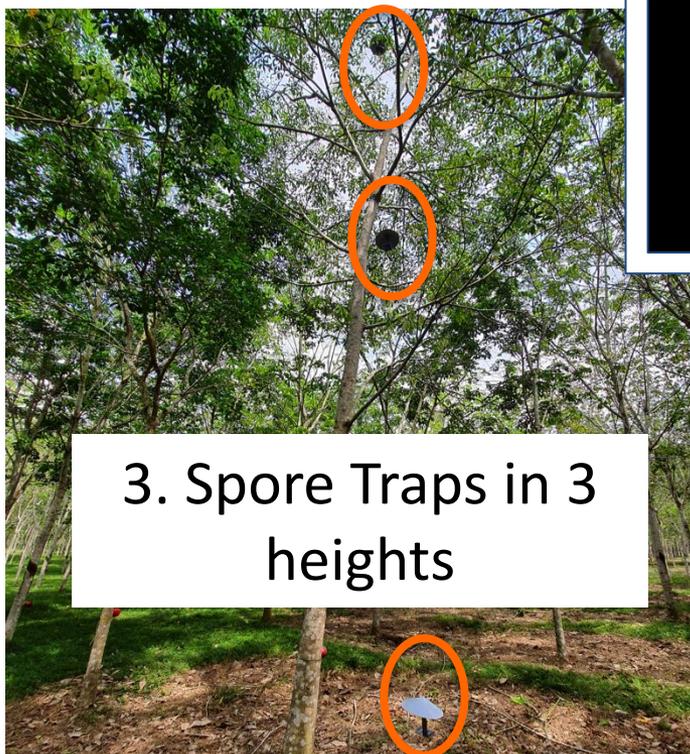


Index for the scoring disease severity (score index) for determining the average disease severity index (ADSI)

1. Disease Severity



2. Leaves Traps in 5 diagonal points



3. Spore Traps in 3 heights

Observation Parameters



4. The Yield

5. The Light Intensity



Lux Light Meter Free - Apps on ...



The Results

1. Disease Severity

Treatment



13.33%

Non-Treatment

26.11%

Twice Higher

2. The fallen leaves in the leaf trap (sheet)

Oidium heveae

Pestalotiopsis sp.

Treatment

41

1

111

4

Non-Treatment



3. Spores Trapped

Treatment

Non-Treatment

O. heveae

42.00

33.22

O. heveae

C. gloeosporioides

16.00

6.56

C. gloeosporioides

Helminthosporium sp.

10.78

13.33

Helminthosporium sp.

1.5
0

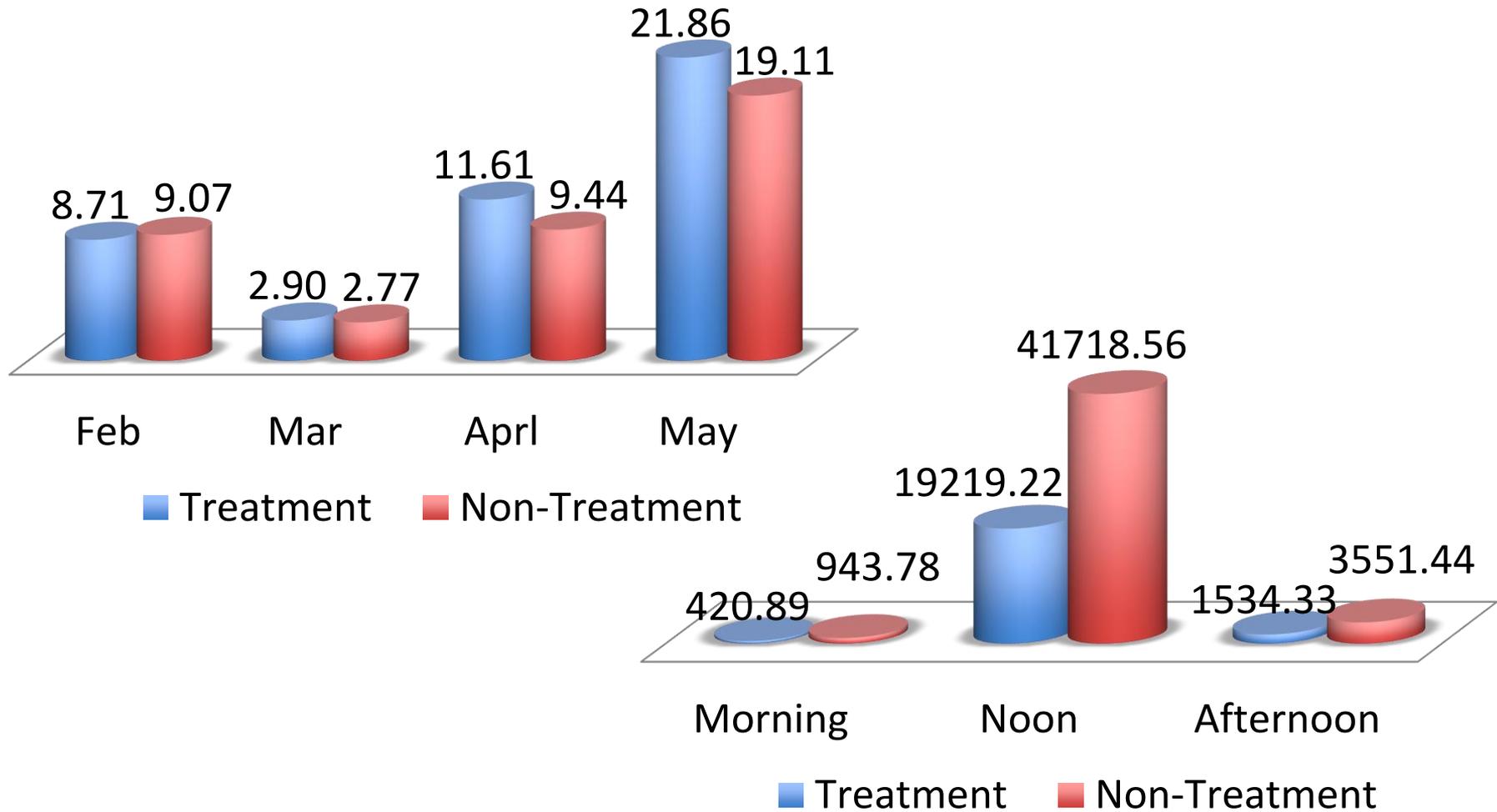
C. cassicola

0.44

Pestalotiopsis sp.



4. The Yield (g/t/t)



5. The Light Intensity (Lux)



≡ Treatment



Non-Treatment ≡





THANK YOU