

Control of Ganoderma sp. in Palm Oil Tree



1. A third party lab, namely CAIQ Biosecurity Sdn Bhd, has been engaged to conduct a few field tests on the effectiveness of Farmour Premium on palm oil tree having Ganoderma issue in 2023.
2. Based on similar trees with Ganoderma issue, field test were conducted before treatment, after treatment 1x, after treatment 2x and after treatment 3x. CAIQ concluded that Farmour Premium can reduce yeast and mould in Palm Oil by **97.62%**.

4.0 Conclusion

In this study, **Farmour Premium AF with higher concentration have higher effectiveness towards the reduction of yeast and mould in PO which achieve 97.62% compared to control.** Through the observation on the PO tree, the treated PO gives positive effect which is less white fungal and observable new green leaves growth compared to control. Hence, the Farmour Premium AF can be indicated have huge potential in coping the BSR disease in PO.



Application Method

Steps to conduct the treatment;

(i) On the tree, nearby the Ganoderma affected area, find 2 spots that are not rotten. Removed the outer layer of the palm oil trunk with a knife until you can see the inner core of the trunk.

(ii) Drill a hole on each spot of the inner core (not rotten), about 6-10 cm deep with 5 mm drill bit.

(iii) Using a drip bag, 500 ml of diluted Farmour Premium is injected into the tree

(iv) Repeat the above after 3-4 weeks, can follow your harvesting cycle if it is within 1 month, should be able to see the leaf start growing after 2-3 treatments.



Application Method



A plant drip bag – can be purchased online easily. We can sell these plant drip bag for Farmour customers too. Just call us directly.

Dilution ratio:

1 ml Farmour Premium : 500 ml of water

Note: upon mixing with water, suggest to use the diluted material within 24 hours for maximum effect.

Farmour Premium is sensitive to UV light, hence please keep it away from sunlight

Based on the above dilution ratio, using a bottle of 1,500 ml mineral water as a base, can drip 3 ml of Farmour Premium. Shake it and mix it well, then pour 500 ml of the mixed material to each drip bag.

This bottle size of mineral water can be used to treat 3 palm oil trees on the same day or next day of mixing the water with Farmour Premium.

Test method used by CAIQ BIOSECURITY SDN. BHD.

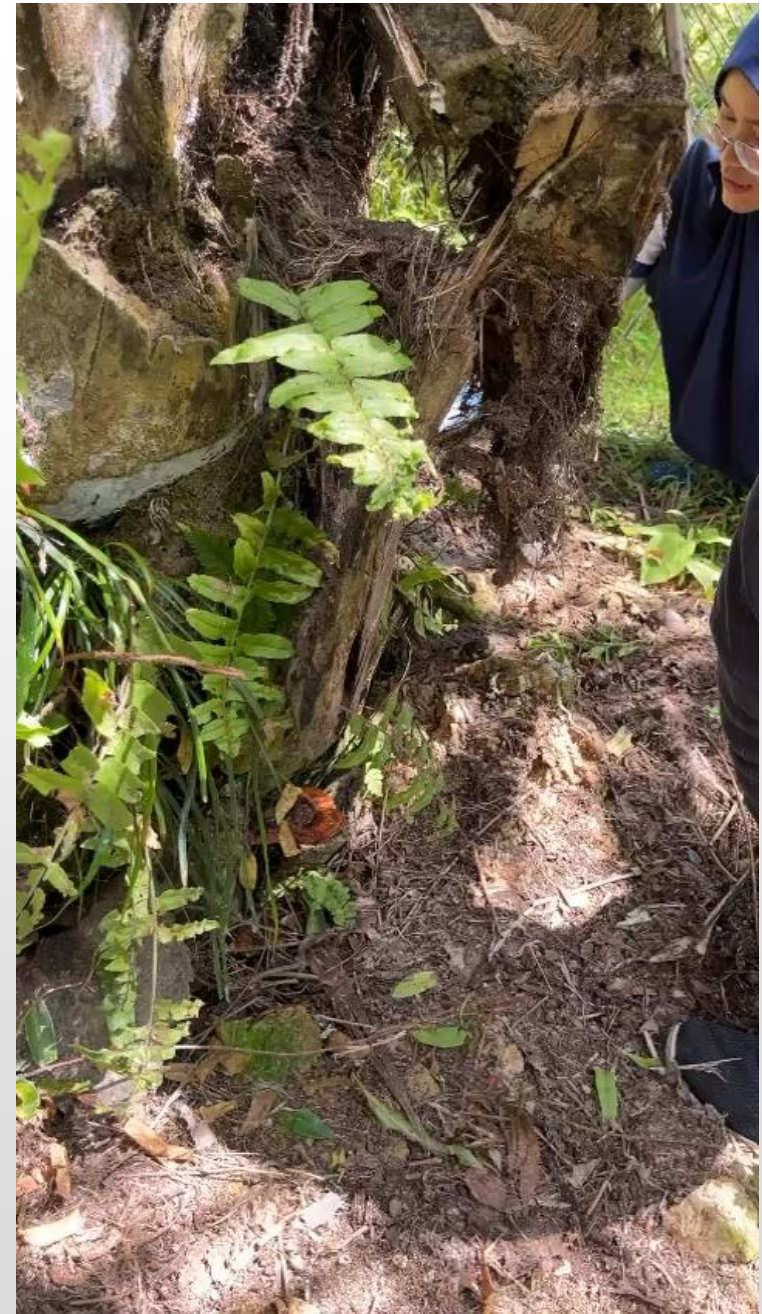
- CAIQ team took swab sample in tree trunk on June 2023, 1 week after the 3rd treatment.
- They randomly drill hole on tree trunk approx. 15cm deep
- Tissue sample of the tree was taken with swab
- They bring back the tissue sample and conduct a lab test to determine microbes numbers.



A drip bag can tie up on the tree or make an aluminium stand to hold it.

Test Conducted

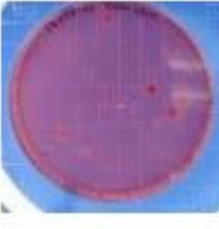
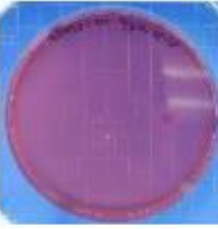
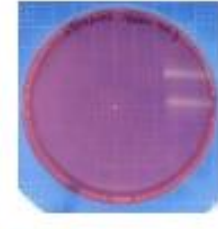
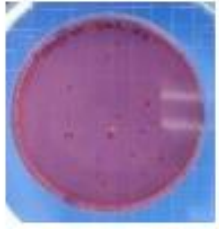
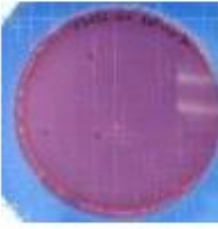
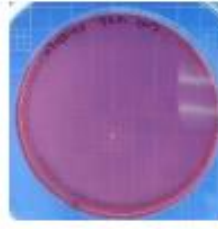
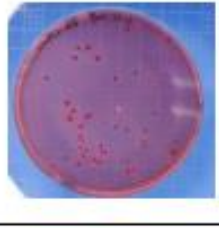
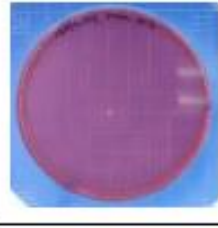
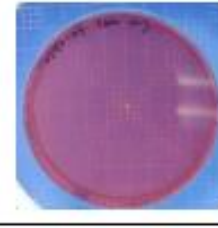
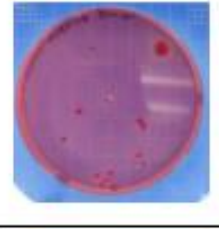
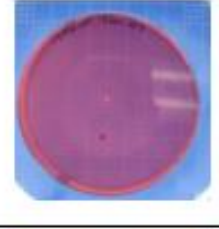
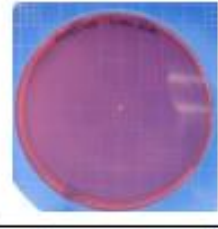
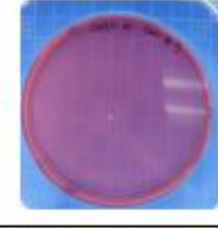
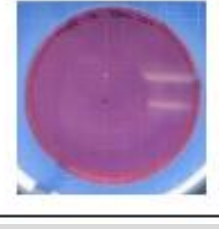
- Soil acidity test
- Disease severity index (DSI) of soil surrounding trees with treatment is 12.5% and 10% VS DSI index on control sample of 35%.
- This may also indicate the treatment reduce the Ganoderma growth through the symptoms observed



Lab Test Work for Reference

- Extracted from CAIQ report
- Observation on fungus growth based on different sample
- Description is based on different dilution level and hence different PPM of Farmour Premium
- Description shows number of times of treatment based on different PPM

Table 1: Yeast and Mould Growth After Incubation

Sample ID	Description	10^0	10^{-1}	10^{-2}	10^{-3}
23092-01	2k + 10k + 10k				
23092-02					
23092-04					
23092-08					
23092-18	5k+ 10k +10k				

Monitoring Methods

- Visual inspections
- No new *Ganoderma* sp. growth



13 March 2023

- New leaf growing



13 March 2023

- New leaf growing (sample A)

- 7/6/2023



- Forming fruit
- (sample A)
- 7/6/2023

