


Tirathaba Control & Practice

Kon Thian Woei

M. Sc of Entomology



JQ BIOTECH

The image features two petri dishes containing Tirathaba larvae. One dish is in the top-left corner, and another is in the bottom-right corner. The larvae are segmented, yellowish-brown, and have a distinct head. The background is a light, textured surface.

What is *Tirathaba*?



Symptoms



***Tirathaba* found on the oil palm inflorescence**

Damage on oil palm fruitlets caused by *Tirathaba*

Characteristics of Tirathaba Fresh Feces



Reddish orange or dark red coloured, wet and spherical.

Tirathaba on Inflorescence



***Tirathaba* larva on male inflorescence with fresh feces and silk formation.**

Tirathaba on Bunch



Fruit bunch seriously covered with *Tirathaba* feces

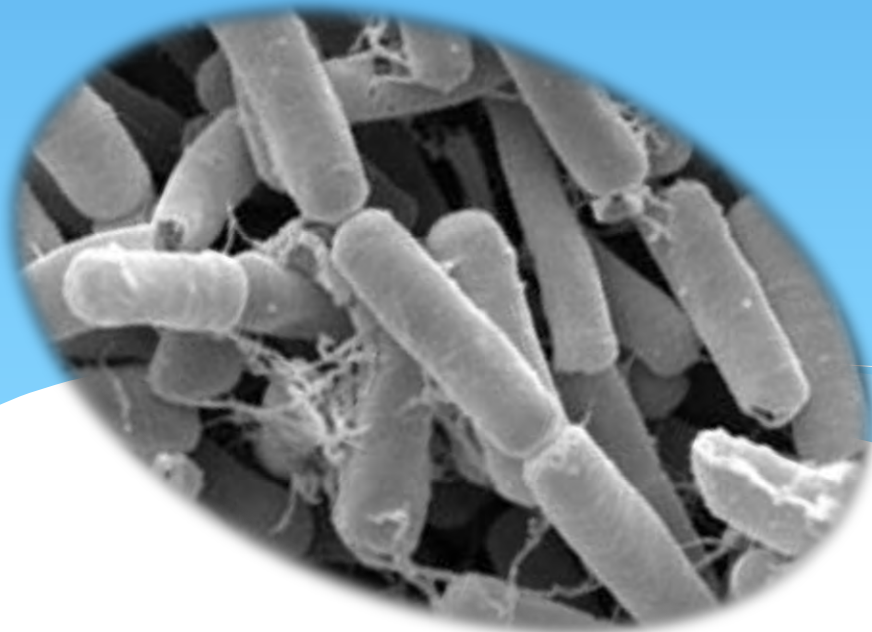
A close-up photograph of a plant stem, likely a sugarcane, heavily infested with a large number of small insects. The insects are primarily red and blue in color. A spider web is visible, draped across the stem and surrounding foliage. The background is blurred, showing more of the plant and its leaves.

Tirathaba
Control

Your **META** Solution for Lepidoptera Pests

Meta-BT

The Biological Pest Control
Bacillus thuringiensis

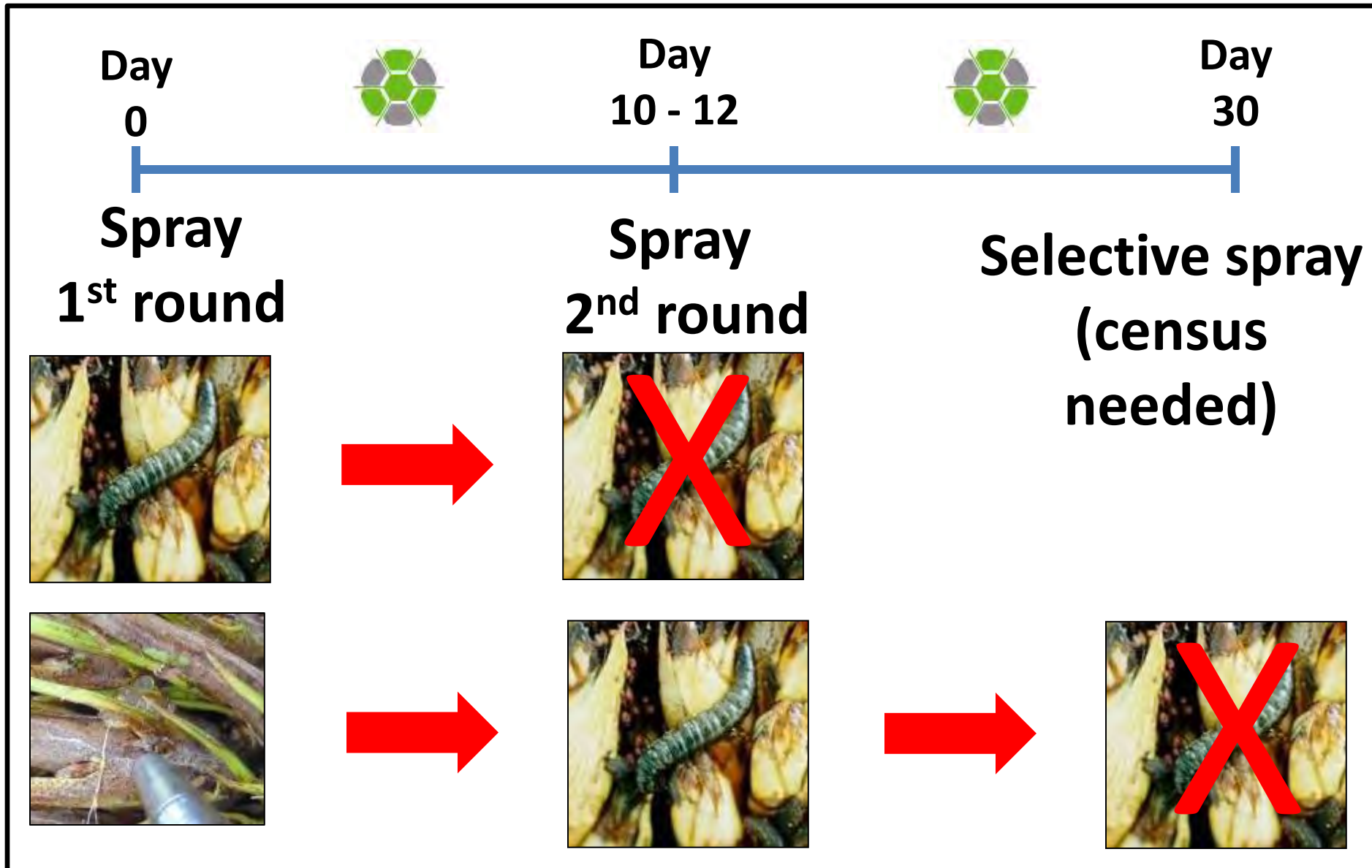


Application Recommendation



**30 ml of Meta-BT / Knapsack
(16 Liters water)**

1 campaign (2 round applications)





Tirathaba



Bagworm

Caterpillar

Lepidoptera stop feeding and die in 3-7 days

Bacillus thuringiensis eaten

Digestion organ breakdown

Mode of Action



Nozzle Recommendation



Non-adjustable Nozzle



Solid Cone type
High volume
(450L/ha)
Even spray



Application Method



Palm less than 8 years old by knapsack even spray

Application Method



Palm more than 8 years old by power spray

Spraying Sequence by Priority



Why **META-BT**



Selectively kills larvae of *Lepidoptera*



Your **META** Solution

Biological Agent

- * Harmless to beneficial insects
- * Environmental friendly



Pollinating weevils are still active after **META** application

Colouring



Blue color stain for easy monitoring

Effectiveness of **META-BT**

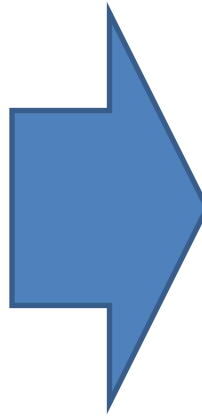
Case study 1

Soil Type	: Peat Soil
Location	: Division 2, Block 103
Year Planted	: 2007
Product	: Meta-BT 30 ml / knapsack (16L water)
Spray Method	: <i>Spray until wet</i>
Application	: 1 campaign (Interval 10 days) - 1st Spray on 23 Sep 2013 - 2nd Spray on 2 Oct 2013

Before



After



Effectiveness of **META-BT**

Case study 2

Soil Type	: Peat Soil
Location	: Block 11/38
Year Planted	: 2011
Product	: Meta-BT 30 ml / knapsack (16L water)
Spray Method	: <i>2L per palm, 8 palms / knapsack</i>
Application	: 1 campaign (Interval 10 days) - 1st Spray on 9 July 2013 - 2nd Spray on 19 July 2013

Effectiveness of **META-BT**

Case study 2

Assessment area	Treatment	Result*
Bunches	Meta-BT	Infestation reduce up to 70.2%.
Bunches	Control	Infestation increase up to 25.5%.

**Based on presence of Tirathaba feces.*

Before



After



Recommended Estate Practices



Sanitation Exercise

Sanitize rotten bunches



Rake out rotten bunches and loose fruits



REMOVE!



Platform - Spray with
Cypermethrin

Thank You

“Customer Success is Our Success”



JQ BIOTECH

jqbiotech.com