

“Field Evaluation of ANTICA Organic Fungicide for the Control of Anthracnose and Other Diseases of ‘Carabao’ Mango”

STATUS REPORT (AS OF APRIL 15, 2011)

**YONDRE J. YONDER
RHOD S. ORQUIA**



Title: Field Evaluation of ANTICA Organic Fungicide for the Control of Anthracnose and Other Diseases of ‘Carabao’ Mango

Researchers: Yondre J. Yonder
Rhod S. Orquia

Place of Study: Piña, Buenavista, Guimars

Duration of Study: 5 months (February to June, 2011)

Approved Budget: Php 142,044.00

Initial Released: Php 90,000.00

Funding Source: Ahcil Laboratories, Inc.
Pert Compound, Tingub, Mandaue City, Cebu

OBJECTIVES

- To evaluate Antica for the control of anthracnose and other diseases of ‘carabao’ mango.
- To determine any phytotoxicity of Antica sprayed on leaves, panicles and developing fruits.
- To determine the effect of Antica on fruit quality (Internal and External).
- To evaluate its impact on non-target organisms endemic in mango orchard.

METHODOLOGY (*Activities Undertaken*)

- 35 trees were selected for induction
- Prior to induction, field sanitation through underbrushing and clearing was done
- Selected trees were subjected to flower induction. A follow-up spray was also done due to cool weather condition



Clearing of experimental area



Flower induction and follow-up spray of experimental trees



METHODOLOGY *(Activities Undertaken)*

- Monitoring of flowering response and tagging of test trees and panicles



- Care and maintenance of experimental trees



METHODOLOGY (*Activities Undertaken*)

- Treatment application of Antica fungicides on experimental trees

Treatments	Product Rate(ml) per 100 li	Time of Application (DAFI*)				
		1 st (16DAFI)	2 nd (26 DAFI)	3 rd (35 DAFI)	4 th (45 DAFI)	5 th (65 DAFI)
A (Untreated)	-	√	√	√	√	√
B (Antica)	100	√	√	√	√	√
C (Antica)	200	√	√	√	√	√
D (Antica)	300	√	√	√	√	√
E (Antica)	400	√	√	√	√	√
F (Amistar)	80	√	√	√	√	√

*Days after flower induction

METHODOLOGY *(Activities Undertaken)*

- Data Gathering of Different Parameters on Flowers and Leaves



METHODOLOGY *(Activities Undertaken)*

- Regular Monitoring of flowering trees for insect infestations



METHODOLOGY *(Activities Undertaken)*

- Project monitoring and inspection of experimental trees



METHODOLOGY (*Activities Undertaken*)

- Treatment application on experimental trees



Untreated (control)



Antica (100 ml/100 li. water)



Antica (200 ml/100 li. water)



Antica (300 ml/100 li. water)



Antica (400 ml/100 li. water)



Amistar (80 ml/100 li. water)

METHODOLOGY *(Activities Undertaken)*

- Bagging of fruits



INITIAL RESULTS

- Flowering and flushing intensity*

TREATMENT	Flowering (%)	Flushing (%)
Untreated (control)	50.00	5.00
Antica (100 ml/100 li. water)	67.50	12.50
Antica (200 ml/100 li. water)	71.25	7.50
Antica (300 ml/100 li. water)	65.00	8.75
Antica (400 ml/100 li. water)	75.00	5.00
Amistar (80 ml/100 li. water)	82.50	7.50

*Average of 4 replication per treatment

INITIAL RESULTS

- Flowering and Flushing Intensity of Test Trees (26 DAFI)



Untreated (control)



Antica (100 ml/100 li. water)



Antica (200 ml/100 li. water)



Antica (300 ml/100 li. water)



Antica (400 ml/100 li. water)



Amistar (80 ml/100 li. water)

INITIAL RESULTS

- Panicle size and Classification*

TREATMENT	Panicle Size (cm)				Panicle Classification (%)	
	Width		Length			
	22 DAFI	28 DAFI	22 DAFI	28 DAFI	Single	Multiple
Untreated (control)	4.41	12.20	14.95	23.53	78.68	21.32
Antica (100 ml/100 li. water)	7.10	17.61	21.89	32.57	66.68	33.32
Antica (200 ml/100 li. water)	4.69	15.10	16.89	28.84	86.68	13.32
Antica (300 ml/100 li. water)	5.60	14.23	17.71	27.62	89.32	10.68
Antica (400 ml/100 li. water)	7.20	17.00	20.36	31.47	93.32	6.68
Amistar (80 ml/100 li. water)	6.03	16.81	19.80	31.77	89.32	10.68

*Based on 25 tagged sample panicles per treatment

INITIAL RESULTS

- Single and Multiple Flower Panicle at 26 DAFI



Single



Multiple

INITIAL RESULTS

- Phytotoxic Effects on Flower and Leaves*

TREATMENT	Leaves		Flowers	
	22 DAFI	28 DAFI	22 DAFI	28 DAFI
Untreated (control)	1.0	1.0	1.0	1.0
Antica (100 ml/100 li. water)	1.0	1.0	1.0	1.0
Antica (200 ml/100 li. water)	1.0	1.0	1.0	1.0
Antica (300 ml/100 li. water)	1.0	1.0	1.0	1.0
Antica (400 ml/100 li. water)	1.0	1.0	1.0	1.0
Amistar (80 ml/100 li. water)	1.0	1.0	1.0	1.0

Rating Scale:

1 = No visible phytotoxicity symptoms; 3 = 1 to 10% injury; 5 = 11 to 20% injury; 7 = 21 to 40% injury; and 9 = 41 to 50% injury

**Based on 25 tagged sample panicles and 50 sampled leaves per treatment*

INITIAL RESULTS

- Flower Panicles at 26 DAFI



Untreated (control)



Antica (100 ml/100 li. water)



Antica (200 ml/100 li. water)



Antica (300 ml/100 li. water)



Antica (400 ml/100 li. water)



Amistar (80 ml/100 li. water)

INITIAL RESULTS

- Incidence of Anthracnose Infection on Flowers and Leaves*

TREATMENT	Flowers			Leaves		
	22 DAFI	28 DAFI	33 DAFI**	22 DAFI	28 DAFI	33 DAFI**
Untreated (control)	1.67	1.67	12.36	1.0	1.0	1.0
Antica (100 ml/100 li. water)	1.16	1.16	11.70	1.0	1.0	1.0
Antica (200 ml/100 li. water)	1.08	1.08	11.84	1.0	1.0	1.0
Antica (300 ml/100 li. water)	1.03	1.03	11.73	1.0	1.0	1.0
Antica (400 ml/100 li. water)	1.0	1.0	10.83	1.0	1.0	1.0
Amistar (80 ml/100 li. water)	1.0	1.0	10.81	1.0	1.0	1.0

Rating Scale:

1 = 0 infection, 3 = 1 to 10 % infection, 5 = 11 to 20 % infection, 7 = 21 to 30 % infection, 9 = 31 to 40 % infection, 11 = 41 to 50 % infection and 13 = greater than 50 % infection

*Average of 4 replication on 25 tagged sample panicles and 50 sampled leaves per treatment

**Heavy rain was experienced from 29-33 DAFI

INITIAL RESULTS

- Panicle after 4 days of heavy rain in the area



Untreated (control)



Antica (100 ml/100 li. water)



Antica (200 ml/100 li. water)



Antica (300 ml/100 li. water)



Antica (400 ml/100 li. water)



Amistar (80 ml/100 li. water)

INITIAL RESULTS

- Incidence of Scab Infection on Flowers and Leaves*

TREATMENT	Flowers			Leaves		
	22 DAFI	28 DAFI	33DAFI	22 DAFI	28 DAFI	33DAFI
Untreated (control)	3.11	3.12	13.00	1.0	1.0	3.00
Antica (100 ml/100 li. water)	2.97	2.97	13.00	1.0	1.0	3.00
Antica (200 ml/100 li. water)	2.95	2.95	13.00	1.0	1.0	3.00
Antica (300 ml/100 li. water)	2.94	2.94	13.00	1.0	1.0	3.00
Antica (400 ml/100 li. water)	2.68	2.68	13.00	1.0	1.0	3.00
Amistar (80 ml/100 li. water)	2.92	2.92	13.00	1.0	1.0	3.00

Rating Scale:

1 = 0 infection, 3 = 1 to 10 % infection, 5 = 11 to 20 % infection, 7 = 21 to 30 % infection, 9 = 31 to 40 % infection, 11 = 41 to 50 % infection and 13 = greater than 50 % infection

*Based on 25 tagged sample panicles and 50 sampled leaves per treatment

- Scab infection on flower panicles



Untreated (control)



Antica (100 ml/100 li. water)



Antica (200 ml/100 li. water)



Antica (300 ml/100 li. water)



Antica (400 ml/100 li. water)



Amistar (80 ml/100 li. water)

INITIAL RESULTS

- Fruit set and retention*

TREATMENT	At 45 DAFI	At 55 DAFI
Untreated (control)	0.13	0.13
Antica (100 ml/100 li. water)	0.22	0.22
Antica (200 ml/100 li. water)	0.62	0.62
Antica (300 ml/100 li. water)	0.31	0.31
Antica (400 ml/100 li. water)	0.63	0.63
Amistar (80 ml/100 li. water)	0.33	0.33

*Average of 4 replication per treatment and based on 25 tagged panicles.

INITIAL RESULTS

- Fruit setting at different treatments (affected by heavy rainfall)



Untreated (control)



Antica (100 ml/100 li. water)



Antica (200 ml/100 li. water)



Antica (300 ml/100 li. water)



Antica (400 ml/100 li. water)



Amistar (80 ml/100 li. water)

INITIAL RESULTS

- Scab infection on fruits*

TREATMENT	At 60 DAFI
Untreated (control)	4.22
Antica (100 ml/100 li. water)	4.31
Antica (200 ml/100 li. water)	3.37
Antica (300 ml/100 li. water)	3.91
Antica (400 ml/100 li. water)	2.67
Amistar (80 ml/100 li. water)	2.15

Rating Scale:

1 = 0 infection, 3 = 1 to 10 % infection, 5 = 11 to 20 % infection, 7 = 21 to 30 % infection, 9 = 31 to 40 % infection, 11 = 41 to 50 % infection and 13 = greater than 50 % infection

**Average of 4 replication at 25 fruits per treatment.*

INITIAL RESULTS

- Scab infection on developing fruits



Untreated (control)



Antica (100 ml/100 li. water)



Antica (200 ml/100 li. water)



Antica (300 ml/100 li. water)



Antica (400 ml/100 li. water)



Amistar (80 ml/100 li. water)

...thank you!