Efficacy of Shakti Ensure against Diseases Of Tomato

A product of

M/s Nivshakti Bioenergy Pvt Ltd, Junaid Manzil, 2nd Floor, 7 B,

Ahiripukur Road, Kolkata, 700 019.

Test Report

(First Season Trial 2016-2017)

By

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2017

Efficacy of Shakti Ensure against Diseases Of Tomato

01	Project title	**Efficacy of Shakti Ensure against Diseases Of Tomato**
02	Name of the sponsor Agency	M/s Nivshakti Bioenergy Pvt Ltd, Junaid Manzil, 2nd Floor, 7 B, Ahiripukur Road, Kolkata, 700 019.
03	Name and address of the Research Station	College of Agriculture, Jawaharlal Nehur Krishi Vishwa Vidyalaya, Jabalpur 482004 (Madhya Pradesh)
04	Name of the supervising scientist	Dr. Usha Bhale Associate Professor, Department of Plant Pathology College of Agriculture, Jawaharlal Nehru Krishi Vishwa Vidyalaya, Jabalpur 482004 (Madhya Pradesh)
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05	Objective of the project	To Evaluate the Efficacy of Shakti Ensure against Diseases Of Tomato and effect of Magic Shakti as Surfactant.
06	Crop & variety	Tomato
	Season	First
07	Target disease	Powdery mildew
08	Treatment details	
	Date of sowing	16.10.2016
	Date of transplanting	16.11.2016
	Variety	Sagar
	Plot size	3 x 2m
	Spacing	40 x 50 cm; (5 row ; 6 plants)
	Design	RBD
	No of treatments	04
	No. of replication	03

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TREATMENT:

Dosage	Application	Repeat Dose (If require)	Interval (If require)	Observation
0.30 ml / 1 lt of water	2-3 times	1-2 times	10 days	5 days 7 days 10 days 13 days
0.35 ml/1 lt of water	2-3 times	1-2 times	10 days	5 days 7 days 10 days 13 days
0.40 ml / 1 lt of water	2-3 times	1-2 times	10 days	5 days 7 days 10 days 13 days
0.45 ml/ 1 lt of water	2-3 times	1-2 times	10 days	5 days 7 days 10 days 13 days

Phytotoxicity rating scale :

Crop Response/Crop Injury	Rating
0-0	0
1-10%	1
11-20%	2
21-30%	3
31-40%	4
41-50%	5
51-60%	6
61-70%	7
71-80%	8
81-90%	9
91-100%	10

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Introduction

The investigation on the evaluation of Bioefficacy Efficacy of Shakti Ensure against Diseases Of Tomato was conducted at Research Experimental area, Department of Plant Pathology, JNKVV, Jabalpur.

Jabalpur is located between 22 degree 49'& 22 degree 80' North latitude and 78 degree 21' & 80 degree 58' East longitude at an altitude of 411.78 meters above mean sea level (MSL).The area is covered under the agroclimatic zone Kymore Plateau & Satpura Hills of Madhya Pradesh.
The region receives average 800mm rainfall. The soil of the experimental area is medium black clay.

The continued and extensive cultivation of crops and vegetable has posed a serious problem of biotic stress in variable proportion, among which fungal diseases are wide spread and potential threat for profitable commercial cultivation. Under favorable conditions of infection losses up to 25% are common.

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Table - Intensity of Powdery mildew in Tomato

S. No	Treatments	Dosage ml/L	Percent Diseases Intensity (%)					
			Before Spray	5th	7 th	10th	13th	15th
1	Shakti Ensure	0.30	11	8	7	6	5	3
	Carbendazim	0.15	11	9	7.5	6	5	3
2	Shakti Ensure	0.35	11	7.5	7	5	4	2
	Carbendazim	0.15	11	7.5	6	5	4	3
3	Shakti Ensure	0.40	11	6.5	5	4	2	1
	Carbendazim	0.15	11	7	5	4.5	3	1.5
4	Shakti Ensure	0.45	11	6	5	3	2	0.80
	Carbendazim	0.15	11	6.5	5.5	4	3	1.2

Observation :

- On the 5th day, Shakti Ensure (@0.30 ml/L) showed 60 % disease intensity whereas 15th days Showed 75 % intensity. Shakti Ensure treated plants shows quick recovery from disease stress.
- New Leaves didn't show any sign of disease.
- On the 5th day, Shakti Ensure (@0.35 ml/L) showed 55 % disease intensity whereas 15th days Showed 80 % intensity. Shakti Ensure treated plants shows quick recovery from disease stress.
  New Leaves didn't show any sign of disease
- On the 5th day, Shakti Ensure(@0.40 ml/L) showed 50 % disease intensity whereas 15th days Showed 90 % intensity. Shakti Ensure treated plants shows quick recovery from disease stress.
- New Leaves didn't show any sign of disease.
- On the 5th day, Shakti Ensure (@0.45 ml/L) showed 45 % disease intensity whereas 15th days Showed 92 % intensity. Shakti Ensure treated plants shows quick recovery from disease stress.
- New Leaves didn't show any sign of disease.

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Table : Meteorological data during experimentation period at JNKVV, Jabalpur

Months	Weeks	Temperature (degree Celsius)		R.H. (%)		Sunshine (hrs/Day)	Rainfall (mm)	No. of Rainy days
		Max	Min	Max	Min			
Oct 2016	41	31.5	21.3	88	51	00	4.2	0000
Oct 2016	42	31.5	15.4	91	32	00	2.5	0000
Oct 2016	43	31.7	15.6	82	29	00	2.9	0000
Oct 2016	44	29.7	12.3	87	34	00	2.4	0000
Nov 2016	45	29.7	10.6	91	24	00	2.2	0000
Nov 2016	46	28.3	8.1	88	24	00	2.0	0000
Nov 2016	47	28.8	8.4	87	23	00	1.4	0000
Nov 2016	48	28.8	8.7	89	27	00	1.7	0000
Dec 2016	49	25.1	7.9	93	43	00	2.1	0000
Dec 2016	50	26.1	7.3	91	28	00	2.0	0000
Dec 2016	51	24.7	5.5	91	30	00	1.8	0000
Dec 2016	52	25.7	5.6	88	29	00	1.9	0000
Jan 2017	01	23.9	9.1	80	48	00	2.8	0000
Jan 2017	02	21.7	6.6	86	42	00	2.9	000.2
Jan 2017	03	24.1	9.2	89	47	00	3.1	0000
Jan 2017	04	25.7	10.1	97	45	01	2.9	003.2
Jan 2017	05	25.4	7.5	92	38	00	2.3	0000
Feb 2017	06	27.2	9.8	84	42	00	3.2	0000
Feb 2017	07	26.4	10.6	95	42	01	2.9	13.20
Feb 2017	08	29.7	10.0	83	26	00	3.3	0000
Feb 2017	09	31.2	11.1	80	26	00	2.6	0000
Mar 2017	10	30.3	12.5	72	24	00	4.5	0000
Mar 2017	11	29.3	9.8	74	16	00	4.7	0000
Mar 2017	12	33.9	14.4	75	19	01	3.4	002.8
Mar 2017	13	38.6	15.9	69	15	00	3.5	0000

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CONCLUSION

- It was found that Shakti Ensure can control Powdery Mildews at a dose of 0.4 ml per liter of water in Tomato Crop with 15 days of spray and the controls remains for more than 3 weeks.
- It has no residual effect on the plant as it is biodegradable.
- It is ecofriendly and all natural predators.

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CERTIFICATE

Certified that the information in product testing report carried out under the project and same has been critically analyzed and interpreted by the undersigned. No part of the data has been utilized for non-official purpose.

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