



M. P. K. V., RAHURI  
Godavari Foundation's  
DR. ULHAS PATIL  
**COLLEGE OF AGRICULTURE,  
JALGAON.**



(Affiliated to Mahatma Phule Krishi Vidyapeeth, Rahuri)



# RAWE PROGRAMME

[ 2019 / 2020 ]

CENTRE - Jalgaon



**Submitted by**

Name of the Student : Dhore Sumit Hemchandra

Reg. Number : AJ-26/2016

Name of the Centre : Jalgaon

Semester : VII

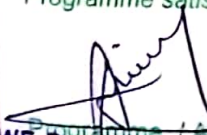


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## CERTIFICATE

This is to certify that Mr. / Miss. Dhore sumit Hemchandra  
 Reg. No. AJ-26/2016 has Completed Rural Agricultural Work Experience  
 Programme satisfactorily 2019 - 2020

  
 Dr. Ushas Patil / A.E.S.  
 AWE Programme Officer  
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 Agriculture, Jalgaon

Associate Dean's  
 Representative

  
 Chairman  
 RAWE



DR. ULHAS PATIL COLLEGE OF AGRICULTURE, JALGAON.

(AFFILIATED TO M.P.K.V. RAHURI)



**RAWE - 2019 - 2020**

**RURAL AGRICULTURAL WORK EXPERIENCE**

**SCHEDULE NO-1**



**RAWA - PLANT PATHOLOGY**  
**RAWA SCHEDULE - PATH - I**  
**GENERAL POSITION OF PLANT DISEASES IN A VILLAGE AND**  
**DISEASE SITUATION**

1. Name of Student : Dhore Sumit Hemchandra  
 2. Regd No. : AJ-26/2016  
 3. Center : Jalgaon  
 4. Village : Satod  
 5. Major crops grown in the crops : Cotton, Banana, Maize, Sorghum,  
okra, Marigold, Chilli

Name of Crops	Name of disease	Per cent disease intensity
a) Agronomical crops		
1 Sorghum	Leaf blight	13 %
2 Cotton	Angular leaf spot	20 %
3 Maize	Leaf blight	19.11 %
4 soybean	Rust	14.51 %
5 Cotton	Reddning	14.66 %
6 sorghum	Ergot	14.55 %
7 maize	Downy mildew	16.44 %
8 Soybean	Anthrachose	15.66 %
b. Horticultural crops		
1 Banana	Sigatoka	13.63 %
2 okra	Powdery Mildew	15.85 %
3 Marigold	1) Leaf spot	13.33 %
4 Chilli	2) Powdery mildew	14.37 %
5 Banana	Leaf curl	18.66 %
6 okra	Cigar end rot	16.77 %
7 chilli	Leaf spot	13.33 %
8	Anthrachose	18.44 %

**Summary / Conclusion** : From the above observation we can say that in general heavy infestation of leaf blight of maile, angular leaf spot of cotton, powdery mildew of okra & leaf curl of chilli & sigatoka of banana & reddning of cotton & other diseases are not much heavily infested.



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## Percent Disease Intensity (PDI):

Sorghum - Leaf blight

Plant no	Total no. of leaves/fruit observed	Disease score / rating								
		1	2	3	4	5	6	7	8	9
1	20	19	1	0	0	0	0	0	0	0
2	20	17	1	1	1	0	0	0	0	0
3	20	17	1	0	1	1	0	0	0	0
4	20	19	0	1	0	0	0	0	0	0
5	20	20	0	0	0	0	0	0	0	0
Total	100	92	3	2	2	1	0	0	0	0
Multiply by disease rating		92	6	6	8	5	0	0	0	0
Σ of numerical ratings	117									

$$PDI = \frac{\Sigma \text{ of numerical rating}}{\text{Total no. of leaves} \times \text{Higher rating}} \times 100$$

$$= \frac{117}{100 \times 9} \times 100$$

$$= 13\%$$



## Percent Disease Intensity (PDI):

Sorghum - ergot

Plant no	Total no. of leaves/fruits observed	Disease severity rating								
		1	2	3	4	5	6	7	8	9
1	20	13	1	0	0	0	0	0	0	0
2	20	18	0	1	0	0	0	0	0	0
3	20	17	1	0	1	0	0	1	0	0
4	20	19	0	1	0	0	0	0	0	0
5	20	18	0	0	1	0	1	0	0	0
Total	100	91	2	2	2	0	2	1	0	0
Multiply by disease rating		91	4	6	8	0	12	7	0	0
Σ of numerical ratings		= 131								

$$PDI = \frac{\Sigma \text{ of numerical rating}}{\text{Total no. of leaves} \times \text{Higher rating}} \times 100$$

$$= \frac{131}{100 \times 9} \times 100$$

$$= 14.55\%$$

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## Percent Disease Intensity (PDI):

Cotton - Angular leaf spot

Plant no	Total no. of leaves/fruits observed	Disease score/Rating								
		1	2	3	4	5	6	7	8	9
1	15	12	1	0	1	0	0	0	0	0
2	15	10	1	0	1	1	1	0	0	0
3	15	11	1	1	0	1	0	0	1	0
4	15	14	1	0	1	1	0	0	0	0
5	15	9	1	1	1	1	1	1	0	0
Total	75	56	5	2	4	4	2	1	1	0
Multiply by disease rating		56	10	6	16	20	12	7	8	0
Σ of numerical ratings	135									

$$PDI = \frac{100 \times \Sigma \text{ of all no. of rating}}{\text{total no. of leaves} \times \text{high rating}}$$

$$= \frac{100 \times 135}{75 \times 9}$$

$$= \frac{13500}{675}$$

$$= 20\%$$



## Percent Disease Intensity (PDI):

Maize-leaf blight

Plant no	Total no. of leaves/fruits observed	Disease score/Rating								
		1	2	3	4	5	6	7	8	9
1	15	13	1	0	1	0	0	0	0	0
2	15	12	1	0	1	1	0	0	0	0
3	15	9	1	2	1	1	0	1	0	0
4	15	10	1	1	1	1	1	0	0	0
5	15	12	0	1	1	1	0	0	0	0
Total	75	56	4	4	5	4	1	1	0	0
Multiply by disease rating		56	8	12	20	20	6	7	0	0
$\Sigma$ of numerical ratings	129									

$$PDI = \frac{100 \times \Sigma \text{ of all no. of rating}}{\text{total no. of leaves} \times \text{high rating}}$$

$$= \frac{100 \times 129}{75 \times 9}$$

$$= \frac{12900}{675}$$

$$= 19.11\%$$

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## Percent Disease Intensity (PDI):

maize - Downey mildew

Plant no	Total no. of leaves/fruits observed	Disease score / Rating								
		1	2	3	4	5	6	7	8	9
1	20	18	0	1	0	0	1	0	0	0
2	20	17	0	1	1	0	0	1	0	0
3	20	16	1	0	1	1	0	0	1	0
4	20	17	0	1	0	1	0	1	0	0
5	20	19	0	0	1	0	0	0	0	0
Total	100	87	1	3	3	2	1	2	1	0
Multiply by disease rating		87	2	9	12	10	6	14	8	0
$\Sigma$ of numerical ratings	= 148									

$$PDI = \frac{\Sigma \text{ of numerical rating}}{\text{Total no. of leaves} \times \text{Higher rating}} \times 100$$

$$= \frac{148}{100 \times 9} \times 100$$

$$= 16.44\%$$



## Percent Disease Intensity (PDI):

### Soybean - anthracnose

Plant no	Total no. of leaves/fruits observed	Disease score / Rating								
		1	2	3	4	5	6	7	8	9
1	20	16	1	0	1	1	0	0	1	0
2	20	17	0	1	0	1	0	1	0	0
3	20	18	1	0	0	0	1	0	0	0
4	20	19	0	0	1	0	0	0	0	0
5	20	19	0	0	0	0	1	0	0	0
Total	100	89	2	1	2	2	2	1	1	0
Multiply by disease rating		89	4	3	8	10	12	7	8	0
$\Sigma$ of numerical ratings		= 141								

$$PDI = \frac{\Sigma \text{ of numerical ratings}}{\text{Total no. of leaves} \times \text{Higher rating}} \times 100$$

$$= \frac{141}{100 \times 9} \times 100$$

$$= 15.66\%$$

Scanned by CamScanner

## Percent Disease Intensity (PDI):

Soybean rust -

Plant no	Total no. of leaves/fruits observed	Disease score/Rating								
		1	2	3	4	5	6	7	8	9
1	15	14	0	0	1	0	0	0	0	0
2	15	12	0	1	1	0	1	0	0	0
3	15	14	0	0	1	0	0	0	0	0
4	15	13	0	0	2	0	0	0	0	0
5	15	14	1	0	0	0	0	0	0	0
Total	75	67	1	1	5	0	0	0	0	0
Multiply by disease rating		67	2	3	20	0	6	0	0	0
$\Sigma$ of numerical ratings	98									

$$PDI = \frac{100 \times \Sigma \text{ of all no. of rating}}{\text{total no. of leaves} \times \text{high rating}}$$

$$= \frac{100 \times 98}{75 \times 9}$$

$$= \frac{9800}{675}$$

$$= 14.51\%$$



## Percent Disease Intensity (PDI):

### Banana - sigar end rot

Plant no	Total no. of leaves/fruits observed	Disease score / Rating								
		1	2	3	4	5	6	7	8	9
1	20	18	0	1	0	1	0	0	0	0
2	20	18	1	0	0	0	1	0	0	0
3	20	18	0	1	0	1	0	0	0	0
4	20	17	0	0	1	0	0	1	0	1
5	20	16	1	0	1	0	1	0	1	0
Total	100	87	2	2	2	2	2	1	1	1
Multiply by disease rating		87	4	6	8	10	12	7	8	9
$\Sigma$ of numerical ratings	= 151									

$$PDI = \frac{\Sigma \text{ of numerical ratings}}{\text{Total no. of leaves} \times \text{Higher rating}} \times 100$$

$$= \frac{151}{100 \times 9} \times 100$$

$$= 16.77\%$$

## Percent Disease Intensity (PDI):

Banana - Sigatoka

Plant no	Total no. of leaves/fruits observed	Disease score/Rating								
		1	2	3	4	5	6	7	8	9
1	15	14	1	1	0	0	0	0	0	0
2	15	13	1	1	0	1	0	0	0	0
3	15	12	0	0	1	0	0	0	0	0
4	15	13	1	0	0	0	0	0	0	0
5	15	14	1	1	0	0	0	0	0	0
Total	75	66	4	3	1	1	0	0	0	0
Multiply by disease rating		66	8	9	4	5	0	0	0	0
$\Sigma$ of numerical ratings	92									

$$PDI = \frac{100 \times \Sigma \text{ of all no. of rating}}{\text{total no. of leaves} \times \text{high rating}}$$

$$= \frac{100 \times 92}{75 \times 9}$$

$$= \frac{9200}{675}$$

$$= 13.63\%$$



## Percent Disease Intensity (PDI):

okra - leaf spot

Plant no	Total no. of leaves/fruits observed	Disease score / rating								
		1	2	3	4	5	6	7	8	9
1	20	16	1	0	1	1	0	1	0	0
2	20	17	0	1	0	1	1	0	0	0
3	20	18	0	1	0	1	0	0	0	0
4	20	18	0	1	0	0	0	1	0	0
5	20	19	0	1	0	0	0	0	0	0
Total	100	88	1	4	1	3	1	2	0	0
Multiply by disease rating		88	2	12	4	15	12	14	0	0
$\Sigma$ of numerical ratings	= 147									

$$PDI = \frac{\Sigma \text{ of numerical ratings}}{\text{Total no. of leaves} \times \text{Higher rating}} \times 100$$

$$= \frac{147}{100 \times 9} \times 100$$

$$= 16.33\%$$

## Percent Disease Intensity (PDI):

okra: Powdery Mildew

Plant no	Total no. of leaves/fruits observed	Disease score/rating								
		1	2	3	4	5	6	7	8	9
1	15	13	6	1	1	0	0	0	0	0
2	15	12	1	0	1	1	0	0	0	0
3	15	14	6	1	0	0	0	0	0	0
4	15	13	1	1	1	0	0	0	0	0
5	15	12	6	1	1	0	1	0	0	0
Total	75	64	2	4	4	1	1	0	0	0
Multiply by disease rating		64	4	12	16	8	6	0	0	0
$\Sigma$ of numerical ratings	107									

$$PDI = \frac{100 \times \Sigma \text{ of all no. rating}}{\text{total no. of leaves} \times \text{high rating}}$$

$$= \frac{100 \times 107}{75 \times 9}$$

$$= \frac{10700}{675}$$

$$= 15.85\%$$



## Percent Disease Intensity (PDI):

Marigold - leaf spot

Plant no	Total no. of leaves/fruits observed	Disease score/Rating								
		1	2	3	4	5	6	7	8	9
1	15	13	1	1	0	0	0	0	0	0
2	15	12	1	1	0	1	0	0	0	0
3	15	14	0	0	1	0	0	0	0	0
4	15	14	0	1	0	0	0	0	0	0
5	15	13	1	0	1	0	0	0	0	0
Total	75	66	3	3	2	1	0	0	0	0
Multiply by disease rating		66	6	9	8	1	0	0	0	0
$\Sigma$ of numerical ratings	90									

$$PDI = \frac{100 \times \Sigma \text{ of all } \cancel{\text{no.}} \text{ no. of rating}}{\text{total no. of leaves} \times \text{high rating}}$$

$$= \frac{100 \times 90}{75 \times 9}$$

$$= \frac{9000}{675}$$

$$= 13.33\%$$

## Percent Disease Intensity (PDI):

### Marigold - Powdery Mildew

Plant no	Total no. of leaves/fruits observed	Disease score / Rating								
		1	2	3	4	5	6	7	8	9
1	15	14	0	1	0	0	0	0	0	0
2	15	12	0	1	1	1	0	0	0	0
3	15	12	1	1	1	0	0	0	0	0
4	15	13	2	0	1	0	0	0	0	0
5	15	14	0	0	0	1	0	0	0	0
Total	75	65	3	3	3	2	0	0	0	0
Multiply by disease rating		65	6	9	12	5	0	0	0	0
$\Sigma$ of numerical ratings	97									

$$PDI = \frac{100 \times \Sigma \text{ of all no. of rating}}{\text{total no. of leaves} \times \text{high rating}}$$

$$= \frac{100 \times 97}{75 \times 9}$$

$$= \frac{9700}{675}$$

$$= 14.37\%$$

# Percent Disease Intensity (PDI):

Chilli - Anthracnose

Plant	Total no. of leaves/fruits observed	Disease score/Rating								
		1	2	3	4	5	6	7	8	9
	20	18	0	1	0	0	1	0	0	0
	20	17	1	0	1	0	0	1	0	0
	20	16	0	1	0	1	0	1	0	1
	20	16	1	0	1	0	1	1	0	0
	20	17	0	1	0	0	1	0	1	0
Total	100	84	2	3	2	1	3	3	1	1
Multiply by disease rating		84	4	9	8	5	18	21	8	9
of numerical ratings		= 166								

$$PDI = \frac{\sum \text{of numerical ratings}}{\text{Total no. of leaves} \times \text{Higher rating}} \times 100$$

$$= \frac{166}{100 \times 9} \times 100$$

$$= 18.44 \%$$



# RAWE Programme

College of Agriculture, Jalgaon Demonstration No: \_\_\_\_\_  
Name of Student: Dhore sumit Hemchandra Regi. No. : AJ-26/16  
Title: \_\_\_\_\_ Date : 1 / 20

Percent Disease Intensity (PDI) -

chilli - leaf curl

No. of observed plant = 75

No. of Infected/Diseased plant = 14

$$PDI = \frac{\text{No of infected plant}}{\text{No. of observed plant}} \times 100$$

$$= \frac{14}{75} \times 100$$

$$= 18.66 \%$$

## PLANT DISEASE SITUATION IN HOST FARMERS FIELD

1. Name of Student : Dhore Sumit Hemchandra
2. Regd No. : AJ-26/2016
3. Center : Jalgaon
4. Village : Satod
5. Name of host farmer : Hiralal Sukhdev Sawle

Name of Crops	Variety	Name of the disease	Intensity of disease	Description of plant protection measures followed
a) Agronomical crops Cotton	Ajeet-155	1) Angular leaf spot	7.11%	-COC + streptomys sulphate 100 ml
		2) Reddening	5.6%	-MgSO <sub>4</sub> + urea
		3) Cercospora leaf spot	28.9%	-COC application
Red gram	ICPL-87	1) Wilt	15.40%	-seed treatment with Thiram + carbendazim 2g/kg
		2) Sterility mosaic	15.85%	- spray Dicofol @ 18.5% at 10 days interval - control mites
b. Horticultural crops				
1 Banana	Mahalaxmi	1) Sigatoka	19.70%	- Appl <sup>n</sup> of Mancozeb @ 0.5% - Removal & destruction of affected plant
		2) Cigar end rot	22.5%	- Appl <sup>n</sup> of COC @ 0.25% - Removal & destruction of plant & fruits
4 Chilli	Sitara	1) Leaf curl	29.48%	- Remove & destroy affected plant - Control thrips - Dimethoate - 0.03%
		2) mosaic of chilli	14.66%	- spray malathion 50 EC @ 0.05% - Remove & destroy affected plant.

**Summary / Conclusion :** From the above observation we can say that cercospora leaf spot of cotton & sigatoka of Banana & leaf curl of chilli is more infested & Angular leaf spot of cotton & Reddening is moderately infested & Red gram wilt.

# RAWE Programme

College of Agriculture, Jalgaon  
 Name of Student: Dhore Sumit Hemchandra  
 Title: \_\_\_\_\_  
 Demonstration No: \_\_\_\_\_  
 Regi. No: AJ-26/16  
 Date: 1/20

Angular leaf spot of cotton

Plant No.	Total No. of Leaves	Disease Rating								
		1	2	3	4	5	6	7	8	9
		0	1-5%	6-10%	11-20%	21-30%	41-50%	51-60%	61-80%	above 80%
1	15	0	2	1	1	-	-	-	-	-
2	15	0	-	-	-	-	1	-	-	-
3	15	0	2	1	1	-	-	-	-	-
4	15	1	2	-	1	-	-	-	-	-
5	15	0	2	1	1	-	-	-	-	-
Total	75	1	8	3	4	-	1	-	-	-
		1	16	9	16	-	6	-	-	-

$$\Sigma \text{ of Numerical Rating} = 1 + 16 + 9 + 16 + 6$$

$$= 48$$

$$PDF = \frac{\Sigma \text{ of All Numerical Rating}}{\text{Total No. of leaves} \times \text{High rating}} \times 100$$

$$= \frac{48}{75 \times 9} \times 100$$

$$= \frac{48}{675} \times 100$$

$$= 0.071 \times 100$$

$$= 7.11 \%$$

$$PDF = 7.11 \%$$

$$PDF = 7.11 \%$$



# RAWE Programme

College of Agriculture, Jalgaon

Name of Student: Dhore sumit Hemchandra

Demonstration No: \_\_\_\_\_

Regi. No.: AJ-26/16

Title \_\_\_\_\_

Date : / /20

Cercospora leaf spot of cotton

Plant No.	Total No. of Leaves	Disease Rating								
		1	2	3	4	5	6	7	8	9
		0	1-5%	6-10%	11-20%	21-30%	41-50%	51-60%	60-80%	above 80%
1	15	0	8	0	1	1	1	1	1	1
2	15	0	5	0	2	1	1	0	0	0
3	15	7	5	3	1	1	1	0	0	0
4	15	4	3	3	2	1	1	0	0	0
5	15	5	5	1	1	1	0	0	0	0
Total	75	21	26	7	7	5	4	1	1	1
		21	52	21	28	25	24	7	8	9

$$\begin{aligned} \Sigma \text{ of Numerical rating} &= 21 + 52 + 21 + 28 + 25 + 24 + 7 \\ &= 195 \qquad \qquad \qquad + 8 + 9 \end{aligned}$$

$$PDF = \frac{\Sigma \text{ of all Numerical rating} \times 100}{\text{Total No. of leaves} \times \text{High rating}}$$

$$= \frac{195 \times 100}{75 \times 9}$$

$$= \frac{195 \times 100}{675}$$

$$= 0.288 \times 100$$

$$= 28.8\%$$

$$PDF = 28.9\%$$

$$PDF = 28.9\%$$

# RAWE Programme

College of Agriculture, Jalgaon

Name of Student: Dhore sumit Hemchandra

Demonstration No:

Regi. No.: AJ-26/16

Title:

Date : / / 20

Reddening in cotton

Plant No.	Total No. of leaves	Disease Rating								
		1	2	3	4	5	6	7	8	9
		0	1-5%	6-10%	11-20%	21-30%	41-50%	51-60%	61-80%	above 80%
1	15	2	-	1	-	-	-	-	-	-
2	15	3	1	-	-	-	1	-	-	-
3	15	3	1	-	-	-	-	-	-	-
4	15	1	-	-	1	-	-	1	-	-
5	15	2	-	1	-	-	-	-	-	-
Total	75	11	2	2	1	-	1	1	-	-
		11	4	6	4	0	6	7	0	0

$$\Sigma \text{ of numerical rating} = 11 + 4 + 6 + 4 + 0 + 6 + 7 + 0 + 0$$

$$= 38$$

$$PDF = \frac{\Sigma \text{ of all numerical rating} \times 100}{\text{Total no. of leaves} \times \text{High rating}}$$

$$= \frac{38}{75 \times 9} \times 100$$

$$= \frac{38}{675} \times 100$$

$$= 0.056 \times 100$$

$$PDF = 5.6 \%$$

$$PDF = 5.6 \%$$

# RAWE Programme

College of Agriculture, D Jalgaon Demonstration No: \_\_\_\_\_  
 Name of Student: Dhore Sumit Hemchandra Regi. No. AJ-26/16  
 Title: \_\_\_\_\_ Date : 1 / 20

Red gram wilt

Plant No.	Total No. of leaves	Disease Rating								
		1	2	3	4	5	6	7	8	9
		0	1-5%	6-10%	11-20%	21-30%	41-50%	51-60%	60-80%	above 80%
1	15	12	1	-	1	-	-	-	-	-
2	15	15	-	2	1	-	-	-	-	-
3	15	9	1	-	-	-	-	-	-	-
4	15	12	1	-	1	-	2	-	1	-
5	15	12	-	-	-	-	-	-	-	-
Total	75	60	3	2	3	-	2	-	1	-
		60	6	6	12	-	12	-	8	-

$$\Sigma \text{ of Numerical rating} = 60 + 6 + 6 + 12 + 12 + 8$$

$$= 104$$

$$PDF = \frac{\Sigma \text{ of all numerical rating} \times 100}{\text{Total no. of leaves} \times \text{High rating}}$$

$$= \frac{104 \times 100}{75 \times 9}$$

$$= \frac{104 \times 100}{675}$$

$$= 0.1540 \times 100$$

$$PDF = 15.40 \%$$

$$PDF = 15.40 \%$$



# RAWE Programme

College of Agriculture, Jalgaon Demonstration No. \_\_\_\_\_  
 Name of Student: Dhore Sumit Hemchandra Regl. No. AJ-26/16  
 Title \_\_\_\_\_ Date  / / 20

## Sigatoka of Banana

Plant No.	Total No. of Leaves	Disease Rating								
		1	2	3	4	5	6	7	8	9
		0	1-5%	6-10%	11-20%	21-30%	41-50%	51-60%	61-80%	above 80%
1	15	-	-	-	-	-	-	-	-	-
2	15	-	8	-	2	-	-	-	-	-
3	15	2	4	5	-	3	-	-	-	-
4	15	-	4	5	2	2	-	-	-	-
5	15	3	4	-	3	1	-	-	-	-
Total	75	5	20	10	7	6	-	-	-	-
		5	40	30	28	30				

$$\Sigma \text{ of Numerical Rating} = 5 + 40 + 30 + 28 + 30$$

$$= 133$$

$$PDI = \frac{\Sigma \text{ of all Numerical Rating}}{\text{Total No. of leaves} \times \text{High rating}} \times 100$$

$$= \frac{133}{75 \times 9} \times 100$$

$$= \frac{133}{675} \times 100$$

$$= \frac{133}{675} \times 100$$

$$= 0.1970 \times 100$$

$$= 19.70\%$$

$$PDI = 19.70\%$$

# RAWE Programme

College of Agriculture, Jalgaon  
 Name of Student: Dhore sumit Hemchandra  
 Title: \_\_\_\_\_  
 Demonstration No.: \_\_\_\_\_  
 Regi. No.: AJ-26/16  
 Date: 1 / 20

Leaf curl of chilli

Plant No.	Total No. of Leaves	Disease Rating								
		1	2	3	4	5	6	7	8	9
		0	1-5%	6-10%	11-20%	21-30%	31-50%	51-60%	61-80%	above 80%
1	15	0	8	0	1	1	1	1	1	1
2	15	5	5	0	2	1	1	0	0	0
3	15	7	5	2	1	1	1	0	0	0
4	15	4	3	3	2	1	1	1	0	0
5	15	5	5	1	1	1	0	0	0	0
Total	75	21	26	6	7	5	4	2	1	1
		21	52	18	28	25	24	14	8	9

$$\Sigma \text{ of numerical rating} = 21 + 52 + 18 + 28 + 25 + 24 + 14 + 8 + 9$$

$$= 199$$

$$PDF = \frac{\Sigma \text{ of all numerical rating} \times 100}{\text{Total No. of leaves} \times \text{High rating}}$$

$$= \frac{199}{75 \times 9} \times 100$$

$$= \frac{199 \times 100}{675}$$

$$= 29.48 \times 100$$

$$= 29.48\%$$

$$PDF = 29.48\%$$

# RAWE Programme

## percent Disease Intensity (PDI):

Red gram - Sterility Mosaic

Total no. of leaves/fruits observed	Disease score/Rating								
	1	2	3	4	5	6	7	8	9
15	13	6	1	1	0	0	0	0	0
15	12	1	0	1	1	0	0	0	0
15	14	6	1	0	0	0	0	0	0
15	13	1	1	1	0	0	0	0	0
15	12	6	1	1	0	1	0	0	0
Total 75	64	2	4	4	1	1	0	0	0
Multiply by disease rating <del>75</del>	64	4	12	16	8	6	0	0	0
Sum of numerical ratings 107									

$$PDI = \frac{100 \times \Sigma \text{ of all no. rating}}{\text{Total no. of leaves} \times \text{high rating}}$$

$$= \frac{100 \times 107}{75 \times 9}$$

$$= \frac{10700}{675}$$

$$= 15.85\%$$



# RAWE Programme

College of Agriculture, \_\_\_\_\_

Name of Student : Sumit H. Dhore

Title : \_\_\_\_\_

Demonstration No: \_\_\_\_\_

Regi. No. : \_\_\_\_\_

Date : / / 20

P.D.I = Percent Disease Intensity -

Chilli -

Mosaic

No. of plant observed = 75

No. of plant infected = 11

$$PDI = \frac{\text{No. of infected plant}}{\text{No. of observed plant}} \times 100$$

$$= \frac{11}{75} \times 100$$

$$= 14.66\%$$

# RAWE Programme

College of Agriculture, \_\_\_\_\_

Name of Student Sumit H. Dhore

Demonstration No: \_\_\_\_\_

Regi. No. : \_\_\_\_\_

Title \_\_\_\_\_

Date : / /20

Banana -

Cigar end rot

No. of plant observed = 40

No. of plant infected = 9

$$PDE = \frac{\text{No. of plant infected}}{\text{No. of plant observed}} \times 100$$

$$= \frac{9}{40}$$

$$= 0.225 \times 100$$

$$PDE = 22.5\%$$



DR. ULHAS PATIL COLLEGE OF AGRICULTURE, JALGAON.

(AFFILIATED TO M.P.K.V. RAHURI)



**RAWE - 2019 - 2020**

**RURAL AGRICULTURAL WORK EXPERIENCE**

**SCHEDULE NO-2**





**SCHEDULE - PATH - II**  
**PLANT DISEASE AND ASSESMENT OF YIELD LOSSES IN**  
**HOST FARMERS FIELD**

1. Name of Student : Dhore Sumit Hemchandra  
 2. Regd No. : AJ-26/2016  
 3. Center : Jalgaon  
 4. Village : Satod  
 5. Name of the host farmer : Hiralal Sukhdev sawle

Sr. No.	Crop	Major Disease	PDI	No. earheads/pods/boll/ yloid contributing characters.		Expected Losses	Timely application of plant protection measures	Actual losses
				Healthy	Infected			
1	Cotton	Angular leaf spot	7.11%	180	70	3.36 qt/ha	Spray 2% Diammonium phosphate	3.12 q/ha
	Cotton	Reddening	5.6%	175	75	4.8 qt/ha	Spray 2% Diammonium phosphate	3.12 q/ha
	Cotton	Cercospora leaf spot	28.9%	170	80	5.3 qt/ha	- use coc	4 q/ha
2	Red-gram	wilt	15.40%	80	20	1.4 q/ha	soil appli <sup>n</sup> of phorate	1.2 q/ha
3	Banana	Sigatoka	19.70%	85	15	15 fruit/tree	- Propionate - Rouging	12 fruit/tree
4	Chilli	Leaf Curl	29.48%	65	10	12 qt/ha	spray with mancozeb	10 q/ha
5	Red gram	Leaf blight	15.85%	70	30	1.6 qt/ha	- Spray carbendazim	1.3 qt/ha
6	Banana	Cigar end rot	22.5%	80	20	20 fruits/tree	- Removal of infected plant - use healthy sucker	15 fruits/tree
7	chilli	Mosaic	14.66%	67	10	10 q/ha	- Spray Lymocystohein	8 q/ha

**Summary / Conclusion :** Mr. Hiralal sawle had done proper care of Plant because insufficient knowledge about IPM method. his losses is more than management practises. Preventive practices should be done by farmer. we suggest integrated disease & pest management method.

# RAWE Programme

College of Agriculture, Jalgaon

Demonstration No: \_\_\_\_\_

Name of Student: Dhore sumit Hemchandra

Regi. No.: AJ-26/16

Title: \_\_\_\_\_

Date :  / / 20

Cotton -

1). Angular leaf spot -

$$a). \text{Expected loss} = \frac{\text{PDI} \times \text{Recommended yield}}{100}$$

$$= \frac{7.11 \times 28}{100}$$

$$= 3.36 \text{ gtl/ha}$$

$$b). \text{Actual loss} = \frac{\text{Actual yield} \times \text{expected yield}}{\text{Recommended yield}}$$

$$= \frac{26 \times 3.36}{28}$$

$$= 3.12 \text{ g/ha}$$

2). Reddening -

$$a). \text{Expected loss} = \frac{\text{PDI} \times \text{Recommended yield}}{100}$$

$$= \frac{5.6 \times 28}{100}$$

$$= 4.8 \text{ gtl/ha}$$

$$b). \text{Actual loss} = \frac{\text{Actual yield} \times \text{expected yield}}{\text{Recommended yield}}$$

$$= \frac{26 \times 4.8}{28}$$

$$= 3.12 \text{ gtl/ha}$$

Page No. \_\_\_\_\_

# RAWE Programme

College of Agriculture, \_\_\_\_\_

Demonstration No: \_\_\_\_\_

Name of Student: \_\_\_\_\_

Regi. No. : \_\_\_\_\_

Title: \_\_\_\_\_

Date : / / 20

3). Cercospora leaf spot -

a). Expected loss =  $\frac{PDF \times \text{Recommended yield}}{100}$

100

$$= \frac{28.9 \times 28}{100}$$

$$= 5.3 \text{ q/ha}$$

b). Actual loss =  $\frac{\text{Actual yield} \times \text{expected yield}}{\text{Recommended yield}}$

Recommended yield

$$= \frac{26 \times 5.3}{28}$$

$$= 4 \text{ q/ha}$$

2). Red gram -

1). Wilt =

a). Expected loss =  $\frac{PDF \times \text{Recommended yield}}{100}$

100

$$= \frac{15.40 \times 22.5}{100}$$

100

$$= 1.4 \text{ q/ha}$$

b). Actual loss =  $\frac{\text{Actual yield} \times \text{expected yield}}{\text{Recommended yield}}$

Recommended yield.

$$= \frac{20 \times 1.4}{22.5} = 1.2 \text{ q/ha}$$

22.5

Page No.



# RAWE Programme

College of Agriculture, Jalgaon

Demonstration No. \_\_\_\_\_

Name of Student: Sumit Dhere

Regi. No. \_\_\_\_\_

Title \_\_\_\_\_

Date : / / 20

## 2) M Leaf blight

$$a) \text{ actual loss} = \frac{\text{PDI} \times \text{Recommended yield}}{\text{expected}}$$

$$= \frac{15.85 \times 22.5}{100}$$

$$= 12 \text{ qt/ha}$$

$$b) \text{ actual loss} = \frac{\text{Actual yield} \times \text{expected yield}}{\text{Recommended yield}}$$

$$= \frac{20 \times 12}{22.5}$$

$$= 10 \text{ qt/ha}$$

## 3) Banana -

### 1) Sigatoka -

$$a) \text{ Expected loss} = \frac{\text{PDI} \times \text{Recommended yield}}{100}$$

$$= \frac{9.70 \times 25}{100}$$

$$= 15 \text{ fruits/tree}$$

$$b) \text{ Actual loss} = \frac{\text{Actual yield} \times \text{expected loss}}{\text{Recommended yield}}$$

$$= \frac{20 \times 15}{25} = 12 \text{ fruits/tree}$$

Page No.

# RAWE Programme

College of Agriculture, \_\_\_\_\_

Demonstration No. \_\_\_\_\_

Name of Student : \_\_\_\_\_

Reg. No. : \_\_\_\_\_

Title : \_\_\_\_\_

Date : \_\_\_\_\_ / \_\_\_\_\_ / 20\_\_\_\_

27. Cigar end rot -

$$a). \text{ expected loss} = \frac{\text{PDF} \times \text{Recommended yield}}{100}$$

$$= \frac{22.5 \times 25}{100}$$

$$= 20 \text{ fruits per tree}$$

$$b). \text{ actual loss} = \frac{\text{Actual yield} \times \text{expected loss}}{\text{recommended yield}}$$

$$= \frac{20 \times 20}{25}$$

$$= 15 \text{ g fruit / tree}$$

3) chilli :-

1) leaf curl =

$$a). \text{ expected loss} = \frac{\text{PDF} \times \text{Recommended yield}}{100}$$

$$= \frac{15.8 \times 150}{100}$$

$$= 1.6 \text{ g/ha}$$

$$b). \text{ Actual loss} = \frac{\text{Actual yield} \times \text{expected yield}}{\text{Recommended yield}}$$

$$= \frac{135 \times 1.6}{150}$$

$$= 1.3 \text{ g/ha}$$

# RAWE Programme

College of Agriculture, \_\_\_\_\_

Name of Student : \_\_\_\_\_

Title: \_\_\_\_\_

Demonstration No: \_\_\_\_\_

Regi. No. : \_\_\_\_\_

Date : / / 20

2). Mosaic -

$$a) \text{ Expected loss} = \frac{\text{PDI} \times \text{Recommended yield}}{100}$$

$$= \frac{14.66 \times 150}{100}$$

$$= 10.9 \text{ t/ha}$$

$$b) \text{ Actual loss} = \frac{\text{Actual yield} \times \text{Expected loss}}{\text{Recommended yield}}$$

$$= \frac{135 \times 10}{150}$$

$$= 8.9 \text{ t/ha}$$



## PLANT DISEASE MANAGEMENT ON HOST FARMERS FIELD

1. Name of Student : Dhore sumit Hemchandra
2. Regd No. : AJ-26/2016
3. Center : Jalgaon
4. Village : Satod
5. Name of the host farmer : Hiralal sukhdev sawle

1. Name of crop : Cotton
2. Name of the variety : Ajeet - 155
3. Seed treatment : Already treated seed used
4. Selection of seed : certified high yielding variety
5. Collection and destruction of stubbles : At time of land preparation
6. Soil and Water Management : Drip irrigation
7. Rouging of diseased plants : It is done when diseased plant observed.
8. Spraying / dusting of any fungicide : Mancozeb
9. Use of bioagents : Not used, but Irrecommended use of trichoderma
10. Use of resistant variety : Bt cotton variety, (Ajeet-155)
11. Use of combination of management practices : Used micronutrient in combination with growth regulators.
  - Use of Bio-pesticide like neem seed extract.
  - Use resistant variety.
  - Timely application of fertilizers
  - Timely sowing of variety.
  - Use of pesticide & fungicides in time.

# PLANT DISEASE MANAGEMENT ON HOST FARMERS FIELD

1. Name of Student : Dhore Sumit Hemchandra
2. Regd No. : AJ-26/2016
3. Center : Jalgaon
4. Village : Satod
5. Name of the host farmer : Hiralal sukh dev sawle

1. Name of crop : Redgram
2. Name of the variety : ICPL-87
3. Seed treatment : seed treatment with thiram @ 5 gm/kg of seed
4. Selection of seed : Purchased from agro service center.
5. Collection and destruction of stubbles : collection & destruction from field done during land preparation.
6. Soil and Water Management : Sara method
7. Rouging of diseased plants : Rouging is done in diseased plant when observed.
8. Spraying / dusting of any fungicide : Soil drenching of 10% granular phosphate
9. Use of bioagents : Not used. But I recommend Rhizobium for seed treatment
10. Use of resistant variety : ICPL-87 is resistant variety which is used.
11. Use of combination of management practices :

Cultural management practices i.e. ploughing, harrowing was done.

Mechanical management like sun drying was done.

- seed treatment with rhizobium & thiram. at the time before sowing.
- Use of integrated pest & disease management technique in field.

## PLANT DISEASE MANAGEMENT ON HOST FARMERS FIELD

Name of Student : Dhore sumit Hemchandra  
Regd No. : AJ-26/2016  
Center : Jalgaon  
Village : Satod  
Name of the host farmer : Hiralal sukhdev sawle

1. Name of crop : Banana
2. Name of the variety : Mahalaxmi
3. Seed treatment : Suckers are treated with Carbendazim solution before plantation
4. Selection of seed : Suckers are selected from disease free plot.
5. Collection and destruction of stubbles : At the time of land preparation
6. Soil and Water Management : Yes, bunds are constructed on boundaries of field.
7. Rouging of diseased plants : Yes, rouging in field is done & infected plant removed.
8. Spraying / dusting of any fungicide : Foliar spraying of micronutrient like  $ZnSO_4$  (0.5%),  $CuSO_4$  (0.2%).
9. Use of bioagents : Not used, But I recommend the use of Trichoderma viride for sucker treatment
10. Use of resistant variety : It was resistant to bunchy top of Banana (Mahalaxmi)
11. Use of combination of management practices : Yes, upto some level of cultural & chemical practises.

- I suggest him to use some biological control measures like use of quarantine measures while using banana suckers for plantation.
- I suggest to use clean cultivation practices to the host farmer.
- If disease occurs, then rough out the diseased plant.



## PLANT DISEASE MANAGEMENT ON HOST FARMERS FIELD

1. Name of Student : Dhore Sumit Hemchandra
2. Regd No. : AJ-26/2016
3. Center : Jalgaon
4. Village : Satod
5. Name of the host farmer : Hiralal Sukhdev Sawle

1. Name of crop : Chilli
2. Name of the variety : Sitara
3. Seed treatment : seed treatment was done with thiram @ 5-6 g/kg seed
4. Selection of seed : purchased from agro-service centre
5. Collection and destruction of stubbles : collection & destruction of stubbles was done.
6. Soil and Water Management : Ridges & furrow prepared & irrigation given as per requirement
7. Rouging of diseased plants : Rouging done when observed disease.
8. Spraying / dusting of any fungicide : spraying of Acetamipride for control of sucking pest
9. Use of bioagents : Not used. But I recommend use of bioagents.
10. Use of resistant variety : use of resistant variety recommended by university (Sitara)
11. Use of combination of management practices :
  - Cultural practices like ploughing, harrowing, collection of stubbles of previous crop was carried out.
  - use some chemical measures for control of disease causing agents like, thrips, whitefly.
  - Use biological control measures, I suggest to farmer..
  - spray acephate to control chilli thrips

## PLANT DISEASE MANAGEMENT ON HOST FARMERS FIELD

Name of Student : Dhore Sumit Hemchandra  
Regd No. : AJ-26/2016  
Center : Jalgaon  
Village : Satod  
Name of the host farmer : Hiralal Sukhdev Sawle

1. Name of crop : Cotton
2. Name of the variety : Ajeet-155
3. Seed treatment : Already treated seed used
4. Selection of seed : Certified high yielding variety.
5. Collection and destruction of stubbles : At time of land preparation
6. Soil and Water Management : Drip irrigation
7. Rouging of diseased plants : It is done when diseased plant observed.
8. Spraying / dusting of any fungicide : Mancozeb
9. Use of bioagents : Not used, but I recommended use of trichogramma.
10. Use of resistant variety : Bt cotton variety. (Ajeet-155)
11. Use of combination of management practices :

- Used micronutrient in combination with growth regulators.
- Use of biopesticide like Neem seed extract.
- Timely application of fertilizers.
- Timely sowing of cotton variety.
- Use of chemical control measures along with cultural control.

## PLANT DISEASE MANAGEMENT ON HOST FARMERS FIELD

1. Name of Student : Dhore Sumit Hemchandra
2. Regd No. : AJ-26/2016
3. Center : Jalgaon
4. Village : Satod
5. Name of the host farmer : Hiralal Sukhdev sawle

1. Name of crop : Banana
2. Name of the variety : Mahalaxmi
3. Seed treatment : Suckers are treated with carbendazim sol<sup>n</sup> before plantation.
4. Selection of seed : suckers are selected from disease free plot.
5. Collection and destruction of stubbles : At the time of land preparation.
6. Soil and Water Management : Yes, bunds are constructed on the boundaries of field.
7. Rouging of diseased plants : Yes, rouging in field is done & infected plant removed.
8. Spraying / dusting of any fungicide : Foliar spraying of micronutrient like  $ZnSO_4$  (0.5%),  $CuSO_4$  (0.2%)
9. Use of bioagents : Not used, but i recommend use of trichoderma viride
10. Use of resistant variety : It was resistant to burchy top of banana. (Mahalaxmi)
11. Use of combination of management practices :

- Yes, upto some level of cultural & chemical practices.
- I suggest him to use some biocontrol measures like use of quarantine measures while using Banana suckers for plantation.
- I suggest to use clean cultivation practises for management of disease to the host farmer.





RAWE 2019-20



## RURAL AGRICULTURAL WORK EXPERIENCE

**DR. ULHAS PATIL COLLEGE OF AGRICULTURE,  
JALGAON.**

(Affiliated to Mahatma Phule Krishi Vidyapeeth, Rahuri)

# METHOD DEMONSTRATION

Name of Student :- Dhore Sumit Hemchandra  
Reg. No. :- AJ-026/2016  
Name of Host Farmer :- Mr. Hiralal Sukhdev Sawle  
Name of Village :- Satod Tal. Yawal Dist. Jalgaon  
Demonstration On :- Seed treatment with  
Bio-fertilizer.  
No. of Participants :- 11  
Date of Demonstration:- 21 / 6 / 2019  
Time :- 9 AM





# Seed treatment with Bio-Fertilizers





# RAWE Programme

College of Agriculture, Jalgaon

Name of Student: Sumit, H. Dhore.

Demonstration No: 1

Regl. No: AJ-26/16

Title: Seed treatment with Bio-fertilizers

Date: 21/6/2019

Title -

Demonstration on seed treatment  
with Bio-fertilizers

Introduction -

- 1). In satod village farmers do not use biofertilizer treatment.
- 2). Farmer uses seed as it is without any treatment with biofertilizers to the seed.
- 3). Hence to create awareness about biofertilizer among farmers we plan this demonstration.

Date - 21/6/19

Time - 9 Am

Place - Satod

Objectives -

- 1). To create awareness among farmers about seed treatment with biofertilizer.
- 2). To tell farmers about importance of Azatobacter biofertilizer treatment to the crop before sowing.
- 3). To show the proper procedure to give treatment of azatobactor to sorghum seeds.



# RAWE Programme

College of Agriculture, \_\_\_\_\_

Demonstration No: \_\_\_\_\_

Name of Student : \_\_\_\_\_

Regi. No. : \_\_\_\_\_

Title: \_\_\_\_\_

Date : / / 20

4). To explain benefit of Azatobactor to the crop & soil.

5). To apply azatobactor to fix atmospheric nitrogen into soil & to make it available to crop.

6). To show farmers an efficient & assured technique for better crop yield.

## Material used -

- 1). Sorghum seed
- 2). Azatobactor culture
- 3). water
- 4). Ghamela
- 5). Hand gloves

## Planning -

1). we visited farmers, the day before demonstration & gave them further idea about the demonstration.

2). on the day of demonstration, we discussed them about use of significance of biofertilizers & gave them information about biofertilizers.

3). Azatobactor, Acetobactor, PSB, Rhizobium etc. bio-fertilizers were never been used by farmers.

# RAWE Programme

College of Agriculture, \_\_\_\_\_

Demonstration No: \_\_\_\_\_

Name of Student : \_\_\_\_\_

Regi. No. : \_\_\_\_\_

Title: \_\_\_\_\_

Date : / / 20

## Procedure -

1). Farmers were gathered at one place in the village.

2). We explained about different biofertilizers & their importance.

3). We also explained the economical aspects as well as environmental aspects of use of biofertilizers.

4). Then procedure & method of treatment was briefly told to them.

5). We took 1 kg seeds in Ghamela & sprinkled water over it. & added 25 gm azatobactor culture & mixed thoroughly.

6). After mixing seeds were placed in shade for drying.

7). Treated seeds are used for sowing next day of treatment.

## Precaution -

1). Dry the seeds in shade after seed treatment.

2). Sowing of seeds should be done immediately after drying.

3). Use fresh culture for treatment.

# RAWE Programme

College of Agriculture, \_\_\_\_\_

Demonstration No: \_\_\_\_\_

Name of Student : \_\_\_\_\_

Regi. No. : \_\_\_\_\_

Title: \_\_\_\_\_

Date : / / 20

4). Avoid use of expired culture.

## Advantages of Azatobactor -

- 1). It increase fertility of soil by fixing atmospheric nitrogen in soil.
- 2). Seedling from seed grow healthy & growth enhance as proper nutrition become available.
- 3). Cost of nitrogen fertilizer saved because use of biofertilizer reduces 30% use of urea.
- 4). Crop yield increases upto 25-30%.

## Questions asked by farmers -

Que. For which crops we can use Azatobactor?

→. It is used for Jowar, Bajra, wheat, maize, paddy, cotton, sugarcane, vegetables, fruit trees & ornamentals.

Que. why sorghum seeds treated with Azatobactor?

→. It fixes atmospheric nitrogen into soil & increase fertility of soil & yield of crop.

Que. what is the price of Azatobactor?

→. Azatobactor culture is only 40 Rs/kg.

Page No.



# RAWE Programme

College of Agriculture, \_\_\_\_\_

Name of Student : \_\_\_\_\_

Title: \_\_\_\_\_

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Regi. No. : \_\_\_\_\_

Date : / / 20

que. which biofertilizer is used for pulses?

→. Rhizobium culture.

que. where it is available?

→. At - 1) krishi vigyan kendras

2) krishi seva kendras.

## Feedback -

Farmers were happy after they are knowing about seed treatment with biofertilizer & they promised us to use this seed treatment before sowing.

# Bio-fertilizer

Page No. \_\_\_\_\_  
Date \_\_\_\_\_

- 1) ~~रंजन तळले~~ - ~~रंजन तळले~~
- 2) ~~ललित पाटील~~ - L.A. Patil
- 3) ~~हिरालाल सावळे~~ - H.A. Savale
- 4) ~~दिलेश महाजन~~
- 5) ~~अनूप पाटील~~ - Anup Patil
- 6) ~~अक्षय महाजन~~
- 7) ~~साचिन बर्डे~~ - Sachin Berde
- 8) ~~सुरेश राणे~~ - सुरेश राणे
- 9) ~~दिरामण जोशी~~ - ~~दिरामण जोशी~~
- 10) ~~ईश्वर साळी~~ - ~~ईश्वर साळी~~
- 11) ~~नरेंद्र ताथडे~~
- 12) ~~रामदास पाटील~~ - ~~राम~~
- 13) ~~सुखदेव बजाटे~~ - ~~सुखदेव बजाटे~~

14). सुधाकर पाटील - Sparsh

15). नथु चौधरी - नथुराम चौधरी

16). अजय बोरसे - अजय बोरसे

17). शंकर पाटील - S.R. Patil

18). चुडामण बडोटे - चुडामण बडोटे

19). सुखदेव महाजन - Sukhajan

20). साचिन पाटील - साचिन पाटील





RAWE 2019-20



## RURAL AGRICULTURAL WORK EXPERIENCE

**DR. ULHAS PATIL COLLEGE OF AGRICULTURE,  
JALGAON.**

(Affiliated to Mahatma Phule Krishi Vidyapeeth, Rahuri)

# METHOD DEMONSTRATION

Name of Student :- Dhore Sumit Hemchandra  
Reg. No. :- AJ-026/2016  
Name of Host Farmer :- Mr. Hiralal Sukhdev Sawle  
Name of Village :- Satod Tal. Yawal Dist. Jalgaon  
Demonstration On :- seed treatment of Fungicide  
No. of Participants :- 13  
Date of Demonstration:- 19/6/2019  
Time :- 5 pm





# Seed Treatment of Fungicides





# RAWE Programme

College of Agriculture, Jalgaon

Demonstration No: 2

Name of Student: Sumit H. Dhore

Regi. No.: AJ-26/16

Title: Seed treatment of fungicide

Date: 19/6/2019

Title -

Seed treatment of fungicide.

Venue - Satod

Objective -

- 1). To prevent seed & soil borne disease.
- 2). To increase seed germination percentage.
- 3). To provide knowledge & importance of seed treatment to farmers.
- 4). To increase crop production & reduce the cost of disease control.
- 5). To control the fungal disease.
- 6). To introduce proper procedure for seed treatment.

Material & Equipment required -

- 1). Amaranthus seeds
- 2). Fungicide - Metalaxyl.
- 3). Ghamela.
- 4). Hand gloves.



# RAWE Programme

College of Agriculture, \_\_\_\_\_

Demonstration No: \_\_\_\_\_

Name of Student : \_\_\_\_\_

Regi. No. : \_\_\_\_\_

Title: \_\_\_\_\_

Date : / / 20

## Procedure -

- 1). We took 1 kg seeds for treatment.
- 2). Taken 3-4 gm metalaxyl powder & applied it to seeds by rubbing with the help of handgloes.
- 3). But rubbing were so smoothly without damaging to seeds.
- 4). After rubbing the seeds some small amount of jaggery sol<sup>n</sup> is used to stick the powder to seed.
- 5). Then allowed it for drying under shade.
- 6). Drying may be for 1 & 1/2 hrs.
- 7). After drying used for sowing.

## Questions asked by farmers -

Que. How much quantity of Metalaxyl is required for 1 kg seed?

→. For 1 kg of seed, 3-4 gm metalaxyl is sufficient.

Que. There is any adverse effect of Metalaxyl on us?

→. No, There is no adverse effect of metalaxyl on us.

# RAWE Programme

College of Agriculture, \_\_\_\_\_

Demonstration No: \_\_\_\_\_

Name of Student : \_\_\_\_\_

Regi. No. : \_\_\_\_\_

Title: \_\_\_\_\_

Date : / / 20

Ques. Why we used handgloves?

→. We used handgloves for our safety.

Ques. What is the role of metalaxyl?

→. It act as fungicide & prevent seed borne & soil borne disease.

Q. Can we apply to other crop seed?

→. Yes, we can apply it.

Feedback -

1). There is very good response we were got from farmers.

2). They now know importance & role of seed treatment of metalaxyl.

3). & give surity to us it.

# Fungicide

~~किरण बघाटे~~

K. S. Borhate

~~विजय सोनवणे~~



~~रामदास पाटील~~

रामदास कृपित पाटील

~~प्रकाश चौधरी~~



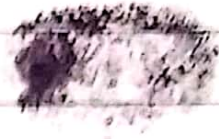
~~विठ्ठल पाटील~~

- विठ्ठल पाटील

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- सुनिल महाजन

~~गिणाराम भांडवे~~



~~दुषील पाटील~~

- H. A. Patil

~~दगडु पाटील~~

- D. B. Patil

~~सुनिल महाजन~~

~~हितेश महाजन~~

~~साचिन वर्डे~~

~~अनुप पाटील~~



- 14). दिलीप चौधरी - ~~दिलीप चौधरी~~
- 15). जानकीराम सोपे - जानकीराम सोपे
- 16). वासुदेव पाटील - वासुदेव पाटील
- 17). सुभाष तळले - सुभाष तळले
- 18). नामदेव बघाटे - नामदेव बघाटे



RAWE 2019-20



## RURAL AGRICULTURAL WORK EXPERIENCE

**DR. ULHAS PATIL COLLEGE OF AGRICULTURE,  
JALGAON.**

(Affiliated to Mahatma Phule Krishi Vidyapeeth, Rahuri)

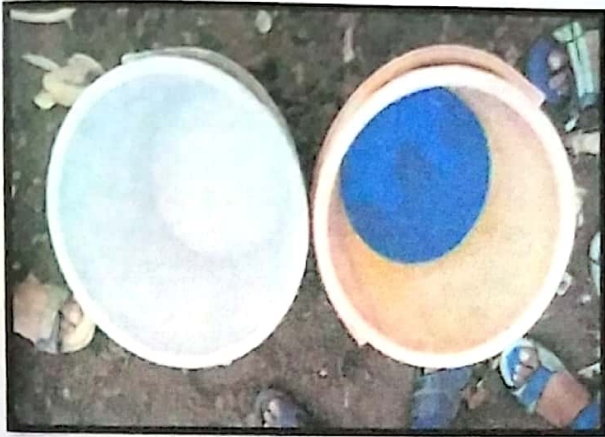
# METHOD DEMONSTRATION

Name of Student :- Dhore Sumit Hemchandra  
Reg. No. :- AJ-026/2016  
Name of Host Farmer :- Mr. Hiralal Sukhdev Sawle  
Name of Village :- Satod Tal. Yawal Dist. Jalgaon  
Demonstration On :- Preparation & use of  
Bordo-Paste  
No. of Participants :- 10  
Date of Demonstration:- 20/7/2019  
Time :- 9:30 Am





# Demonstration On Preparation And Use Of Bordo Paste





# RAWE Programme

College of Agriculture, Jalgaon

Demonstration No: 3

Name of Student: Sumit. H. Dhore.

Regi. No.: AJ-26/16

Title: Preparation and use of Bordo paste

Date: 20/7/2019

## Title-

Demonstration on preparation of  
Bordo paste & use of Bordo Paste

## Introduction-

- 1). Bordeaux paste / Bordo paste is mixture of copper sulphate & slaked lime.
- 2). It is important fungicide.
- 3). It is used in orchard, Gardens to prevent infestation of fungal disease.
- 4). It is applied on the trunk of tree as it is preventive in mode of action and it is ineffective after fungus has become established.
- 5). Bordo paste can be prepared by using different proportion of component.
- 6). In preparing it, the  $\text{CuSO}_4$  & lime dissolved separately in water & then mixed.
- 7). It was invented by P. A. Millardet.
- 8). It is in excess quantity eventually becomes a pollutant.

## Objective-

- 1). To know the technology of preparation of fungicides.

# RAWE Programme

College of Agriculture, \_\_\_\_\_

Demonstration No: \_\_\_\_\_

Name of Student : \_\_\_\_\_

Regi. No. : \_\_\_\_\_

Title: \_\_\_\_\_

Date : / /20

2). To know the procedure of preparation of fresh fungicides from copper sulphate & lime.

3). To describe the importance of the bordo paste in pest & disease control.

4). To detect the method of application of Paste.

## Material used -

1). Copper sulphate - 0.5 kg

2). Lime - 0.5 kg

3). water - 2.5 lit

4). Buckets

5). stick & sickle

## Implementation -

Date - 20/7/19

Time - 5 Pm

Place - satod

1). on planned date & time we went to field of Mr. Hivalal sawle.

2). By using all material we prepare the bordeaux paste.

3). The paste is ready for application.

# RAWE Programme

College of Agriculture, \_\_\_\_\_

Demonstration No: \_\_\_\_\_

Name of Student: \_\_\_\_\_

Regl. No. : \_\_\_\_\_

Title: \_\_\_\_\_

Date : / / 20

4). we show the farmers how to apply on citrus.

## Procedure for preparation of Bordo-paste-

1). For Bordo-paste we took 2 buckets. In 1<sup>st</sup> bucket we took 0.5 kg  $\text{CuSO}_4$  & mixed in 2.5 lit water.

2). Similarly mixed 0.5 kg  $\text{Ca(OH)}_2$  in 2.5 lit water.

3). Then mixed these two solutions with constant stirring.

4). Finally prepared bordo-paste of concentration 10%. & applied on stem of citrus.

## Formula of Bordo-paste - [1:1:10]

1 kg  $\rightarrow$   $\text{CuSO}_4$

1 kg  $\rightarrow$   $\text{Ca(OH)}_2$

10 lit  $\rightarrow$  water

## Method of check pH $\rightarrow$

1). By using litmus paper.

2). By dipping sickle in mixture for 1 min. if it gets rusty then mixture is acidic in nature.



# RAWE Programme

College of Agriculture, \_\_\_\_\_

Name of Student : \_\_\_\_\_

Title: \_\_\_\_\_

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Regi. No. : \_\_\_\_\_

Date : / / 20

## Precautions -

1). Solution mixture should be prepared in plastic vessels.

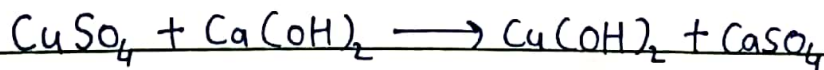
2). Bordeaux mixture prepared fresh every time for spraying.

## Advantages -

1). It is used to control wide variety of disease - 1). Downy mildew 2). powdery mildew  
3). Late blight 4). wilt etc. of fruit crops.

2). It is relatively cheap method & also easy to prepare.

## Chemical formulae -



## Questions asked by farmers →

Que. Can bordo-paste prepared on a day be used on subsequent days?

→. Bordo-paste is most effective when it is used fresh.

# RAWE Programme

College of Agriculture, \_\_\_\_\_

Demonstration No: \_\_\_\_\_

Name of Student : \_\_\_\_\_

Regi. No. : \_\_\_\_\_

Title: \_\_\_\_\_

Date : / / 20

Que. while preparing bordopaste it is necessary to add  $\text{CuSO}_4$  sol<sup>n</sup> to lime solution?

→. Yes, Copper sulphate solution should be added to lime solution or both simultaneously

Que. why we use wooden stick for mixing?

→. We use wooden stick because mixture may be concentrated & we avoided its reaction with metal & to avoid its effect on hands.

Que. why we dipped metal sickle in mixture?

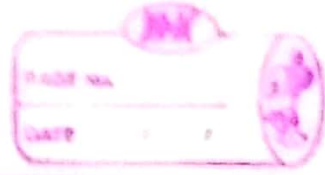
→. To know the concentration of mixture & metal is best indicator to show concentration of mixture.

Feedback-

1). Peoples were dont know about what is bouydeux mixture/bordo paste & how to use it.

2). But after demonstration they now know about how to use bordo b paste. & how to prepare.

# Bardo Paste



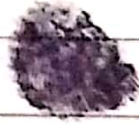
~~शिवर पाटील~~



~~नारायण तळले~~

Narayan Talale

~~सुरेश नाथडे~~



~~नरेंद्र राणे~~

- Narendra Rane

~~हितेश महाजन~~

- H-S Mahajan

~~अनुप महाजन~~



~~सुनिल शिंदे~~

- सुनिल शिंदे

~~अजय पाटील~~

- अजय पाटील

~~किरण पाटील~~

- किरण पाटील

~~सखाराम महाजन~~

- सखाराम महाजन

~~दिलीप पाटील~~

- दिलीप पाटील

~~नामदेव थावलकर~~

- नाम.स. थावलकर

~~राजेश चितोडे~~

- राजेश चितोडे

Teachers Signature



- 14) प्रभाकर वाणी - P. Wani
- 15) दिलीप चौधरी - D. Chauri
- 16) सुधाकर खडसे - S. Khadse
- 17) मोहन पाटील - M. Patil

# COMPREHENSIVE REPORT

PATH - 475



# RAWE Programme

College of Agriculture, Jalgaon

Demonstration No: \_\_\_\_\_

Name of Student: Sumit. H. Dhore

Regi. No.: AJ-26/16

Title: PATH-475

Date: / / 20

## Comprehensive Report

### Introduction-

For RAWE Programme, I had allotted to Satod village. I studied all plant pathology aspects in respect to my RAWE programme.

I studied different plant pathology aspects like general position of plant disease of agronomical & horticultural crops in village & my host farmers field. plant protection measure application in village. Availability of fungicide for controlling disease level so reducing future economic losses.

In RAWE Programme, I observed various disease in host farmers field & also on another field from its etiology to actual spreading.

As I studied critical symptoms of various disease, I identified & diagnose disease on crops.



# RAWE Programme

College of Agriculture, \_\_\_\_\_

Demonstration No: \_\_\_\_\_

Name of Student: \_\_\_\_\_

Regi. No. : \_\_\_\_\_

Title: \_\_\_\_\_

Date : / / 20

## Cropping pattern in village -

Due to availability of water & good conditioned soil, major crops are taken like Banana, cotton, & in some area sorghum, Bajra & other crop such as green gram, Black gram & also kharif crops.

### 1). Agronomical crops -

cotton, sorghum, Bajra, Greengram, Black gram etc.

### 2). Horticultural crops -

Banana, okra, Brinjal, chilli etc.

### 3). Diseases of Horticultural crops -

1). Banana - Sigatoka

2). okra - Yellow vein Mosaic.

## Important plant protection activities followed by farmers -

Important activities like management of plant disease mark important demonstration. we had taken following demonstration in RAWE 2019-20, PATH-475:-

# RAWE Programme

College of Agriculture, \_\_\_\_\_

Demonstration No: \_\_\_\_\_

Name of Student : \_\_\_\_\_

Regi. No. : \_\_\_\_\_

Title: \_\_\_\_\_

Date : / / 20

1). Seed treatment with fungicides.

2). Seed treatment with Bio-fertilizers.

3). Preparation of Bordeaux paste.

Management practices followed-

1). Deep ploughing during summer.

2). Disease resistant varieties are sown.

3). Collection & destruction of plant debris.

4). Spray with 1% Bordeaux mixture/paste to control citrus canker.

5). Spacing should be maintain between row to row.

6). Rouging is done time to time.

7). Spraying of copper oxychloride 0.25% for leaf spot of cotton

8). Use of Bio-fertilizer treated seed for sowing.

9). Rabi season crop - wheat, gram, Rabi Jowar etc.

10). Summer season crop -

Groundnut, maize, brinjal etc.

# RAWE Programme

College of Agriculture, \_\_\_\_\_ Demonstration No: \_\_\_\_\_  
Name of Student : \_\_\_\_\_ Regi. No. : \_\_\_\_\_  
Title: \_\_\_\_\_ Date : / / 20

Effect of weather parameters & incidence of disease -

Weather parameters such as humidity, rainfall play very important role in incidence of disease.

Sigatoka of banana become major problem of disease in banana crop.

During mid July to Aug & Sept. due to heavy rainfall causes the water logging condition which result into causing root disease.

Humid condition is very dangerous to crops.

Incidence of disease increase due to humid condition & heavy rainfall.

General position of disease in village & host farmers field -

1). Agronomical crop -

1). cotton - 1). Red rotting

2). Angular leaf spot.

2). Jowar → 1). Rust.

2). Smut