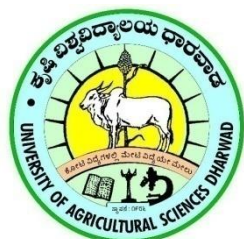


**UNIVERSITY OF AGRICULTURAL SCIENCES  
DHARWAD**



**AGRICULTURAL RESEARCH STATION SANKESHWAR**

**ALL INDIA CO-ORDINATED RESEARCH  
PROJECT ON SUGARCANE**

**PLANT PATHOLOGY EXPERIMENTAL  
DATA 2015-16**

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### Meteorological data for the year 2015 at ARS, Sankeshwar

Month	Rainy days	Rainfall (mm)	Average rainfall in 31 years (mm)
January	00	00	1.14
February	00	00	1.08
March	02	31.4	9.59
April	02	48.0	56.1
May	07	71.0	63.21
June	13	191.6	149.2
July	13	47.0	148.9
August	11	39.8	132.08
September	04	46.6	125.1
October	03	47.0	127.5
November	01	11.2	31.52
December	00	00	5.27
<b>Total</b>	<b>56</b>	<b>533.6</b>	<b>850.69</b>

Rainfall received during 2015 was (533.6) 317.09 mm deficit (37%) compared to the average rainfall of 31 years (850.69mm). Though sugarcane is irrigated crop the rainfall during March (31.4), April (48.0) May (71.0) and June (191.6) favored the sugarcane growth. While during July to October insufficient rainfall affected grand growth phase leading to moderate cane productivity. The lower rainfall during flower induction period (July- August) delayed flowering with lower intensity.

## YEARLY RESEARCH PLAN FOR THE YEAR 2015-16

1. Project No. : PP17B  
2. Department. : Plant Pathology  
3. Project Title. : Evaluation of zonal varieties for resistance to smut  
4. Experiment Title. : Initial Varietal Trial Early  
5. Project Leader. : Dr. S. G. Raju  
Associate Professor  
ARS, Sankeshwar.  
6. Location : ARS, Sankeshwar.  
7. Experiment. : Continued  
8. Year of start. : 1986-87  
9. Likely year of completion. : -  
10. Experimental details.

### a) Varieties:

1	Co 12001	Standards	
2	Co 12003	1	Co 85004
3	Co 12006	2	Co 94008
4	Co 12007	3	CoC 671
5	Co 12008	4	Co 8011
6	CoM 12081	5	Co 740
7	CoM 12082		
8	CoM 12083		
9	CoN 12071		
10	CoN 12072		
11	CoT 12366		
12	CoT 12367		

- b) Design. : R. B. D.  
c) Replication : Two  
d) Plot size. : 7.2 (6 rows) x 6.0 m.  
e) Spacing. : 120 cm.  
f) Seed rate. : 12 eye buds/m.  
g) Fertilizers. : 250:75:188 NPK Kg/ha.  
h) Date of Planting :31.01.2015



### 1. Initial Varietal Trial (Early)

Sl. No.	Genotypes	Smut reaction	
		% Incidence	Reaction
1	Co 12001	0	R
2	Co 12003	0	R
3	Co 12006	45.83	HS
4	Co 12007	22.34	S
<b>5</b>	<b>Co 12008</b>	<b>0</b>	<b>R</b>
6	Co 12082	22.91	S
7	Co 12021	7.69	MR
<b>8</b>	<b>Co 12024</b>	<b>0</b>	<b>R</b>
9	CoM 10081	29.71	S
10	CoM 10082	29.28	S
11	CoN 10071	9.09	MR
<b>12</b>	<b>CoN 10072</b>	<b>0</b>	<b>R</b>
<b>Checks</b>			
13	Co 85004	0	R
14	Co 94008	0	R
15	CoC 671	11.11	MS
16	Co740	36.36	HS
17	Co8011	37.72	HS

Twelve genotypes and 5 standards were evaluated against smut. Out 12 genotypes 5 namely Co 12001, Co 12003, Co 12008, Co 12024 and CoN 10072 were rated as R. Of the remaining 7 entries, 2 were rated as MR, 4 were rated as MS, 1 entry namely Co 12006 was rated as S.

## YEARLY RESEARCH PLAN FOR THE YEAR 2015-16

1. Project No. : PP17B  
2. Department. : Plant Pathology  
3. Project Title. : Evaluation of zonal varieties for resistance to smut  
4. Experiment Title. : Advanced Varietal Trial – PC I  
5. Project Leader. : Dr. S. G. Raju  
Associate Professor  
ARS, Sankeshwar.  
6. Location : ARS, Sankeshwar.  
7. Experiment. : Continued  
8. Year of start. : 1986-87  
9. Likely year of completion. : -  
10. Experimental details.

### a) Varieties:

1	Co 10004	Standards	
2	Co 10005	1	Co 85004
3	Co 10006	2	Co 94008
4	Co 10024	3	CoC 671
5	Co 10026	4	Co 8011
6	Co 10027	5	Co 740
7	CoT 10366		
8	CoT 10367		

- b) Design. : R. B. D.  
c) Replication : Three  
d) Plot size. : 7.2 (6 rows) x 6.0 m.  
e) Spacing. : 120 cm.  
f) Seed rate. : 12 eye buds/m.  
g) Fertilizers. : 250:75:188 NPK Kg/ha.  
h) Date of Planting : 31.01.2015



## 2. Advanced Varietal Trial-PC I

Sl. No.	Genotypes	Smut reaction	
		% Incidence	Reaction
1	Co 10004	0	R
2	Co 10005	0	R
3	Co 10006	14.28	MS
4	Co 10024	8.33	MR
5	Co 10026	0	R
6	Co 10027	0	R
7	CoT 10366	17.42	MS
8	CoT 10367	16.66	MS
<b>Checks</b>			
9	Co 85004	0	R
10	Co 94008	0	R
11	CoC 671	20.93	S
12	Co8011	11.11	MS
13	Co740	67.45	HS

Out of 8 genotypes Co10004, Co10005, Co 10026 and Co 10027 found to be R where as Co10024 found to be MR and the remaining 3 entries namely Co1006, CoT10366 and CoT 10367 were MS.

## YEARLY RESEARCH PLAN FOR THE YEAR 2015-16

1. Project No. : PP17B  
2. Department. : Plant Pathology  
3. Project Title. : Evaluation of zonal varieties for resistance to smut  
4. Experiment Title. : Advanced Varietal Trial – Early PC II  
5. Project Leader. : Dr. S. G. Raju  
Associate Professor  
ARS, Sankeshwar.  
6. Location : ARS, Sankeshwar.  
7. Experiment. : Continued  
8. Year of start. : 1986-87  
9. Likely year of completion. : -  
10. Experimental details.

### a) Varieties:

1	Co 09004	Standards	
2	Co 09007	1	Co 85004
3	CoN 09072	2	Co 94008
		3	CoC 671
		4	Co 8011
		5	Co 740

- b) Design. : R. B. D.  
c) Replication : Three  
d) Plot size. : 7.2 (6 rows) x 6.0 m.  
e) Spacing. : 120 cm.  
f) Seed rate. : 12 eye buds/m.  
g) Fertilizers. : 250:75:188 NPK Kg/ha.  
h) Date of Planting : 31.01.2015

### 3. Advanced Varietal Trial - Early PC II

Sl. No.	Genotypes		
		% Incidence	Reaction
1	Co 09004	0	R
2	Co 09007	0	R
3	Co 09072	7.49	MR
Checks			
4	Co 85004	8.66	MR
5	Co 94008	0	R
6	CoC 671	27.69	S
7	Snk 07680	8.33	MR
8	Co 8011	13.33	MS
9	Co 740	30.41	HS

3 entries were tested against smut among them Co 09004 and Co 09007 were R. Co 09072 was MR.

## YEARLY RESEARCH PLAN FOR THE YEAR 2015-16

1. Project No. : PP17B  
 2. Department. : Plant Pathology  
 3. Project Title. : Evaluation of zonal varieties for resistance to smut  
 4. Experiment Title. : Initial Varietal Trial – Midlate  
 5. Project Leader. : Dr. S. G. Raju  
 Associate Professor  
 ARS, Sankeshwar.  
 6. Location : ARS, Sankeshwar.  
 7. Experiment. : Continued  
 8. Year of start. : 1986-87  
 9. Likely year of completion. : -  
 10. Experimental details.

### a) Varieties:

1	<b>Co 12009</b>	<b>9</b>	<b>CoM 12084</b>	<b>Standards</b>	
2	<b>Co 12012</b>	<b>10</b>	<b>CoM 12085</b>	1	<b>Co 86032</b>
3	<b>Co 12014</b>	<b>11</b>	<b>Co M12086</b>	2	<b>Co 99004</b>
4	<b>Co 12016</b>	<b>12</b>	<b>CoN 12073</b>	3	<b>Co 8011</b>
5	<b>Co 12017</b>	<b>13</b>	<b>CoN 12074</b>	4	Co 740
6	<b>Co 12019</b>	<b>14</b>	<b>CoT 12368</b>		
7	<b>Co 12021</b>	<b>15</b>	<b>VSI 12121</b>		
8	<b>Co 12024</b>				

- b) Design. : R. B. D.  
 c) Replication : Three  
 d) Plot size. : 7.2 (6 rows) x 6.0 m.  
 e) Spacing. : 120 cm.  
 f) Seed rate. : 12 eye buds/m.  
 g) Fertilizers. : 250:75:188 NPK Kg/ha.  
 h) Date of Planting : 07.01.2015

#### 4. Initial Varietal Trial - Midlate

Sl. No.	Genotypes	Smut reaction	
		% Incidence	Reaction
1	Co 12009	0	R
2	Co 12012	13.33	MS
3	Co 12014	7.14	MR
4	Co 12016	0	R
5	Co 12017	0	R
6	Co 12019	0	R
7	Co 12021	7.69	MR
8	Co 12024	41.66	HS
9	CoM 12084	0	R
10	CoM 12085	0	R
11	CoM 12086	22.61	S
12	CoN 12073	9.0	MR
13	CoN 12074	28.57	S
14	CoT 12368	0	R
15	VSI 12121	23.07	S
Checks			
16	Co 86032	0	R
17	Co 99004	15.38	MS
18	Co 8011	21.13	S
19	Co 740	31.81	HS

Six genotypes viz., Co12009, Co 12016, Co 1207, Co1209, CoM 12084, CoM 12085 and CoT 12368 were R, Co12014, Co 12021 and CoN 12073 were MR, Co12012 was MS and remaining 3 entries namely CoM 12086, CoN 12074 and VSI 12121 were found to be S.

## YEARLY RESEARCH PLAN FOR THE YEAR 2015-16

1. Project No. : PP17B  
2. Department. : Plant Pathology  
3. Project Title. : Evaluation of zonal varieties for resistance to smut  
4. Experiment Title. : Advanced Varietal Trial – Midlate PC I  
5. Project Leader. : Dr. S. G. Raju  
Associate Professor  
ARS, Sankeshwar.  
6. Location : ARS, Sankeshwar.  
7. Experiment. : Continued  
8. Year of start. : 1986-87  
9. Likely year of completion. : -  
10. Experimental details.

### a) Varieties:

1	<b>Co 9009</b>	<b>7</b>	<b>CoT 10368</b>	<b>Standards</b>	
2	<b>Co 10015</b>	<b>8</b>	<b>CoT 10369</b>	1	<b>Co 86032</b>
3	<b>Filler</b>	<b>9</b>	<b>CoVC 10061</b>	2	<b>Co 99004</b>
4	<b>Co 10031</b>	<b>10</b>	<b>PI 10131</b>	3	<b>Co 8011</b>
5	<b>Co 10033</b>	<b>11</b>	<b>PI 10132</b>	4	<b>Co 740</b>
6	<b>CoM 10083</b>				

- b) Design. : R. B. D.  
c) Replication : Three  
d) Plot size. : 7.2 (6 rows) x 6.0 m.  
e) Spacing. : 120 cm.  
f) Seed rate. : 12 eye buds/m.  
g) Fertilizers. : 250:75:188 NPK Kg/ha.  
h) Date of Planting : 05.01.2015

## 5. Advanced Varietal Trial - Midlate PC I

Sl. No.	Genotypes		
		% Incidence	Reaction
1	Co 09009	0	R
2	Co 10015	0	R
3	Co 10017	49.99	HS
4	Co 10031	12.28	MS
5	Co 10033	0	R
6	CoM10083	0	R
7	CoT 10368	0	R
8	CoT 10369	0	R
9	CoNC 10061	7.69	MR
10	PI 10132	0	R
11	PI 10132	0	R
Checks			
12	Co 86032	0	R
13	Co 99004	10.81	MS
14	Co 8011	11.11	MS
15	Co 740	28.66	S

Eleven entries including four checks were tested for smut resistance. The genotypes Co 9004, Co 10015, Co 100033, CoM 100833, CoT 10368, CoT 10369, PI 10132 and PI 101 32 remained free from smut and graded as R. While each entry Co10031 was graded as MS and Co 10017 graded as HS.

## YEARLY RESEARCH PLAN FOR THE YEAR 2015-16

1. Project No. : PP17  
2. Department. : Plant Pathology  
3. Project Title. : Evaluation of zonal varieties for resistance to YLD  
4. Experiment Title. : Initial Varietal Trial Early  
5. Project Leader. : Dr. S. G. Raju  
Associate Professor  
ARS, Sankeshwar.  
6. Location : ARS, Sankeshwar.  
7. Experiment. : Continued  
8. Year of start. : 2013-14  
9. Likely year of completion. : -  
10. Experimental details.

### a) Varieties:

1	Co 12001	Standards	
2	Co 12003	1	Co 85004
3	Co 12006	2	Co 94008
4	Co 12007	3	CoC 671
5	Co 12008	4	Co 8011
6	CoM 12081	5	Co 740
7	CoM 12082		
8	CoM 12083		
9	CoN 12071		
10	CoN 12072		
11	CoT 12366		
12	CoT 12367		

- b) Design. : R. B. D.  
c) Replication : Two  
d) Plot size. : 7.2 (6 rows) x 6.0 m.  
e) Spacing. : 120 cm.  
f) Seed rate. : 12 eye buds/m.  
g) Fertilizers. : 250:75:188 NPK Kg/ha.  
h) Date of Planting : 31.01.2015





## 1. Initial Varietal Trial Early

Sl. No.	Genotypes	YLD reaction	
		Severity Grade	Reaction
1	Co 12001	2	MR
2	Co 12003	2	MR
3	Co 12006	5	HS
4	Co 12007	3	MS
5	Co 12008	3	MS
6	Co 12082	3	MS
7	Co 12021	2	MR
<b>8</b>	<b>Co 12024</b>	<b>0</b>	<b>R</b>
9	CoM 10081	3	MS
10	CoM 10082	2	MR
<b>11</b>	<b>CoN 10071</b>	<b>1</b>	<b>R</b>
12	CoN 10072	2	MR
<b>Checks</b>			
13	Co 85004	2	MR
14	Co 94008	3	MS
15	CoC 671	2	MR
16	Co740	3	MS
17	Co8011	4	S

Co 12024 and CoN 10071 exhibited R reaction, Co 12001, Co 12003, Co 12021; CoM 10082 and CoN 10071 were found MR against YLD. However two standard checks Co 85004 and Co 94008 showed MR reaction against YLD

## YEARLY RESEARCH PLAN FOR THE YEAR 2015-16

1. Project No. : PP17  
2. Department. : Plant Pathology  
3. Project Title. : Evaluation of zonal varieties for resistance to YLD  
4. Experiment Title. : Advanced Varietal Trial – Early PC I  
5. Project Leader. : Dr. S. G. Raju  
Associate Professor  
ARS, Sankeshwar.  
6. Location : ARS, Sankeshwar.  
7. Experiment. : Continued  
8. Year of start. : 2013-14  
9. Likely year of completion. : -  
10. Experimental details.

### a) Varieties:

1	Co 10004	Standards	
2	Co 10005	1	Co 85004
3	Co 10006	2	Co 94008
4	Co 10024	3	CoC 671
5	Co 10026	4	Co 8011
6	Co 10027	5	Co 740
7	CoT 10366		
8	CoT 10367		

- b) Design. : R. B. D.  
c) Replication : Three  
d) Plot size. : 7.2 (6 rows) x 6.0 m.  
e) Spacing. : 120 cm.  
f) Seed rate. : 12 eye buds/m.  
g) Fertilizers. : 250:75:188 NPK Kg/ha.  
h) Date of Planting : 31.01.2015

## 2. Advanced Varietal Trial-PC I

Sl. No.	Genotypes	YLD reaction	
		Severity Grade	Reaction
1	Co 10004	2	MR
2	Co 10005	2	MR
3	Co 10006	2	MR
4	Co 10024	2	MR
5	Co 10026	2	MR
6	Co 10027	2	MR
7	CoT 10366	3	MS
8	CoT 10367	3	MS
<b>Checks</b>			
9	Co 85004	2	MR
10	Co 94008	3	MS
11	CoC 671	2	MR
12	Co8011	3	MS
13	Co740	3	MS

Six entries Co 10004, Co 10005, Co 10006, Co 10024, Co 10026 and Co 10027 showed R reaction. Two entries namely, CoT 10266 and CoT 10367 entries were MS for YLD.

## YEARLY RESEARCH PLAN FOR THE YEAR 2015-16

1. Project No. : PP17  
2. Department. : Plant Pathology  
3. Project Title. : Evaluation of zonal varieties for resistance to YLD  
4. Experiment Title. : Advanced Varietal Trial – Early PC II  
5. Project Leader. : Dr. S. G. Raju  
Associate Professor  
ARS, Sankeshwar.  
6. Location : ARS, Sankeshwar.  
7. Experiment. : Continued  
8. Year of start. : 2013-14  
9. Likely year of completion. : -  
10. Experimental details.

### a) Varieties:

1	Co 09004	Standards	
2	Co 09007	1	Co 85004
3	CoN 09072	2	Co 94008
		3	CoC 671
		4	Co 8011
		5	Co 740

- b) Design. : R. B. D.  
c) Replication : Three  
d) Plot size. : 7.2 (6 rows) x 6.0 m.  
e) Spacing. : 120 cm.  
f) Seed rate. : 12 eye buds/m.  
g) Fertilizers. : 250:75:188 NPK Kg/ha.  
h) Date of Planting : 31.01.2015

### 3. Advanced Varietal Trial - Early PC II

Sl. No.	Genotypes	YLD reaction	
		Severity Grade	Reaction
1	Co 09004	2	MR
2	Co 09007	2	MR
3	Co 09072	2	MR
Checks			
4	Co 85004	2	MR
5	Co 94008	3	MS
6	CoC 671	2	MR
7	Snk 07680	2	MR
8	Co 8011	3	MS
9	Co 740	3	MS

All entries Viz., Co 09004, Co 09007 and Co 09072 shwed Mr Reaction against YLD.

## YEARLY RESEARCH PLAN FOR THE YEAR 2015-16

1. Project No. : PP17  
 2. Department. : Plant Pathology  
 3. Project Title. : Evaluation of zonal varieties for resistance to YLD  
 4. Experiment Title. : Initial Varietal Trial – Midlate  
 5. Project Leader. : Dr. S. G. Raju  
 Associate Professor  
 ARS, Sankeshwar.  
 6. Location : ARS, Sankeshwar.  
 7. Experiment. : Continued  
 8. Year of start. : 2013-14  
 9. Likely year of completion. : -  
 10. Experimental details.

### a) Varieties:

1	<b>Co 12009</b>	<b>9</b>	<b>CoM 12084</b>	<b>Standards</b>	
2	<b>Co 12012</b>	<b>10</b>	<b>CoM 12085</b>	1	<b>Co 86032</b>
3	<b>Co 12014</b>	<b>11</b>	<b>Co M12086</b>	2	<b>Co 99004</b>
4	<b>Co 12016</b>	<b>12</b>	<b>CoN 12073</b>	3	<b>Co 8011</b>
5	<b>Co 12017</b>	<b>13</b>	<b>CoN 12074</b>	4	Co 740
6	<b>Co 12019</b>	<b>14</b>	<b>CoT 12368</b>		
7	<b>Co 12021</b>	<b>15</b>	<b>VSI 12121</b>		
8	<b>Co 12024</b>				

- b) Design. : R. B. D.  
 c) Replication : Three  
 d) Plot size. : 7.2 (6 rows) x 6.0 m.  
 e) Spacing. : 120 cm.  
 f) Seed rate. : 12 eye buds/m.  
 g) Fertilizers. : 250:75:188 NPK Kg/ha.  
 h) Date of Planting : 07.01.2015

#### 4. Initial Varietal Trial - Midlate

Sl. No.	Genotypes	YLD reaction	
		Severity Grade	Reaction
1	Co 12009	3	MS
2	Co 12012	2	MR
3	Co 12014	2	MR
4	Co 12016	3	MS
5	Co 12017	2	MR
6	Co 12019	2	MR
7	Co 12021	1	R
8	Co 12024	2	MR
9	CoM 12084	3	MS
10	CoM 12085	1	R
11	CoM 12086	3	MS
12	CoN 12073	2	MR
13	CoN 12074	2	MR
14	CoT 12368	2	MR
15	VSI 12121	3	MS
Checks			
16	Co 86032	3	MS
17	Co 99004	2	MR
18	Co 8011	3	MS
19	Co 740	4	S

Two entries Co 12021 and CoM 12085 showed R reaction however eight entries viz., Co 12012, Co 12014, Co 12017, Co 12019, Co 12024, CoN 12073, CoN 12074 and CoT 12368 exhibited MR reaction against YLD.



## YEARLY RESEARCH PLAN FOR THE YEAR 2015-16

1. Project No. : PP17  
2. Department. : Plant Pathology  
3. Project Title. : Evaluation of zonal varieties for resistance to YLD  
4. Experiment Title. : Advanced Varietal Trial – Midlate PC I  
5. Project Leader. : Dr. S. G. Raju  
Associate Professor  
ARS, Sankeshwar.  
6. Location : ARS, Sankeshwar.  
7. Experiment. : Continued  
8. Year of start. : 2013-14  
9. Likely year of completion. : -  
10. Experimental details.

### a) Varieties:

1	<b>Co 9009</b>	<b>7</b>	<b>CoT 10368</b>	<b>Standards</b>	
2	<b>Co 10015</b>	<b>8</b>	<b>CoT 10369</b>	1	<b>Co 86032</b>
3	<b>Filler</b>	<b>9</b>	<b>CoVC 10061</b>	2	<b>Co 99004</b>
4	<b>Co 10031</b>	<b>10</b>	<b>PI 10131</b>	3	<b>Co 8011</b>
5	<b>Co 10033</b>	<b>11</b>	<b>PI 10132</b>	4	<b>Co 740</b>
6	<b>CoM 10083</b>				

- b) Design. : R. B. D.  
c) Replication : Three  
d) Plot size. : 7.2 (6 rows) x 6.0 m.  
e) Spacing. : 120 cm.  
f) Seed rate. : 12 eye buds/m.  
g) Fertilizers. : 250:75:188 NPK Kg/ha.  
h) Date of Planting : 05.01.2015

## 5. Advanced Varietal Trial - Midlate PC I

Sl. No.	Genotypes	YLD reaction	
		Severity Grade	Reaction
1	Co 09004	2	MR
2	Co 10015	2	MR
3	Co 10017	4	S
4	Co 10031	4	S
5	Co 10033	2	MR
6	CoM10083	2	MR
7	CoT 10368	4	S
8	CoT 10369	3	MS
9	CoNC 10061	3	MS
10	PI 10132	2	MR
11	PI 10132	3	MS
Checks			
12	Co 86032	3	MS
13	Co 99004	2	MR
14	Co 8011	3	MS
15	Co 740	3	MS

Five entries Co 09004, Co 10015, Co 10033, CoM 10083 and PI 10132 were MR.3 entries Viz., CoT 10369, CoNC 10061 and PI 101132 showed MS reaction. However Co 10017, Co 10031 and CoT 10368 found S against YLD

## YEARLY RESEARCH PLAN FOR THE YEAR 2015-16

1. Project No. : PP22
2. Department. : Plant Pathology
3. Project Title. : Survey of sugarcane diseases naturally occurring in the area on important sugarcane varieties
4. Objective : To gather information on the diseases naturally occurring on Varieties growing in northern Karnataka
5. Project Leader. : Dr. S. G. Raju  
Associate Professor  
ARS, Sankeshwar.
6. Location : Districts of northern karnataka
7. Experiment. : Continued
8. Year of start. : 1989-90
9. Likely year of completion. : -
10. Experimental details : Periodic observations in June, September and December

### 1. Red rot

Name of area surveyed	Diseases incidence	Varieties affected	Crop stage when observed
Ranebennur Dist: Haveri	0	Not noticed	Grand growth and maturity stage
Dharwad Dist: Dharwad	0	Not noticed	Grand growth and maturity stage
Mudhol Dist: Bagalkot	0	Not noticed	Grand growth and maturity stage
Bilagi Dist: Bagalkot	0	Not noticed	Grand growth and maturity stage
Hukkeri Dist:Belgaum	0	Not noticed	Grand growth and maturity stage
Khanapur Dist:Belgaum	0	Not noticed	Grand growth and maturity stage
Haliyal Dist: Uttar Kannada	0	Not noticed	Grand growth and maturity stage

## 2. Smut

Name of area surveyed	Diseases incidence	Varieties affected	Crop stage when observed
Ranebennur Dist: Haveri	11-3	Co 86032,Co 7804, CoC 671	Grand growth stage
Dharwad Dist: Dharwad	13-1	Co 86032,Co 7804, CoC 671	Grand growth stage
Mudhol Dist: Bagalkot	18-7	Co 86032,Co 8011, Co 94012, C0 91010,Co 92005	Grand growth stage
Bilagi Dist: Bagalkot	16.4	Co 86032,Co 8011, CoC 671,C0 91010	Grand growth stage
Hukkeri Dist:Belgaum	19.2	Co 86032,Co 740,Co 8011	Grand growth stage
Khanapur Dist:Belgaum	15.5	Co 86032,Co 8011	Grand growth stage
Haliyal Dist: Uttar Kannada	14.8	Co 86032,Co 740	Grand growth stage

## 3. Rust

Name of area surveyed	Diseases incidence	Varieties affected	Crop stage when observed
Ranebennur Dist: Haveri	11.9	Co 86032,Co 7804,CoC 671	Grand growth stage
Dharwad Dist: Dharwad	17.3	Co 86032,Co 7804,CoC 671	Grand growth stage
Mudhol Dist: Bagalkot	19.9	Co 86032,C0 91010, <b>CoM 265</b>	Grand growth stage
Bilagi Dist: Bagalkot	23.2	Co 86032,C0 91010, <b>CoM 0265</b> , CoC 671	Grand growth stage
Hukkeri Dist:Belgaum	10.8	Co 86032,CoC 671	Grand growth stage
Khanapur Dist:Belgaum	15.7	Co 86032,Co 8011	Grand growth stage
Haliyal Dist: Uttar Kannada	16.3	Co 86032, <b>CoM 0265</b>	Grand growth stage

## 4. Wilt

Name of area surveyed	Diseases incidence	Varieties affected	Crop stage when observed
Ranebennur Dist: Haveri	0	Not noticed	Grand growth stage
Dharwad Dist: Dharwad	0	Not noticed	Grand growth stage
Mudhol Dist: Bagalkot	0	Not noticed	Grand growth stage
Bilagi Dist: Bagalkot	0	Not noticed	Grand growth stage
Hukkeri Dist:Belgaum	0	Not noticed	Grand growth stage
Khanapur Dist:Belgaum	0	Not noticed	Grand growth stage
Haliyal Dist: Uttar Kannada	0	Not noticed	Grand growth stage

## 5. Brown leaf spot

Name of area surveyed	Diseases incidence	Varieties affected	Crop stage when observed
Ranebennur Dist: Haveri	10-2	Co 94012, CoC 671,Co 7804	Grand growth stage
Dharwad Dist: Dharwad	22.5	Co 86032, CoC 671,Co 7804	Grand growth stage
Mudhol Dist: Bagalkot	12.1	Co 94012, CoC 671,Co 91010	Grand growth stage
Bilagi Dist: Bagalkot	11-4	Co 94012, Co 86032,Co 91010,Co 671	Grand growth stage
Hukkeri Dist:Belgaum	40-6	Co 86032,Co 671	Grand growth stage
Khanapur Dist:Belgaum	34-7	Co 86032,Co 94012	Grand growth stage
Haliyal Dist: Uttar Kannada	38-9	Co 86032	Grand growth stage

## 6. GSD

Name of area surveyed	Diseases incidence	Varieties affected	Crop stage when observed
Ranebennur,Dist: Haveri	5.3	Co 94012, CoC 671	Grand growth stage
Hangal,Dist: Haveri	7.9	Co 86032, CoC 671,Co 7804	Grand growth stage
Mudhol,Dist: Bagalkot	13.4	Co 94012, Co 91010, C0 86032,CoM 265	Grand growth stage
Bilagi,Dist: Bagalkot	8.6	CoM 265,Co 91010,Co 671	Grand growth stage
Dharwad,Dist: Dharwad	9.8	Co 86032,Co 671,Co 94012	Grand growth stage
Hukkeri,Dist:Belgaum	16.7	CoM 265	Grand growth stage
Chikkodi,Dist:Belgaum	14..6	CoC 671,Co 94012,CoM 265	Grand growth stage
Riabag,Dist:Belgaum	12.1	Co 8011, Co 740,CoM 265	Grand growth stage
Athani,Dist:Belgaum	19.5	CoM 265	Grand growth stage
Gokak,Dist:Belgaum	11.3	CoM 265	Grand growth stage

## 7. YLD

Name of area surveyed	Disease severity grade	Varieties affected	Crop stage when observed
Hangal,Dist: Haveri	1	Co 86032 Co 7804 CoC 671	Grand growth stage
Mudhol,Dist: Bagalkot	3	Co 92005 Co 2000-15 Co 86032 Co 91010	Grand growth and maturity stage
Jamkhandi,Dist:Bagalkot	5	Co 2000-15 Co 86032 Co 91010	Grand growth and maturity stage
Dharwad,Dist: Dharwad	4	Co 86032 CoC 671	Grand growth and maturity stage
Hukkeri,Dist:Belgaum	2	Co 86032 Co 2000-15	Grand growth stage

## 8. Pokkah Boeng

Name of area surveyed	Diseases incidence	Varieties affected	Crop stage when observed
Dharwad Dist: Dharwad	3.2 4.3	Co 86032 Co 94012	Grand growth stage and maturity
Hukkeri Dist:Belgaum	22.7 25.5 8.1	Co 8011 Co 86032 CoM 0265	Grand growth stage and maturity
Khanapur Dist:Belgaum	20.4 25.6	Co 8011 Co 86032	Grand growth stage and maturity
Chikkodi Dist: Belgaum	5.9 2.6	Co 86032 CoM 0265	Grand growth stage and maturity
Athani Dist: Belgaum	7.7 6.8 9.3	Co 8011 Co 86032 CoM 0265	Grand growth stage and maturity

Pokkah boeng was observed only in few pockets. Pokkah boeng was prominently observed with its first appearance during May month, brown spot the most common and predominant foliar disease observed even from 2 months age to harvest, rust was observed during august to September months. Smut is seen commonly in most of the varieties, but the disease is not in such a stage to cause any severe yield reduction. YLD as been observed in some varieties in severe form.

## YEARLY RESEARCH PLAN FOR THE YEAR 2015-16

1. Project No. : PP28B
2. Department. : Plant Pathology
3. Project Title. : Methodology for screening sugarcane genotypes for resistance to brown rust (*Puccinia melanocephala*)
4. Objective : Standardization of methodology for inoculation of urediospores of brown rust for rating of resistance
5. Project Leader. : Dr. S. G. Raju  
Associate Professor  
ARS, Sankeshwar.
6. Location : ARS, Sankeshwar.
7. Experiment. : Continued
8. Year of start. : 2013-14
9. Likely year of completion. : 2016-17
10. Experimental details.

Methods of inoculation

### 1) Clip inoculation

### 2) Leaf whorl inoculation

- b) Design. : -
- c) Replication : -
- d) Plot size. : 15mx30m (2blocks)
- e) Spacing. : 120 cm.
- f) Seed rate. : 12 eye buds/m.
- g) Fertilizers. : 250:75:188 NPK Kg/ha.
- h) Date of Planting : 31.01.2015

Sl. No.	Inoculation method	Average n. of pustules / inch <sup>2</sup> (mean of 10 clumps)	No. of leaves bearing rust pustules
1	Clip inoculation	21.3	6
2	Leaf whorl inoculation	53.8	12

After 1 month of inoculation the observations regarding the number of pustules on leaves were recorded observations indicated that, out of 2 methods, number of rust pustules (53.8/sq. Inch<sup>2</sup>) on inoculated were higher under leaf whorl method. In clip inoculation, the average numbers of rust pustules per sq. Inch were 21.3. Therefore leaf whorl inoculation method is far superior over clip inoculation method.



## YEARLY RESEARCH PLAN FOR THE YEAR 2015-16

1. Project No. : PP31
2. Department. : Plant Pathology
3. Project Title. : Screening, epidemiology and management of pokkah boeng in sugarcane
4. Objective : To study the development of pokkah boeng disease in relation to weather parameters and its management
5. Project Leader. : Dr. S. G. Raju  
Associate Professor  
ARS, Sankeshwar.
6. Location : ARS, Sankeshwar.
7. Experiment. : Continued
8. Year of start. : 2014-15
9. Likely year of completion. : 2015-16
10. Experimental details.

### Treatments

**T-1. Sett treatment – Overnight soaking with Carbendazim - )- 0-1% a.i.**

**T-2. Sett treatment – Carbendazim - )- 0-05% a.i.(3 sprays at 15 days interval from May 15<sup>th</sup>)**

**T-3. Sett treatment (T1) + Foliar spray with Carbendazim (T2 )**

**T-4, Control**

- b) Design. : RBD
- c) Replication : 5
- d) Plot size. : 6,0mx3.6m
- e) Spacing. : 120 cm.
- f) Seed rate. : 12 eye buds/m.
- g) Fertilizers. : 250:75:188 NPK Kg/ha.
- h) Date of Planting : 22.02.2015

S.No.	Treatment	Germination (%)	Disease incidence
1	Sett treatment- Overnight soaking with carbendaizim- 0.1%	92.4	14.5
2	Foliar spray- Carbendaizim -0.05% (3 sprays at 15 days interval from May 15 <sup>th</sup> )	90.6	11.3
3	Sett treatment (T1) + Foliar spray- Carbendaizim -0.05% (T2)	94.5	6.7
4	Control	76.9	28.9
	CD at 5 %	1.1	0.8

The result revealed that set treatment + foliar spray Carbendazim 0.05% showed highest germination and also low disease incidence of top rot disease (94.5 and 6.7 respectively) compared to the other treatments.

## YEARLY RESEARCH PLAN FOR THE YEAR 2015-16

1. Project No. : PP31
2. Department. : Plant Pathology
3. Project Title. : Management of brown spot disease of sugarcane
4. Objective : To study the development of pokkah boeng disease in relation to weather parameters and its management
5. Project Leader. : Dr. S. G. Raju  
Associate Professor  
ARS, Sankeshwar.
6. Location : ARS, Sankeshwar.
7. Experiment. : New
8. Year of start. : 2015-16
9. Likely year of completion. : 2017-18
10. Experimental details.

### Treatments

**T-1. - Propiconazole - 0-1%**

**T-2. – Hexaconazole - 0-1%**

**T-3. – Triadimefon - 0-1%**

**T-4. – Mancozeb - 0-3%**

**T-4. – Contrl (untreated) - -**

- b) Design. : RBD
- c) Replication : 4
- d) Plot size. : 6.0mx8.4m
- e) Spacing. : 120 cm.
- f) Seed rate. : 12 eye buds/m.
- g) Fertilizers. : 250:75:188 NPK Kg/ha.
- h) Date of Planting : 22.02.2015

Treatments	Fungicides	Dosage	Per cent Disease Index	Yield (t/ha)
T1	Propiconazole	0.1%	11.5	74.5
T2	Hexaconazole	0.1%	15.7	72.9
T3	Tridemefon	0.1%	13.8	73.4
T4	Mancozeb	0.3%	17.6	69.7
T5	Carbendazim	0.1%	24.3	70.2
T6	Cotrol (Untreated)	-	38.1	70.8
CD (5%)			1.70	1.64

Five fungicides Viz., propiconazole, hexaconazole, tridemefon, mancozeb and carbendazim were tested for the management of disease. Propiconazole (0.1%) was found superior compared to other fungicides for the control of the disease besides improving cane yield.