

### Weekly meteorological data of Akola for the year 2011-12

Met Week	Date	Rainfall (mm)	Temperature (Oc)		RH I %	RH II %
			Max	Min		
1	2	3	4	5	6	7
1	1-7 Jan.11	0.0	25.1	8.8	78	25
2	8-14	0.0	27.4	7.0	73	18
3	15-21	0.0	29.3	9.9	71	24
4	22-28	0.0	31.2	12.3	73	25
5	29-4 Feb.	0.0	31.5	13.8	68	25
6	5-11	0.0	32.7	13.3	63	19
7	12-18	0.0	32.9	16.4	58	26
8	19-25	3.7	30.9	15.7	64	28
9	26-4 Mar.	3.0	33.5	18.0	68	26
10	5-11	0.0	36.4	18.6	51	17
11	12-18	0.0	36.5	15.3	43	15
12	19-25	0.8	38.7	22.2	40	16
13	26-1 Apr.	0.0	39.0	19.0	34	10
14	2-8	24.8	37.7	22.0	50	25
15	9-15	0.0	38.7	23.3	54	20
16	16-22	0.0	40.4	25.5	47	21
17	23-29	4.0	39.9	23.1	44	16
18	30-6 May	0.0	41.7	26.8	47	21
19	7-13	0.0	41.6	27.9	50	20
20	14-20	0.2	43.4	28.7	43	19
21	21-27	2.0	41.1	28.0	58	29
22	28-3 June	21.6	42.0	28.1	55	24
23	4-10	31.9	37.3	25.1	75	40
24	11-17	23.5	38.0	25.4	66	33
25	18-24	0.0	35.7	27.1	66	42
26	25-1 July	17.2	33.1	24.8	77	45
27	2-8	43.7	34.6	25.0	79	54
28	9-15	26.4	31.4	23.8	88	59
29	16-22	58.1	30.4	24.0	91	69
30	23-29	26.0	29.8	23.8	89	67
31	30-5 Aug.	17.5	30.9	24.1	88	65
32	6-12	8.5	30.5	23.7	87	64
33	13-19	47.6	30.1	23.3	89	65
34	20-26	18.9	31.3	23.4	94	65
35	27-2 Sept.	46.6	28.5	23.2	95	82
36	3-9	63.1	29.8	23.2	92	68
37	10-16	21.5	29.9	23.4	90	70
38	17-23	3.5	30.9	22.5	89	57
39	24-30	0.0	32.7	22.5	85	44
40	1-7 Oct.	0.0	34.9	21.3	79	35
41	8-14	0.8	35.5	21.0	80	35
42	15-21	0.9	35.7	20.1	80	29
43	22-28	0.0	34.6	15.9	70	19
44	29-4 Nov.	0.0	32.9	15.3	65	24
45	5-11	0.0	33.8	14.7	63	21
46	12-18	0.0	33.5	14.6	63	18
47	19-25	0.0	32.0	12.9	69	23
48	26-2 Dec.	0.0	31.4	15.4	75	31
49	3-9	0.0	31.6	13.9	72	25
50	10-16	0.0	29.9	11.4	72	25
51	17-23	0.0	29.6	11.3	65	23
52	24-31	0.0	29.5	11.4	69	23

## Experiment No. 1

Project code	- AICRP PP-17
Location of Project	- Sugarcane Research Centre, Dr.P.D.K.V., Akola.
Project title	- <b>Evaluation of zonal varieties for resistant to major diseases in Advance Varietal Trial, Early II plant under natural condition</b>
Duration of project	- One year
Date of start	- 06/01/2011
Period for which report submitted	- 2011-12
<b>Principal Investigator</b>	-
Name	- Dr. A.M. Charpe
Designation	- Assistant Professor of Plant Pathology
Address	- Sugarcane Research Centre, Dr.P.D.K.V., Akola.
Objectives	- To study the sugarcane varieties for their reaction towards major diseases
Specific objectives	- To find out diseases resistant sources
Project technical profile	-

### Project technical profile

#### Technical details

1. Progressive year - First (2011-12)
2. Design - Randomized Block Design
3. Replication - Three
4. Plot size - 6.00x 5.40m<sup>2</sup>
5. Spacing - 90 cm row to row
6. Fertilizer - 175 kg N + 100 kg P<sub>2</sub>O<sub>5</sub> + 100 kg K<sub>2</sub>O ha<sup>-1</sup>
7. Date of planting - 06/01/2011
8. Date of harvesting - 06-11-2011
9. Treatments :Eight varieties
  - 1) Co 06001
  - 2) Co 06002
  - 3) Co 06022
  - 4) CoM 06082
  - 5) PI 06132
  - 6) Co 85004 (Ch)
  - 7) Co 94008 (Ch)
  - 8) CoC 671 (Ch)

**Table 1 : Per cent disease incidence of whip smut, pokkah boeng, grassy shoot and mosaic in AVT Early II Plant**

Sr. No.	Genotypes	% whip smut incidence	Grade	% Pokkah boeng incidence	Grade	% Grassy shoot incidence	Grade	% mosaic incidence	Grade
1	Co 06001	0.00	R	0.00	R	9.44	MR	35.66	S
2	Co 06002	0.00	R	2.45	R	14.21	MS	9.80	MR
3	Co 06022	0.00	R	1.73	R	1.30	MR	9.96	MR
4	CoM 06082	0.00	R	0.00	R	18.22	MS	8.91	MR
5	PI 06132	0.00	R	2.35	R	12.94	MS	10.58	MS
6	Co 85004 (Ch)	0.00	R	0.0	R	24.41	S	38.50	S
7	Co 94008 (Ch)	0.00	R	6.10	MS	21.54	S	58.53	HS
8	CoC 671 (Ch)	0.00	R	1.81	R	23.11	S	54.34	HS

**Results :**

**Smut**

Data presented in Table 2 revealed that All the entries under screening recorded resistant reaction against smut disease.

**Pokkah Boeng**

In case of pokkah boeng varieties CoO6001, CoO6002, CoO6022, CoM06082, PI06132, Co85004 and CoC671 (ch) showed resistant reaction against pokkah boeng disease. Whereas Co94008 showed moderately susceptible reaction.

**Grassy shoot**

In case of grassy shoot varieties Co06001 and Co06022, showed moderately resistant reaction against grassy shoot disease. Whereas Co06002, CoM06082 and PI06132 showed moderately susceptible reaction. The varieties Co85004, Co94008 and CoC671 showed susceptible reaction.

**Mosaic**

In case of mosaic varieties Co06002, Co06022 and CoM06082 showed moderately resistant reaction against mosaic disease where as PI06132 showed moderately susceptible reaction. The varieties Co06001 and Co85004 showed susceptible reaction. The varieties Co94008 and CoC671 showed highly susceptible reaction.

## Experiment No 2

Project code	-	AICRP PP17
Location of Project	-	Sugarcane Research Centre, Dr.P.D.K.V., Akola.
Project title	-	<b>Evaluation of zonal varieties / genotypes for their reaction against major diseases of sugarcane in Advance Varietal Trial Early I Plant under natural condition</b>
Duration of project	-	<b>One year</b>
Date of start	-	<b>02/02/11</b>
Period for which report submitted	-	<b>2011-12</b>
Name	-	Dr. A.M. Charpe
Designation	-	Assistant Professor of Plant Pathology
Address	-	Sugarcane Research Centre, Dr.P.D.K.V., Akola.
Objectives	-	To screen the sugarcane varieties in AICRP Trials for their reactions to major diseases.
Specific objectives	-	To find out diseases resistant sources
<b>Project technical profile</b>		
Technical details		
Progressive year	-	First (2011-2012)
Design	-	Randomized Block Design
Replication	-	Three
Plot size	-	6.00 x 5.40 m <sup>2</sup>
Spacing	-	90 cm row to row
Fertilizer	-	175 kg N + 100 kg P <sub>2</sub> O <sub>5</sub> + 100 kg K <sub>2</sub> O ha <sup>-1</sup>
Date of planting	-	02-02-2011
Date of harvesting	-	02-12-2011
Treatment : Seven Genotypes		1) Co 07012                      5) Co 85004 (Ch) 2) Co 07015                      6) Co 94008 (Ch) 3) CoN 07071                    7) CoC 671 (Ch) 4) PI07131

**Table 2 : Per cent disease incidence of whip smut, pokkah boeng, grassy shoot and mosaic in AVT Early I Plant**

Sr. No.	Genotypes	% whip smut incidence	Grade	% Pokkah boeng incidence	Grade	% Grassy shoot incidence	Grade	% mosaic incidence	Grade
1	Co 07012	0.00	R	0.00	R	16.36	MS	9.39	MR
2	Co 07015	0.00	R	15.63	S	5.90	MR	9.73	MR
3	CoN 07071	0.00	R	4.97	R	13.57	MS	16.22	MS
4	PI 07131	0.00	R	2.53	R	4.22	MR	9.29	MR
5	Co 85004 (Ch)	0.00	R	2.38	R	7.44	MR	11.30	MS
6	Co 94008 (Ch)	0.00	R	4.32	R	15.27	MS	32.77	S
7	CoC 671 (Ch)	0.00	R	8.55	MS	11.35	MS	39.89	S

**Table 2.1 : Per cent disease incidence of yellow leaf disease in AVT Early I Plant**

Sr. No.	Genotypes	% yellow leaf disease incidence
1	Co 07012	25.00
2	Co 07015	9.73
3	CoN 07071	32.03
4	PI 07131	5.55
5	Co 85004 (Ch)	20.75
6	Co 94008 (Ch)	28.94
7	CoC 671 (Ch)	7.14

**Results :** Data presented in Table 2 revealed that

**Smut :** All the varieties under screening recorded resistant reaction against smut disease.

**Pokkah Boeng** Sugarcane varieties Co07012, CoN07071, PI07131, Co85004 and Co94008 showed resistant reaction against Pokkah boeng disease, CoC671 showed moderately susceptible reaction and Co07015 showed susceptible reaction

**Grassy shoot** Sugarcane varieties Co07015, PI07131, Co85004 showed moderately resistant reaction against grassy shoot disease where as Co07012, CoN07071, Co94008 and CoC671 showed moderately susceptible reaction.

**Mosaic** Varieties CO07012, Co07015 and PI07131 showed moderately resistant reaction against mosaic disease. The varieties CoN07071, and Co85004 showed moderately susceptible reaction whereas Co94008 and CoC671 showed susceptible reaction.

**Yellow leaf disease** The varieties Co07015, PI07131 and CoC671 showed less incidence of yellow leaf disease.

### Experiment No 3

Project code	-	AICRP PP-17
Location of Project	-	Sugarcane Research Centre, Dr.P.D.K.V., Akola.
Project title	-	<b>Evaluation of zonal varieties / genotypes for their reaction against major diseases of sugarcane in Advance Varietal Trial Midlate II Plant under natural condition</b>
Duration of project	-	One year
Date of start	-	07-01-2011
Period for which report submitted	-	2011-2012
Name	-	Dr. A.M. Charpe
Designation	-	Assistant Professor of Plant Pathology
Address	-	Sugarcane Research Centre, Dr.P.D.K.V., Akola.
Objectives	-	To screen the sugarcane varieties in AICRP Trials for their reactions to major diseases.
Technical details		
Progressive year	-	First (2011-2012)
Design	-	Randomized Block Design
Replication	-	Three
Plot size	-	6.00 x 4.50 m <sup>2</sup>
Spacing	-	90 cm row to row
Fertilizer	-	175 kg N + 100 kg P <sub>2</sub> O <sub>5</sub> + 100 kg K <sub>2</sub> O ha <sup>-1</sup>
Date of planting	-	07-01-2011
Date of harvesting	-	07-11-2011
Treatments : Thirteen genotypes		
	1)	Co 06007
	2)	Co 06010
	3)	Co 06012
	4)	Co 06013
	5)	Co 06014
	6)	Co 06015
	7)	Co 06020
	8)	Co 06027
	9)	CoM06082
	10)	CoM06084
	11)	CoSnK3632
	12)	Co86032 (Ch)
	13)	Co 99004 (Ch)

**Table 3 : Per cent disease incidence of whip smut, pokkah boeng, grassy shoot and mosaic in AVT midlate II Plant**

Sr. No.	Genotypes	% whip smut incidence	Grade	% Pokkah boeng incidence	Grade	% Grassy shoot incidence	Grade	% mosaic incidence	Grade
1	Co 06007	0.00	R	0.00	R	35.00	S	15.00	MS
2	Co 06010	0.00	R	0.00	R	51.92	HS	24.03	S
3	Co 06012	0.00	R	5.66	MS	22.06	S	26.41	S
4	Co 06013	0.00	R	15.76	S	11.33	MS	16.25	MS
5	Co 06014	0.00	R	0.36	R	6.50	MR	7.58	MR
6	Co 06015	0.00	R	3.57	R	5.61	MR	6.63	MR
7	Co 06020	0.00	R	1.30	R	3.91	MR	5.65	MR
8	Co 06027	0.00	R	5.63	MS	0.00	HR	20.65	MS
9	CoM 06082	0.00	R	0.00	R	11.86	MS	8.90	MR
10	CoM 06084	0.00	R	16.93	S	10.05	MS	46.56	S
11	CoSnk 03632	0.00	R	0.84	R	20.58	S	26.05	S
12	Co 86032 (Ch)	0.00	R	0.00	R	12.44	MS	22.11	S
13	Co 99004 (Ch)	0.00	R	13.42	S	12.08	MS	20.80	MS

**Results :**

Data presented in Table 4 revealed that

**Smut**

All the varieties under screening recorded resistant reaction against smut disease.

**Pokkah boeng**

Sugarcane varieties Co06007, Co06010, Co06014, Co06015, Co06020, CoM06082, CoSnk3632 and Co86032 (C) showed resistant reaction against Pokkah boeng disease while Co06012 and Co06027 showed moderately susceptible reaction. The varieties Co06013 CoM06084 and Co99004 (C) showed susceptible reaction.

**Grassy shoot**

The variety Co06027 recorded highly resistant reaction against grassy shoot disease. Varieties Co06014, Co06015 and Co06020 recorded moderately resistant reaction. Varieties Co06013, CoM06082, CoM06084, Co86032 and Co99004 showed moderately susceptible reaction. Varieties Co06007, Co06012 and CoSnk3632 showed susceptible reaction. The variety Co06010 showed highly susceptible reaction.

**Mosaic**

Sugarcane varieties Co06014, Co06015, Co06020 and CoM06082 recorded moderately resistant reaction against mosaic diseases. Varieties Co6007, Co06013, Co06027 and Co99004 showed moderately susceptible reaction. Varieties Co06010, Co06012, CoM06084, CoSnk3632 and Co86032 recorded susceptible reaction.

## Experiment No 4

Project code	- AICRP PP-17
Location of Project	- Sugarcane Research Centre, Dr.P.D.K.V., Akola.
Project title	- <b>Evaluation of zonal varieties / genotypes for their reaction against major diseases of sugarcane in Advance Varietal Trial Midlate I plant under natural condition</b>
Duration of project	- One year
Date of start	- 03-02-2011
Period for which report submitted	- 2011-2012
Principal Investigator	
Name	Dr.A.M.Charpe
Designation	Asstt. Prof. of Plant Pathology
Department	Sugarcane Research Centre, Dr.P.D.K.V., Akola.
Location	Senior Research Scientist Sugarcane Research Centre, Dr.P.D.K.V., Akola.
Address	Senior Research Scientist Sugarcane Research Centre, Dr.P.D.K.V., Akola.
Objectives	- To screen the sugarcane varieties in AICRP Trials for their reactions to major diseases.

## Project technical profile

### Technical details

Progressive year	- First (2011-2012)
Design	- Randomized Block Design
Replication	- Three
Plot size	- 6.00 x 5.40 m <sup>2</sup>
Spacing	- 90 cm row to row
Fertilizer	- 175 kg N + 100 kg P <sub>2</sub> O <sub>5</sub> + 100 kg K <sub>2</sub> O ha <sup>-1</sup>
Date of planting	- 03-02-2011
Date of harvesting	- 02-02-2012
Treatments : Eight genotypes	1) Co 07006                      5) Co 07010 2) Co 07007                      6) CoSnK 07103 3) Co 07008                      7) ) Co 86032 (Ch) 4) Co 07009                      8) Co99004(Ch)



**Table 4: Per cent disease incidence of whip smut, Pokkah boeng, grassy shoot and mosaic in AVT Midlate I Plant**

Sr. No.	Genotypes	% whip smut incidence	Grade	% Pokkah boeng incidence	Grade	% Grassy shoot incidence	Grade	% mosaic incidence	Grade
1	Co 07006	0.00	R	2.80	R	0.70	R	39.51	S
2	Co 07007	0.00	R	1.57	R	17.61	MS	19.81	MS
3	Co 07008	0.00	R	6.01	MS	5.40	MR	27.02	S
4	Co 07009	0.00	R	2.51	R	5.01	MR	34.48	S
5	Co 07010	0.00	R	0.90	R	2.71	MR	22.89	S
6	CoSnk 07103	0.00	R	25.74	HS	3.29	MR	23.65	S
7	Co 86032 (Ch)	0.00	R	1.54	R	1.54	MR	34.15	S
8	Co 99004 (Ch)	0.00	R	33.68	HS	0.69	R	27.77	S

**Results :**

Data presented in Table 4 revealed that

**Smut :**

All the varieties under screening recorded resistant reaction against smut disease.

**Pokkah boeng**

Sugarcane varieties Co07006, Co07007, Co07009, Co07010 and Co86032 (C) recorded resistant reaction against Pokkah boeng disease. Where as Co07008 showed moderately susceptible reaction CoSnk07103 and Co99004 showed highly susceptible reaction.

**Grassy shoot**

Sugarcane varieties Co7006 and Co99004 recorded resistant reaction against grassy shoot disease of sugarcane where as Co07008, Co07009, Co07010, CoSnk07103 and Co86032 showed moderately resistant reaction. The variety Co07007 showed moderately susceptible reaction.

**Mosaic**

The variety Co07007 showed moderately susceptible reaction against mosaic disease. Where as Co07006, Co07008, Co07009, Co07010, CoSnk07103, Co86032 and Co99004 showed susceptible reaction.

## Experiment No 5

Project code	- AICRP PP-17
Location of Project	- Sugarcane Research Centre, Dr.P.D.K.V., Akola.
Project title	- <b>Evaluation of zonal varieties / genotypes for their reaction against major disease of sugarcane in Initial Varietal Trial Early I Plant under natural condition</b>
Duration of project	- One year
Date of start	- 05-02-2011
Period for which report submitted	- 2011-2012
Principal Investigator	
Name	Dr.A.M.Charpe
Designation	Asstt. Prof. of Plant Pathology
Department	Sugarcane Research Centre, Dr.P.D.K.V., Akola.
Location	Senior Research Scientist Sugarcane Research Centre, Dr.P.D.K.V., Akola.
Address	Senior Research Scientist Sugarcane Research Centre, Dr.P.D.K.V., Akola.
Objectives	- To screen the sugarcane varieties in AICRP Trials for their reactions to major diseases.

## Project technical profile

Technical details	
Progressive year	- First (2011-2012)
Design	- Randomized Block Design
Replication	- Three
Plot size	- 6.00 x 5.40 m <sup>2</sup>
Spacing	- 90 cm row to row
Fertilizer	- 175 kg N + 100 kg P <sub>2</sub> O <sub>5</sub> + 100 kg K <sub>2</sub> O ha-1
Date of planting	- 05-02-2011
Date of harvesting	- 05-12-2011
Treatments Eight Genotypes	1) Co 08001                      5) VSI08121 2) Co 08006                      6) Co 85004 (Ch) 3) CoN 08071                    7) Co 94008 (Ch) 4) PI08131                        8) CoC 671 (Ch)

**Table 5: Per cent disease incidence of whip smut, Pokkah boeng, grassy shoot and mosaic in IVT Early**

Sr. No.	Genotypes	% whip smut incidence	Grade	% Pokkah boeng incidence	Grade	% Grassy shoot incidence	Grade	% mosaic incidence	Grade
1	Co 08001	0.00	R	3.30	R	11.22	MS	11.88	MS
2	Co 08006	0.00	R	5.84	MS	10.30	MS	12.37	MS
3	CoN 08071	0.00	R	4.49	R	6.42	MR	12.50	MS
4	PI 08131	0.00	R	2.66	R	7.10	MR	10.94	MS
5	VSI08121	0.00	R	10.28	S	10.64	MS	15.24	MS
6	Co 85004(Ch)	0.00	R	7.17	MS	8.60	MR	13.97	MS
7	Co94008(ch)	0.00	R	11.33	S	7.77	MR	12.29	MS
8	CoC 671 (Ch)	0.00	R	12.42	S	10.06	MS	13.75	MS

**Results :**

Data presented in Table 5 revealed that

**Smut**

All the varieties under screening recorded resistant reaction against smut disease.

**Pokkah boeng**

Sugarcane varieties Co 8001, CoN08071 and PI 08131 showed resistant reaction against Pokkah boeng disease. Whereas Co08006 and Co85004 (C) showed moderately susceptible reaction. The varieties VSI08121, Co94008 and CoC671 showed susceptible reaction.

**Grassy shoot**

Sugarcane varieties CON 08071, PI08131, Co85004 and CO94008 recorded moderately resistant reaction against grassy shoot disease. While Co08001, Co08006, VSI08121 and CoC671 recorded moderately susceptible reaction.

**Mosaic**

The varieties CO08001, Co08006, CoN08071, PI08131, VSI08121, Co85004, Co94008, and CoC671 recorded moderately susceptible reaction against mosaic disease.

## Experiment No. 6

600	Project code	-	AICRP PP-17
601.2	Location of Project	-	Sugarcane Research Centre, Dr.P.D.K.V., Akola.
602	Project title	-	<b>Evaluation of zonal varieties / genotypes for their reaction against major diseases of sugarcane in Initial Varietal Trial Midlate Plant under natural condition</b>
605	Duration of project	-	One year
605.1	Date of start	-	06-02-2011
605.3	Period for which report submitted	-	2011-2012
611	Principal Investigator		
611.1	Name		Dr.A.M.Charpe
611.2	Designation		Asstt. Prof. of Plant Pathology
611.3	Department		Sugarcane Research Centre, Dr.P.D.K.V., Akola.
611.4	Location		Sugarcane Research Centre, Dr.P.D.K.V., Akola.
611.5	Address		Sugarcane Research Centre, Dr.P.D.K.V., Akola.
620.1	Objectives	-	To screen the sugarcane varieties in AICRP Trials for their reactions to major diseases.
621.1	Technical details		
1.	Progressive year	-	First (2011-2012)
2.	Design	-	Randomized Block Design
3.	Replication	-	Three
4.	Plot size	-	6.00 x 4.50 m <sup>2</sup>
5.	Spacing	-	90 cm row to row
6.	Fertilizer	-	175 kg N + 100 kg P <sub>2</sub> O <sub>5</sub> + 100 kg K <sub>2</sub> O ha <sup>-1</sup>
7.	Date of planting	-	06-02-2011
8.	Date of harvesting	-	06-01-2012
9.	Treatments Twenty Genotypes		1) Co 08007                      11) CoR08141 2) Co 08008                      12) CoSnK08101 3) Co 08009                      13) CoVCO8061 4) CoO8016                      14) CoVCO8062 5) CoO8018                      15) CoVCO8063 6) CoO8019                      16) CoVCO8064 7) CoO8020                      17) CoVSIO8122 8)CoJNO8091                      18) CoVSIO8123 9)CoMO8081                      19) Co86032 (C) 10)CoNO8072                      20) Co99004 (C)

**Table 6: Per cent disease incidence of whip smut, Pokkah boeng, grassy shoot and mosaic in IVT Midlate**

Sr. No.	Genotypes	% whip smut incidence	Grade	% Pokkah boeng incidence	Grade	% Grassy shoot incidence	Grade	% mosaic incidence	Grade
1	Co 08007	0.00	R	2.55	R	0.85	R	14.46	MS
2	Co 08008	0.00	R	1.06	R	1.06	MR	8.80	MR
3	Co 08009	0.00	R	2.93	R	5.44	MR	5.44	MR
4	CoO8016	0.00	R	3.62	R	6.15	MR	13.76	MS
5	CoO8018	0.00	R	3.56	R	6.72	MR	3.56	MR
6	CoO8019	0.00	R	2.64	R	4.53	MR	6.41	MR
7	CoO8020	0.00	R	3.98	R	7.57	MR	13.94	MS
8	CoJNO8091	0.00	R	6.69	MS	7.95	MR	15.06	MS
9	CoMO8081	0.00	R	0.79	R	4.33	MR	5.90	MR
10	CoNO8072	0.00	R	4.19	R	13.48	MS	7.91	MR
11	CoRO8141	0.00	R	5.95	MS	3.97	MR	12.65	MS
12	CoSnKO8101	0.00	R	2.06	R	5.84	MR	13.74	MS
13	CoVCO8061	0.00	R	1.06	R	7.41	MR	7.94	MR
14	CoVCO8062	0.00	R	1.17	R	4.28	MR	4.28	MR
15	CoVCO8063	0.00	R	0.36	R	1.43	MR	3.21	MR
16	CoVCO8064	0.00	R	0.81	R	3.63	MR	8.06	MR
17	CoVSIO8122	0.00	R	0.00	R	10.58	MS	9.41	MR
18	CoVSIO8123	0.00	R	0.00	R	12.43	MS	10.44	MS
19	Co86032 (ch)	0.00	R	0.00	R	8.07	MR	13.90	MS
20	Co99004(ch)	0.00	R	37.76	HS	4.79	MR	18.82	MS

- Results :** Data presented in Table 6 revealed that
- Smuts :** All the varieties under screening recorded resistant reaction against smut disease.
- Pokkah Boeng :** Sugarcane varieties CoO8007, CoO8008, CoO8009, CoO8016, , CoO8018, CoN08019, CoM08020, CoNO8081, CoNO8072, CoSnK08101, CoVCO8061, CoVCO8062, CoVCO8063, CoVCO8064, CoVSIO8122, CoVSIO8123 and Co86032 (C) recorded resistant reaction against Pokkah boeng disease whereas CoJN08091 and CoR08141 showed moderately susceptible reaction and Co99004 (C) showed highly susceptible reaction.
- Grassy shoots :** The variety Co08007 recorded resistant reaction against grassy shoot disease. The varieties Co08008, Co08009, Co08016, Co08018, CoN08019, CoM08020, CoJN08091, CON08081, CoR08141, CoSnK08101, CoVC08061, CoVC08062, CoVCo8063, CoVC08064, Co86032 and Co99004 recorded moderately resistant reaction. The varieties CoN08072, CoVSI08122 and CoVSI08123 recorded moderately susceptible reaction.
- Mosaic** The varieties Co08008, Co08009, Co08018, CoN08019, CoN08081, CoN08072, CoVC08061, CoVC08062, CoVC08063, CoVC08064 and CoVSI08122, recorded moderately resistant reaction while Co08007, Co08016, CoM08020, CoJN08091, CoR08141, CoSnk8101, CoVSI08123, Co86032 and Co99004 recorded moderate susceptible reaction.

## Experiment No 7

Project code	- AICRP PP-31
Location of Project	- Sugarcane Research Centre, Dr.P.D.K.V., Akola.
Project title	- <b>Screening, Epidemiology and Management of Pokkah boeng in Sugarcane</b>
Duration of project	- Three years
Date of start	- 01-02-2011
Period for which report submitted	- 2011-2012
Principal Investigator	
Name	Dr.A.M.Charpe
Designation	Asstt. Prof. of Plant Pathology
Department	Sugarcane Research Centre, Dr.P.D.K.V., Akola.
Location	Senior Research Scientist Sugarcane Research Centre, Dr.P.D.K.V., Akola.
Address	Senior Research Scientist Sugarcane Research Centre, Dr.P.D.K.V., Akola.
Objectives	- To study the development of Pokkah boeng disease in relation to weather parameters and its management in Sugarcane crop
Technical details	
Progressive year	- First (2011-2012)
Duration	- 3 years
Plot size	- 6.0 x 2.70 sqm
Design	- Randomized Block Design
Replication	Four
Spacing	- 90 cm row to row
Fertilizer	- 175 kg N + 100 kg P <sub>2</sub> O <sub>5</sub> + 100 kg K <sub>2</sub> O ha <sup>-1</sup>
Variety	- CoVSI 9805
Date of planting	- 01-02-2011
Date of harvesting	- 05-01-2012
Treatments	- Four T <sub>1</sub> – Sett treatment - overnight soaking with carbendazim 0.1% a.i. T <sub>2</sub> – Foliar spray – Carbendazim 0.05% a.i. (3 sprays at 15 days interval from May 15) T <sub>3</sub> – Sett treatment T <sub>1</sub> + Foliar spray with carbendazim T <sub>2</sub> T <sub>4</sub> – Control
Artificial inoculation	- <i>Fusarium moniliformae</i> 5 Lit. broth 10 days culture + 45 Lit water total 50 lit of diluted culture applied as ½ lit per row i.e. 1 ½ lit/plot.

Screening of zonal varieties for Pokkah boeng disease during the year 2011-12 and their reaction already shown in respective experiments.

**Epidemiology :**

**Table 7 : Correlation of Pokkah boeng incidence on Sugarcane at Akola with weather parameters (19 observations) variety Co86032 and Co7219**

Variety		Rainfall (mm)	Max. Temp	Min. Temp	RH I (%)	RH II (%)
CO86032	r	-0.787	0.343	-0.920	-0.935	-0.937
	t (cal)	-5.28	1.511	-9.684	-10.87	-11.02
	n=19	-S	NS	-S	-S	-S
CO7219	r	-0.597	0.178	-0.946	-0.901	-0.836
	t (cal)	-3.077	0.747	-12.12	-8.580	6.285
	n=19	-S	NS	-S	-S	S

Here r= coefficient of correlation, t = calculated t NS = Non significant  
S = significant at 0.05% (t=2.110)

Weather parameters of preceding week were taken for correlation.

**Results :**

From Table 7 revealed that Pokkah boeng incidence on CO86032 has shown negative significant correlation with minimum temperature, relative humidity, RH-I, RH-II and rainfall, Non significant correlation was observed with Max. temperature. On Co7219 the Pokkah boeng incidence has shown positive significant correlation with RH II and negative significant correlation with minimum temperature RH I and rainfall. Non significant correlation was observed with maximum temperature.

**Management of Pokkah boeng :**

**Table 7.1 : Effect of different treatments on Pokkah boeng incidence of sugarcane**

Sr. No.	Treatment	% Pokkha Boeng incidence
1	T <sub>1</sub> – Sett treatment - overnight soaking with carbendazim 0.1% a.i.	70.00 (56.88)
2	T <sub>2</sub> – Foliar spray – Carbendazim 0.05% a.i.	68.28 (55.76)
3	T <sub>3</sub> – Sett treatment - T <sub>1</sub> + Foliar spray with carbendazim T <sub>2</sub>	62.57 (52.26)
4	T <sub>4</sub> – Control	71.28 (57.58)
	'F' test	NS
	SE(M) ±	1.28

(Figures in parenthesis are arcsin values)

**Results :** From table 7.1 revealed that all the treatments are non significant.

This trial will not be conducted during the year 2012-13 because of shortage of irrigation water.



**List of On going projects to be undertaken during 2012-13.**

1. Evaluation of zonal varieties for their reaction against major diseases of sugarcane in AVT Early I Plant
2. Evaluation of zonal varieties for their reaction against major diseases of sugarcane in AVT Early II Plant
3. Evaluation of zonal varieties for their reaction against major diseases of sugarcane in AVT Midlate I Plant
4. Evaluation of zonal varieties for their reaction against major diseases of sugarcane in AVT Midlate II Plant

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**DR PANJABRAO DESHMUKH KRISHI  
VIDYAPEETH, AKOLA**

**ANNUAL REPORT OF RESEARCH WORK DONE  
ON SUGARCANE PATHOLOGY**

**2011-2012**

Submitted to  
**ALL INDIA COORDINATED RESEARCH PROJECT  
ON SUGARCANE**



Submitted by

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SUGARCANE RESEARCH CENTRE  
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