

ACHARYA N.G. RANGA AGRICULTURAL UNIVERSITY

From
Principal Scientist (Ento) & Head,
Sugarcane Research Station,
VUYYURU - 521 165, A.P.

To
Dr. S. K. Shukla,
Project Coordinator (S),
All India Coordinated Research Project on
sugarcane,
IISR, Lucknow – 226 002, U.P.

Lr. No. A1 / 1 / AICRP / 2017, dt. 30-05-2017

Sir,

Sub : Submission of Annual Report (2015-16) of AICRP on sugarcane, Dept. of Genetics and Plant Breeding, Sugarcane Research Station, Vuyyuru – Reg.

Ref : 1. F. No. 17 – 33 /PCS/2017 dt. 15-05-2017 of the Project Co-ordinator (Sugarcane), AICRP(Sugarcane), IISR, Lucknow – 226002.
2. D.O.No.:1-11/2017-CI(Br.) dt.10-04-2017 and 04-05-2017 of the Director & Principal Investigator, Crop Improvement – AICRP (S), SBI, Coimbatore-641 007.

* * *

I submit to enclose here with Annual Report (2016-17) of AICRP on Sugarcane pertaining to Division of Genetics and Plant Breeding, Sugarcane Research Station, Vuyyuru. I further submit that information on progress made from 2003 onwards and weather report are also enclosed here for kind perusal.

Yours faithfully,

PRINCIPAL SCIENTIST (Ento.) & HEAD
SUGARCANE RESEARCH STATION
VUYYURU - 521 165

Copy submitted to the Director & Principal Investigator, Crop Improvement – AICRP (S), SBI, Coimbatore for kind perusal.

ACHARYA N.G. RANGA AGRICULTURAL UNIVERSITY

From
Principal Scientist (Ento.) & Head,
Sugarcane Research Station,
VUYYURU - 521 165, A.P.

To
The Director & Principal Investigator,
Crop Improvement – AICRP (S),
SBI, Coimbatore-641 007.

Lr. No. A1 / 2 / AICRP / 2017, dt. 30-05-2017

Sir,

Sub : Submission of Annual Report (2016-17) of AICRP on sugarcane, Dept. of Genetics and Plant Breeding, Sugarcane Research Station, Vuyyuru – Reg.
Ref : F. No. 17 – 33 /PCS/2017 dt. 15-05-2017 of the Project Co-ordinator (Sugarcane), AICRP(Sugarcane), IISR, Lucknow – 226002.
2. D.O.No.:1-11/2017-CI(Br.) dt.10-04-2017 and 04-05-2017 of the Director & Principal Investigator, Crop Improvement – AICRP (S), SBI, Coimbatore-641 007.

* * *

I submit to enclose here with Annual Report (2016-17) of AICRP on Sugarcane pertaining to Division of Genetics and Plant Breeding, Sugarcane Research Station, Vuyyuru. I further submit that data sheets with RBD analysis, information on progress made from 2003 onwards and weather report are also enclosed here for kind perusal.

Yours faithfully,

PRINCIPAL SCIENTIST (Ento.) & HEAD
SUGARCANE RESEARCH STATION
VUYYURU - 521 165

Copy submitted to the Project Co-ordinator (Sugarcane), AICRP (Sugarcane), IISR, Lucknow – 226 002 for kind perusal

Table: Meteorological data, S.R.S., Vuyyuru – 521 165, Krishna dt., A.P.

<i>Month</i>	<i>Temperature °C</i>		<i>R.H. %</i>		<i>Rain fall in mm</i>	<i>No. of rainy days</i>
	<i>Max.</i>	<i>Min.</i>	<i>F.N.</i>	<i>A.N.</i>		
January, 2016	31.1	18.5	89.0	48.0	Nil	Nil
February, 2016	33.5	19.1	18.4	48.0	Nil	Nil
March, 2016	36.7	22.7	90.0	44.0	Nil	Nil
April, 2016	39.5	25.00	79.0	41.0	Nil	Nil
May, 2016	39.3	25.9	70.0	45.0	131.6	4.0
June, 2016	33.8	24.3	84.0	65.0	316.6	14.0
July, 2016	35.0	23.8	80.0	58.0	43.6	7.0
August, 2016	35.8	24.1	80.0	55.0	149.6	8.0
September, 2016	32.5	22.1	89.0	66.0	106.2	9.0
October, 2016	32.8	19.8	79.0	58.0	129.8	4.0
November, 2016	32.3	17.4	80.0	52.0	Nil	Nil
December, 2016	31.0	15.4	82.0	52.0	14.0	1
January, 2017	30.1	15.9	87.0	47.0	Nil	Nil
February, 2017	33.8	18.0	88.0	44.0	Nil	Nil
March, 2017	35.7	21.3	83.0	45.0	38.0	2.0
April, 2017	38.7	24.5	82.0	44.0	Nil	Nil

Table : Progress made from 2003 on wards (Sugarcane Research Station, Vuyyuru)

Year	No. of clones selected in				
	Seedling nursery	Settling nursery	Selection nursery	Preliminary Yield Trial	
2003-04	126 (2004 V 1 to 126)	48 (2003 V...)	40 (2002 V...)	-	
2004-05	208 (2005 V 1 to 208)	40 (2004 V...)	16 (2003 V...)	13 (2002 V...)	Early (6) Mid late (7)
2005-06	135 (2006 V 1 to 135)	58 (2005 V...)	16 (2004 V...)	10 (2003 V...)	Early (7) Mid late (3)
2006-07	136(2007 V 1 to 136)	49 (2006 V...)	23 (2005 V...)	9 (2004 V...)	Early (5) Mid late (4)
2007-08	398 (2008 V 1 to 398)	50 (2007 V...)	20 (2006 V...)	12 (2005 V...)	Early (6) Mid late (6)
2008-09	152 (2009 V 1 to 152)	126 (2008 V...)	22 (2007 V ...)	12 (2006 V...)	Early (6) Mid late (6)
2009-10	162 (2010 V 1 to 162)	54 (2009 V...)	36 (2008 V ...)	12 (2007 V...)	Early (6) Mid late (6)
2010-11	283 (2011 V 1 to 283)	54 (2010 V...)	27 (2009 V...)	21 (2008 V...)	Early (11) Mid late (10)
2011-12	166 (2012 V 1 to 166)	49 (2011 V...)	28 (2010 V...)	12 (2009 V ...)	Early (6) Mid late (6)
2012-13	133 (2013 V 1 to 133)	42 (2012 V ...)	22 (2011 V ...)	16 (2010 V ...)	Early (10) Mid late (6)
2013-14	97 (2014 V 1 to 97)	44 (2013 V...)	19 (2012 V...)	14 (2011 V ...)	Early (10) Mid late (4)
2014-15	180 (2015 V 1 to 180)	35 (2014 V...)	20 (2013 V...)	12 (2012 V...)	Early (11) Mid late (1)
2015-16	253 (2016 V 1 to 253)	Clones in Settling nursery, Selection nursery and PYT (Plant) crops of 2015-16 season were damaged due to fire accident on 07-03-2016 and clones could not be promoted and planted for 2016-17 season. The trials were ratooned.			
2016-17	83(2017 V 1 to 83)	57 (2016 V...)	24 (2015 V...)	12 (2014 V...) 15 (2013 V...)	Early (7) Mid late (5) Early (10) Mid late (5)

Annual report of Sugarcane Breeding (AICRP on Sugarcane), S.R.S., Vuyyuru for the year 2016-17

1. Project No : II(a)
2. Code No : P1-2016 / 2- AHD / F30 / 0230
3. Name of the project : Evolving improved sugarcane genotypes suitable for different Agro-climatic zones of Andhra Pradesh – Seedling Nursery
4. Site of the Experiment : Sugarcane Research Station, Vuyyuru.
5. Project Leader and her associates : 1. Dr. V.Satya Priya Lalitha, Pr.Scientist (Pl.Br.)
6. Objective : To identify potential genotypes from the seedlings raised from true seed to process through various selection stages.
7. Date of initiation : Recurring feature with new set of crosses every year.
8. Results if any, achieved so far : In Seedling nursery (2015-16), a total of 1836 g of fluff from 30 Station Crosses, 13 Zonal Crosses, 18 GCs and 13 PCs was sown out of which 12,133 seedlings were obtained. 6,291 seedlings were survived in the main field with an average survival per cent of 51.85 and an average of 6.61 seedlings were obtained per gram of fluff sown. 253 seedlings (2016 V 1 to 2016 V 253) were selected based on H.R. Brix and other morphological characters and planted in Settling nursery (2016-17). Maximum number of selections were made in the crosses viz., Co V 89101 X Co 62198 (27), 69 A 591 x Co 62198 (16), Co 99006 X Co 62198 (13) and Co 0240 X Co 775 (11). The selections viz., 2016 V 144 (26.65), 2016 V 147 (26.55), 2016 V 119 (26.30), 2016 V 134 (25.80) and 2016 V 151 (25.60) recorded higher H.R.- Brix values. Higher number of canes per clump were recorded by 2016 V 47 (14), 2016 V 228, V 245 and V 251 (13), 2016 V 38, V 71, V 86 and V 171 (12) and 2016 V 116, V 201 and V 233 (11) while 2016 V 233 (14.5 kg), 2016 V 171 (14.0 kg), 2016 V 40 (13.0 kg) and 2016 V 47, V 71, V 221, V 228 and V 251(12.0 kg) recorded higher clump weight. The selections viz., 2016 V 225 (299.2 cm), 2016 V 97 (278.3 cm), 2016 V 90 (266.7 cm) and 2016 V 34 (260.0 cm) recorded higher length of millable cane where as 2016 V 75 (3.24 cm), 2016 V 244 (3.21 cm), 2016 V 143 (3.19 cm), 2016 V 96 (3.14 cm), 2016 V 123 (3.13 cm) and 2016 V 58 (3.12 cm) recorded higher diameter of millable cane.
9. Techniques adopted :
 - a) Treatments : 6,754 seedlings from 18 Station Crosses, 8 Zonal Crosses, 8 GCs and 13 PCs
 - Standards : Co 6907 and Co7219
 - b) Design } A.R.C.B.D
 - c) Replications }

- d) Spacing : 80X40cm in furrows of 10m length to accommodate 25 seedlings per furrow.
- e) Date of Sowing Nursery : 01,02 - 03 -16
- f) Date of Transplanting : 12,13 - 05 -16
- g) Fertilizers : 75kg P₂O₅ + 100 kg K₂O/ha as basal.
Nitrogen @ 168 kg/ha in the form of urea in two splits 30% at 10 DAT and 70% at 60 days after transplanting.
- h) Irrigations : Once in a week during formative phase till the break of monsoon, as and when necessary during monsoon and once in 21days during maturity phase from November till harvest.
- i) Date of Harvesting : 07 -03 -2017

10. Data analysed : In Seedling nursery (2016-17), a total of 689.5 g of fluff from 18 Station Crosses, 8 Zonal crosses, 8 GCs and 13 PCs was sown out of which 6,754 seedlings were obtained. 2,750 seedlings were survived in the main field with an average survival per cent of 40.72 and an average of 9.80 seedlings were obtained per gram of fluff sown. 83 seedlings (2017 V 1 to 2017 V 83) were selected based on H.R. Brix and other morphological characters and planted in Settling nursery (2017-18). The selections viz., 2017 V 49 (26.2), V 4, 41 (25.7), V 23, 57 (25.6), V 73 (25.5), V 3 (25.4), V 71 (24.9), V 15, 67 (24.8), V 22 (24.7), V 7, 61 (24.6) and V 21, 26, 34 (24.5) recorded higher H.R.-Brix values. The selection 2017 V 80 recorded higher length of millable cane (235.7 cm) while 2017 V 69 recorded higher diameter (3.04 cm). Maximum number of selections were made in crosses viz., LK 7901 X Bo 32 (10), Co V 89101 GC (10), Co V 89101 X ISH 69 (9), Co V 89101 X Co T 8201 (7) and Co 09022 X Co 89029 (7).

11. Summary of results : Out of 6,754 seedlings obtained, 2,750 seedlings were survived in the main field with an average survival per cent of 40.72 and an average of 9.80 seedlings were obtained per gram of fluff sown. 83 seedlings (2017 V 1 to 2017 V 83) were selected based on H.R. Brix and other morphological characters and planted in Settling nursery (2017-18).

12. Results that can be transferred to the farmers :
This is the preliminary stage of evaluation of genotypes and needs further testing.

1. Project No : II (b)
2. Code No : P1 - 2016 / 3 - AHD / F30 / 0230
3. Name of the project : Evolving improved sugarcane genotypes suitable for different agro-climatic zones of Andhra Pradesh – Settling Nursery (C₁).
4. Site of the Experiment : Sugarcane Research Station, Vuyyuru.
5. Project Leader and his associates : 1. Dr. V.Satya Priya Lalitha, Pr.Scientist (Pl.Br.)
6. Objective : To identify promising genotypes for further testing in Selection Nursery.

7. Date of initiation : Recurring feature with new set of clones every year.
8. Results if any, achieved so far : In Settling nursery (2015-16), out of 180 clones (2015 V...) studied along with two standards, Co 6907 and Co 7219, the clones 2015 V 38 (26.1), 2015 V 63 and 71 (25.6), 2015 V 37 (25.4) and 2015 V 31 (25.2) recorded higher H.R.- Brix values. The clones *viz.*, 2015 V 76 (1,45,000/ha), 2015 V 154 and 2015 V 159 (1,35,000/ha) and 2015 V 31 and 2015 V 101 (1,25,000/ha) recorded higher stalk population while the standards Co 6907 and Co 7219 recorded stalk population of 1,20,833/ha and 64,167/ha, respectively. Clones in Settling nursery of 2015-16 season were damaged due to fire accident on 07-03-2016 and clones could not be promoted and planted in Selection nursery (2016-17). The trial was ratooned.
9. Techniques adopted :
- a) Treatments : 253 selected clones (2016 V...) from Seedling nursery of 2015-16 season.
 - Standards : Co 6907 and Co7219.
 - b) Design } A.R.C.B.D.
 - c) Replications }
 - d) Spacing : 80cm between rows.
 - e) Plot size : 2.5 M x 2 R x 0.8 M = 4.0 Sq.m.
 - f) Seed rate : Four three budded setts / metre
 - g) Date of Planting : 07,12-04-16
 - h) Fertilizers : 168kg N/ha in two equal doses at 45 and 90 days after planting. 75kg P₂O₅ and 100kg K₂O/ha as basal dose.
 - f) Irrigations : Once in a week during formative phase till the break of monsoon, as and when necessary during monsoon and once in 21 days during maturity phase from November till harvest.
 - g) Date of Harvesting : 03,06-03-2017
10. Data analysed : In Settling nursery (2016-17), out of 253 clones (2016 V...) studied along with two standards Co 6907 and Co 7219, 57 clones were selected and planted in Selection nursery (2017-18). The clones *viz.*, 2016 V 144 (27.3), 2016 V 178 (27.0), 2016 V 131 and 176 (26.8) and 2016 V 151 (26.5) recorded higher H.R.- Brix values. The clones *viz.*, 2016 V 178 (1,20,000/ha), 2016 V 109 and 188 (1,12,500/ha), 2016 V 71 and V 242 (1,07,500/ha), 2016 V 67, 151 and 192 (1,02,500/ha) and 2016 V 70 (1,00,000/ha) recorded more than one lakh stalk population per hectare. The clones *viz.*, 2016 V 178 (172.5 t/ha), 2016 V 119 (140.0 t/ha), 2016 V 128 and 172 (137.5 t/ha), 2016 V 6 and 188 (135.0 t/ha) and 2016 V109 and 136 (130.0 t/ha) recorded higher cane yield. The clone 2016 V 178 recorded higher cane (172.5 t/ha) and brix (46.58 t/ha) yields.
11. Summary of results : Out of 253 clones studied, , 57 clones were selected and planted in Selection nursery (2017-18). The clones *viz.*, 2016 V 144 (27.3), 2016 V 178 (27.0), 2016 V 131 and 176 (26.8) and 2016 V 151 (26.5) recorded higher H.R.- Brix values.
12. Results that can be transferred to the farmers :
This is the preliminary stage of evaluation of genotypes and needs further testing.

1. Project No : II (c)
2. Code No : P1 - 2016 / 4 - AHD / F30 / 0230.
3. Name of the project : Evolving improved sugarcane genotypes suitable for different agro-climatic zones of Andhra Pradesh – Selection Nursery (C₂).
4. Site of the Experiment : Sugarcane Research Station, Vuyyuru.
5. Project Leader and his associates : 1. Dr. V.Satya Priya Lalitha, Pr.Scientist (Pl.Br.)
6. Objective : To identify promising genotypes for further testing in Preliminary yield trial.
7. Date of initiation : Recurring feature with new set of clones every year.
8. Results if any, achieved so far : In Selection nursery (2015-16), 35 clones were studied along with two standards Co 6907 and Co 7219. The clone 2014 V 31 recorded higher per cent juice sucrose value of 18.32 at 10th month. The clones 2014 V 3 (1,20,000/ha), 2014 V 84 (1,19,325/ha), 2014 V 45 (1,13,750/ha) and 2014 V 38 (1,12,500/ha) recorded more than one lakh millable canes while the standards Co 7219 and Co 6907 recorded stalk population of 1,25,417/ha and 1,06,875/ha, respectively. Clones in Selection nursery of 2015-16 season were damaged due to fire accident on 07-03-2016 and clones could not be promoted and planted in Preliminary Yield Trial – Plant crop (2016-17). The trial was ratooned.
In Ratoon crop (2016-17) of Selection nursery (2015-16), 35 clones (2014 V...) were studied along with two standards Co 6907 and Co 7219 in duplicate observation blocks to plant in Preliminary Yield Trial – multiplication (2017-18) so as to include them in MYT (Early & Mid-late) trials of 2018-19 season. The clones viz., 2014 V 2, 31, 33, 45, 90, 91 and 92 were categorised under early and 2014 V 9, 17, 68, 88 and 97 were categorised under mid-late group.
9. Techniques adopted :
 - a) Treatments : 180 clones (2015 V...) from Ratoon crop (2016-17) of Settling nursery of 2015-16 season
 - Standards : Co 6907 and Co7219.
 - b) Design } A.R.C.B.D.
 - c) Replications }
 - d) Spacing : 80cm between rows.
 - e) Plot size : 5 M x 2 R x 0.8 M = 16.0 Sq.m.
 - f) Seed rate : Four three budded setts/metre.
 - g) Date of Ratooning : 13-03-16
 - h) Fertilizers : 168kg N/ha in two equal doses at 45 and 90 days after planting. 75kg P₂O₅ and 100kg K₂O/ha as basal dose.
 - i) Irrigations : Once in a week during formative phase till the break of monsoon, as and when necessary during monsoon and once in 21 days during maturity phase from November till harvest.

j) Date of Harvesting : 03,06-03-2017

10. Data analysed : Clones in Settling nursery of 2015-16 season were damaged due to fire accident on 07-03-2016 and clones could not be promoted and planted in Selection nursery (2016-17). The trial was ratooned.

In Ratoon crop (2016-17) of Settling nursery of 2015-16 season, 180 (2015 V...) clones were studied along with two standards Co 6907 and Co 7219. 24 clones were selected and promoted to Preliminary Yield Trial – Plant crop (2017-18). The clones viz., 2015 V 144 (28.5), 2015 V 2 (27.5), 2015 V 52 (26.5), 2015 V 41 and 128 (26.1), 2015 V 126 (25.7) and 2015 V 31 (25.1) recorded higher H.R.-Brix values. The clone 2015 V 32 recorded higher cane yield of 160.0 t/ha.

11. Summary of results :
Out of 180 clones studied , 24 clones were selected and promoted to Preliminary Yield Trial – Plant crop (2017-18).

12. Results that can be transferred to the farmers :
This is the preliminary stage of evaluation of genotypes and needs further testing.

1. Project No : IV (a)

2. Code No : P1 - 2016 / 12 - AHD / F30 / 0230.

3. Name of the project : Initial Varietal Trial (Early)

4. Site of the Experiment : Sugarcane Research Station, Vuyyuru.

5. Project Leader and his associates : Dr. V. Satya Priya Lalitha, Pr.Scientist (Pl.Br.)

6. Objective : To screen and select high yielding and sucrose rich clones suitable for East - Coast zone.

7. Date of initiation : 1990

8. Results if any achieved so far : In Initial Varietal Trial (Early) (2015-16), the clones Co A 13-324 (18.25) and Co V 13-356 (18.03) recorded higher per cent juice sucrose values while the standard Co C 01-061 recorded 17.99 per cent juice sucrose. The standard Co C 01-061 recorded higher stalk population of 89,661/ha. The clone Co C 13-336 recorded higher Cane (110.80 t/ha) and CCS (12.77 t/ha) yields while the standard Co 6907 recorded higher cane yield (100.46 t/ha) among the standards and another standard Co C 01-061 recorded higher CCS yield (10.75 t/ha).

9. Techniques adopted :
a) Treatments : 7 (Co 07013, Co 13023, Co 13024, Co A 14-321, Co A 14-322, Co C 14-336, Co V 14-356 (2007 V 127))
Standards : 2 (Co C 01-061, Co A 92081(87 A 298))
b) Design : Randomized Block Design.
c) Replications : Three
d) Spacing : 90 cm between rows.

- e) Plot size : Gross : 6 R x 6 M x 0.9 M = 32.4 Sq.m
Net : 4 R x 6 M x 0.9 M = 21.6 Sq.m
- f) Seed rate : Four three budded setts/metre.
- g) Date of Planting : 09 -01 -2016
- h) Fertilizers : 168kg N/ha in two splits at 45 and 90 days after planting. 75 kg P₂O₅ + 100 kg k₂O/ha as basal dose.
- i) Irrigations : Once in a week till the break of monsoon, as and when necessary during the monsoon and once in 21 days during maturity phase from November till harvest.
- j) Date of Harvesting : 25 -01 -2017

10. Data analysed : In Initial Varietal Trial (Early) (2016-17), the clone Co C 14-336 recorded higher per cent juice sucrose value of 18.19 while the standard Co C 01-061 recorded 16.52 per cent juice sucrose. The clone Co A 14-321 recorded higher cane yield of 112.81 t/ha while the standard Co A 92081 recorded cane yield of 85.65 t/ha. The clone Co C 14-336 recorded higher CCS yield of 13.32 t/ha. The clone Co A 14-321 recorded higher diameter of millable cane (3.08 cm) and significantly higher single cane weight (1.57 kg).

11. Summary of results : The clone Co A 14-321 recorded higher cane yield of 112.81 t/ha while the clone Co C 14-336 recorded higher CCS yield of 13.32 t/ha.

12. Results that can be transferred to the farmers :
The promising varieties need to be tested in the farmers' fields.

1. Project No : IV (b)
2. Code No : P1 - 2016 / 13 - AHD / F30 / 0230.
3. Name of the project : Advanced Varietal Trial (Early) – First Plant
4. Site of the Experiment : Sugarcane Research Station, Vuyyuru.
5. Project Leader and his associates : Dr. V. Satya Priya Lalitha, Pr.Scientist (Pl.Br.)
6. Objective : To screen and select high yielding and sucrose rich clones suitable for East - Coast zone.
7. Date of initiation : 1990
8. Results if any achieved so far : In Advanced Varietal Trial (Early) – I plant (2015-16), the standard Co C 01-061 (18.18) and the clone Co V 12-356 (18.08) recorded higher per cent juice sucrose. The clone Co A 12-322 recorded higher cane yield of 118.93 t/ha while the standard Co C 01-061 recorded cane yield of 90.43 t/ha. The clone Co A 12-321 recorded higher CCS yield of 13.66 t/ha followed by Co V 12-356 (2006 V 51) with 13.32 t/ha CCS yield while the standard Co C 01-061 recorded CCS yield of 12.00 t/ha.

9. Techniques adopted :
- a) Treatments : 5 (Co A 13-322, Co A 13-323, Co C 13-336, Co C 13-337, Co V 13-356)
 - Standards : 2 (Co C 01-061, Co A 92081(87 A 298))
 - b) Design : Randomized Block Design.
 - c) Replications : Three
 - d) Spacing : 90 cm between rows.
 - e) Plot size : Gross : 8 R x 6 M x 0.9 M = 43.2 Sq.m
Net : 6 R x 6 M x 0.9 M = 32.4 Sq.m
 - f) Seed rate : Four three budded setts/metre.
 - g) Date of Planting : 11 -02 -2016
 - h) Fertilizers : 168kg N/ha in two splits at 45 and 90 days after planting. 75 kg P2O5 + 100 kg k2O/ha as basal dose.
 - i) Irrigations : Once in a week till the break of monsoon, as and when necessary during the monsoon and once in 21 days during maturity phase from November till harvest.
 - j) Date of Harvesting : 10 -01 -2017

10. Data analysed : In Advanced Varietal Trial (Early) – I plant (2016-17), the clone Co V 13-356 (2006 V 41) recorded higher per cent juice sucrose of 19.88 and CCS yield of 14.67 t/ha where as the standard Co C 01-061 recorded 17.26 per cent juice sucrose. The standard Co C 01-061 recorded higher cane yield of 110.19 t/ha. The clone Co A 13-322 recorded significantly higher diameter of millable cane (2.99 cm) and single cane weight (1.71 kg).

11. Summary of results : The clone Co V 13-356 (2006 V 41) recorded higher per cent juice sucrose of 19.88 and CCS yield of 14.67 t/ha.

12. Results that can be transferred to the farmers :
The promising varieties need to be tested in the farmers' fields.

- 1. Project No : IV (c)
- 2. Code No : P1 - 2016 / 14 - AHD / F30 / 0230.
- 3. Name of the project : Advanced Varietal Trial (Early) – Second Plant
- 4. Site of the Experiment : Sugarcane Research Station, Vuyyuru.
- 5. Project Leader and his associates : Dr. V. Satya Priya Lalitha, Pr.Scientist (Pl.Br.)
- 6. Objective : To screen and select high yielding and sucrose rich clones suitable for East - Coast zone.
- 7. Date of initiation : 1990

8. Results if any achieved so far : In Advanced Varietal Trial (Early) - II plant (2015-16), the clone Co A 11- 321 recorded higher per cent juice sucrose of 18.63 where as the standard Co C 01-061 recorded 18.05 percent juice sucrose. The clone Co C 11-336 recorded higher cane yield of 93.52 t/ha while the standard Co 6907 recorded 90.74 t/ha cane yield. Higher CCS yield of 11.06 t/ha was recorded by the standard Co C 01-061 followed by clone Co C 11-336 with CCS yield of 10.59 t/ha.

9. Techniques adopted :

- a) Treatments : 5 (Co A 12-321, Co A 12-322, Co A 12-323, Co Or 12-346, Co V 12-356)
- Standards : 3 (Co C 01-061, Co A 92081(87 A 298), Co 6907)
- b) Design : Randomized Block Design.
- c) Replications : Three
- d) Spacing : 90 cm between rows.
- e) Plot size : Gross : 8 R x 6 M x 0.9 M = 43.2 Sq.m
Net : 6 R x 6 M x 0.9 M = 32.4 Sq.m
- f) Seed rate : Four three budded setts/metre.
- g) Date of Planting : 08 -01 -2016
- h) Fertilizers : 168kg N/ha in two splits at 45 and 90 days after planting. 75 kg P₂O₅ + 100 kg k₂O/ha as basal dose.
- i) Irrigations : Once in a week till the break of monsoon, as and when necessary during the monsoon and once in 21 days during maturity phase from November till harvest.
- j) Date of Harvesting : 31 -12 -2016

10. Data analysed : In Advanced Varietal Trial (Early) - II plant (2016-17), the standard Co C 01-061 recorded higher per cent juice sucrose of 16.37 followed by the clone Co V 12-356 with 16.02 percent juice sucrose. The clone Co A 12- 321 recorded higher cane yield of 115.43 t/ha while the standard Co C 01-061 recorded 101.95 t/ha cane yield. Higher CCS yield was also recorded by the standard Co C 01-061 (11.74 t/ha). The clone Co A 12-323 recorded significantly higher diameter of millable cane (3.32 cm) and single cane weight (1.71 kg).

11. Summary of results : The clone Co A 12- 321 recorded higher cane yield of 115.43 t/ha.

12. Results that can be transferred to the farmers :
The promising varieties need to be tested in the farmers' fields.

1. Project No : IV (d)

2. Code No : P1 - 2016 / 15 - AHD / F30 / 0230.

3. Name of the project : Advanced Varietal Trial (Early) – Ratoon

4. Site of the Experiment : Sugarcane Research Station, Vuyyuru.

5. Project Leader and his associates : Dr. V. Satya Priya Lalitha, Pr.Scientist (Pl.Br.)
6. Objective : To screen and select high yielding and sucrose rich clones suitable for East - Coast zone.
7. Date of initiation : 1990
8. Results if any achieved so far : In Advanced Varietal Trial (Early) - Ratoon (2015-16), the standard Co C 01-061 recorded higher percent juice sucrose of 18.08. The clone Co A 11-321 recorded higher cane yield of 84.03 t/ha while the standard Co C 01-061 recorded cane yield of 80.94 t/ha. The standard Co C 01-061 recorded higher CCS yield of 10.45 t/ha followed by clone Co A 11-321 with 10.17 t/ha CCS yield.
9. Techniques adopted :
- a) Treatments : 5 (Co A 12-321, Co A 12-322, Co A 12-323, Co Or 12-346, Co V 12-356)
 - Standards : 3 (Co C 01-061, Co A 92081(87 A 298), Co 6907)
 - b) Design : Randomized Block Design.
 - c) Replications : Three
 - d) Spacing : 90 cm between rows.
 - e) Plot size : Gross : 8 R x 6 M x 0.9 M = 43.2 Sq.m
Net : 6 R x 6 M x 0.9 M = 32.4 Sq.m
 - f) Seed rate : -
 - g) Date of Ratooning : 12-02-2016
 - h) Fertilizers : Nitrogen @ 280 kg N/ha in two equal doses at the time of ratooning and 45 days after ratooning, P @ 100 kg/ha and K @ 168 kg/ha as basal dose.
 - i) Irrigations : Once in a week till the break of monsoon, as and when necessary during monsoon and once in 21 days during maturity phase from November till harvest.
 - j) Date of Harvesting : 08 -01 -2017
10. Data analysed : In Advanced Varietal Trial (Early) - Ratoon (2016-17), the clone Co A 12-323 recorded higher per cent juice sucrose of 19.61 while the standard Co C 01-061 recorded percent juice sucrose of 18.24. The clone Co A 12-321 recorded higher cane yield of 91.67 t/ha where as the standard Co C 01-061 recorded cane yield of 84.67 t/ha. The clone Co V 12-356 (2006 V 51) recorded higher CCS yield of 11.75 t/ha. The clone Co A 12-323 recorded significantly higher diameter of millable cane (3.21 cm) and single cane weight (1.53 kg).
11. Summary of results : The clone Co A 12-321 recorded higher cane yield of 91.67 t/ha where as the clone Co V 12-356 (2006 V 51) recorded higher CCS yield of 11.75 t/ha.
12. Results that can be transferred to the farmers :
The promising varieties need to be tested in the farmers' fields.

1. Project No : IV (e)
2. Code No : P1 - 2016 / 16 - AHD / F30 / 0230.
3. Name of the project : Initial Varietal Trial (Mid-late)
4. Site of the Experiment : Sugarcane Research Station, Vuyyuru
5. Project Leader and his associates : 1.Dr. V.Satya Priya Lalitha, Pr.Scientist (Pl.Br)
6. Objective : To screen and select high yielding and sucrose rich genotypes suitable for East – Coast zone.
7. Date of initiation : 1990
8. Results if any achieved so far : In IVT (Mid-late) (2015-16), the standard Co V 92102 recorded highest percent juice sucrose of 19.88 at 12th month followed by Co C 13-339 (19.61) and Co A 12-324 (19.18). The clone Co A 13-327 recorded higher stalk population of 1,01,389 /ha where as the standard Co 7219 recorded population of 85,339/ha. The clone Co A 13-327 recorded higher cane yield of 132.25 t/ha and CCS yield of 17.02 t/ha while the standard Co V 92102 recorded 113.73 t/ha cane yield and 16.77 t/ha CCS yield.
9. Techniques adopted :
 - a) Treatments : 11 (Co 13025, Co 13027, Co 13028, Co 13029, Co 13030, Co 13031, Co 13032, Co A 14-323, Co A 14-324, Co C 14-337, PI 14-376, PI 14-377)
 - Standards : 3 (Co 86249, Co V 92102 (83 V 15), Co 7219)
 - b) Design : Randomized Block Design.
 - c) Replications : Two
 - d) Spacing : 90cm between rows.
 - e) Plot size : Gross : 6 R x 6 M x 0.9 M = 32.4 Sq.m
Net : 4 R x 6 M x 0.9 M = 21.6 Sq.m
 - f) Seed rate : 4 three budded setts/metre.
 - g) Date of Planting : 02-02-20q16
 - h) Fertilizers : Nitrogen @ 168 kg N/ha in two equal doses at 45 and 90 days after planting. P @ 75 kg/ha and K @ 100 kg/ha as basal dose.
 - i) Irrigations : Once in a week till the break of monsoon, as and when necessary during monsoon and once in 21 days during maturity phase from November till harvest.
 - h) Date of Harvesting : 04-02-2017
10. Data analysed : In IVT (Mid-late) (2016-17), the clone PI 14-376 recorded higher percent juice sucrose of 18.89 while the standard Co V 92102 recorded 18.10 per cent juice at twelvth month.. The clone PI 14-377 recorded higher cane yield of 119.44 t/ha and CCS yield of 14.54 t/ha while the standard Co 86249 recorded 95.60 t/ha cane yield. The clone Co 13031 recorded significantly higher diameter of millable cane (3.07 cm) and single cane weight (1.54 kg).

11. Summary of results : The clone PI 14-377 recorded higher cane yield of 119.44 t/ha and CCS yield of 14.54 t/ha.
12. Results that can be transferred to the farmers :
The promising varieties need to be tested in the farmers' fields.
1. Project No : IV (f)
2. Code No : P1 - 2016 / 17 - AHD / F30 / 0230.
3. Name of the project : Advanced Varietal Trial (Mid-late) – First Plant
4. Site of the Experiment : Sugarcane Research Station, Vuyyuru
5. Project Leader and his associates : 1.Dr. V.Satya Priya Lalitha, Pr.Scientist (Pl.Br)
6. Objective : To screen and select high yielding and sucrose rich genotypes suitable for East – Coast zone.
7. Date of initiation : 1990
8. Results if any achieved so far : In Advanced Varietal Trial (Early) – I plant (2014-15), the standard Co C 01-061 recorded higher per cent juice sucrose of 16.79. The clones Co C 10-336 (103.01 t/ha) and Co C 11-336 (102.78 t/ha) recorded higher cane yield. The standard Co C 01-061 recorded higher CCS yield of 11.28 t/ha.
9. Techniques adopted :
- a) Treatments : 4 (Co A 11-326, Co A 12-324, Co C 13-339, Co Or 13-346)
- Standards : 2 (Co 86249, Co V 92102 (83 V 15))
- b) Design : Randomized Block Design.
- c) Replications : Four
- d) Spacing : 90cm between rows.
- e) Plot size : Gross : 8 R x 6 M x 0.9 M = 43.2 Sq.m
Net : 6 R x 6 M x 0.9 M = 32.4 Sq.m
- f) Seed rate : 4 three budded setts/metre.
- g) Date of Planting : 11-02-16
- h) Fertilizers : Nitrogen @ 168 kg N/ha in two equal doses at 45 and 90 days after planting. P @ 75 kg/ha and K @ 100 kg/ha as basal dose.
- i) Irrigations : Once in a week till the break of monsoon, as and when necessary during monsoon and once in 21 days during maturity phase from November till harvest.
- h) Date of Harvesting : 10-02-2017

10. Data analysed : In AVT (Mid-late) - I plant (2016-17), the standard Co V 92102 recorded higher percent juice sucrose of 19.61 at 12th month, higher cane yield of 121.99 t/ha and CCS yield of 17.34 t/ha. The clone Co A 12-324 recorded significantly higher diameter of millable cane (3.07 cm) while Co C 13-339 recorded significantly higher single cane weight (1.87 kg).

11. Summary of results : The standard Co V 92102 recorded higher percent juice sucrose of 19.61 at 12th month, higher cane yield of 121.99 t/ha and CCS yield of 17.34 t/ha.

12. Results that can be transferred to the farmers :
The promising varieties need to be tested in the farmers' fields.

Table 1A: Details of fluff sown in Seedling nursery (2016-17)

No. of SCs:18 ZCs:8 PCs:13 GCs:8 D.O.S.: 01,02-03-2016 D.O.T.:12,13-05-2016

S. No.	Crosses / GCs/PCs	Fluff weight (g)	No of seedlings transplanted	No of seedlings survived	Per cent survival	No of seedlings obtained/gm of fluff sown
Station Crosses:						
1	Co LK 8102 X Co 62198	31.0	269	148	55.02	8.68
2	Co Snk 05103 X BO 130	13.5	106	52	49.06	7.85
3	Co Snk 05103 X Co 0235	13.0	1	1	100.00	0.08
4	Co 1158 X ISH 287	14.0	3	2	66.67	0.21
5	Co LK 7901 X BO 32	21.5	768	308	40.10	35.72
6	Co N 05071 X Co H 15	16.0	NG	-	-	-
7	Co P 06436 X Co 62198	11.0	292	127	43.49	26.55
8	Co S 96268 X BO 130	8.5	1	1	100.00	0.12
9	Co J 83 X Co 89029	9.5	150	84	56.00	15.79
10	LG 95053 X HR 83-65	23.0	50	21	42.00	2.17
11	UP 9530 X BO 32	14.5	150	12	8.00	10.34
12	Co 1158 X HR 83-65	36.5	81	31	38.27	2.22
13	Co 09022 X Co 89029	20.5	168	103	61.31	8.20
14	Co 8353 X Co S 510	14.0	200	103	51.50	14.29
15	BO 91 X Co S 08272	17.0	77	28	36.36	4.53
16	Co N 05071 X ISH 150	27.0	13	7	53.85	0.48
17	ISH 100 X Co H 12	15.5	443	176	39.73	28.58
18	Co 0237 X Co 1148	6.0	7	4	57.14	1.17
	Total	312.0	2779	1208	43.47	8.91
Zonal Crosses:						
1	ISH 100 X Co 94008	18.5	73	39	53.42	3.95
2	Co V 89101 X ISH 69	21.5	495	184	37.17	23.02
3	Co V 89101 X Co T 8201	19.5	700	195	27.86	35.90
4	Co A 92081 X Co T 8201	6.5	46	7	15.22	7.08
5	Co V 89101 X Co A 7602	18.5	484	162	33.47	26.16
6	Co 8013 X Co C 671	10.5	315	162	51.43	30.00
7	Co 86032 X Co 94008	14.0	37	9	24.32	2.64
8	Co A 92081 X Co 94008	4.5	NG	-	-	-
	Total	113.5	2150	758	35.26	18.94
Polycrosses*:						
1	Co 94012	10.0	31	23	74.19	3.10
2	CP 52-68	5.0	57	35	61.40	11.40
3	Co C 90063	5.0	15	9	60.00	3.00
4	Co V 89101(81 V 48)	16.0	100	43	43.00	6.25
5	Co 7201	10.0	135	80	59.26	13.50
6	Co A 7602	5.0	82	37	45.12	16.40
7	Co 2000-10	5.5	40	20	50.00	7.27
8	ISH 100	4.5	4	2	50.00	0.89
9	86 V 96 (Co V 94101)	4.5	47	18	38.30	10.44
10	Co C 671	8.0	15	4	26.67	1.88
11	Co M 0265	3.5	19	7	36.84	5.43
12	Co 85002	6.5	91	26	28.57	14.00

13	Co8371	6.0	162	76	46.91	27.00
	Total	89.5	798	380	47.62	8.92
	GCs:					
1	89 V 74	30.0	185	103	55.68	6.17
2	Co 92006	12.5	200	39	19.50	16.00
3	Co A 92081	11.0	2	1	50.00	0.18
4	Co V 89101(81 V 48)	71.5	550	225	40.91	7.69
5	Co 92002	12.5	79	26	32.91	6.32
6	Co A 05323	31.5	NG	-	-	-
7	Co V 94101(86 V 96)	2.5	9	8	88.89	3.60
8	Co V 92102 (83 V 15)	3.0	2	2	100.00	0.67
	Total	174.5	1027	404	39.34	5.89
	Grand Total	689.5	6754	2750	40.72	9.80

NG: Not Germinated

***PCs: Co775, Co99006, Co 86011, ISH 69, Co 94008, CoT 8201, Co V 92102, Co93009(Males)**

Table 1B: Performance of selected seedlings in Seedling nursery (2016-17)

S.No	Clone	Parentage	No of canes/ clump	clump wt (Kg)	H.R Brix	LMC (cm)	Diameter (cm)
1	2017 V 1	ISH 100 X Co 94008	2	2.00	21.80	177.5	2.52
2	2017 V 2	Co 8013 X Co C 671	2	1.50	21.40	145.0	2.70
3	2017 V 3	Co 8013 X Co C 671	7	5.00	25.40	125.0	2.63
4	2017 V 4	Co 8013 X Co C 671	2	2.00	25.70	135.0	2.48
5	2017 V 5	Co P 06-436 X Co 62198	9	6.00	22.80	212.2	2.30
6	2017 V 6	Co P 06-436 X Co 62198	3	2.00	22.80	83.3	2.31
7	2017 V 7	Co P 06-436 X Co 62198	2	2.50	24.60	130.0	2.31
8	2017 V 8	Co P 06-436 X Co 62198	4	3.50	22.90	151.7	2.36
9	2017 V 9	Co P 06-436 X Co 62198	4	4.00	23.60	182.7	2.35
10	2017 V 10	Co P 06-436 X Co 62198	6	3.00	23.30	115.0	1.84
11	2017 V 11	ISH 100 X Co H 12	4	2.00	21.20	110.0	1.91
12	2017 V 12	ISH 100 X Co H 12	4	3.00	20.80	123.3	2.21
13	2017 V 13	Co V 89101 X ISH 69	3	3.00	24.40	127.0	1.76
14	2017 V 14	Co V 89101 X ISH 69	4	4.50	23.50	131.7	2.16
15	2017 V 15	Co V 89101 X ISH 69	6	5.00	24.80	105.0	2.41
16	2017 V 16	Co V 89101 X ISH 69	7	6.00	23.50	145.0	2.64
17	2017 V 17	Co V 89101 X ISH 69	3	3.00	22.10	100.0	3.09
18	2017 V 18	Co V 89101 X ISH 69	5	4.00	22.80	118.3	2.64
19	2017 V 19	Co V 89101 X ISH 69	2	2.00	22.70	108.3	2.70
20	2017 V 20	Co V 89101 X ISH 69	3	2.00	21.40	110.0	2.27
21	2017 V 21	Co V 89101 X ISH 69	5	3.00	24.50	95.0	2.20
22	2017 V 22	Co Lk 8102 X Co 62198	3	2.00	24.70	129.3	2.21
23	2017 V 23	Co Lk 8102 X Co 62198	5	3.00	25.60	100.0	2.42
24	2017 V 24	Co Lk 8102 X Co 62198	6	3.00	23.30	130.0	2.05
25	2017 V 25	Co Lk 8102 X Co 62198	8	6.00	21.70	153.3	2.07
26	2017 V 26	Co Lk 8102 X Co 62198	4	3.00	24.50	155.0	2.18

27	2017 V 27	Co Lk 7901 X Bo 32	4	4.00	23.50	146.7	2.20
28	2017 V 28	Co Lk 7901 X Bo 32	2	2.50	22.40	133.3	2.52
29	2017 V 29	Co Lk 7901 X Bo 32	6	6.00	23.20	186.7	2.27
30	2017 V 30	Co Lk 7901 X Bo 32	7	4.00	22.20	160.0	1.90
31	2017 V 31	Co Lk 7901 X Bo 32	9	6.00	24.00	138.3	1.99
32	2017 V 32	Co Lk 7901 X Bo 32	4	2.00	24.10	145.7	1.91
33	2017 V 33	Co Lk 7901 X Bo 32	5	3.00	22.70	165.7	2.13
34	2017 V 34	Co Lk 7901 X Bo 32	6	4.00	24.50	168.3	2.31
35	2017 V 35	Co Lk 7901 X Bo 32	8	4.00	22.40	143.3	2.69
36	2017 V 36	Co Lk 7901 X Bo 32	8	6.00	23.80	163.3	2.15
37	2017 V 37	Co 8353 X Co S 510	6	7.00	21.40	158.3	2.10
38	2017 V 38	Co 8353 X Co S 510	4	4.00	21.10	136.7	2.57
39	2017 V 39	Co 583 X Co 89029	3	3.00	20.50	160.0	2.75
40	2017 V 40	Bo 91 X Co 587272	5	6.00	22.60	181.3	2.76
41	2017 V 41	Bo 91 X Co 587272	6	6.00	25.70	146.7	1.95
42	2017 V 42	Co V 89101 X Co A7602	6	6.50	22.90	140.0	2.46
43	2017 V 43	Co V 89101 X Co A7602	3	3.00	22.00	140.0	2.71
44	2017 V 44	Co V 89101 X Co A7602	5	7.00	24.10	165.0	2.99
45	2017 V 45	Co V 89101 X Co A7602	5	2.00	22.90	105.0	2.41
46	2017 V 46	LG 95053 X HR 83-65	5	6.00	21.30	168.3	2.47
47	2017 V 47	Co 09022 X Co 89029	6	4.00	23.60	165.0	2.50
48	2017 V 48	Co 09022 X Co 89029	3	2.00	22.20	160.0	2.46
49	2017 V 49	Co 09022 X Co 89029	5	6.00	26.20	185.0	2.35
50	2017 V 50	Co 09022 X Co 89029	6	4.00	21.50	123.3	2.31
51	2017 V 51	Co 09022 X Co 89029	6	3.00	23.50	163.3	2.05
52	2017 V 52	Co 09022 X Co 89029	6	4.00	23.70	155.0	2.27
53	2017 V 53	Co 09022 X Co 89029	4	3.00	23.20	138.0	2.67
54	2017 V 54	Co V 89101 GC	11	11.00	22.80	185.0	2.59
55	2017 V 55	Co V 89101 GC	4	3.00	21.90	131.7	2.63
56	2017 V 56	Co V 89101 GC	8	6.00	23.90	181.7	2.39
57	2017 V 57	Co V 89101 GC	6	4.00	25.60	145.0	2.39
58	2017 V 58	Co V 89101 GC	8	8.00	22.20	208.3	2.61
59	2017 V 59	Co V 89101 GC	8	7.00	24.20	143.3	2.53
60	2017 V 60	Co V 89101 GC	5	6.00	22.10	145.0	2.67
61	2017 V 61	Co V 89101 GC	5	5.00	24.60	140.0	2.29
62	2017 V 62	Co V 89101 GC	5	7.00	23.00	126.3	2.45
63	2017 V 63	Co V 89101 GC	5	7.00	20.60	155.0	2.78
64	2017 V 64	89 V 74 GC	4	3.00	23.90	141.7	2.46
65	2017 V 65	89 V 74 GC	6	4.00	22.80	143.0	2.31
66	2017 V 66	89 V 74 GC	6	6.50	22.30	153.0	2.39
67	2017 V 67	Co V 89101 X Co T 8201	6	7.00	24.80	208.3	2.35
68	2017 V 68	Co V 89101 X Co T 8201	3	2.00	23.00	146.7	2.27
69	2017 V 69	Co V 89101 X Co T 8201	4	6.00	20.10	135.0	3.04
70	2017 V 70	Co V 89101 X Co T 8201	5	6.00	23.40	125.0	2.46
71	2017 V 71	Co V 89101 X Co T 8201	4	2.00	24.90	131.7	2.32

72	2017 V 72	Co V 89101 X Co T 8201	7	6.00	23.40	153.3	2.27
73	2017 V 73	Co V 89101 X Co T 8201	4	2.00	25.50	127.3	2.16
74	2017 V 74	Co 92002 GC	6	5.00	23.80	150.0	2.26
75	2017 V 75	Co 7201 PC	5	3.50	24.30	176.7	2.08
76	2017 V 76	Co 8371 PC	4	4.00	20.40	186.7	2.72
77	2017 V 77	Co 8371 PC	4	5.00	21.40	146.7	2.42
78	2017 V 78	Co 8371 PC	4	6.00	21.10	203.3	2.68
79	2017 V 79	Co 8371 PC	4	5.00	20.00	190.0	2.53
80	2017 V 80	Co 2000 -10 PC	4	8.00	20.00	235.7	2.53
81	2017 V 81	CP 52-68 PC	4	3.00	22.80	148.3	2.05
82	2017 V 82	Co A 7602 PC	3	3.00	20.40	143.3	2.35
83	2017 V 83	Co 1158 X HR 83-65	6	3.50	22.50	128.3	2.40
84	Co 6907(C)	Co 740 X Co 1287	3	2.00	21.50	130.0	2.24
85	Co 7219 (C)	Co 449 X Co 658	3	1.50	23.80	115.0	2.20

Table 1C: Crosswise means in Seedling nursery (2016-17)

S.No	Clone	Parentage	No of canes/ clump	Clump wt (Kg)	H.R Brix	LMC (cm)	Diameter (cm)
1	2017 V 1	ISH 100 X Co 94008	2.0	2.00	21.80	177.50	2.52
2	2017 V 2 to 4	Co 8013 X Co C 671	3.7	2.83	24.20	135.00	2.60
3	2017 V 5 to 10	Co P 06-436 X Co 62198	4.7	3.50	23.33	145.82	2.25
4	2017 V 11 to 12	ISH 100 X Co H 12	4.0	2.50	21.00	116.65	2.06
5	2017 V 13 to 21	Co V 89101 X ISH 69	4.2	3.61	23.30	115.59	2.43
6	2017 V 22 to 26	Co Lk 8102 X Co 62198	5.2	3.40	23.96	133.52	2.19
7	2017 V 27 to 36	Co Lk 7901 X Bo 32	5.9	4.15	23.28	155.13	2.21
8	2017 V 37 to 38	Co 8353 X Co S 510	5.0	5.50	21.25	147.50	2.34
9	2017 V 39	Co 583 X Co 89029	3.0	3.00	20.50	160.00	2.75
10	2017 V 40 to 45	Co V 89101 X Co A7602	4.8	4.63	22.98	137.50	2.64
11	2017 V 46	LG 95053 X HR 83-65	5.0	6.00	21.30	168.30	2.47
12	2017 V 47 to 53	Co 09022 X Co 89029	5.1	4.00	23.15	157.24	2.39
13	2017 V 54 to 63	Co V 89101 GC	6.5	6.40	23.09	156.13	2.53
14	2017 V 64	89 V 74 GC	5.3	4.50	23.00	145.89	2.39
15	2017 V 67 to 73	Co V 89101 X Co T 8201	4.7	4.43	23.59	146.76	2.41
16	2017 V 74	Co 92002 GC	6.0	5.00	23.80	150.00	2.26
17	2017 V 75	Co 7201 PC	5.0	3.50	24.30	176.70	2.08
18	2017 V 76 to 79	Co 8371 PC	4.0	5.00	20.73	181.68	2.59
19	2017 V 80	Co 2000 -10 PC	4.0	8.00	20.00	235.70	2.53
20	2017 V 81	CP 52-68 PC	4.0	3.00	22.80	148.30	2.05
21	2017 V 82	Co A 7602 PC	3.0	3.00	20.40	143.30	2.35
22	2017 V 83	Co 1158 X HR 83-65	6.0	3.50	22.50	128.30	2.40
84	Co 6907(C)	Co 740 X Co 1287	3.0	2.00	21.50	130.00	2.24
85	Co 7219 (C)	Co 449 X Co 658	3.0	1.50	23.80	115.00	2.20

Table2: Performance of selected clones in Settling nursery (2016-17)

S.No	Clone	Parentage	NMC (000s/ ha)	H.R. - Brix	Cane yield (t/ha)	Brix yield (t/ha)
1	2016 V 1	Co V 89101 X Co T 8201	65.000	24.30	87.50	21.26
2	2016 V2	Co V 89101 X Co T 8201	87.500	24.00	110.00	26.40
3	2016 V 6	Co V 89101 X Co T 8201	80.000	23.30	135.00	31.46
4	2016 V 8	Co V 89101 X Co T 8201	50.000	24.50	75.00	18.38
5	2016 V 31	Co 8371 X Co 99006	87.500	23.40	120.00	28.08
6	2016 V 35	69 A 591 X Co 62198	60.000	23.30	82.50	19.22
7	2016 V 45	69 A 591 X Co 62198	65.000	23.90	77.50	18.52
8	2016 V 47	69 A 591 X Co 62198	92.500	24.30	117.50	28.55
9	2016 V 50	Co A 86032 X Co 94008	110.000	24.70	130.00	32.11
10	2016 V 57	Co 0240 X Co 775	62.500	25.60	90.00	23.04
11	2016 V 67	Co C 90063 X Co 94008	102.500	24.50	100.00	24.50
12	2016 V 68	Co C 90063 X Co 94008	67.500	24.80	90.00	22.32
13	2016 V 70	Co C 90063 X Co 94008	100.000	24.40	117.50	28.67
14	2016 V 71	Co C 90063 X Co 94008	107.500	24.50	120.00	29.40
15	2016 V 74	Co V 89101 X Co A 7602	70.000	25.10	97.50	24.47
16	2016 V 81	Co Snk 05-103 x Co 62198	52.500	23.40	80.00	18.72
17	2016 V 89	Co Snk 05-103 x Co 62198	60.000	25.40	77.50	19.69
18	2016 V 91	Co Se 96436 x 2000 V 59	70.000	24.40	92.50	22.57
19	2016 V 93	Co Se 96436 x 2000 V 59	45.000	25.90	53.50	13.86
20	2016 V 95	Co Se 96436 x 2000 V 59	57.500	24.60	87.50	21.53
21	2016 V 96	Co Se 96436 x 2000 V 59	65.000	25.00	87.50	21.88
22	2016 V 109	Co J 64 X Co 87268	112.500	25.70	130.00	33.41
23	2016 V 112	Co V 89101 x 2000 V 59	70.000	25.10	92.50	23.22
24	2016 V 113	Co V 89101 x 2000 V 59	80.000	24.90	110.00	27.39
25	2016 V 114	Co V 89101 x 2000 V 59	50.000	25.50	75.00	19.13
26	2016 V 119	Co V 89101 x 2000 V 59	92.000	25.80	140.00	36.12
27	2016 V 120	Co V 89101 x 2000 V 59	52.500	24.40	75.00	18.30
28	2016 V 122	Co V 89101 x 2000 V 59	90.000	24.20	120.00	29.04
29	2016 V 128	Co V 89101 x 2000 V 59	92.500	24.90	137.50	34.24
30	2016 V 130	Co V 89101 x 2000 V 59	70.000	24.10	100.00	24.10
31	2016 V 131	Co V 89101 x 2000 V 59	72.500	26.80	105.00	28.14
32	2016 V 132	Co V 89101 x 2000 V 59	72.500	23.50	90.00	21.15
33	2016 V 136	Co V 89101 x 2000 V 59	95.000	25.40	130.00	33.02
34	2016 V 140	Co 99006 x Co 62198	52.500	23.80	77.50	18.45
35	2016 V 142	Co 99006 x Co 62198	67.500	24.80	95.00	23.56
36	2016 V 144	Co 99006 x Co 62198	90.000	27.30	117.50	32.08
37	2016 V 145	Co 99006 x Co 62198	95.000	25.70	115.00	29.56
38	2016 V 151	Co 99006 x Co 62198	102.500	26.50	122.50	32.46
39	2016 V 171	Co 8338 GC	87.500	24.20	102.50	24.81
40	2016 V 172	Co 8338 GC	82.500	23.80	137.50	32.73
41	2016 V 174	Co 8338 GC	77.500	23.80	95.00	22.61
42	2016 V 176	Co 8338 GC	72.500	26.80	90.00	24.12

43	2016 V 178	Co 8338 GC	120.000	27.00	172.50	46.58
44	2016 V 180	Co 8338 GC	60.000	24.00	80.00	19.20
45	2016 V 182	Co C 671 X Co T 8201	60.000	24.70	87.50	21.61
46	2016 V 185	Co C 671 X Co T 8201	62.500	25.30	90.00	22.77
47	2016 V 186	UP 9530 X Co 775	57.500	24.60	80.00	19.68
48	2016 V 187	UP 9530 X Co 775	65.000	23.70	90.00	21.33
49	2016 V 188	UP 9530 X Co 775	112.500	23.60	135.00	31.86
50	2016 V 192	85 R 186 X Co 1148	102.500	24.00	120.00	28.80
51	2016 V 200	Co 99006 X Co Se 92423	82.500	25.20	92.50	23.31
52	2016 V 205	Co 99006 X Co Se 92423	57.500	25.70	80.00	20.56
53	2016 V 207	Co A 7602 PC	70.000	25.10	100.00	25.10
54	2016 V 217	Co 7201 PC	62.500	23.30	92.50	21.55
55	2016 V 234	Co 94012 PC	70.000	23.80	92.50	22.02
56	2016 V 237	97 R 129 GC	67.500	23.90	95.00	22.71
57	2016 V 242	Co 99006 GC	107.500	25.00	125.00	31.25
58	Co6907 (C)	Co 740 X CO 1287	72.500	22.60	102.50	23.17
59	Co 7219 (C)	Co 449 X Co 658	85.000	22.50	107.50	24.19

Table 3: Performance of selected clones in Selection nursery (2016-17)
(Ratoon crop of Settling nursery of 2015-16)
*Forwarded to PYT - Plant crop (2017-18)

S.No	Clone	Percentage	NMC (000s/ha)	Cane yield (t/ha)	% juice sucrose
1	2015 V 2	97 R 401 X Co 8213	90.000	110.00	27.5
2	2015 V 4	97 R 401 X Co 8213	62.500	85.00	24.9
3	2015 V 31	Co 90063 X Co 94008	125.000	132.50	25.1
4	2015 V 32	ISH 100 X Co 86249	92.500	160.00	24.2
5	2015 V 35	Co A 92081 X Co T 8201	75.000	115.00	24.1
6	2015 V 36	Co A 92081 X Co T 8201	132.500	165.00	23.4
7	2015 V 38	81 V 48 X ISH 69	60.000	77.50	24.8
8	2015 V 41	81 V 48 X ISH 69	75.000	85.00	26.1
9	2015 V 43	81 V 48 X ISH 69	137.500	145.00	24.9
10	2015 V 52	Co C 671 X Co 94008	85.000	90.00	26.5
11	2015 V 82	Co 94012 PC	97.500	107.50	23.6
12	2015 V 90	Co 85002 PC	65.000	67.50	24.7
13	2015 V 92	Co 85002 PC	97.500	117.50	24.6
14	2015 V 105	ISH 100 X C 81615	90.000	97.50	24.3
15	2015 V 112	Co 94012 X Co 94008	60.000	77.50	24.2
16	2015 V 126	ISH 175 X Co V 92102	60.000	70.00	25.7
17	2015 V 128	ISH 175 X Co V 92102	115.000	125.00	26.1
18	2015 V 132	Co V 92102 GC	70.000	102.50	24.7
19	2015 V 134	Co 90018 GC	85.000	97.50	24.2
20	2015 V 144	Co V 94101 GC	60.000	82.50	28.5
21	2015 V 148	Co 89101 X Co 775	77.500	102.50	23.9
22	2015 V 149	Co 89101 X Co 775	60.000	75.00	24.5
23	2015 V 155	Co 99086 X Co 775	75.000	92.50	23.8
24	2015 V 161	97 R 129 GC	90.000	117.50	23.5
25	Co 6907 (C)	Co 740 X Co 1287	105.000	136.25	19.6
26	Co 7219 (C)	Co 449 X Co 658	82.500	96.25	23.3