

CROP IMPROVEMENT

Technical programme for the year 2023-2024 Peninsular Zone

B. II- Zonal Varietal Trial

Centres (18) : Akola, Basmathnagar, Belagavi, Coimbatore, Kolhapur, Mandya, Navsari, Padegaon, Powarkheda, Pravaranagar, Pune, Pugalur, Kawardha (Raipur), Rudrur, Sameerwadi, Sankeshwar, Sirugamani and Thiruvalla.

1. Initial Varietal Trial

Entries (17) : Co 20001, Co 20002, Co 20003, Co 20005, Co 20006, Co 20007, Co 20009, Co 20010, Co 20011, Co 20012, CoN 20071, CoN 20072, CoM 20082, CoSnk 20101, CoSnk 20102, CoSnk 20103, CoT 20366.

Standards (3) : Co 86032, CoC 671 and Co 09004
Design : Randomised Block Design
Replications : Three
Plot size : Gross: 6m x 6r x 1.2m
Net : 5m x 4r x 1.2m
Seed rate : 12 buds per metre
Planting date : II fortnight of December to I fortnight of January
Crop duration : 12 months
Data to be recorded : As per Annexure - I

2. Advanced Varietal Trial – I Plant

Entries (11): Co 18001, Co 18002, Co 18003, Co 18009, Co 18012, Co 18013, Co 18024, CoVC 18061, CoN 18071, CoN 18072, CoVSI 18121,
Standards (3) : Co 86032, CoC 671 and Co 09004
Design : Randomised Block Design
Replications : Three
Plot size : Gross: 6m x 8r x 1.2m
Net : 5m x 6r x 1.2m
Seed rate : 12 buds per metre
Planting date : II fortnight of December to I fortnight of January
Crop duration : 12 months
Data to be recorded : As per Annexure - I

3. Advanced Varietal Trial - II Plant

Entries (12)	:	Co 17001, Co 17002, Co 17003, Co 17004, Co 17005, Co 17010, Co 17012, Co 17013, CoVC 17061, CoN 17072, MS 17082, and CoT 17366
Standards (3)	:	Co 86032, CoC 671 and Co 09004
Design	:	Randomized Block Design
Replications	:	Three
Plot size	:	Gross: 6m x 8r x 1.2m Net : 5m x 6r x 1.2m
Seed rate	:	12 buds per metre
Planting date	:	II fortnight of December to I fortnight of January
Crop duration	:	12 months
Data to be recorded	:	As per Annexure - I

4. Advanced Varietal Trial – (Ratoon)

Entries (12)	:	Co 17001, Co 17002, Co 17003, Co 17004, Co 17005, Co 17010, Co 17012, Co 17013, CoVc 17061, CoN 17072, MS 17082, and CoT 17366
Standards (3)	:	Co 86032, CoC 671 and Co 09004
Design	:	Randomised Block Design
Replications	:	Three
Plot size	:	Gross: 6m x 8r x 1.2m Net : 5m x 6r x 1.2m
Ratooning date	:	After harvest of AVT Plant – I
Crop duration	:	11 months
Data to be recorded	:	As Annexure-II

Seed multiplication

1. **Multiplication of IVT (2022-23) entries at the centers :** Following 23 entries will be multiplied at the centers during 2023-'24 for inclusion in AVT – I plant in 2024-'25 after analyzing their performance in IVT (2022-'23)

Co 19002, Co 19003, Co 19004, Co 19005, Co 19008, Co 19009, Co 19014, Co 18023, CoN 19071, MS 19081, CoVSI19121, CoT 19366, CoT 19367, CoR 19141, CoR 19142, CoR 19143, CoR 19144, CoR 19145, CoR 19146, CoT 18366, CoT 18367, CoT 18368, CoT 18369

2. **Multiplication of zonal entries accepted during 2021**

The following 16 entries accepted in the Group Meeting of AICRP (S) held at ICAR –IISR Lucknow through online during 19-20th October 2021 are under multiplication at ICAR-Sugarcane Breeding Institute, Coimbatore and Central Sugarcane Research Station, Padegaon. On prior intimation, the centers should depute their staff and lift the material for one year multiplication.

ICAR-SBI, Coimbatore (Multiplication centre):

Mandya, Powarkheda, Pugalur, Rudrur, Sameerwadi, Sirugamani and Thiruvalla

CSRS, Padegaon (Multiplication centre):

Akola (Tharsa), Basmathnagar, Belagavi, Kolhapur, Navsari, Pravaranagar, Pune, Raipur (Kawardha) and Sankeshwar

Co 21002, Co 21003, Co 21004, Co 21005, Co 21006, Co 21007, Co 21009, Co 21010, CoN 21071, CoN 21072, CoM 21081, CoM 21082, CoM 21083, VSI 21121, CoR 21141 and CoT 21366

3. Seed multiplication of new entries

Following 17 entries were accepted in the AICRP(S) workshop held at ICAR-IISR, Lucknow during 14-15th October 2022. The concerned breeders are requested to supply two sets of seed materials of the accepted entries; one set to ICAR-SBI, Coimbatore and the other set to CSRS, Padegaon for one year multiplication.

Co 22004, Co 22005, Co 22006, Co 22007, Co 22009, Co 22010, Co 22012, Co 22015, Co 22018, Co 15020, CoN 22071 (2017 N 42), VSI 22121 (VSI 56-2), CoSnk 22101 (CoSnk 151509), CoSnk 22103 (CoSnk 152084), CoSnk 22105 (CoSnk 152145), CoSnk 22106 (CoSnk 152150) and CoSnk 22107 (CoSnk 152152)

Annexure-I

ALL INDIA COORDINATED RESEARCH PROJECT ON SUGARCANE

**Characters on which data to be recorded in Initial Varietal Trial (IVT)
and Advanced Varietal Trial (AVT) – Plant crops**

Crop: Sugarcane

1. Germination % at 30 days for tropics and 45 days for sub-tropics
2. No. of tillers (thousand/ha) at 120 days
3. No. of shoots (thousand/ha) at 240 days
4. Number of millable canes (thousand/ha) after 10 months and 12 months at harvest
6. Stalk length (cm) at 8, 10 and 12 months
7. Stalk diameter (cm) at 8, 10 and 12 months
8. Single cane weight (kg) at 8, 10 and 12 months
9. Brix % in juice at 8, 10 and 12 months
10. Sucrose % in juice at 8, 10 and 12 months
11. Purity % at 8, 10 and 12 months
12. CCS % at 8, 10 and 12 months
13. Extraction % after 10 and 12 months at harvest
15. Fibre % in cane after 10 and 12 months at harvest
16. Pol % cane after 10 and 12 months at harvest
17. Cane yield (t/ha) after 12 months at harvest
18. CCS t/ha after 12 months at harvest
19. Jaggery quality after 10 and 12 months at harvest (if facility available)
20. Jaggery yield (t/ha) after 12 months at harvest (if facility available)

Morphological characters

1. Lodging: Erect, lodging, snapping, heavy lodging
2. Leaf sheath spines: Absent (A), present (P), medium (M), heavy (H)
3. Flowering : Absent (A), present (P)
4. Canopy structure and colour : Green, light green, yellowish green, dark green
5. Bud size : Big (B), small (S), medium (M)
6. Pithiness : Absent (A), present (P), less (L), heavy (H)
7. Internode splits : Absent (A), present (P), low (L), moderate (M), heavy (H)
8. Natural incidence of diseases and pests

ALL INDIA COORDINATED RESEARCH PROJECT ON SUGARCANE

Characters on which data to be recorded in ratoon crop

Advanced Varietal Trial (Ratoon)

- Note :**
1. No gap filling should be done.
 2. Ratooning operation should be completed within 15 days after harvesting plant crop.
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1. Number of tillers (thousand/ha) before giving full earthing up (90 days)
 2. Number of cane formed tillers (thousand/ha) after 180 days
 3. Number of millable canes (thousand/ha) after 270 days and 330 days at harvest
 4. Stalk length (cm) at after 270 days and 330 days
 5. Stalk diameter (cm) at after 270 days and 330 days
 6. Single cane weight (kg) at after 270 days and 330 days
 7. Brix % in juice after 270 days and 330 days at harvest
 8. Sucrose % in juice after 270 days and 330 days at harvest
 9. Purity % after 270 days and 330 days at harvest
 10. CCS % after 270 days and 330 days at harvest
 11. Fibre % in cane after 270 days and 330 days at harvest
 12. Pol % cane after 270 days and 330 days at harvest
 13. Cane yield (t/ha) after 330 days at harvest
 14. CCS t/ha after 330 days at harvest
 15. Extraction % after 270 days and 330 days at harvest
 16. Jaggery quality after 270 days and 330 days at harvest (if facility available)
 17. Jaggery yield (t/ha) after 270 days and 330 days at harvest (if facility available)