

**THE K.J.SOMAIYA INSTITUTE OF APPLIED  
AGRICULTURAL RESEARCH, SAMEERWADI**

**Annual Report of 2015-16 All India Coordinated Research Project on Sugarcane**

The institute is a voluntary centre of the All India Coordinated Research Project on Sugarcane (AICRP-S) and participates in varietal testing programme of the Peninsular Zone. During 2015-16, 2 Initial Varietal Trails and 4 Advanced Varietal Trials were conducted.

**Initial Varietal Trial- Early**

The trial comprised 12 new clones (Co 12001, Co 12003, Co 12006, Co 12007, Co 12008, CoM 12081, CoM 12082, CoM 12083, CoN 12072, CoT 12366 and CoT 12367) and three standards (Co 85004, Co 94008 and CoC 671) and was laid out in a RBD with two replications on 20 January 2015 as per the technical programme provided by the Principal Investigator. The crops were grown with the recommended package of practices of the area. The experimental crop was harvested at 10 months and the data on cane yield, yield attributes and quality parameters are presented in Table 1.

The varieties showed no significant differences in germination or tiller population. However, stalk populations differed significantly. But compared to the best standard Co 85004, no variety recorded significantly higher stalk population. Varieties Co 12001, CoM 12082, CoM 12083 were on par with the best standard.

For juice quality, the best standard was CoC 671 with a sucrose % of 19.32; and no variety was better than it through many were on par. Co 12006 recorded the best sucrose value (19.87%) followed by Co 12008 (19.63%).

There were significant differences in cane yield among the varieties. The best standard was Co 83004 (83 t/ha). Only Co 12001 was significantly better than Co 85004, while others like CoT 12367, CoM 12082, CoM 12083 were on par. The CCS% followed the same trend. The CCS yield was best in Co 12001 (16.18 t/ha) and was significantly better than Co 85004 (10.22 t/ha).

### **Initial Varietal Trial – Midlate**

The trial consisted of 15 new clones viz, Co 12009, Co 12012, Co 12014, Co 12016, Co 12017, Co 12019, Co 12021, Co 12024, CoM 12084, CoM 12085, CoM 12086, CoN 12073, CoN 12074, CoT 12368, VSI 12121 and two standards, Co 99004 and Co 86032. The experiment was planted on 19 January 2015 in a RBD layout with two replications. The experimental crop was raised as per the recommended package of practices. The crop was harvested at 12 months. Data on cane yield, yield attributes and quality parameters are presented in Table 2.

Significantly higher number of millable canes was recorded in Co 12024 (86.24 thousand/ha) than the standards Co 99004 and Co 86032 (69.16 and 67.7 thousand /ha) while many were on par.

Co 12009 recorded significantly higher sucrose and CCS % than Co 86032 but was on par with Co 99004.

Significantly higher cane and CCS yields were recorded in CoT 12368 (133.00 and 18.68 t/ha) compared to the standard Co 86032 (71.00 and 9.76 t/ha respectively), but it was on par with Co 99004 (110 and 16.22 t/ha, respectively).

### **Advanced Varietal Trial – Early (I Plant)**

The trial consisted of 8 clones viz, Co 10004, Co 10005, Co 10006, Co 10024, Co 10026, Co 10027, CoT 10366 and CoT 10367 and three standards Co 85004, Co 94008 and CoC 671. It was planted on 18 January 2015 in a RBD with 3 replications. The recommended package and practices were followed. The experiment was harvested at 10 months. Data on cane yield, yield attributes and quality parameters are presented in Table 3.

At harvest, the stalk population did not differ significantly among the varieties. However, Co 10005 recorded the highest number of millable canes.

Juice quality parameters and CCS% did not differ significantly among the varieties. Highest sucrose and CCS% recorded in standard CoC 671 (18.01 and 12.66% respectively) followed by Co 10004 (17.65, 12.23) and Co 10027 (17.83 and 12.36).

Significantly higher cane yield and CCS yield were recorded in Co 10027 (160.00 and 19.75 t/ha) than all the standards and Co 10005 (146.00 and 15.97 t/ha) was on par with Co 10027.

### **Advanced Varietal Trial – Midlate (I Plant)**

The trial consisted of 11 clones viz. Co 09009, Co 10015, Co 10017, Co 10031, Co 10033, CoM 10083, CoT 10369, CoVC 10061, PI 10131 and PI 10132 and two standards Co 99004 and Co 86032 and was planted on 17 January 2015 in a RBD with 2 replications. The recommended package and practices were followed. The experiment was harvested at 10 months. Data on cane yield, yield attributes and quality parameters are presented in Table 4.

At harvest, the stalk population was best in the best standard (Co 99004) followed by Co 10015 and CoM 10083.

PI 10131 recorded significantly higher CCS% than the standards and also to all other varieties.

Significantly higher cane yield and CCS yield were recorded in the standard variety Co 99004 (176.00 and 23.31 t/ha) compared to other varieties, but varieties Co 10015 and Co 10033 were better than Co 86032.

### **Advanced Varietal Trial– Early (II Plant)**

The trial consisted of three clones (Co 09004, Co 09007 and CoN 09072) and three standards (Co 85004, Co 94008 and CoC 671) and was planted on 15 January 2015 and laid out in a RBD with four replications. The experiment was harvested at 10 months. Cane yield, yield attributes and quality parameters are presented in Table 5.

The stalk population did not differ among the varieties and no variety was better than the standards.

Sucrose% and CCS% were significantly higher in Co 09004 (19.95% and 14.34%) over standards Co 85004 and Co 94008 while CoC 671 was on par with Co 09004

Co 09007 recorded significantly higher cane and CCS yield (145.00 and 19.78 t/ha) compared to the standard Co 85004 (86.00 and 11.29 t/ha) and Co 94008 (115.00 and 14.26 t/ha) respectively while CoC 671 (142.00 and 19.0) was on par with Co 09007.

### **Advanced Varietal Trial– Early (Ratoon)**

The trial consisted of three clones (Co 09004, Co 09007 and CoN 09072) and three standards (Co 85004, Co 94008 and CoC 671) and was ratooned on 28 January 2015. The experiment was harvested at 10 months. Cane yield, yield attributes and quality parameters are presented in Table 6.

Sucrose% and CCS% were higher in CoC 671 (20.00 and 14.38%) followed by Co 09007 and Co 09004.

Varieties Co 09004 and CoN 09072 recorded significantly higher NMC than CoC 671 and Co 94008 while being on par with Co 85004.

Significantly higher cane yield and CCS yield were recorded in Co 09004 (111.00 and 15.11 t/ha) compared to all standard varieties.