

## Co 0118 (KARAN 2)

### PROMISING EARLY VARIETY FOR NORTH WESTERN ZONE

**Co 0118** is a selection from the progeny of the cross Co 8347 x Co 86011. This clone was identified from seedling ratoon nursery raised at Sugarcane Breeding Institute, Regional Centre, Karnal and was tested under the Pre Zonal Varietals Trial as K96-059. It was selected as an early clone as it had pol % juice higher than CoJ 64 during November, January and March. The cane yield and sugar yield of Co 0118 was higher than that of CoJ 64.

#### Salient characteristics

Co 0118 is a medium thick, green-yellow canes with obconoidal internodes, rectangular buds, lanceolate auricle on both sides (generally long on one side), shallow bud groove and weak spines on leaf sheath. The clone is free from splits, pith and bud cushion. The fibre % is about 12.78 %. The jaggery is of A<sub>1</sub> quality with light yellow colour. This clone is moderately resistant (MR) to the prevalent races of red rot pathogen by plug method of inoculation.

#### Performance of Co 0118 in North Western Zone

This clone has been evaluated under All India Co-ordinated Research Project in the North Western Zone. Co 0118 ranked 3<sup>rd</sup> in the zone for cane yield, sugar yield and sucrose % in juice. Average cane and sugar yields, and sucrose% recorded in 2 plant and 1 ratoon crops at 7 research stations in the zone in comparison with standards are presented in Table 1. In comparison to the major check CoJ 64, it showed 15 % improvement in cane yield and 3 % improvement in sucrose % in juice.

**Table 1. Performance of Co 0118 in All India Coordinated Research Project Trials**

Item	Co 0118	CoJ 64	CoPant 84211
Cane yield (t/ha)	78.20	67.59	66.84
% increase or decrease over checks		15.70	17.00
Sugar yield (t/ha)	9.88	8.59	8.28
% increase or decrease over checks		15.01	19.32
Sucrose %	18.45	17.90	17.65
% increase or decrease over checks		3.07	4.53

#### Performance of Co 0118 under abiotic stresses

Co 0118 was evaluated under water stress and water logging conditions at DSCL Sugar, Ajbapur and Simbhaoli Sugar Mills Ltd., Simbhaoli. Performance of Co 0118 with respect to cane yield and pol % in cane is presented in Tables 2 & 3. Under normal condition cane yield of Co 0118 was 4 t/ha higher than CoJ 64. Improvement in cane yield under water stress and water logging conditions was higher by more than 10 t/ha over respective standards. Pol % in cane in Co 0118 was more than 1% higher than respective standards under normal and abiotic conditions.

**Table 2. Cane yield of Co 0118 at DSCL Sugar Ajbapur (UP) under normal and abiotic stresses**

Clones	Condition	Cane Yield (t/ha)
Co 0118	Normal	89.30
	Water stress	77.39
<i>Standards</i>	Water logging	78.76
CoJ 64	Normal	85.45
CoS 97261	Water stress	61.94
	Water logging	66.58
CoS 96268	Normal	67.68

**Table 3. Pol % in cane in Co 0118 at DSCL Sugar Ajbapur (UP) under abiotic stresses**

Clones	Condition	November	January	March
Co 0118	Normal	11.87	14.49	15.60
	Water stress	11.34	14.20	15.15
	Water logging	11.58	13.96	14.46
<i>Standards</i>				
CoJ 64	Normal	11.73	13.05	14.41
CoS 97261	Water stress	9.98	11.37	14.21
	Water logging	8.65	11.77	13.13

#### Performance of Co 0118 in ISMA trials

Co 0118 was tested at 11 sugar mills in Haryana, Uttarakhand and Uttar Pradesh. Its juice quality (pol % in cane) was better than respective local checks in all the regions. The pol % in cane was higher by more than 1% during February over CoJ 64 in western Uttar Pradesh and Uttarakhand (Table 4).

**Table 4. Pol % in cane during February 2008 in Co 0118 in sub-tropical India (ISMA Trials)**

Clone	Pol % in cane during February 2008			
	Central UP (6)	Western UP (3)	Uttarakhand (1)	Haryana (1)
Co 0118	15.34	15.18	15.54	12.32
<i>Standards</i>				
CoJ 64	15.00	14.16	14.19	12.01
CoS 767	13.00	14.10	14.00	-
CoS 8436	-	-	-	11.13

Figures in parenthesis indicate the number of sugar mills in each region

### Package of practices for Co 0118 for NWZ

1. Application of 100 kg DAP (2 bag) per acre before planting in furrows.
2. Application of 25 kg/acre M.O. Potash before planting in furrows.
3. Placing of setts in furrows. Seed rate 12 buds / meter or 6 setts of 2-buds each.
4. Covering of setts by soil with spades (1 – 2 inches).
5. Light irrigation – water logging should be avoided.
6. Spraying of Atrazine @ 2.0 kg/acre on 3<sup>rd</sup> day of planting.
7. Fields may be irrigated as when need felt.
8. Application of urea @ 50 kg/acre after 45 days of planting.
9. Application of urea @ 50 kg/acre + 25 kg MOP after 90 days of planting followed by light earthing up.
10. Application of Furadon @ 13kg/acre during last week of June to 1<sup>st</sup> week of July.
11. Earthing up during June – July depending upon growth of crop.
12. First propping during August.
13. Second propping during September.
14. For seed crop apply urea @ 32.5 kg/acre during September
15. For autumn planted cane apply 100 kg DAP + 25 kg MOP as basal, 100 kg urea in Feb/March and 100 kg urea + 25 kg MOP in June

### Recommendation

Co 0118 was released by the Central Sub-Committee on Crop Standards, Notification and Release of Varieties for Agricultural Crops in 2009. This variety would prove as high quality early maturing clones under assured irrigation, water stress or water logging areas. This variety is a suitable substitute for CoJ 64.

### For further details contact:

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