Package of Practices (POP) – Sugarcane Variety CoSe 01235

Introduction

CoSe 01235 is an early-maturing variety from Shahjahanpur Sugar Research Station, suited for Western UP sandy loam soils. Particularly valued for early-season crushing, it allows sugar mills to begin operations before October. Excellent tillering, fast canopy establishment, and strong resistance to Red Rot and Grassy Shoot Disease (GSD) make it a dependable and farmer-preferred variety in Muzaffarnagar, Saharanpur, and Meerut districts.

Land Preparation

Soil and Climate: Sandy loam to loam soils. Western UP's semi-arid climate requires assured irrigation. Incorporate higher FYM (15 t/ha) to improve moisture retention in lighter soils.

Tillage: 3–4 ploughings with deep tillage. Pre-irrigation (palewa) before ploughing in drier western districts to improve tilth. Raised bed furrows (90 cm) preferred. Level field to prevent uneven moisture distribution.

Planting

Timing: Autumn planting: October–November (primary season for this variety). Spring: February–March also feasible.

Seed material: 40,000 three-budded setts/ha from disease-free nursery. Row spacing: 90 cm; depth: 20–25 cm.

Seed Treatment

- HWT: 52°C for 30 minutes.
- Chemical: Bavistin 0.1% + Malathion 0.05% dip for 15 minutes.
- Bio-treatment: Trichoderma viride bioinoculant or Gluconacetobacter diazotrophicus @ 2 kg/ha in 250 litres of water.

Planting Methods

Trench method: Preferred for autumn planting to protect emerging shoots from winter cold. Trenches 30 cm deep at 90 cm spacing.

Sett placement: Two setts placed end-to-end with slight overlap, buds facing upward. Cover with shallow soil layer to retain warmth during winter germination.

Pest protection: Apply Chlorpyrifos 20 EC @ 5 L/ha or Fipronil 0.3% GR @ 20 kg/ha in furrow at planting to control termites and early borers.

Nutrient Management

Fertilizers: 250 kg N, 80 kg P_2O_5, 100 kg K_2O/ha. Apply Sulphur @ 20 kg/ha via SSP for combined P and S benefit.

Basal: Full P + K + 1/3 N at planting.

Top dressing: 1/3 N at 30–45 DAP; 1/3 N at 90 DAP.

Green manure: Dhaincha (Sesbania) can be turned into soil before planting for additional 30–40 kg N/ha equivalent.

Irrigation

Autumn planting: 8–10 irrigations total.

- Post-planting (Nov–Jan): More frequent irrigation every 10 days due to dry winter and slow germination.
- Grand growth (June–Aug): Every 15 days; reduce during active monsoon.
- Maturity: Withhold 30 days before harvest.

Mulching: Dry trash mulch between rows reduces winter moisture loss by up to 40%.

Weed Control

Pre-emergence: Atrazine @ 2 kg a.i./ha at 3 DAP.

Post-emergence: 2,4-D @ 0.75 kg a.i./ha at 45 DAP.

Manual: Hand weeding at 30 DAP. Earthing up at 90 DAP.

Mulching: Sugarcane trash mulch (8–10 cm) suppresses winter weed flush effectively.

Pest and Disease Management

- Gurdaspur borer (Acigona steniellus): Apply Chlorantraniliprole 18.5 SC @ 0.3 ml/litre; remove affected dead hearts.
- Red Rot: Disease-free certified seed + Carbendazim dip; rogue and destroy infected clumps immediately.
- Grassy Shoot Disease (phytoplasma): Destroy all infected clumps; control leafhopper (Pyrilla) vector with Malathion spray.
- Termites: Drench Chlorpyrifos 20 EC @ 4 L/ha in furrow at planting.

Yield

Yield potential: Plant crop: 85–100 t/ha. Ratoon crop: 70–85 t/ha.

Sugar recovery: 10.6% CCS. Optimal recovery when harvested in December–January.

Best suited for: Western UP (Muzaffarnagar, Saharanpur, Meerut, Shamli) on sandy loam soils.

Ratoon Management

Stubble shaving: Shave to 8–10 cm depth immediately after harvest using sharp spades.

Gap filling: Within 15 days using sprouted setts from same field.

Fertilizer: Apply extra K_2O at 30 KDA; 30 kg extra N/ha over plant crop dose.

Propping: Tie cane with dry leaves at 4–5 internode height at grand growth stage to prevent lodging.

Weed control: Atrazine 1.5 kg/ha at 3 DAS of ratoon; 2,4-D at 30 DAS.

Fair and Remunerative Price (FRP) of Sugarcane

The FRP is the minimum price that sugar mills are legally required to pay sugarcane farmers, fixed by the central government on CACP recommendations.

Season	FRP (₹/quintal)	Base Recovery
2025–26	₹355	10.25%
2024–25	₹340	10.25%
UP SAP 2024–25	₹370 (early varieties)	—

A premium of ₹3.46 per quintal is paid for every 0.1% increase in recovery above 10.25%. For mills with recovery below 9.5%, the minimum price is ₹329.05 per quintal.