Package of Practices (POP) – Sugarcane Variety CoLk 94184 (Lucknow-1)

Introduction

CoLk 94184, released by the Indian Institute of Sugarcane Research (IISR), Lucknow, is a mid-season, high-yielding variety adapted to Terai soils and Central Uttar Pradesh. It offers exceptional yield potential (80–105 t/ha), high juice quality (sugar recovery 10.8%), and notable tolerance to waterlogging, making it ideal for flood-prone lowland tracts in UP. Its strong tillering and broad adaptability have made it a prominent variety across the Lucknow, Sitapur, and Hardoi districts.

Land Preparation

Soil and Climate: Performs best on loam and silty loam soils. Tolerates heavy clay loam in Terai. Requires warm temperatures (21–30°C) and reliable monsoon or canal irrigation. Annual rainfall: 80–140 cm.

Tillage: Subsoil ploughing once in three years to break hardpan. Follow with 3 cross-ploughings and harrowing to fine tilth. Incorporate 12–15 t/ha FYM during the final ploughing. In Terai low-lying areas, make raised bed furrows for drainage. Row spacing: 90 cm for low-lying fields.

Planting

Timing: Spring planting: 15 February – 31 March. Optimum: last week of February to first week of March.

Seed material: 35,000–40,000 three-budded setts/ha from 8–9 month old disease-free nursery. Use healthy, succulent upper third of the cane.

Seed Treatment

- HWT: 52°C for 30 minutes to control RSD and Smut.
- Chemical: Mancozeb 0.2% + Imidacloprid 0.05% soak for 15 minutes before planting.
- Bioagent: Pseudomonas fluorescens @ 5 g/litre water for root-zone biological protection.

Planting Methods

Trench method: For Terai region: 30 cm deep trenches at 90 cm spacing. Ensures protection against lodging and better ratoon.

Flat bed (kera) method: For upland normal soils. Furrows 20–25 cm deep, 75–90 cm apart. Two setts placed end-to-end with 5 cm overlap.

Drainage: Ensure cross-drainage channels in Terai fields. Avoid standing water at furrow bottom during germination phase.

Nutrient Management

Fertilizers: 300 kg N, 100 kg P_2O_5, 130 kg K_2O per hectare.

Basal dose: Full P_2O_5 + K_2O + 1/3 N at planting.

Top dressing: 1/3 N at 30–45 DAP; 1/3 N at 90 DAP (earthing up). Apply Zinc Sulphate @ 25 kg/ha if Zn deficiency observed. Boron foliar spray @ 1.5 kg/ha at grand growth stage.

Bio-fertilizers: Azotobacter + PSB @ 2 kg/ha each; Trichoderma culture @ 10 kg/ha mixed with compost.

Irrigation

- Germination (0–35 days): Every 7 days.
- Tillering (36–100 days): Every 10 days.
- Grand growth (101–270 days): Every 7–10 days; reduce frequency during active monsoon.
- Maturity: Withhold irrigation 40 days before harvest.

Note: In Terai, adequate monsoon rain may reduce kharif irrigations. Monitor soil moisture carefully during post-monsoon drying.

Weed Control

Pre-emergence: Atrazine 50% WP @ 2 kg + Diuron @ 1 kg a.i./ha at 3 DAP.

Post-emergence: 2,4-D @ 1 kg a.i./ha at 30 DAP for broad-leaf weeds.

Mechanical: Bullock-drawn cultivator inter-cultivation at 45 DAP. Earthing up at 90 DAP controls residual weeds and prevents lodging.

Pest and Disease Management

- Whitefly: Spray Dimethoate 30 EC @ 1.5 ml/litre.
- Mealybug (Saccharicoccus sacchari): Release Anagyrus kamali; drench with Profenofos.
- Shoot borer: Trichogramma japonicum release @ 2.5 lakh/ha.

- Pineapple disease (Thielaviopsis paradoxa): Treat setts with Captan + Bavistin combination.
- Smut: HWT mandatory; rogue "whip" shoots immediately; variety is resistant.

Yield

Yield potential: Plant crop: 80–105 t/ha. Ratoon crop: 70–85 t/ha.

Sugar recovery: 10.8% CCS. One of the highest-recovery mid-season varieties in Central UP.

Best suited for: Terai region and Central UP (Lucknow, Sitapur, Lakhimpur Kheri districts).

Ratoon Management

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

Irrigation: Irrigate within 24 hours of harvest to stimulate sprouting.

Fertilizer: 25 kg extra N/ha over plant crop schedule. Full K_2O at ratoon initiation.

Earthing up: At 60 DAS to support tiller development and prevent lodging.

Trash management: Retain trash on field as mulch after shredding; suppresses weeds and conserves moisture.

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.