



Dr. G. Hemaprabha
Director

19-1/2024 /Tech/22- R&D (SK)

May 27, 2024

GENERAL CIRCULAR - I

Dear Sir/Ma'am,

ICAR-Sugarcane Breeding Institute, Coimbatore in collaboration with University of Agricultural Sciences, Bangalore, the sugar industries of Karnataka and M. Visvesvaraya Sugarcane Research Centre of S.Nijalingappa Sugar Institute, Belagavi will be organizing the **22nd Sugarcane Research & Development Workshop of Southern Karnataka** during **20-21 June 2024 (Tentative)**. The exact dates and venue will be communicated shortly. The following topics will be discussed.

- i. Review of action taken on the recommendations of the previous workshop
- ii. Managing drought & measures to improve irrigation water use efficiency
- iii. Interventions for improving sugarcane yields in Southern Karnataka
- iv. Review of mechanization initiatives in the region including mechanical harvesting
- v. Varietal position in sugar factories, Performance of new sugarcane varieties & AICRP (S) Varietal trials
- vi. Sugarcane seed nursery programme

Besides discussion on these topics, Special lectures on '**Approaches to improve sugar recovery in Southern Karnataka**' and on '**Why should sugarcane farming be the preferred choice of farmers of Southern Karnataka?**' will be delivered during the workshop.

Coromandel Sugars Ltd., Makavalli and M. Visvesvaraya Sugarcane Research Centre of S.Nijalingappa Sugar Institute, Belagavi would be jointly hosting the Workshop.

As the time is short, you may please prepare the manuscripts of the papers covering these topics as per the guidelines enclosed and send to the undersigned positively by **06 June 2024**. The guidelines can also be downloaded from <http://sugarcane.icar.gov.in> or <http://caneinfo.icar.gov.in> . Awards will be given for outstanding presentations.

As we are planning to bring out the papers presented at the workshop in printed form (*Compendium of Research Articles & Status Papers*; ISSN: 0973-8185), your papers may be prepared and sent to the undersigned **in time**. The papers (prepared using MS Word) can be sent by email to sbiextension@yahoo.com.

With best regards,

Yours sincerely,

DIRECTOR

GUIDELINES FOR PREPARING PAPERS

Topic i: Review of action taken on the recommendations of the previous workshop

Sugar factories/Department of Sugar/Department of Agriculture and research institutions in the region are requested to furnish the details of action taken on the recommendations made in the previous workshop as per the details given hereunder:

S.No.	Recommendation/Action point	Action taken
1.	Factories have to try to bring a minimum of 5% irrigated sugarcane under drip fertigation every year and maintain at-least 25% area under drip fertigation	
2.	Sugar factories need to evolve site specific design, irrigation and fertigation schedules and organize trainings to progressive farmers on designing and maintenance of drip fertigation system	
3.	Factories should advocate wide row planting with suitable intercrops to facilitate mechanization and to augment farmers' income.	
4.	Sugar mills should educate the farmers by conducting trainings on integrated nutrient management practices with organics, inorganics and bio fertilizers to maintain soil health.	
5.	Being one of the poorest regions in the country for sugar recovery, a proper varietal scheduling for Southern Karnataka has to be in place for improving sugar recovery.	
6.	Mean performance of the variety for cane yield and Sugar recovery at 360 days has to be studied by the factory R & D unit before recommendation of any new variety. No new sugarcane variety should be taken up for large-scale cultivation without studying the technological parameters and field related characteristics by the sugar factory	
7.	All sugar factories should have quality seed nursery programme for popular and new sugarcane varieties and only disease - free tissue culture plants should be used as the starting planting material in the 3-tier nursery programme.	

Topic ii: Managing drought & measures to improve irrigation water use efficiency

Extent of drought in the factory area - extent of yield loss - technology advocated to remedy the situation- performance of sugarcane varieties under drought - extent of adoption of drought management practices by the farmers in registered area - impact of the extent of adoption of drought management practices on yield and recovery

Area under different irrigation methods, viz. surface irrigation, sprinklers, rain gun, surface drip, subsurface drip etc - Irrigation interval and scheduling of irrigations (in different soils) - yield improvement / water saving due to drip / sprinkler / rain gun irrigation - advantages and constraints in adopting modern methods of irrigation - measures to minimize conveyance loss of irrigation water viz. polythene lining of channels, pipelines, etc - soil moisture conservation measures - spacing adopted with reference to different irrigation methods - cost of installation and economics of different methods - efforts taken / schemes to improve water use efficiency and popularize newer techniques - perception of farmers about different methods of irrigation- extent of water logging and drainage systems adopted - testing water quality and measures employed to enhance yield while using poor quality water.

Sl. No.	Method of irrigation	Coverage (ha)
	Surface irrigation – ridges and furrows	
	Surface irrigation – flat beds	
	Surface irrigation – Flood irrigation	
	Sprinklers	
	Rain gun	
	Surface drip	
	Subsurface drip	

Efforts made by the factory in managing drought and improving irrigation-use efficiently - Constraints in adoption by farmers.

Topic iii: Interventions for improving sugarcane yields in Southern Karnataka

Major varieties grown in the factory area for different seasons and their respective yield levels - Average cane yield levels obtained from different varieties in your factory area from plant and ratoon crops.

Average Cane Yield t /ha (2020-21, 2021-22 & 2022-23)					
Variety	Year	Plant crop	Ratoon crop		
			First ratoon	Second ratoon	Third ratoon
Mean					

Irrigation potential, extent of adoption of irrigation scheduling, micro irrigation and fertigation - cropping pattern followed in the area - Rainfall pattern (For 2021, 2022 and 2023 seasons).

Fertilizer application – recommended dosage, adoption of soil-test based application – soil health cards - method and time of application of NPK – extent of adoption in your area – constraints in adoption – Extension efforts taken to spread these technologies.

Micro nutrient deficiencies observed – corrective measures undertaken.

Percentage of incidence of different pests and diseases in your area – extent of adoption – integrated pests and diseases management practices – constraints in adoption – extension efforts taken to spread these practices.

Planting methods – Use of single bud seedlings – Transplanting – Extent of area under intercropping, trash mulching - weed management, Adoption of three-tier nursery programme - Extent of mechanization from land preparation to harvest – age of harvest

List out and **rank** the major constraints in maximizing cane yield levels in your area such as salinity, alkalinity, drought, water logging, pests and diseases, farmer reluctance etc. Your strategies for overcoming these constraints and improving cane productivity.

Mention the budget allotment for cane development work in your factory (Provide scheme-wise particulars)

What is your target for cane yields in current/next three years (2023-24, 2024-25, 2025-26) ?- Action plan you propose to take to spread the scientific cane cultivation practices in your area to achieve this target.

Efforts made by the factory in transfer of technology related to maximizing cane yields in your factory- mention the constraints in adoption by the registered cane growers.

Topic iv: Review of mechanization initiatives in the region including mechanical harvesting

Usage of implements in sugarcane cultivation – sugarcane planter – intercultivator – earthing up ridger – stubble shaver - offbarrer- combined ratoon manager - weeder – rotovator trash shredder – Extent of mechanization in farmers’ fields (area & %) across different soil types – saving in labour, time and cost - merits and demerits in mechanization – scope for mechanization in farmers’ fields – cost effectiveness in mechanized and non-mechanized cane farms - perception of farmers towards mechanization – steps initiated to popularize mechanization in sugarcane – constraints in adoption of sugarcane mechanization.

Mechanized harvesting – machines used, cost of machines, hiring charges of harvester, cost of maintenance harvester, spacing adopted, capacity of the machines, area covered (area and % of total cane area), extraneous materials in machine harvested cane, pros and cons of mechanized harvesting – steps initiated to popularize mechanization in sugarcane – constraints in adoption of sugarcane mechanization; impact of mechanized harvesting on juice quality /sugar recovery.

Topic v: Current varietal position , Performance of new sugarcane varieties & AICRP (S) Varietal trials

Varietal position

Sugar factory personnel to provide the following details:

2020-21

S.No	Variety	Area covered	Percentage	Highest yield t/ ha	Yield at the time of introduction (t/ha) (Mention year)	Yield, at present (t/ha)

2021-22

S.No	Variety	Area covered	Percentage	Highest yield t/ ha	Yield at the time of introduction (t/ha) (Mention year)	Yield, at present (t/ha)

2022-23

S.No	Variety	Area covered	Percentage	Highest yield t/ ha	Yield at the time of introduction (t/ha) (Mention year)	Yield, at present (t/ha)

Performance of new sugarcane varieties & AICRP (S) trials

Scientists from ICAR-Sugarcane Breeding Institute, Coimbatore and Sugarcane Research Stations of Karnataka would be presenting the characteristics of new sugarcane varieties and their performance in Southern Karnataka. Participants may give their observations on the performance of new varieties especially with reference to cane yield (average and highest yield recorded) quality (including SMT and BMT results), performance in different soil types and months of planting, optimum age at harvest and incidence of pest and diseases. Tolerance to abiotic constraints like drought, water-logging etc. may also be indicated.

This will be followed by presenting the results of AICRP trials conducted by the research institutions & sugar factories in Southern Karnataka.

Topic vi: Sugarcane seed nursery programme

Details of three-tier seed nursery programme adopted by the factory to sustain the yield of sugarcane varieties to be provided.

Particulars	Area in hectares
<i>Area under primary nursery</i> Variety 1. Variety 2. Variety 3.	
<i>Area under secondary nursery</i> Variety 1. Variety 2. Variety 3.	
<i>Area under commercial nursery</i> Variety 1. Variety 2. Variety 3.	

Breeder seed production programme of ICAR-Sugarcane Breeding Institute and research institutions in the region would be discussed. Sugar factories may indicate their breeder seed requirements for the ensuing season.

Please note:

Kindly provide the data in **tabular form**, wherever required. You may include additional information if you feel that this would help in enhancing the purpose of the workshop. Please restrict your paper to the main themes of the workshop only.
