Details of Research Papers Published by Author Relevant to the Research Topic

• **International Journals :**


• **National Journals :**


  2. “Computerized model for sugarcane Harvesting for Effective Planning and Control in Co-operative sugar factories in Pune district” , Abhinav – Journal of Research in commerce and management, Volume No1, Issue No 9, 2012, **ISSN 2277-1166**

APPENDIX – A

QUESTIONNAIRE

Pilot Survey of Sugar Factories of Pune District

(2007-2009)

I. Name of Factory: ____________________________________________________

II. Address: __________________________________________________________

   (i) Registered Office: __________________________________________

   (ii) Location of the factory: ___________________________________

III. Constitution (whether co-operative society private/public limited
     company joint sector/public sector company)

IV. Date of incorporation/registration: ________________________________

V. Performance during the last 3 years: ______________________________

   A. Salient production and operating results:

      (1) Licensed crushing capacity (TCD): 5000 M.Tons

      (2) Installed crushing capacity (TCD): 5000 M.Tons

      (3) Area under sugarcane (acres): _____________________________

      (4) Average yield (tons/acre): _________________________________

      (5) Total production of sugarcane in the area (lakh tons) ________

      (6) Gross duration of the season (days): ________________________

      (7) Net duration of the season (days): __________________________

      (8) Percentage of hours lost to total available hours: __________

      (9) Average daily rate of crushing (tons): ______________________
(2)

(a) including stoppages: ________________________________

(b) excluding stoppages : ________________________________

(10) Total cane crushed (lakh tons) : ________________________________

(11) Pol % cane : ________________________________________________

(13) Total sugar losses % cane : ________________________________

(14) Average sugar recovery % : ________________________________

(15) Total sugar produced (quintals) : ________________________________

(16) Reduced mill extraction (%) : ________________________________

(17) Reduced Boiling House Extraction (%) : ________________________________

(18) Reduced Overall Extraction (%) : ________________________________

(19) Extra fuel consumption % cane : ________________________________
APPENDIX – B

QUESTIONNAIRE FOR SUGARCANE FARMERS
(MEMBERS)

1. Name of the Farmer:__________________________________________________

2. Village Name: _______________________________________________________

3. Gat Name :__________________________________________________________

4. Distance (Km) : __________

5. Survey No / Gat No.: __________

6. Season: Adsali / Presason / Season /Ratoon(Khodva)


8. Sugarcane Cultivation Type : 3’feet / 4’feet / 5 ‘feet

9. Area: Hector_____ R _____

10. Cultivation Date: / / 

11. Irrigation Method: Canal/ Well / Lift / Drip Irrigation
APPENDIX – C

QUESTIONNAIRE FOR AGRICULTURAL OFFICERS

1. Sugar Factory Name ______________________________________________
2. Sugar Factory Crushing Capacity: _____________
3. Actual no. of Working Days :___________________
4. Final rate given for Sugarcane in Previous year :_______________
5. Rate given for harvesting and Transportation : ________________
6. Distance Rate: _________________
7. Total Sugarcane recorded (Hector) : ______________
8. Total Sugarcane Crushed (Tonns) : _______________
9. Rate given for Prev.year for sugarcane : ______________
10. Annual Rainfall in Previous year (mm) : _______________
11. Vehicle Type : _________________
12. Carrying Capacity (Tons) : _______________
13. Distance Carrying : _________________
14. No of Vehicles : _______________
15. Planned Vehicles : _______________
16. Actual Vehicles : _______________
17. Sugarcane Area name (Gat ) : _______________
18. Sugarcane Variety : _________________
19. Sugarcane Recovery : _________________
20. Sugarcane Tonnage : _________________
21. Sugarcane Duration : _________________
22. Distance between Furrows(Ft) : _______________

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APPENDIX – D

QUESTIONNAIRE FOR MILL YARD INCHARGE

1. Sugar Factory Name : ________________________________________________
   ________________________________________________
2. Session year : __________________________
3. Sugarcane Area : _________________________
4. Crushing Mode : _________________________
5. Type of Vehicle : Bullock Cart / Tractor /Truck : _____________________
6. Village Distance (km) : ____________________
7. Stoppage Hours (Hr) : _____________________
8. Cane Loading Time : _____________________
9. Yard In Time : __________________________
10. Outside Lead Time : _____________________
11. Cane Unloading Time : ___________________
12. Inside Lead Time : _____________________
13. Total Lead Time : ______________________
14. Reduction weight of sugarcane : __________
15. Reduced wt. of Sugar. : __________________
APPENDIX – E
SCREEN SHOTS OF THE INPUT AND OUTPUT SCREENS

Fig. Master details of sugarcane factory coverage area details

Fig. Master details of sugarcane variety details
A. 4.1 Samples for Estimation of Tonnage and Recovery in Sugar:

![Fig. 4.1 Samples for tonnage and recovery in sugarcane](image1)

4.2 Sample for Estimation of Cultivation:

![Fig. 4.2 Samples for estimation of cultivation](image2)
4.3 Sample for Estimation of the Harvesting and Transportation Time:

Fig. 4.3 Samples for estimation of Uncertainty & Transportation Time

4.4 Samples for available vehicles and its carrying capacity:

Fig. 4.4 Samples for estimation of Available vehicles and carrying capacity
4.5 Samples for vehicle allocation for transportation:

![Samples for vehicle allocation for transportation](image)

Fig. 4.5 Samples for estimation of vehicles allocation for transportation

B. 4.6 Estimation of Variety v/s Tonnage:

![Estimation of Variety v/s Tonnage](image)

Fig. 4.6 Estimation of Variety v/s Tonnage
4.7 Estimation of Variety v/s Recovery:

![Image of Estimation of Recovery](image1)

**Fig 4.7** Estimation of Variety v/s Recovery

4.8 Estimation of Total lead time v/s Reduced weight of sugar:

![Image of Estimation of Total Lead Time](image2)

**Fig 4.8** Estimation Total lead time v/s reduced weight of sugar
4.9 Estimation of Total lead time v/s reduced weight of sugarcane:

![Image of Estimation of Total Lead Time vs Reduced Weight of Sugarcane]

**Fig. 5.9** Estimation Total lead time v/s reduced weight of sugarcane

4.10 Estimation of Rainfall Vs Recovery:

![Image of Estimation of Rainfall vs Recovery]

**Fig 4.10** Estimation of Rainfall Vs Recovery
4.11 Estimation of Rainfall v/s Tonnage:

![Fig 4.11 Estimation of rainfall Vs tonnage](image)

4.12 Estimation of total crushing v/s Rate given for Harvesting:

![Fig 4.12 Estimation of total crushing v/s Rate given for Harvesting](image)
4.13 Estimation of Harvesting Schedule Programme for Less Sugarcane:

![Estimation of Harvesting Schedule Programme for less sugarcane](image1)

Fig. 4.13 Estimation of Harvesting Schedule Programme for less sugarcane

4.14 Estimation of Harvesting Schedule Programme for Excess Sugarcane:

![Estimation of Harvesting Schedule Programme for excess sugarcane](image2)

Fig. 4.14 Estimation of Harvesting Schedule Programme for excess sugarcane

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