

Manual 3-in-1 Sugarcane Processing Machine

(Juice + Gur + Raw Sugar)

1. Project Introduction

Is project ka maqsad aik **low-cost manual sugarcane processing machine** banana hai jo sirf **Rs. 27,000** ke budget mein tayar ho.

Is machine ka kaam yeh hai ke farmer **ganna (sugarcane)** daalay aur **ek hi machine se** teen mukhtalif products hasil hon:

1. Fresh Sugarcane Juice
2. Gur (Jaggery)
3. Raw / Desi Sugar

Is project ka core idea **farmer aur customer ko direct connect karna** hai taa ke **middleman ka kirdar khatam** ho aur farmer ko apni mehnat ka poora faida milay.

2. Problem Statement

Pakistan mein aksar farmers apna ganna **middleman** ke zariye bechtay hain, jahan:

- Farmer ko **kam price** milta hai
- Customer ko **mehnga product** milta hai
- Processing ka faida beech ke log le jate hain

Small farmers ke paas **mehngi machines** khareedne ka budget nahi hota, jis ki wajah se wo sirf raw ganna bechne par majboor hotay hain.

3. Proposed Solution

Is problem ka solution aik **manual, low-cost aur portable machine** hai jo:

- Bijli ke baghair kaam kare
- Local material se ban sakay
- Asaani se repair ho sakay
- Future mein electric motor ke sath upgrade ho sakay

Yeh machine **rural areas** ke liye specially design ki gayi hai.

4. Product Description

Machine Working (Simple Words mein)

1. Farmer machine mein **ganna daalta** hai
 2. Manual handle ghoomane se ganna crush hota hai
 3. Juice nikal kar **filter tray** mein chala jata hai
 4. Juice ka aik hissa **direct selling** ke liye use hota hai
 5. Juice ko garam kar ke:
 - o Gur tayar kiya jata hai
 - o Ya raw sugar crystallization ke liye use hota hai
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5. Product Specifications

- Fully manual operation
 - No electricity required
 - Mild steel frame
 - Local iron rollers
 - Food-grade trays & filters
 - Portable & lightweight
 - Upgradeable to electrical system
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6. Costing & Pricing Details (PKR)

Estimated Manufacturing Cost

Item	Cost (PKR)
Manual ganna crusher	8,000
Gear / handle system	2,500

Item	Cost (PKR)
Juice tray & filter	2,500
Gur pan & bhatti	8,000
Sugar trays	2,000
Frame & welding	4,000
Total Cost	27,000

Sale Price & Profit

- **Estimated Cost:** Rs. 27,000
 - **Sale Price:** Rs. 35,000
 - **Profit per Unit:** Rs. 8,000
 - **Profit Margin:** ~30%
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7. Production Capacity

- 100–150 kg sugarcane per day
 - Depends on manual labor
 - Suitable for small-scale daily operations
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8. Target Users

- Small farmers
 - Rural youth entrepreneurs
 - Village-level startups
 - NGOs working on rural development
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9. Scalability & Future Plan

Phase 1 – Manual Version

- Very low cost

- Easy adoption
- Proof of concept

Phase 2 – Semi-Manual

- Small motor add-on
- Higher capacity

Phase 3 – Electrical Version

- Full automation
 - Commercial-scale usage
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10. Social & Economic Impact

- Middleman elimination
 - Farmer income increase (30–40%)
 - Affordable products for customers
 - Employment generation in villages
 - Promotion of self-reliance
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11. Conclusion

Yeh project aik **simple, affordable aur impactful solution** hai jo:

- Farmers ko empower karta hai
- Local economy ko strong banata hai
- Innovation ko grass-root level tak le jata hai

“Kam paisay mein zyada faida – directly farmer se customer tak.”
