

Small millet processing machines development and outreach

Experience of DHAN Foundation



Our engagement with small millet processing equipment

1. Developing dehuller prototypes in collaboration with Tamil Nadu Agricultural University (TNAU)
2. Field testing of dehuller prototypes
 - Prototypes developed by TNAU
 - Prototypes developed by Central Institute of Agricultural Engineering, McGill and CFTRI
3. Supporting commercialisation and scaling up by fabricators
 - AVM Engineering and Victor Agro Sales
4. Supporting establishment / revival of SMPUs of different scale

Centrifugal dehuller prototypes developed by TNAU as part of our project



Improved single chamber- Village level- 50kg/h



Double chamber – Microenterprise level- 100 kg/h



Double chamber- SME level- 300 kg/h

Advantages of prototypes developed

- Suitable for all SMs with necessary fine tuning
- Reduces drudgery of women significantly; time involved in dehulling reduced by 50 to 70 %
- 10 % more recovery when compared to abrasive type; Efficiency of the unit is above 80 %
- Offers more nutritious product than existing mills thro' better retention of bran –*better retention of fibre and micronutrients*
- Versatility to meet varying requirements at affordable cost
- Easy to handle with suitable training
- Adaptable to local conditions
 - Can be installed as part of existing mills
 - Village level prototype run with single phase power

Advantages of prototypes developed...



Acceptable small millet processing equipment - Dehuller

1. For village level SMPUs to promote local consumption in the production areas

1. Victor single chamber centrifugal dehuller
2. AVM single chamber and double chamber (for kodo millet) centrifugal dehullers- below 100 kg/ hour capacity
3. CIAE dehuller model

2. For processing on a commercial scale

1. AVM single chamber and double chamber (for kodo millet) centrifugal dehullers- Above 100 kg/ hour capacity
2. Victor double chamber centrifugal dehuller

Acceptable small millet processing equipments...

1. Grader

2. Destoner

- Integral part of small millet processing assembly
- Both are used for pre and post dehulling operations to get the quality output

Victor Single Chamber CF Dehuller



Specifications

Capacity- 40 to 50 kg/ hour

Power- 2 HP single phase

Versatility- Dehulls all small millets; but more suitable for little, foxtail and proso millet

Cost: Rs.52,000 (approximate)

Advantages

Compact, affordable, widely tested

AVM single chamber CF dehuller with grader



Specifications

Capacity- 100 kg/ hour

Power- 2 HP three phase

Versatility- Dehulls all small millets, except kodo millet

Cost: Rs.1,05,000 (Approximately)

Advantages

Sturdy, combined with grader, widely tested

AVM double chamber CF dehusser with grader



Specifications

Capacity- 100 kg/ hour

Power- 6 HP three phase

Designed for kodo millet

Cost: Rs.2,00,000 (Approximately)

Advantages

Sturdy, combined with grader

Victor Double Chamber CF Dehuller



Specifications

Capacity- 100 kg/ hour

Power- 5 HP three phase

Dehulls all small millets

Cost: Rs.1,03,000 (Approx.)

Advantages:

Compact, affordable, widely tested

Victor Grader

Specifications

Capacity- 50 kg/ hour

Power - 2 HP Single phase

Versatility- Suitable for all small millets; with sieve change can be used for other grains too

Cost: Rs. 32,000 (Approx.)

Advantages:

- Can be used in pre and post hulling stages
- Critical to achieve quality output



Victor De-stoner



Specifications

Capacity- 50 kg/ hour

Power- 2HP single phase

Versatility- Suitable for all small millets; with sieve change and other adjustments can be used for other grains too

Cost: Rs.42,000 (Approx.)

Advantages

- Remove immature grain and stones
- Can be used in pre and post hulling stages
- Can be used for segregating seed from grains

AVM De-stoner with Grader

Specifications

Capacity- 100 kg/ hour

Power- 2 HP three phase

Versatility- Suitable for all small millets; with sieve change and other adjustments can be used for other grains too

Cost: Rs. 80,000 (Approximately)

Advantages

- Both destoning and grading operations in one machine
- Remove immature grain and stones
- Can be used in pre and post hulling stages
- Can be used for segregating seed from grains



Perfura De-stoner with Grader

Specifications

Capacity- 100 kg/ hour for small millets; other higher capacities available

Power- 2 HP three phase

Versatility- Suitable for all small millets; with sieve change and other adjustments can be used for other grains too

Cost: Rs. 50,000 (Approx.)

Advantages

- Both destoning and grading operations in one machine
- Remove immature grain and stones
- Can be used in pre and post hulling stages
- Can be used for segregating seed from grains



Other service provided by the fabricators

1. Customised designing is done based on the customer requirements
2. Trial run at the fabricating site
3. Installation support and after sales service provided based on requirement
4. Supply anywhere in India



You are welcome to contact us for further details.

Thank you!

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