CENTRAL FOOD TECHNOLOGICAL RESEARCH INSTITUTE, MYSORE

SMALL SCALE VERSATILE DAL MILL

INTRODUCTION

The production of pulse in India is of the order of 15 million tons per year. Generally pulses are consumed in a variety of food preparation after conversion into dhal viz., de-husked split pulse. It is estimated that more than 75% of the pulse produced is converted into dhal. Dhal milling is probably the third largest of food processing industry after rice and wheat. Milling of pulse is practiced as a small-scale rural operation from ancient times and more recently as a large commercial operation.

Large scale dhal milling industries need huge capital investment, power and raw material to gain economic stability while small scale or tiny scale units produce inferior quality product with lesser yield compared to large scale dhal mills. Although some small-scale units (e.g., mini dhal mill) give satisfactory performance in de-husking pulses, some of the machine parameters, small capacity and (specific) wet pre-milling treatment become limitations for these units. Moreover, such small units could be used only for bolder or easy to mill pulses.

There has been a persistent demand from the entrepreneurs and consumers for a small-scale mill of about 300 kg per hour capacity, which can process all pulses including minor pulses.

The Versatile Dal Mill, developed at this institute, has been designed to process all type of pulses including minor ones. The mill is comparatively free from dust pollution.

DESCRIPTION

The Versatile Dal Mill consists of a new type of pulse de-husker, cleaner cum grader, cyclone separators, dal separator, paddle type mixes, de-stoner, polisher and elevators. All these units are arranged in a streamlined layout.

PROCESS

The process of de-husking is done in two major steps. In the first step, the cleaned and size-graded grains are scarified followed by oil addition and sun/mechanical drying. Then, in the second step, the removal of husk and splitting of the two cotyledons are done by passing the material through versatile pulse de-husker. This de-husker gives 2-4% higher yield of good quality dal than the traditional dal mill.

CAPACITY

The mill can process 200-300kg. Of dal per hour

ESTIMATED PROJECT COST (IN '000)

Land (300M^2)	75.00
Building (100 M^2)	300.00
Equipment cost	600.00
Other expenses	100.00
Working capital	900.00
Total project cost	**1975.00**

Man power 4 nos.
Power is 15 KW

SUPPLIER OF THE MILL

The following firms have taken our design and are manufacturing the mill as per our specifications. For requirement of this small-scale versatile dal mill, you may contact:

1. **A.M.I.ENGINEERING,**
   Station Road, Opp. Veena Cinema, Patna-800 001,
   Fax: 0612-2224274; Mobile: 9973437800; 9431016895; E-mail: ashwani@amienggfarmer.com

2. **BHAVANI MACHINERY MANUFACTURERS,**
   Gumbaz road, Ganjam (P.O), Srirangapatna - 571 438 (KAR)

3. **SRI MURGAN INDUSTRIES,**
   37-B, II Stage, Industrial Suburb, Mysore (KAR)

4. **NALANDA AGRO WORKS**
   Nalanda Nagar, Kurji, Patna - 800 010 (BIH); Ph: 0612-263886[O] 267706 [R]

5. **FARM STEEL PRODUCTS,**
   Industrial Estate, Vijayawada - 520 007 (AP)
   Tel/Fax: 0866 - 553958 (R) 0866 – 472694 E-mail: farmsteel@mailcity.com

6. **FAIRDEAL EQUIPMENTS,**
   # 7, Vishrambag Corporation Housing Society, S.B.Road, Pune - 411 016 (MAH)
   Ph: 020 5652522 Fax: 020-5655469 E-mail: snghatge@vsnl.com

7. **SYSTEM ENGINEERING**
   # 40/1, Opp.Rapsri Industries, Gowdanapalya, Subramanyapura Main Road, Bangalore - 560 061
   Ph: 6696679, 6696533, Fax: 6691088,

8. **TECHNO STEEL PRODUCTS**
   Plot No. 152, IDA, Thumakunta, Hindupur - 515 211 (AP)
   Ph: 08556-21758, 0821-6560380, E-mail: hantekengg@rediffmail.com

9. **A.RICHARD**
   S/o Anthony Patric, No. 1155, 9th main Opp. NIE, Vidyaranyapuram, Mysore - 570 008 (KAR)
   Ph: 484944; Mobile: 9845296946