



FEED PRODUCTS PORTFOLIO

RELIABLE FEEDS PRIVATE LIMITED



AN APPLICATION AND RESEARCH ORIENTED BIOTECH AND FEED GROUP WITH FOCUS ON ENERGY AND FEED INDUSTRY



Reliable Food and Nutrition Industries was founded in 2009 with focus on alternative proteins and renewable energy. It started with enzymes for Ethanol manufacturing, and then moved to fuel and Ethanol byproduct preservation. It was the first company in India to put up a pilot scale plant for Rice DDGS. It now has two manufacturing facilities for Rice Gluten with capacity of 200 MT of Rice Protein/month and 800 MT Rice DDGS/month. It has also setup two trading companies that trades in DDGS through various trading channels. The trading volume is about 1200MT/month.

The company has the ability to supply 2000MT/month of Rice Gluten.



Introduction

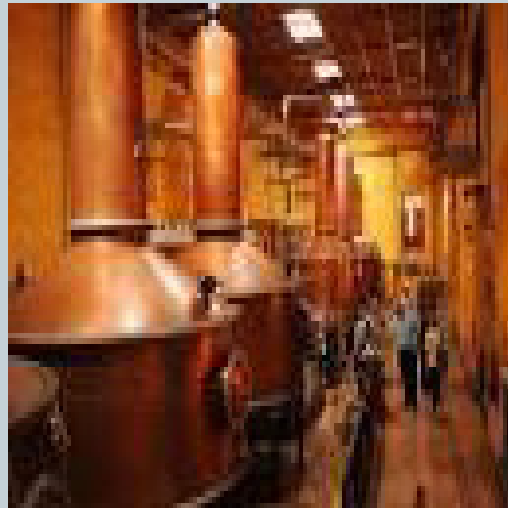
WE ARE DEDICATED TO DEVELOPING ECO-FRIENDLY NOVEL PRODUCTS AND APPLICATIONS THAT HELP REDUCE COSTS AND IMPROVE EFFICIENCIES. WE BOAST OF

- High calibre R&D team with core biotech experience and industry specific knowledge
- cGMP manufacturing capability with strong techno-commercial team
- World class quality standards and processes

Manufacturing Facilities



Rice Protein Plant
Pathankot, Punjab



Enzyme Plant
Bangalore, Karnataka



Rice DDGS Plant
Behror, Rajasthan

Industries Served



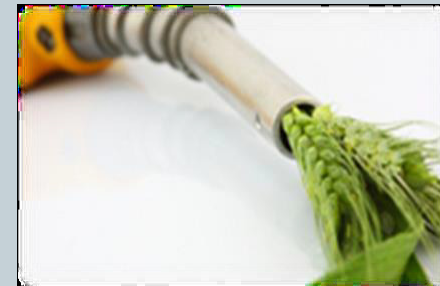
Water Conservation



Feed



Enzymes



Renewable Energy



PRODUCT PORTFOLIO FOR FEED INDUSTRY



- ❖ Rice Protein
- ❖ Rice DDGS (Steam Bundle Dried)
- ❖ Rice DDGS (Air Flash Dried)
- ❖ Rice DDGS (Flash Dried and Enzyme Treated)
- ❖ Various Enzymes

Product Portfolio for Feed Industry

RICE PROTEIN/GLUTEN



Rice Protein, also called Rice Gluten is a product manufactured as a byproduct of glucose manufacturing from broken white rice. In this process, the protein, fiber and oil is separated from starch before the starch is sent for further processing. The wet gluten is air flash dried to a light cream powder

Typical Properties of Rice Protein (if manufactured from high quality white rice)

Protein: 45%
Oil: 6-7%
Fiber: 6-7%
Ash: < 3%
Color: Light Cream
Shape: Powder



Benefits of Rice Protein:

- ✓ Best Quality Rice Protein product available
- ✓ No impurities
- ✓ Higher oil and energy
- ✓ Good Appearance
- ✓ High Digestability

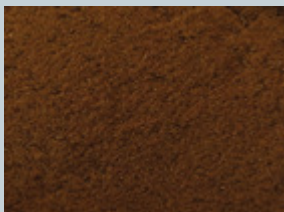
Product Portfolio for Feed Industry

RICE DDGS (STEAM BUNDLE DRIED)

Rice DDGS, is a byproduct of Alcohol/Ethanol manufacturing industry. In this process, the starch in the grain is fermented to Alcohol, and balance material from grain is further sent to dry house, where it is dried using steam in the steam bundle dryer.

Typical Properties of Steam Bundled Dried Rice DDGS

Protein: 45%
Oil: 1-2%
Fiber: 3-5%
Ash: < 3%
Color: Dark Brown
Shape: Powder with Granules



Benefits of Steam Dried Rice DDGS:

- ✓ Cheapest Protein Alternative available in the Rice Gluten family
- ✓ Low toxicity compared to whole grain or Corn DDGS in Indian conditions

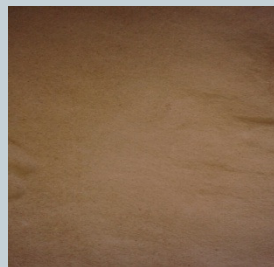
Product Portfolio for Feed Industry

RICE DDGS (AIR FLASH DRIED)

Rice DDGS, is a byproduct of Alcohol/Ethanol manufacturing industry. In this process, the starch in the grain is fermented to Alcohol, and balance material from grain is further sent to dry house, where it is dried using fluidized air in the Flash/Ring dryer. The good thing about this drying method is that material comes in contact with heat for only couple of seconds (flash dried) so there is no protein degradation and product retains it's color.

Typical Properties of Air Flash Dried Rice DDGS

Protein: 45%
Oil: 1-2%
Fiber: 3-5%
Ash: < 3%
Color: DORB Colour
Shape: Powder

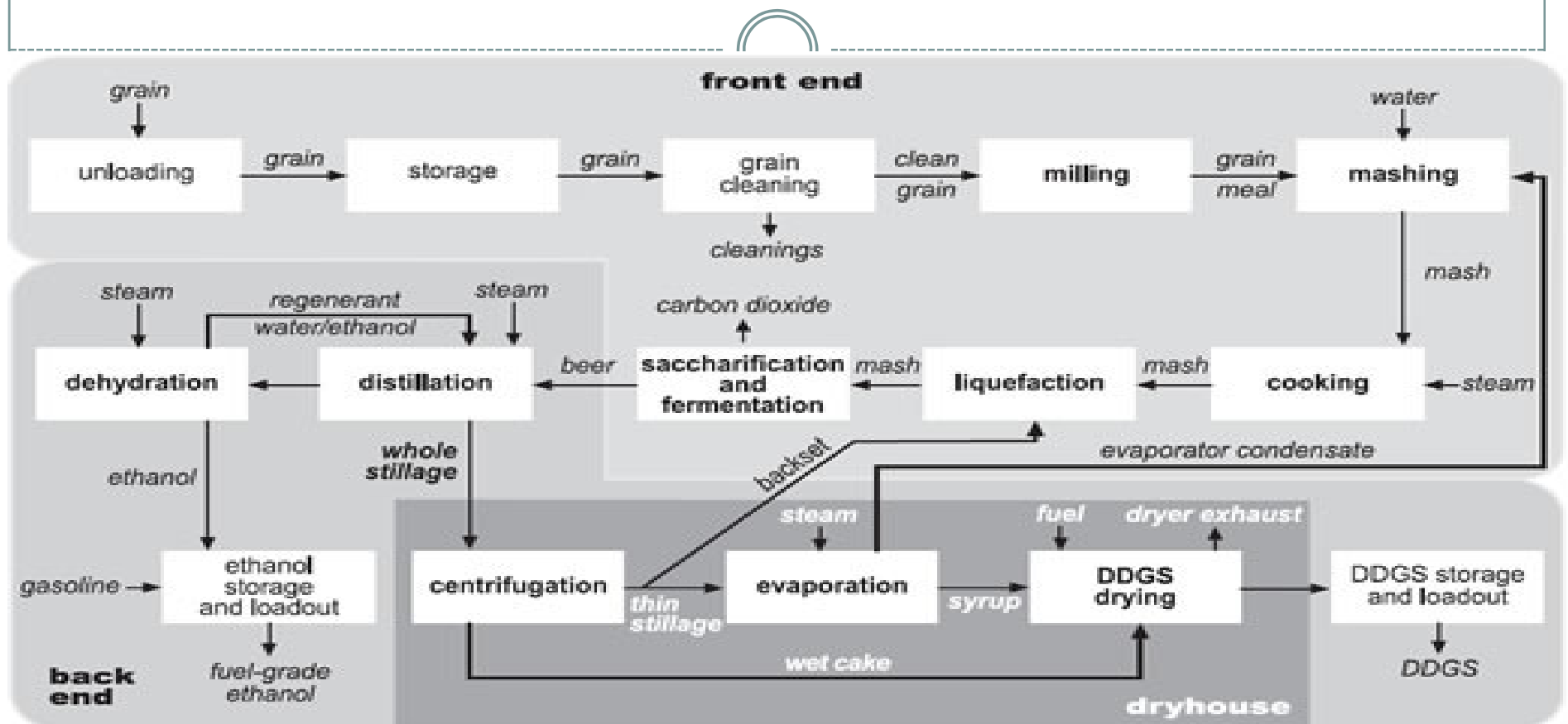


Benefits of Air Flash Dried Rice DDGS:

- ✓ Air Dried DDGS has higher palatability and digestability compared to steam bundle dried Rice DDGS and is similar to Rice Protein
- ✓ Protein degradation is minimal because of less heat exposure
- ✓ Low Toxicity and Better Appearance
- ✓ Best Cost Benefit Ratio

Product Portfolio for Feed Industry

FLOW CHART FOR MANUFACTURING PROCESS OF RICE DDGS





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Thank You