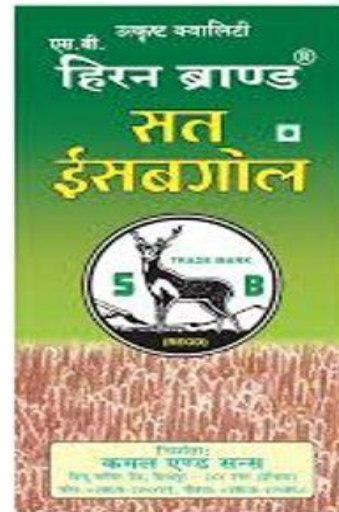


# ISABGOL PROCESSING



**AATMANIRBHAR BHARAT**

**PM Formalisation of Micro Food Processing  
Enterprises Scheme (PM FME Scheme)**

# INTRODUCTION

- ✓ Isabgol (*Plantago ovata*) is an important annual, short stemmed commercial medicinal herb belonging to the family Plantaginaceae.
- ✓ The name is originated from two Sanskrit words, 'asp' and 'ghol' referring horse ear as the seed resembles to horse ear, also refers to the boat shaped seeds.
- ✓ It is known by several names such as ispaghula, sheetabeeja, aspaghul, isofgolu, ashwagolam, aspagol, ashwakarna, bazarqutuna.
- ✓ Isabgol is mainly known for its medicinal properties such as promotes digestive health, relieves constipation, treats diarrhea, lowers cholesterol and blood sugar levels, boots satiety and aids in weight loss.

## ISABGOL INDUSTRY IN INDIA

- ✓ India lead the world market in terms of production and export of isabgol seed and husk to the world market. India's average annual production is 120,000 tonnes, and in 2020-21 there's likely to be negligible carry-forward stock.
- ✓ India produces about 80% of isabgol husk powder in the world market and about 90-95% of India's isabgol production is exported.
- ✓ The major importer of isabgol end products are United Kingdom, USA, China, France and Norway.
- ✓ The total farm area under this wonder herb is 55,000 acres promoting its large scale farming.

# Health Benefits Of Psyllium Husk (Isabgol)

Aids Digestion

Reduce Blood Sugar

Helps Weight Loss

Reduces Blood Pressure

Anti-inflammatory

Detoxifying the Body

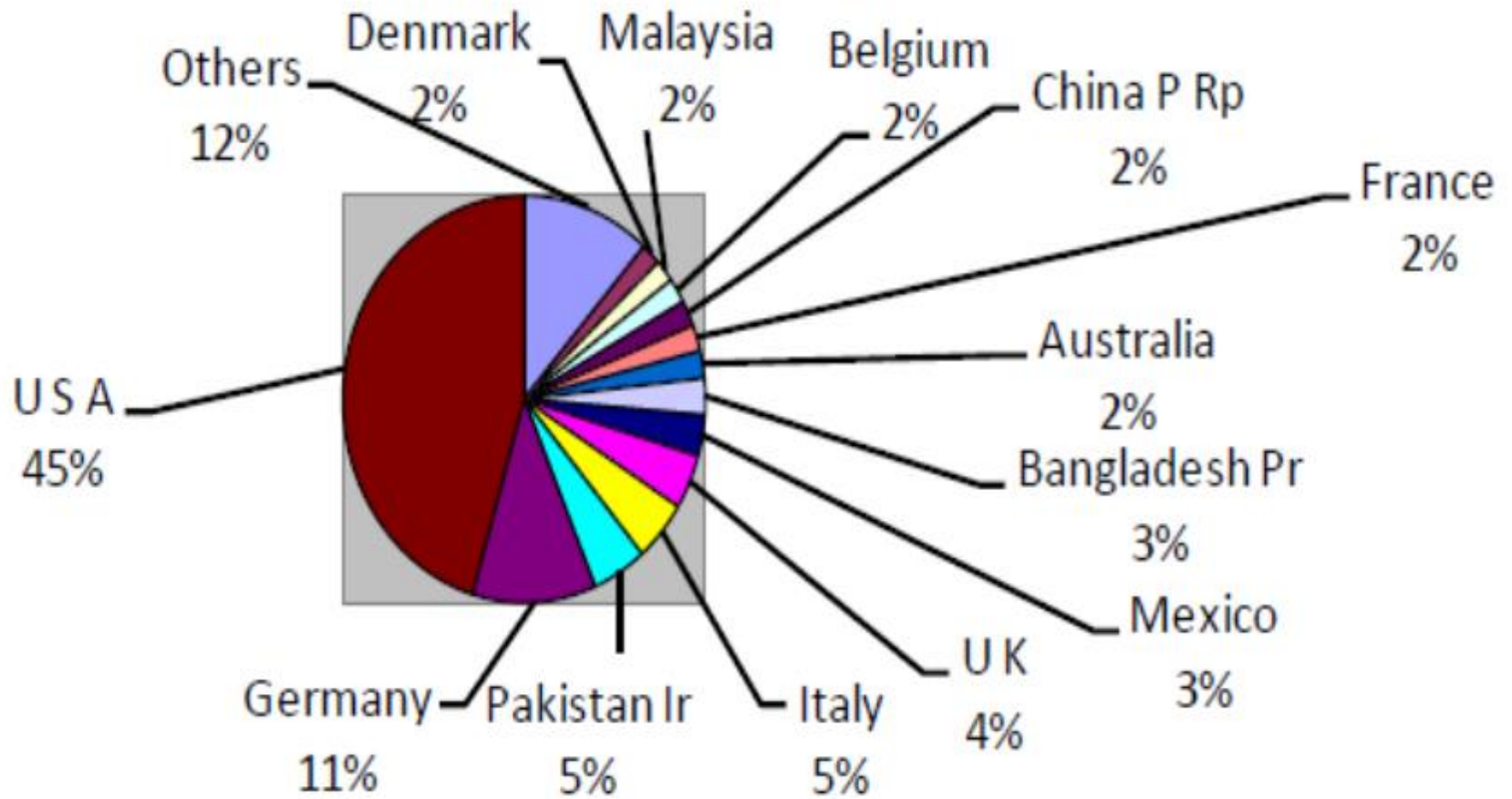
Cholesterol Reduction



## VALUE ADDITION OF ISABGOL

- ✓ Isabgol value added products include Instant vegetable soup mixes (tomato soup and tomato-mushroom soup), composite flour (biscuit and noodles), cookies, cake mixes (chocolate and plain cake), ice-cream stabilizer and dessert mixes isabgol husk, isabgol husk powder and isabgol kha-kha powder.
- ✓ These value added products are cost effective, safe for human consumption and rich in total dietary fiber. The main by-product of isabgol husk is,
  - Lali: Used as cattle feed.
  - Chito: Used as Pig feed.
  - Khakho: It is used to prevent ice slipping
  - Golaisab: Used as cattle feed

# COUNTRYWISE EXPORT OF ISABGOL



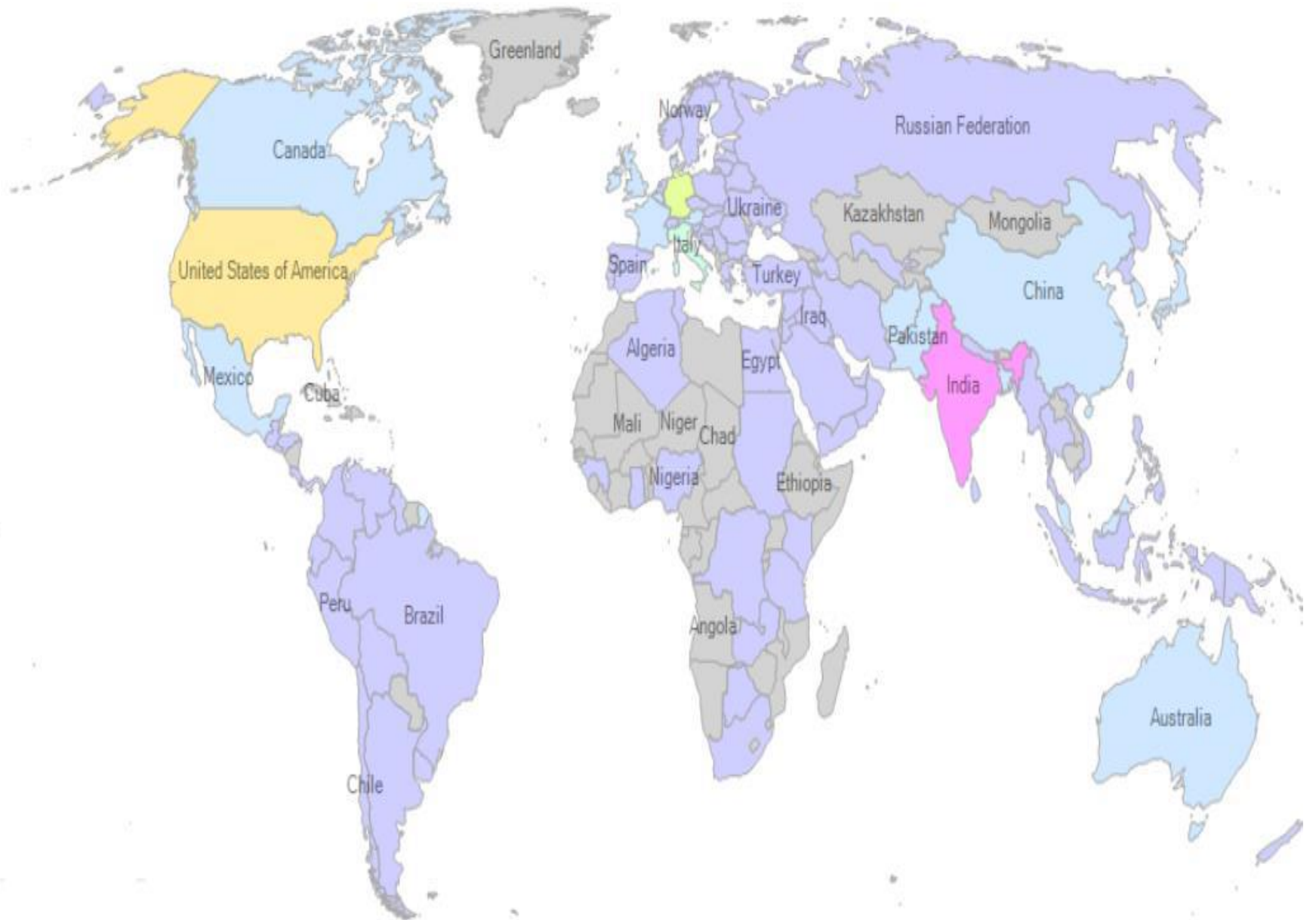
## KEY DETERRENTS TO THE GROWTH OF THE MARKET

- ✓ Highly weather sensitive crop so, unseasonal rains in winter causes damage to the crop and loss to the farmer.
- ✓ Non-availability of mandis and processing hub in Rajasthan.
- ✓ Price is highly volatile and depends upon previous years stock.
- ✓ Lack of research and development facilities.
- ✓ Shattering of seeds under climatic adversity.
- ✓ Prolonged monsoon results in delay in sowing.
- ✓ Unavailability of quality, non-shattering seeds to withstand climatic anomalies.
- ✓ Lack of incentives from the government to take up research and trials for value addition in the crop.

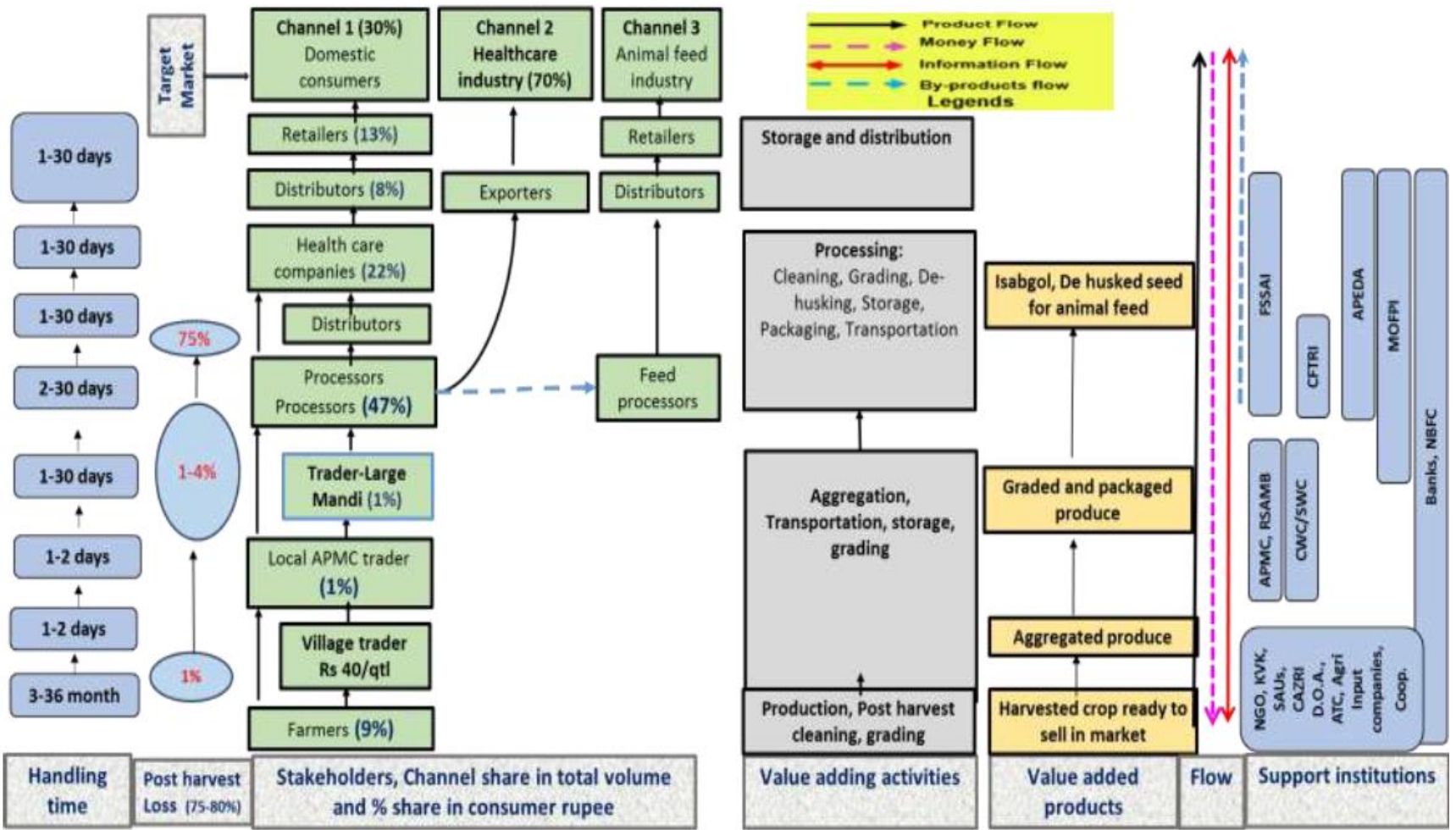
## EXPORT-IMPORT OPPORTUNITIES

- ✓ Isabgol has huge export potential due to its numerous health benefits and use in Unani and Ayurvedic medicines.
- ✓ India holds a monopoly in production and export of isabgol seed and husk in the international market.
- ✓ Isabgol end products are exported to United Kingdom, USA, China, France, Norway, Korea, Japan, Italy and Australia.
- ✓ USA is the chief importer of Isabgol seeds and husk followed by Western Europe, and about 90% of its production is exported to these countries.
- ✓ Last buyer of isabgol is Procter & Gamble from Gujarat, along with other buyers like Dr Morepan, Dabur, Lupin and Glaxo.





# PRE-INTERVENTION VALUE CHAIN CHART OF ISABGOL



## NEED FOR PROCESSING ISABGOL

- ✓ Increase the storage life and produce wide range of products.
- ✓ Value added products include isabgol husk, isabgol husk powder and isabgol kha-kha powder etc. obtain higher returns. Real return in isabgol comes from processed products.
- ✓ Enhance the fibre content of the food.
- ✓ Increase the bulk of the food.
- ✓ Provide consumers with an incentive to make purchase.
- ✓ Essential for uplifting the economy because of its high value and increased market demand.

## NEED FOR PROCESSING ISABGOL

- ✓ Isabgol is economically important medicinal herb used in pharmaceutical industries because of its nutritional and nutraceuticals properties. It has to be processed to; Increase the storage life and produce wide range of products.
- ✓ Value added products include isabgol husk, isabgol husk powder and isabgol kha-kha powder etc. obtain higher returns. Real return in isabgol comes from processed products.
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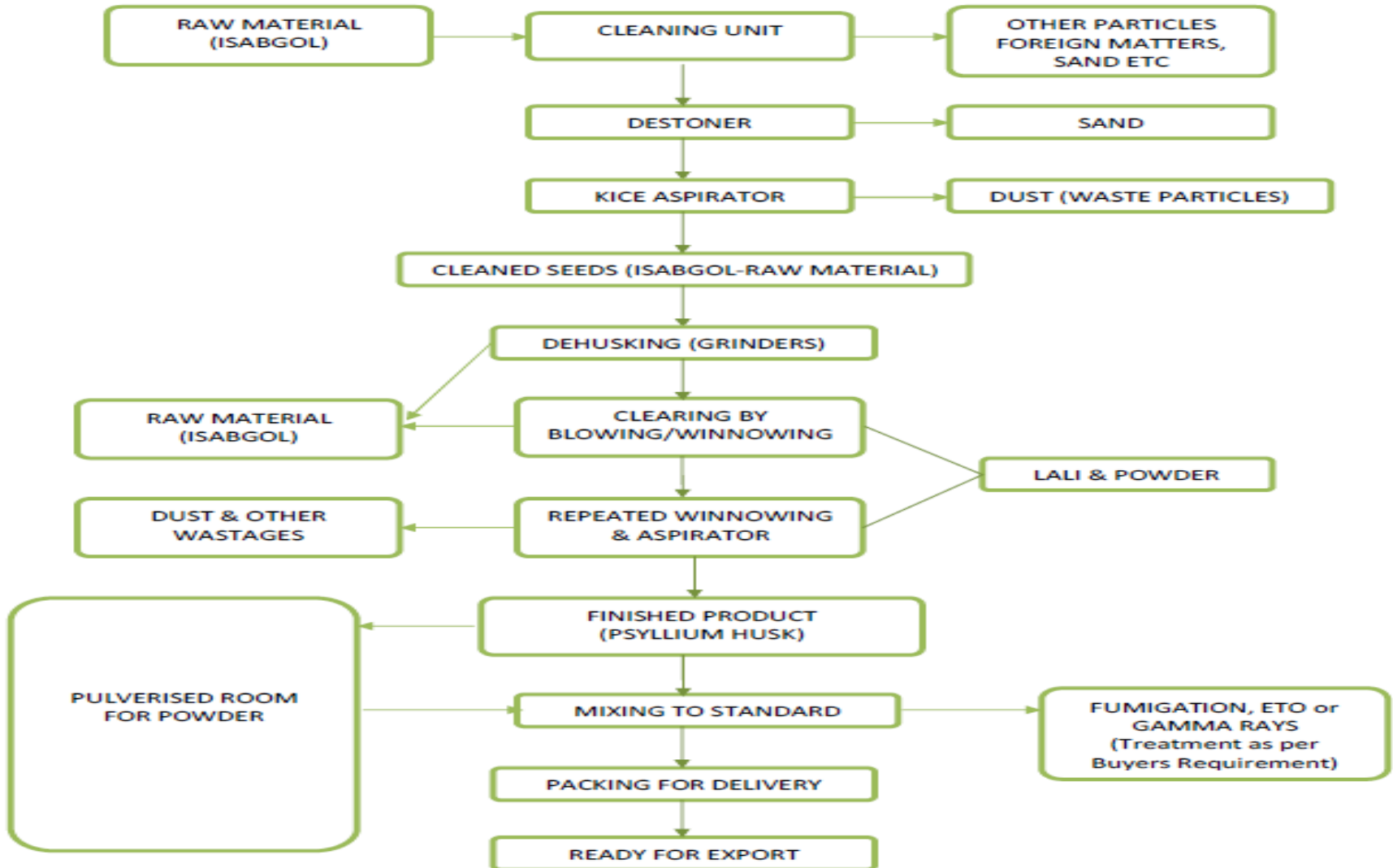
## NUTRITIONAL QUALITY OF ISABGOL SEED

Parameters	Amount
Energy	4.75 kcal/g
Protein	17.40%
Fat	6.70%
Linoleic acid (LA)	40%
Total dietary fibre	24.60%
Insoluble fibre	19.60%
Soluble fibre	5%
Triglycerides	10-20%

# DIFFERENT DEPARTMENTS IN A UNIQUE ISABGOL PROCESSING PLANT

- ✓ 1. Production and Operation: Production planning, Scheduling, managing daily production
- ✓ 2. Quality Assurance and Regulatory: Assure quality of the product, Establish food safety, organizing internal audits, Certifications (FSSAI, FSSC 22000, Agmark, BRC etc.) and updating of food safety manual
- ✓ Research and Development: New Product development
- ✓ 4. Engineering
- 5. Procurement: Engaged in procurement of raw material, packing material, engineering items, vendor development etc.
- 6. Store: Maintaining the inventory and alarm procurement, maintaining FIFO, LIFO etc.
- 7. Logistic and Supply Chain: Deliver products to the consumer at right time

# ISABGOL MANUFACTURING PROCESS FLOW HUSK



# ISABGOL PROCESSING PLANT



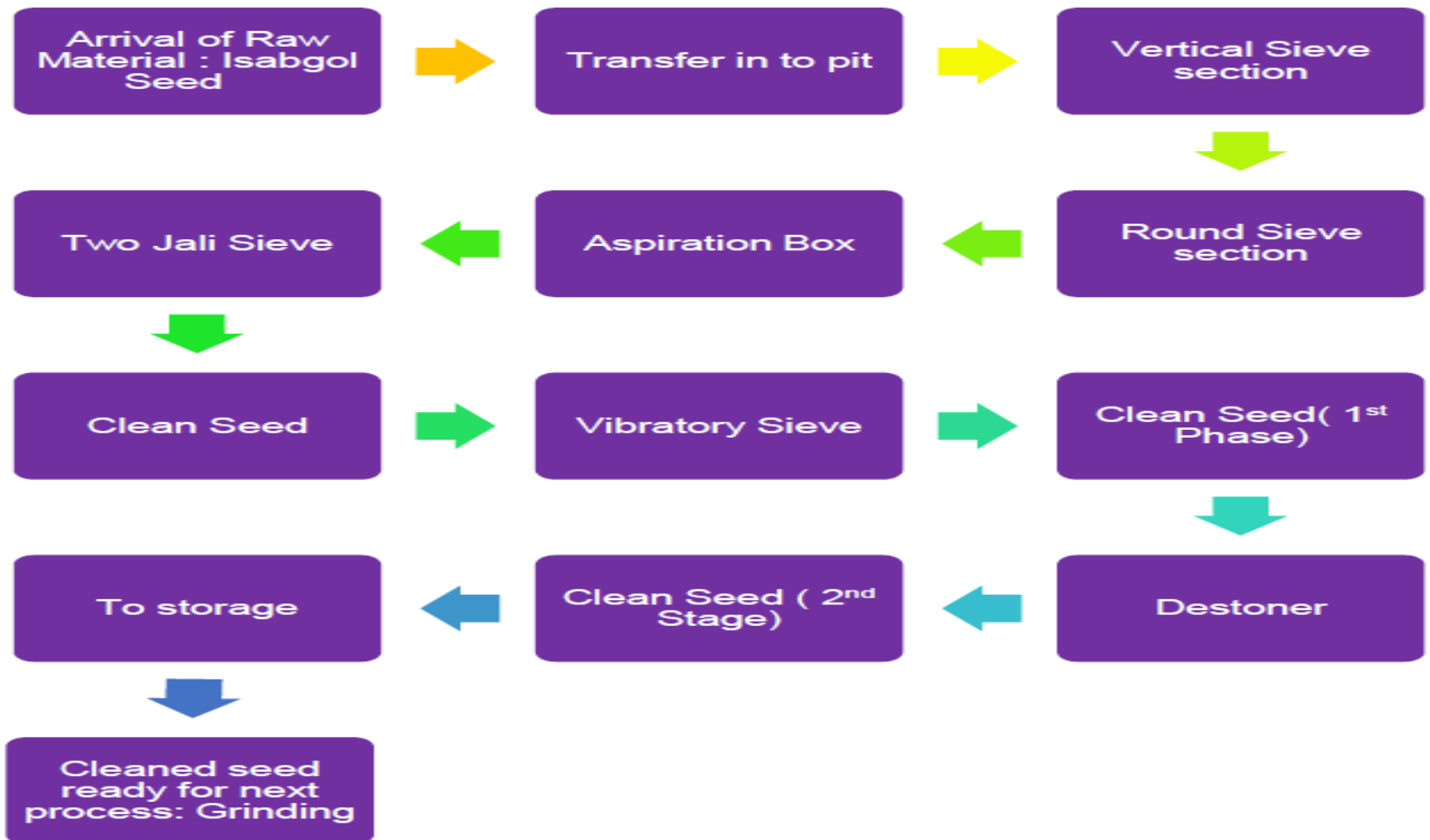


# ISABGOL SEED CLEANING PLANT

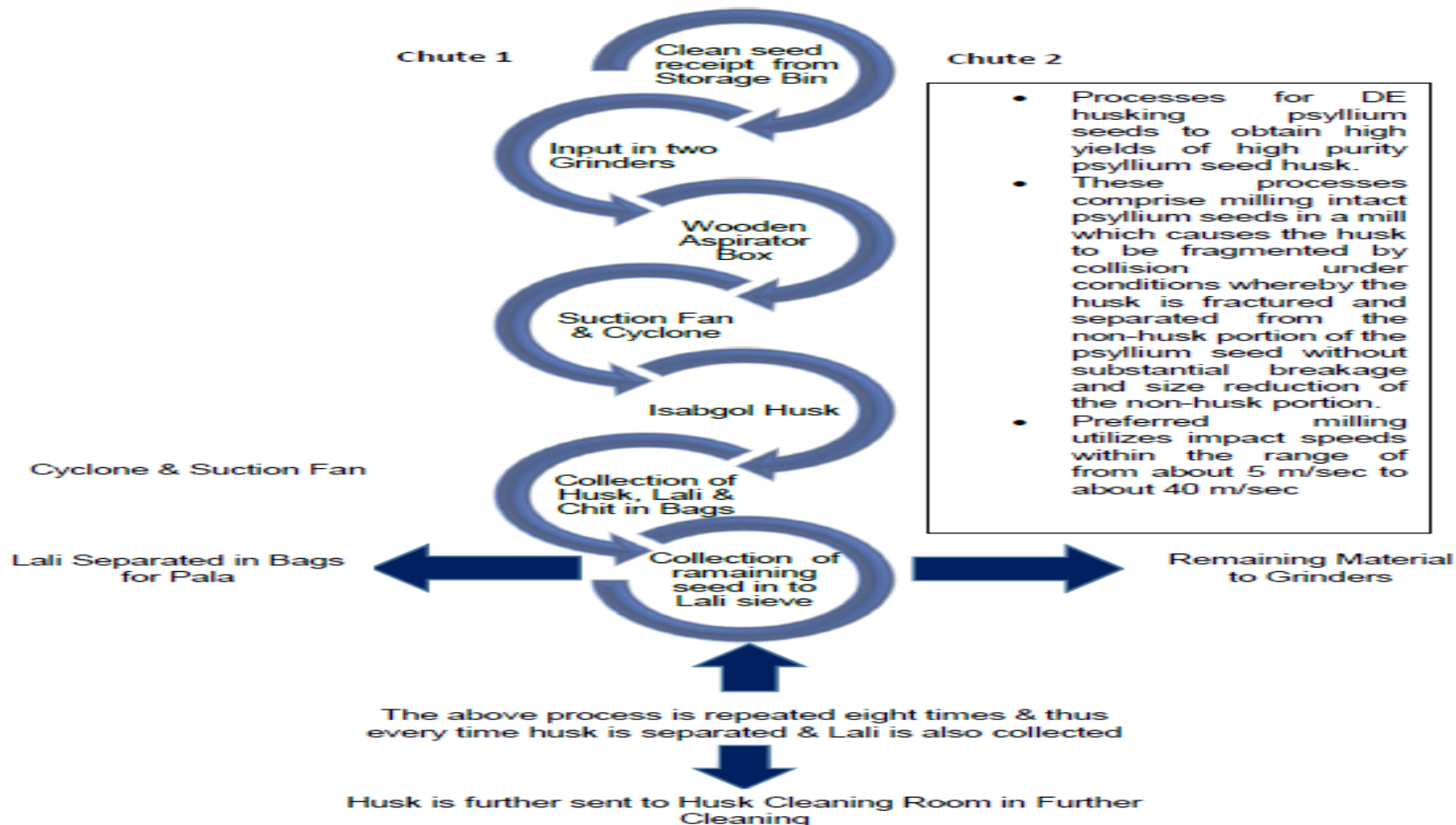


- ✓ The initial step associated with the cycle is cleaning of isabgol seeds.
- ✓ When the isabgol seed is gotten at Raw Material Reception deck it is weighted and then the crude isabgol seeds are cleaned by mechanical cycle through different strides of preparing.
- ✓ The crude isabgol seeds are cleaned by mechanical cycle through different steps of handling where no synthetics are utilized.
- ✓ There is a thorough ten phase in cleaning process of the seeds, which is trailed by de-husking of the seeds.
- ✓ 500 kg of isabgol seeds/hour can be cleaned at all stages.

# ISABGOL SEED CLEANING PROCESS FLOW CHART



# ISABGOL DE-HUSKING/GRINDING PROCESS FLOW CHART

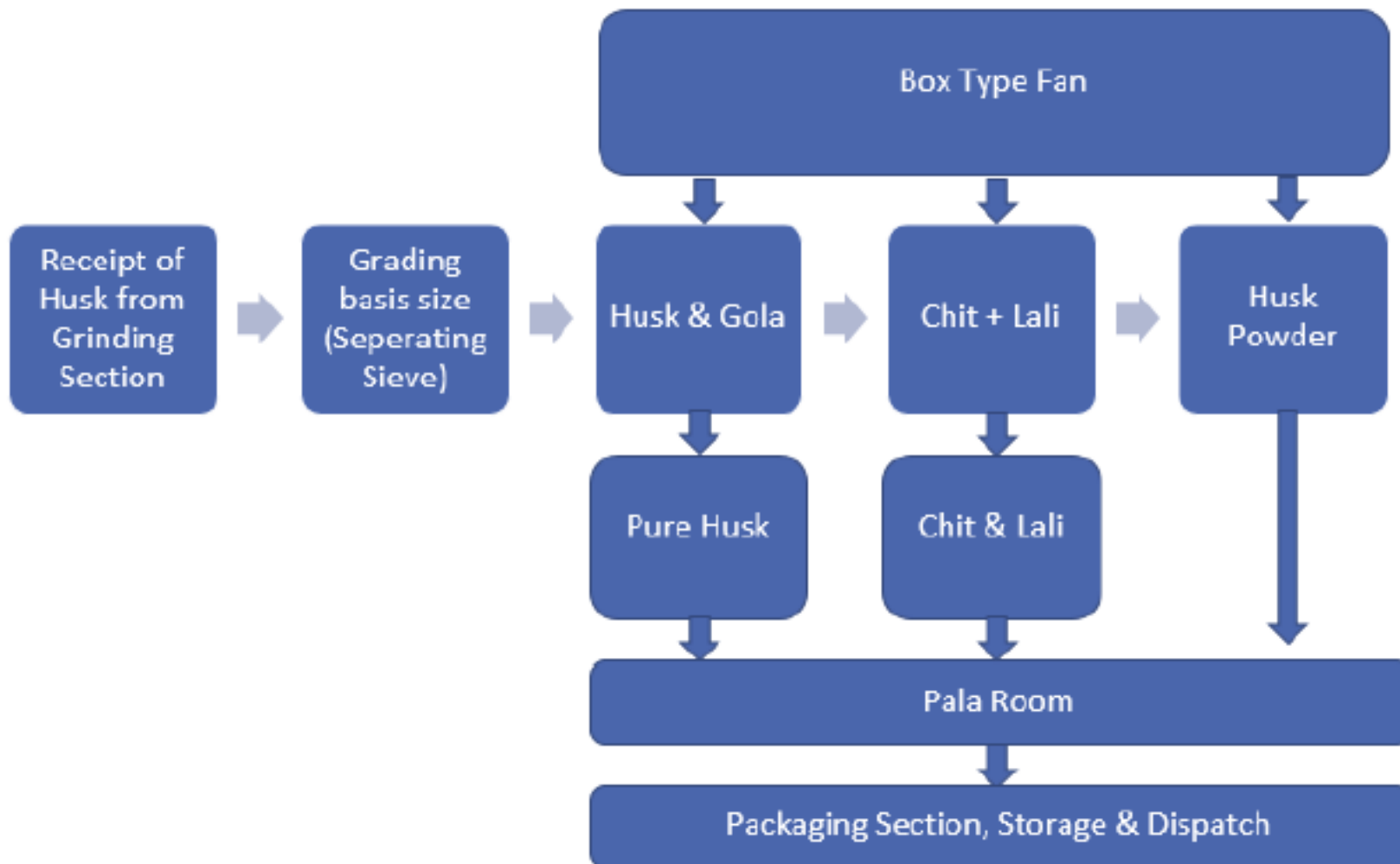


- ✓ Interaction of de-husking isabgol obtains critical return of unadulterated and quality isabgol seed husk.
- ✓ The interaction join preparing flawless/perfect isabgol seeds in a plant which makes the husk to be partitioned by crash under conditions whereby the husk is broken and separated from the non-husk part of the isabgol seed without impressive breakage and size decline of the non-husk divide.
- ✓ De-Husking framework with automatic feeding having organized two plants in corresponding with seventy two grinders during which grinders are at 36" distance across.
- ✓ Magnets are organized in important spots. This unit can create 200 kg of mixture of de-husked materials every hour.

# ISABGOL HUSK POWDER, GRINDING PLANT



# ISABGOL HUSK CLEANING UNIT AND PACKING PROCESS FLOW CHART



# FUMIGATION

- The plant is equipped with a fumigation chamber, which works as per specific guide guidelines from specialists.
- The dose of the fumigant and treatment is done according to guidelines of the importing country and prerequisites of customers.
- Both crude isabgol seeds and the final isabgol items are treated according to the necessity of customers.



# STERILIZATION

- ✓ Treatment of the completed item is done with Methyl Bromide Ethylene Oxide and Gamma Rays.
- ✓ Irradiation are given through agreement offices upon explicit solicit from the customer.

# PM FORMALISATION OF MICRO FOOD PROCESSING ENTERPRISES SCHEME (PMFME)

## TOTAL OUTLAY: **RS.10,000 CRORE**

- **2,00,000** FPOs/SHGs/Cooperatives and working micro enterprises to be directly benefitted
- Expected to generate **9 lakh** skilled and semi-skilled jobs
- To be implemented over a **5-yr period from 2020-21 to 2024-25**
- Cluster approach
- Focus on Perishables.

**Helpline Number**

+91 1302281089



For More details Contact:

National Institute of Food Technology and Entrepreneurship and Management  
Ministry of Food Processing Industries  
Plot No. 97, Sector-56, HSIIDC, Industrial Estate, Kundli, Sonipat, Haryana-131028

Website: <http://www.niftem.ac.in>

Email: [pfmecell@niftem.ac.in](mailto:pfmecell@niftem.ac.in)

Call: 0130-2281089