Detailed Project Report

"DPR on Cattle feed market in North East Region of India"

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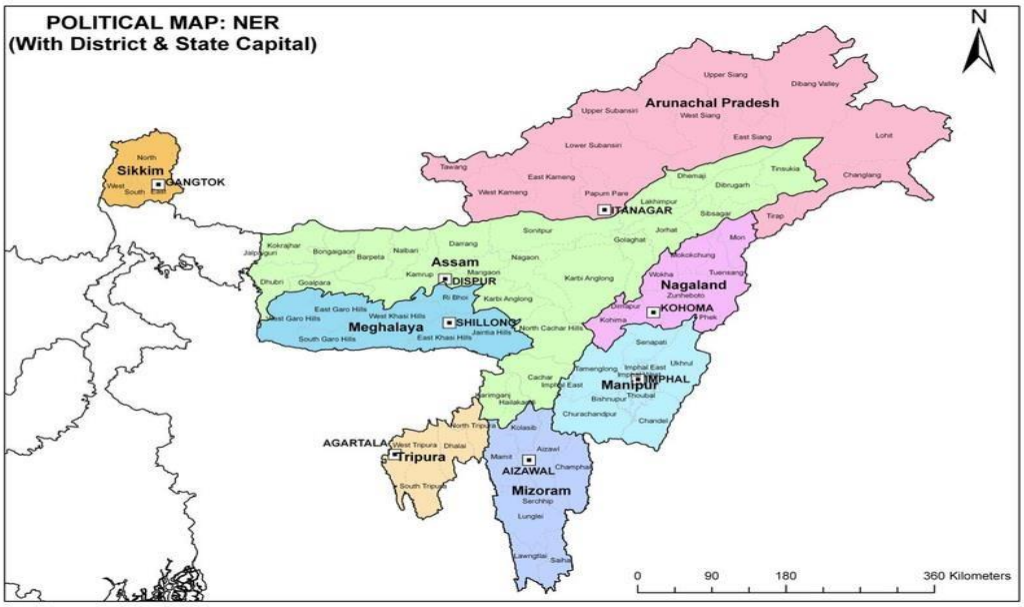
Content

Introduction:

North East India, comprising eight states, is a region characterized by its diverse topography, climatic conditions, and agricultural practices. Cattle farming is a significant agricultural activity in this region, contributing substantially to the livelihoods of many rural communities. Cattle feed plays a crucial role in ensuring the health, productivity, and growth of livestock.



Background:

Feed of Cattle:

Commonly available feed ingredients for dairy animals

Cereal grains	Vegetable protein	Milling by products	Animal fat	Vegetable fat
Maize	Groundnut oil cake	De oiled Rice bran	Lard	Corn oil
Bajra	Soybean meal	Wheat bran	Tallow	Groundnut oil
Sorghum	Sunflower oil cake	Rice Polish		Sunflower oil
Broken Rice	Cotton seed meal	Molasses		
Oats	Coconut meal			
Barley	Linseed meal			
Wheat	Mustard cake			
	Sesame seed meal			

Livestock Feeding System:

According to National Dairy Development Board (NDDB), the livestock feeding systems in India is categorized into six major types:

1. Dry Fodder + Compound Feed + Concentrate Feed
2. Dry Fodder + Green Fodder + Compound Feed + Concentrate Feed
3. Dry Fodder + Homemade Concentrate Mix + Grazing
4. Green Fodder + Compound Feed + Concentrate Feed
5. Silage + Dry Fodder + Concentrate Feed

6. Silage + Compound Feed + Concentrate Feed

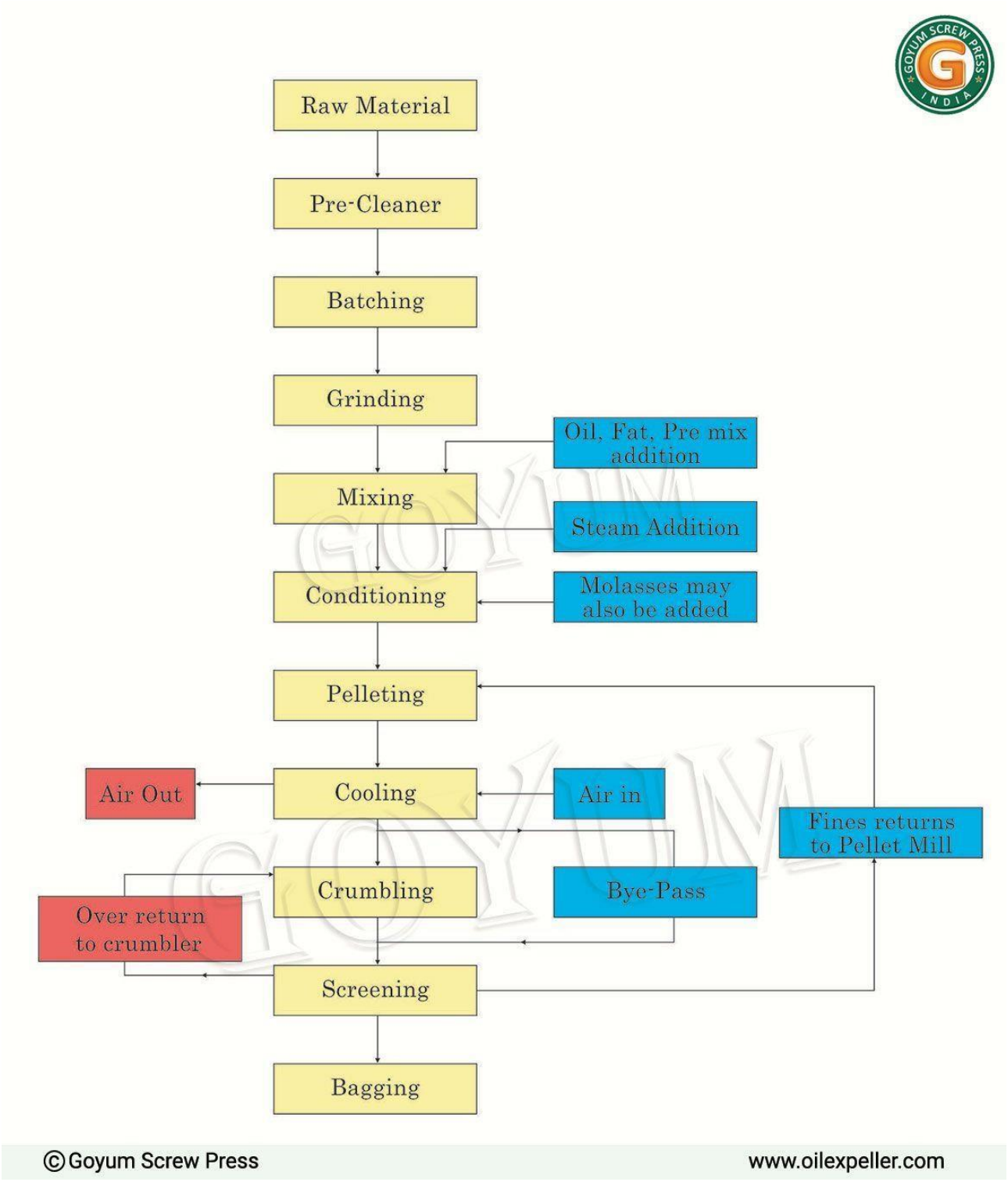
Availability of Raw Material in NER:

The North-Eastern Region of India, which includes Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, and Tripura, has a total cropped area of 5.3 million hectares and a population of approximately 45.6 million people.

- **Maize**: Maize is a widely grown crop in the North East region, particularly in states like Assam, Meghalaya, and Arunachal Pradesh.
- **Rice Bran**: With rice being a staple crop in the region, rice bran is also commonly available.
- **Green Fodder**: Given the favourable climatic conditions, various types of grasses and legumes suitable for fodder are grown across the region.
- **Soybean Meal**: Soybean cultivation is expanding in states like Assam, Tripura, and Manipur, providing a potential source for soybean meal.

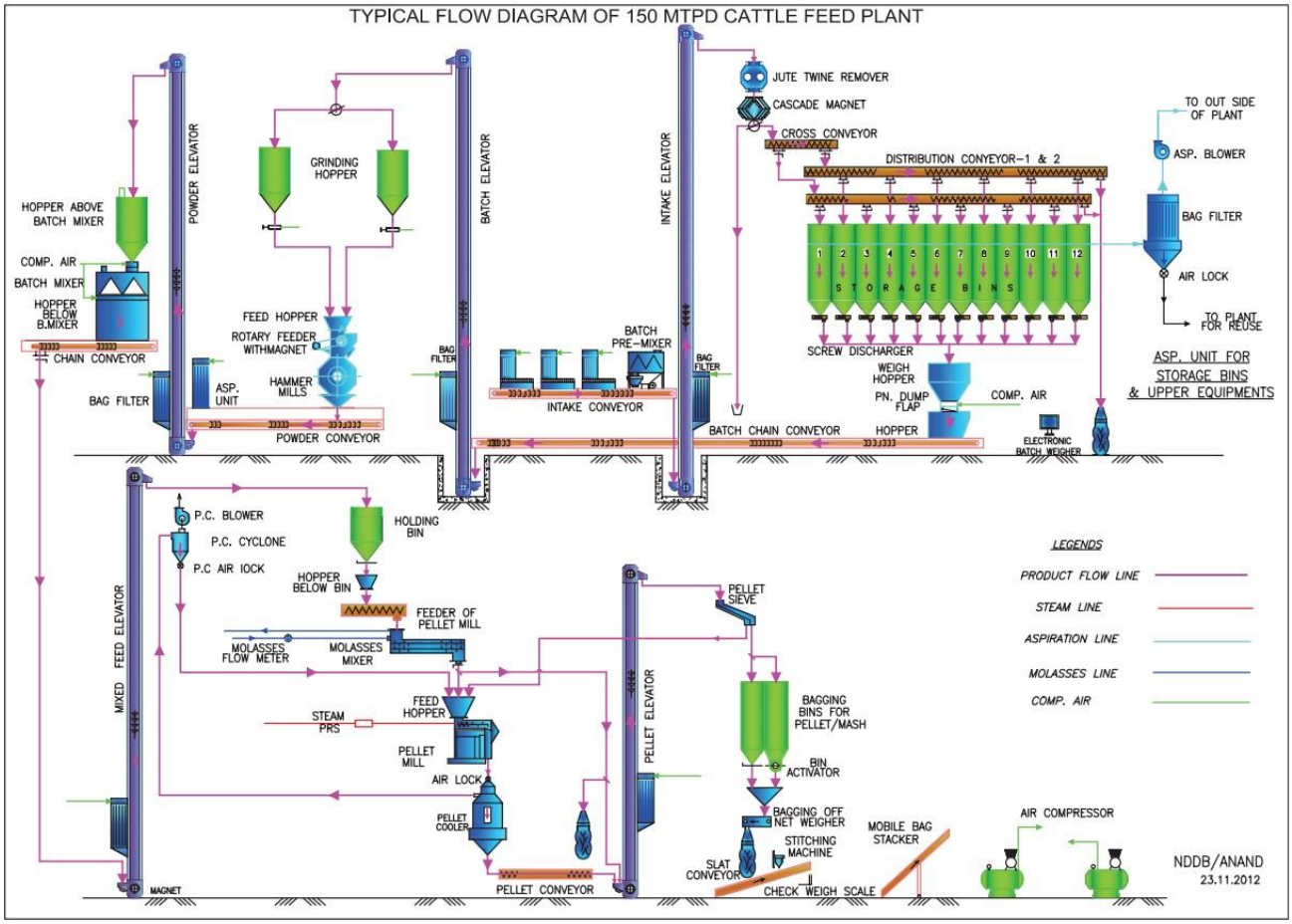
Technical Feasibility:

Process of manufacturing cattle feed:

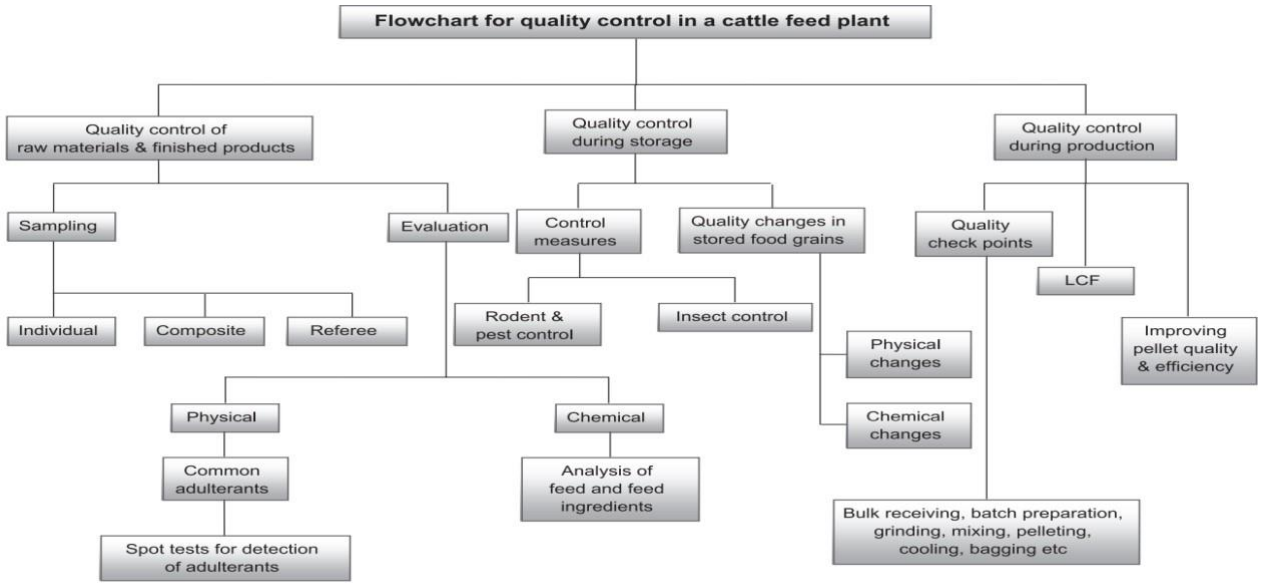


Flow diagram of cattle feed plant:

The proposed plan is to build a 150MTPD central plant in Assam and the distribute the product to the retailers and wholesalers.



Quality control in cattle feed plant:



Marketing Strategy:

Market size:

North East hilly region of India is home to diverse animal genetic resources including cattle, buffalo, sheep, goat, pigs, equines, yaks, mithuns, etc. The total livestock population in the region is around 21 million, out of which cattle and buffaloes constitute about 11.49 million and 0.84 million respectively. As per a report, North-east India has a total demand of 25,000 metric tonnes of feed across Cattle, Aqua, Poultry & Piggeries, which is a huge untapped opportunity for the feed industry. In the recent past Northeast has emerged as preferred region for animal feed industry.

The cattle feed market in North East India was valued at approximately INR 3,500 crores in 2023. It is projected to grow at a CAGR of around 6% during the forecast period (20242029).

Market Characteristics:

1. **Market operators:** The major cattle feed manufacturers in the eight north east states are,
   I. Assam: Delux Feed Products (P) Ltd, Eastern Manufacturing Co, Government of Assam, Manas Products (Protein) Pvt Ltd, West Assam Milk Producers' Cooperative Union Ltd, ProrichAgro
   II. Arunachal Pradesh: Government of Arunachal Pradesh
   III. Manipur: B S Animal Feeds Corporation (P) Ltd, Yumsha Feed Products.
   IV. Meghalaya: Government of Meghalaya, Premier Feed Mill
   V. Mizoram: Govt of Mizoram
   VI. Nagaland: Govt of Nagaland
   VII. Sikkim: Sukhim Ani-Feed Pvt Ltd VIII. Tripura: Government of Tripura

2. # Possible growth rate:
   The CAGR is around 6% during the forecasted period (2024-2029). As there are few players in the market there is a high possible growth rate in the market. If it is possible to tie up with the govt, then big farms can be targeted as a market as well as small cattle owners.

Financial feasibility:

Project Cost: The proposed project cost is around 20cr. The details of the project cost are given bellow,

- **Land Acquisition:**
  Approximately 5-10% of the budget for acquiring land suitable for the plant. This could vary depending on the location and size of the land required. 3cr is allocated for this aspect.
- **Construction and Infrastructure:**
  Building the plant infrastructure, including construction of production facilities, storage units, office buildings, and other necessary structures. This may consume a significant portion of the budget. Around 8 crores for this aspect.
- **Machinery and Equipment:**
  Purchasing machinery and equipment required for the manufacturing process, including mixers, grinders, pellet mills, packaging machines, etc. This is crucial for efficient production. Approximately 5 crores for machinery.
- **Raw Materials and Inventory:**
  Procuring raw materials such as grains, cereals, soybean meal, vitamins, minerals, and additives needed for formulating the feed. Also, allocate funds for maintaining inventory levels. Around 2 crores for this purpose.
- **Labor and Salaries:**
  Budget for hiring skilled and unskilled labourers, technicians, engineers, and administrative staff. Also, allocate funds for their salaries, benefits, and training. This could consume around 1 crore.
- **Utilities and Operating Expenses:**
  Budget for utilities like electricity, water, and fuel, as well as ongoing operational expenses such as maintenance, repairs, and regulatory compliance. Around 1 crore for this aspect.
- **Marketing and Distribution:**
  Funds allocations for marketing activities to promote your brand and products. Also, budget for establishing distribution channels and logistics for delivering the feed to customers. Around 1 crore for this purpose.
- **Contingency Fund:**
  It's wise to keep a contingency fund to cover unforeseen expenses or emergencies during the project implementation. Around 1 crore for this purpose.
- **Research and Development:**
  Investing in research and development to improve product quality, develop new formulations, and stay competitive in the market. Around 0.5 crore for R&D.
- **Legal and Regulatory Expenses:**
  Budget for legal consultations, permits, licenses, and compliance with local regulations and environmental standards. Around 0.5 crore for this aspect.

Land Acquisition	3cr

Construction and Infrastructure	8cr
Machinery and Equipment	5cr
Raw Materials and Inventory	2cr
Labor and Salaries	1cr
Utilities and Operating Expenses	1cr
Marketing and Distribution	1cr
Contingency Fund	1cr
Research and Development	0.5cr
Legal and Regulatory Expenses	0.5cr

Total estimated cost: 23 crores

allocations will be adjusted based on specific requirements, market conditions, and expert advice before proceeding with the project.

Financial analysis:

Assumption, Plant capacity is 150 MTPD

Revenue Projection:

Assuming the plant operates at full capacity and sells all its production:

- Price per MT of cattle feed: Rs 6000
- Total annual revenue = 150 MT * 6000/MT *12 = Rs 10800,000 **Cost Analysis:**

Raw Material Cost:

- Cost of raw materials per MT: Rs 7000
- Total raw material cost = 150 MT * 700/MT = Rs 105000

Labor Cost:

- Monthly labour cost: Rs 500,000
- Annual labour cost = 500,000 * 12 = Rs 6000000 **Overhead Costs:**
- Utilities, maintenance, insurance, etc.: Rs 500,000 **Total Operating Expenses:**
- Total Operating Expenses = Raw Material Cost + Labor Cost + Overhead Costs
- Total Operating Expenses = 105000+6000000+500000= Rs 6605000 **Gross profit:**
- Gross profit= Total Revenue - Total Operating Expenses
- Gross profit= 10800,000 –6605000= 4195000

Break-even analysis:

- Break-even point (in MT) = Total Fixed Costs / (Price per MT - Variable Cost per MT)
- Assuming total Fixed cost = 6000000
- BEP= 6000000/ (6000-700) = 1132 MT

SWOT analysis:

Strength	**Weakness**
• Abundant Raw Materials • Growing Livestock Industry • Low Competition Proximity to Target Market	• Infrastructure Challenges • Skilled Labor Shortage • Seasonal Fluctuations Regulatory Compliance • Power Supply
Opportunity	**Threat**
• High Export Potential Innovate feed formulations, invest in R AND D can lead to competitive • advantages and increased market share. • Partnership with Govt and NGOs Partnering with local farmers to secure steady supply	• Competition from Established Brands • Price Volatility • Political Instability Natural Calamities Pest and Disease Outbreaks