RT 512: Livelihood and Entrepreneurship

Term Project

"Detailed project report on Millet Based food"

(Millet Flakes)

A Project Report Submitted

by

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to the

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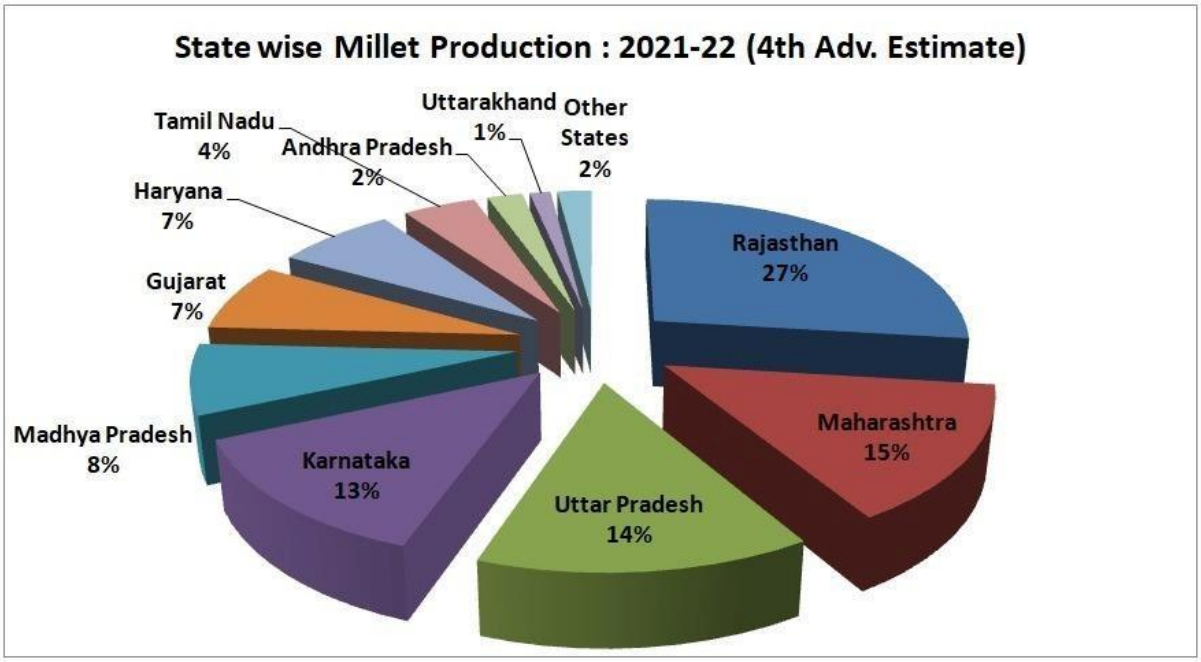
Introduction

Millets are a group of small-seeded grasses that have been cultivated for thousands of years as a staple food in many parts of the world. They are highly nutritious and have a range of health benefits. Millets are also environmentally friendly crops as they require less water and inputs compared to other grains.

There are several different types of millets, including **pearl millet, finger millet, foxtail millet, proso millet, and barnyard millet**. Each type of millet has its unique nutritional profile and culinary uses. Millets are a rich source of vitamins and minerals, including B vitamins, iron, calcium, magnesium, potassium, and zinc. They are also high in fiber and protein, making them an excellent food for vegetarians and vegans.

In terms of culinary uses, millets can be used in a variety of dishes, including porridges, bread, pasta, and snacks. They can also be ground into flour and used in baking. Millet flour is often used as a gluten-free alternative to wheat flour.

Millets have gained popularity in recent years as a healthy and sustainable food option. They are easy to grow and harvest, and their adaptability to different climatic conditions makes them an ideal crop for small farmers. Overall, millets are a nutritious, versatile, and sustainable food that is gaining popularity worldwide



Varieties of Millets

Health benefits and Nutritional information

Calories: 316

Protein: 10 grams

Fat: 3 grams

Carbohydrates: 69 grams

Fiber: 6 grams

Vitamin B1 (thiamine): 26% of the Daily Value (DV)

Vitamin B2 (riboflavin): 7% of the DV

Vitamin B5 (pantothenic acid): 7% of the DV

Vitamin B6: 25% of the DV

Copper: 30%of the DV

Iron: 18% of the DV

Magnesium: 37% of the DV

Phosphorus: 22% of the DV

Potassium: 7% of the DV

Zinc: 14% of the DV

Millet is rich in a variety of nutrients, including B vitamins, which play an essential role in metabolism, neural development, and skin and hair health.

It's also a rich source of magnesium, a mineral that's important for bone formation, heart health, and over 600 biochemical reactions in your body, such as energy production and protein metabolism.

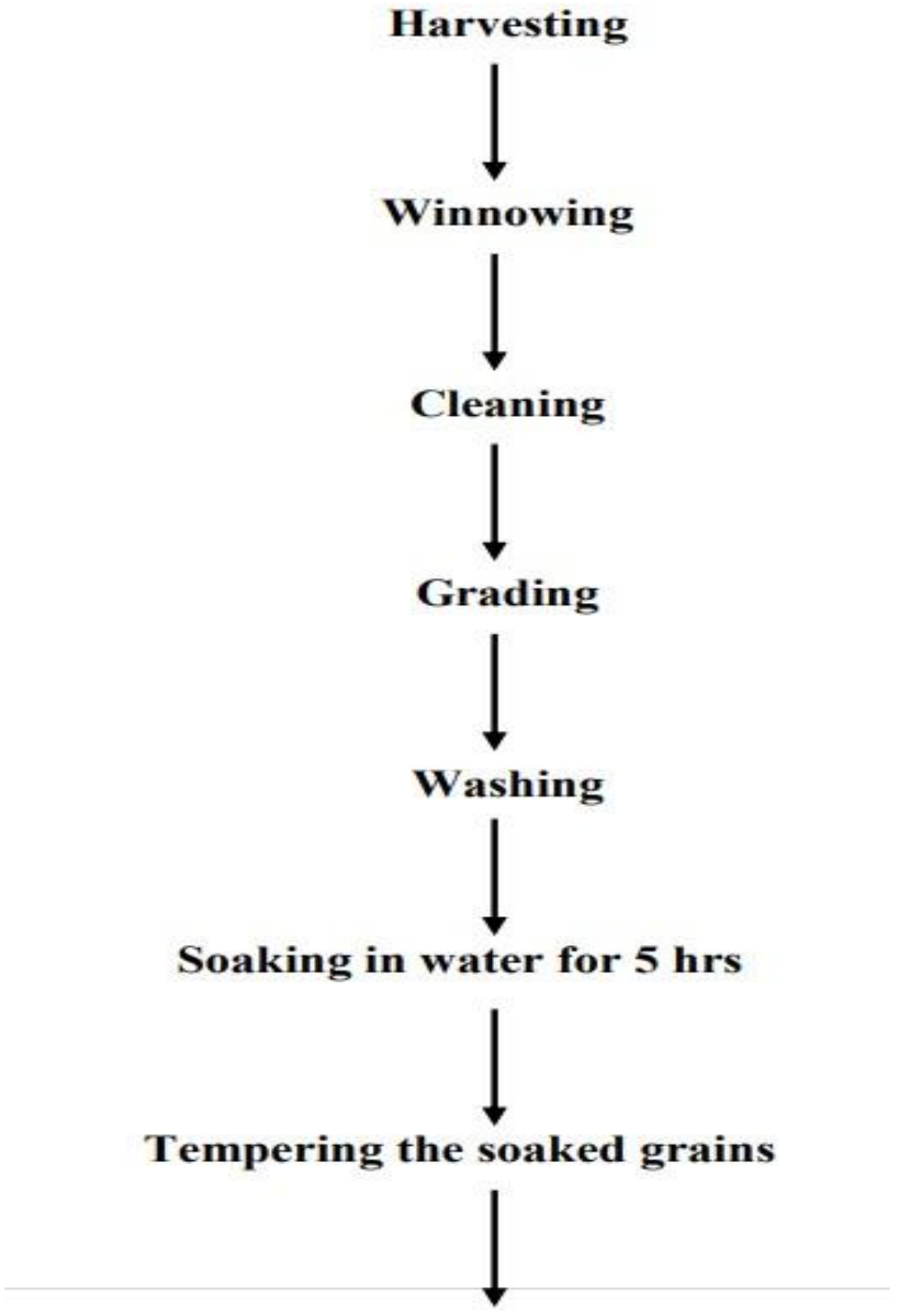
In addition, millet is high in antioxidants like flavonoids, phenolic acids, and tannins. Eating a diet rich in these antioxidants can lower oxidative stress and inflammation in your body.

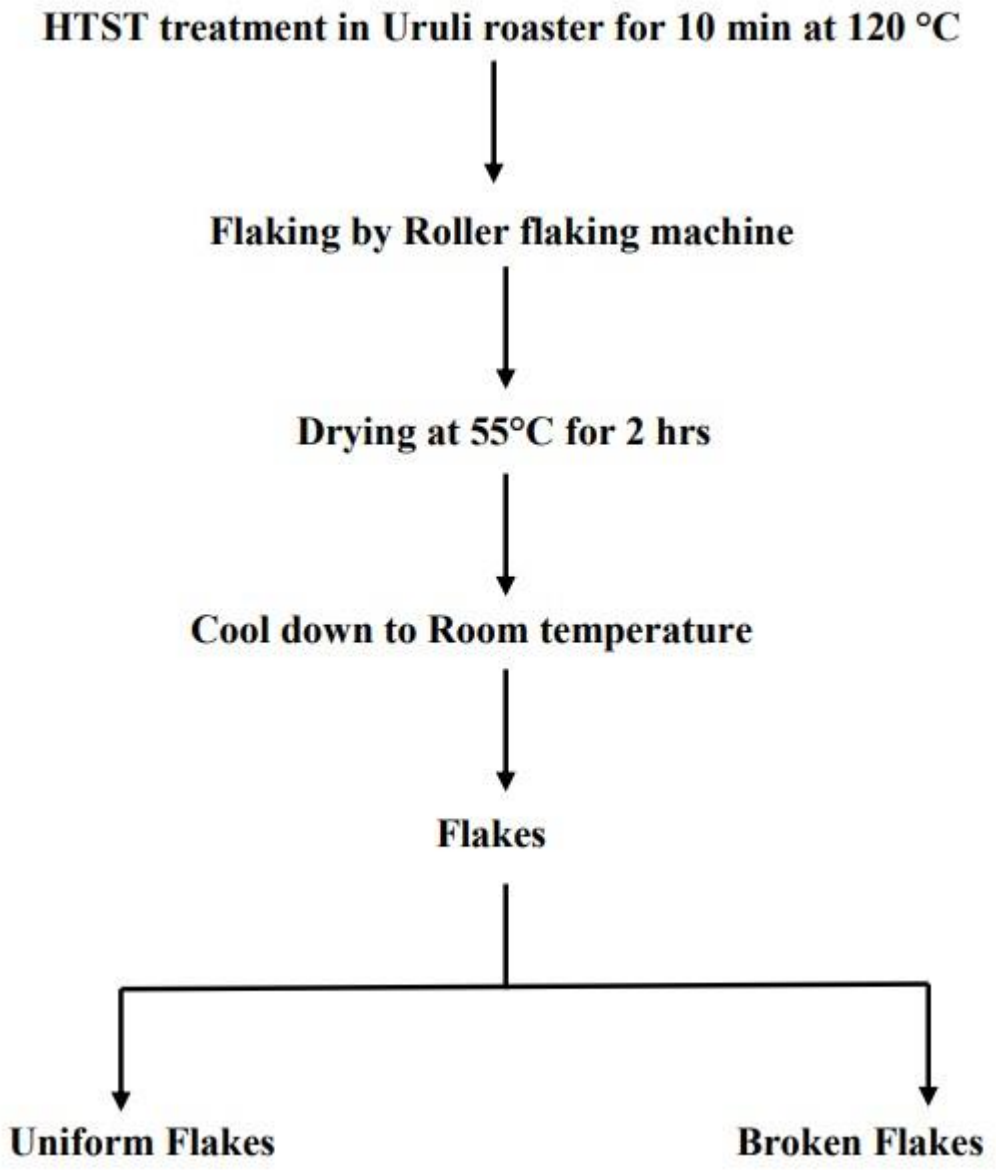
Furthermore, half a cup (96 grams) of millet provides approximately 20% of the recommended daily fiber intake. A diet rich in fiber promotes gut health, stabilizes your blood sugar levels, and aids weight management.

Finally, this grain is a great source of protein. In fact, it provides as much protein as quinoa, a cereal grain renowned for its high protein content.

Manufacturing process of the Millet flakes

Flow chart for Millet flakes:


Harvesting
Winnowing
Cleaning
Grading
Washing
Soaking in water for 5 hrs
Tempering the soaked grains



Marketing Strategy For Millet Flakes

<u>Detailed Project Assumptions</u>:

Fixed Capital Investment:

The fixed capital investment includes the cost of land, building, plant and machinery, and other assets required for the project. The total cost of fixed capital investment is estimated at INR 50 lakhs.

Machinery and Equipment:

The machinery and equipment required for the millet flakes manufacturing unit include a cleaning machine, de-husking machine, milling machine, roasting machine, packaging machine, and weighing machine. The cost of machinery and equipment is estimated at INR 20 lakhs.

Utility and Fittings:

The utility and fittings required for the project include electricity, water supply, steam, and fuel. The cost of utility and fittings is estimated at INR 5 lakhs.

Operative Expenses:

The operative expenses include the cost of raw materials, labor, power, repairs and maintenance, and other expenses. The cost of operative expenses is estimated at INR 10 lakhs per annum.

Manpower Requirement:

The millet flakes manufacturing unit requires a workforce of 10 employees, including a production manager, quality control supervisor, machine operators, and laborers. The total cost of manpower requirement is estimated at INR 8 lakhs per annum.

Cash Flow Analysis:

Year 1

Fixed Capital Investment: INR 50 lakhs

Machinery and Equipment: INR 20 lakhs

Utility and Fittings: INR 5 lakhs

Operative Expenses: INR 10 lakhs

Manpower Requirement: INR 8 lakhs

Total Cost: INR 93 lakhs

Cash Inflow: INR 20 lakhs

Discounted cash inflow: INR 17.86 lakhs (discount rate of 12%)

Cash Outflow: INR 93 lakhs

Discounted cash outflow: INR 83.03 lakhs (discount rate of 12%)

Net cash flow: -INR 65.17 lakhs

Year 2:

Fixed Capital Investment: INR 0 lakhs

Machinery and Equipment: INR 0 lakhs

Utility and Fittings: INR 5 lakhs

Operative Expenses: INR 10 lakhs

Manpower Requirement: INR 8 lakhs

Total Cost: INR 23 lakhs

Cash Inflow: INR 25 lakhs

Discounted cash inflow: INR 20.03 lakhs (discount rate of 12%)

Cash Outflow: INR 23 lakhs

Discounted cash outflow: INR 19.47 lakhs (discount rate of 12%)

Net cash flow: INR 0.56 lakhs

Year 3:

Fixed Capital Investment: INR 0 lakhs

Machinery and Equipment: INR 0 lakhs

Utility and Fittings: INR 5 lakhs

Operative Expenses: INR 10 lakhs

Manpower Requirement: INR 8 lakhs

Total Cost: INR 23 lakhs

Cash Inflow: INR 30 lakhs

Discounted cash inflow: INR 22.05 lakhs (discount rate of 12%)

Cash Outflow: INR 23 lakhs

Discounted cash outflow: INR 17.36 lakhs (discount rate of 12%)

Net cash flow: INR 4.69 lakhs

Year 4:

Fixed Capital Investment: INR 0 lakhs

Machinery and Equipment: INR 0 lakhs

Utility and Fittings: INR 5 lakhs

Operative Expenses: INR 10 lakhs

Manpower Requirement: INR 8 lakhs

Total Cost: INR 23 lakhs

Cash Inflow: INR 35 lakhs

Discounted cash inflow: INR 26.12 lakhs (discount rate of 12%)

Cash Outflow: INR 23 lakhs

Discounted cash outflow: INR 15.47 lakhs (discount rate of 12%)

Net cash flow: INR 10.65 lakhs

Year 5:

Fixed Capital Investment: INR 0 lakhs

Machinery and Equipment: INR 0 lakhs

Utility and Fittings: INR 5 lakhs Operative

Expenses: INR 10 lakhs

Manpower Requirement: INR 8 lakhs

Total Cost: INR 23 lakhs

Cash Inflow: INR 40 lakhs

Discounted cash inflow: INR 29.47 lakhs (discount rate of 12%)

Cash Outflow: INR 23 lakhs

Discounted cash outflow: INR 13.79 lakhs (discount rate of 12%)

Net cash flow: INR 15.68 lakhs

Total discounted cash inflow: INR 116.53 lakhs (sum of the discounted cash inflows for all 5 years)

Total discounted cash outflow: INR 149.13 lakhs (sum of the discounted cash outflows for all 5 years)

Net Present Value (NPV): INR (149.13 lakhs - 116.53 lakhs) = INR 32.60 lakhs

Therefore, the NPV of the project is INR 32.60 lakhs. Since the NPV is positive, the project is considered profitable and worth undertaking.

Breakeven point Calculation

Selling price of millet flakes: Let's assume that the selling price of one kg of millet flakes is Rs. 100.

Cost of raw materials: The cost of raw millet grains is Rs. 60 per kg.

Variable cost per unit: The variable cost per unit is the cost of producing one kg of millet flakes, including the cost of raw materials, labor, and any other variable costs. Let's assume that the variable cost per unit is Rs. 35.

Now, we can calculate the breakeven point for your millet flakes startup as follows:

Total fixed costs = capital investment + machinery and equipment cost + utility and fitting cost + operative expenses + manpower requirement

Total fixed costs = Rs. 50 lakh + Rs. 20 lakh + Rs. 5 lakh + Rs. 10 lakh + Rs. 8 lakh

Total fixed costs = Rs. 93 lakh

Contribution margin per unit = selling price per unit - variable cost per unit

Contribution margin per unit = Rs. 100 - Rs. 35

Contribution margin per unit = Rs. 65

Breakeven point in units = total fixed costs / contribution margin per unit

Breakeven point in units = Rs. 93 lakh / Rs. 65

Breakeven point in units = 143077 units

So, to break even, your millet flakes startup will need to sell 143077 units of millet flakes. Alternatively, you can calculate the breakeven point in terms of revenue as follows:

Breakeven point in revenue = breakeven point in units x selling price per unit

Breakeven point in revenue = 143077 units x Rs. 100

Breakeven point in revenue = Rs. 1.43 crore

Therefore, to break even, your millet flakes startup will need to generate revenue of Rs. 1.43 crore.

Some key players of Millet flakes in India

- Soulfull
- 24 Mantra Organic
- Timbaktu Organic
- True Elements
- Natureland Organics

Future Predictions

The millet flakes market in India has been growing steadily in recent years due to increasing health awareness and demand for natural and organic foods. According to a report by Research and Markets, the millet market in India is expected to grow at a CAGR of 4.8% during the forecast period 2020-2025.

One example of a manufacturing company in India that produces millet flakes is Pristine Organics. Pristine Organics is a Bangalore-based company that specializes in organic and natural food products. The company offers a range of millet-based products, including millet flakes, millet flours, and ready-to-eat meals.

According to the company's financial statements for the fiscal year 2020-21, Pristine Organics reported a revenue of Rs. 26.76 crores (approximately $3.6 million USD) and a net profit of Rs. 0.56 crores (approximately $75,000 USD). While this information does not specifically indicate the profitability of their

millet flakes product line, it does suggest that the company is generating revenue and making a profit from its organic and natural food products

SWOT Analysis

Strengths:

- **Nutritious:** Millet flakes are a rich source of essential nutrients such as fiber, protein, vitamins, and minerals, which make them a healthy option for breakfast.
- **Gluten-free:** Millet flakes are a good alternative for people who are allergic to gluten, as they do not contain gluten.
- **Versatile**: Millet flakes can be used in various recipes, including porridges, bread, muffins, and other baked goods.
- **Sustainable**: Millet is a sustainable crop that requires less water and fertilizer compared to other crops, making it a more eco-friendly option.

Weaknesses:

- **Taste:** Some people may find millet flakes to be bland or less flavorful compared to other grains.
- **Availability:** Millet flakes may not be as readily available as other popular grains, which could limit their availability in some regions.
- **Price:** Millet flakes may be more expensive than other cereal grains, which could limit their appeal to price-sensitive customers**.**

Opportunities:

- **Health trend**: With the growing trend towards healthier eating, millet flakes could be positioned as a nutritious and healthy breakfast option.
- **Plant-based trend**: As more consumers are adopting plant-based diets, millet flakes could be marketed as a plant-based alternative to traditional breakfast options.
- **Sustainability trend:** As consumers become more aware of sustainability issues, millet flakes could be marketed as a sustainable option for breakfast.

Threats:

- **Competition:** Millet flakes face competition from other popular grains such as oats, wheat, and quinoa.
- **Lack of awareness:** Many consumers may not be aware of millet flakes, which could limit their market appeal.

- **Food regulations:** Changes in food regulations or labeling requirements could impact the marketing or production of millet flakes.

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