




«Uzbekekspertiza» JSC

BUSINESS PLAN


*Farming and Exporting Artemia Shrimp in the Republic of
Karakalpakstan*



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Business Plan: Farming and Exporting Artemia Shrimp in the Republic of Karakalpakstan

1. Project Description


1.1. Product Name

- **Artemia Shrimp:** Artemia shrimp are small marine animals rich in nutrients and are widely used as a primary feed in aquaculture and fisheries.



1.2. Project Objective

- **Objective:** To achieve high profits by cultivating high-quality Artemia shrimp and exporting them to international markets. This process includes developing the local economy, creating new jobs, and ensuring ecological sustainability.

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1.3. Project Scale

- **Annual Production Volume:** 500 tons of Artemia shrimp.
- **Cultivation Area:** 50 hectares.

1.4. Project Location

- **Location:** Republic of Karakalpakstan, Uzbekistan. This region has favorable natural resources for Artemia farming.

1.5. Project Timeline


- **Start Time:** In the first year, preparation and construction work will be carried out, and from the second year, the project will transition to full-scale production.

2. Impact of the Presidential Decree No. PF-9 Dated January 12, 2024

The Presidential Decree No. PF-9 focuses on developing agriculture and aquaculture, increasing export potential, and improving socio-economic conditions in regions. Below are the possible impacts of this decree on the Artemia shrimp farming and export project.

2.1. Improving the Investment Environment

- **Incentives and Tax Reliefs:** The decree provides for tax reliefs and other incentives for agricultural and aquaculture projects. This helps reduce financial costs in implementing the Artemia project.
- **State Subsidies:** State subsidies may be allocated for Artemia farming projects within the framework of the decree, providing additional financial support for project development.

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2.2. Infrastructure Development

- **Road Infrastructure:** The decree envisions measures to modernize roads between villages and districts, improving transport logistics. This enhances the possibilities for the efficient transportation of Artemia products.

- **Logistics Centers:** The decree plans to establish new logistics centers and modernize existing warehouses. This improves the processes of collecting, storing, and preparing products for export.

2.3. Ecological Sustainability and Innovations

- **Ecological Protection:** The decree aims to introduce environmentally friendly technologies in agriculture and aquaculture and ensure rational use of natural resources. This helps maintain sustainability in Artemia farming.


- **Innovative Technologies:** Measures to support and implement innovative technologies are outlined. This provides opportunities to optimize Artemia farming processes and increase efficiency.

3. Key Aspects of the Cabinet of Ministers' Resolution No. 327 Dated May 27, 2021

3.1. Conservation of Aquatic Bioresources

- **Protection Measures:** The resolution provides for measures to protect aquatic bioresources, including Artemia shrimp. These measures aim to preserve the natural environment, maintain biological diversity, and ensure sustainable development.

- **Precautionary Principle:** The resolution requires adherence to the precautionary principle for the rational use and preservation of natural resources, which is crucial for areas where Artemia shrimp grow naturally.

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3.2. Use of Water Reservoirs

- **Licensing:** The resolution requires licensing for industrial-scale use of aquatic bioresources. Obtaining appropriate permits is necessary for Artemia shrimp farming.
- **Monitoring and Control:** The resolution envisions the introduction of a system for monitoring and controlling aquatic bioresources. This allows for constant monitoring of Artemia shrimp farming processes.


3.3. Development of Aquaculture

- **Innovations and Technologies:** The resolution supports the introduction of modern technologies and innovations in aquaculture. This creates significant opportunities for introducing new methods and increasing efficiency in Artemia farming.
- **State Support:** The resolution outlines state support measures for aquaculture development, including subsidies, preferential loans, and other financial assistance.

4. Market Analysis

4.1. International Market Demand

- **Demand:** Artemia shrimp have high demand in the global market, especially in aquaculture and fisheries. Artemia is rich in nutrients and serves as essential feed for many types of fish and seafood.
- **Main Markets:** China, India, the USA, South Korea, and European countries are the main importers of Artemia.

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4.2. Local Market

- **Demand:** Interest in Artemia shrimp is increasing in Uzbekistan, particularly in fish farming enterprises.

4.3. Competition

- **International Competitors:** China, the USA, Thailand, and Iran are major competitors in Artemia farming.

- **Local Competitors:** There are few competitors in Artemia farming in Uzbekistan, providing good opportunities for new businesses.

4.4. Opportunities


- **Natural Resources:** Karakalpakstan has natural saline lakes that provide a natural environment for Artemia farming.

- **State Support:** Subsidies and incentives provided by the state in agriculture and aquaculture sectors.

4.5. Threats

- **Climate Change:** Climate changes can affect water salinity levels and Artemia development.

- **Competition:** There is strong competition in the international market, making it important to remain competitive in terms of price and quality.

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5. Production Process and Infrastructure

5.1. Natural Resources and Preparation of Reservoirs

- **Location Selection:** Saline lakes or special reservoirs are selected. The water salinity level in these locations is suitable for Artemia development.
- **Salinity and Water Quality:** Maintaining the water salinity level at 60-300 ppt is required for Artemia farming. Water quality is continuously monitored.

5.2. Artemia Shrimp Cultivation


- **Purchasing and Incubating Shrimp Eggs:** High-quality Artemia eggs are purchased from certified suppliers. The incubation process is carried out in special reservoirs, maintaining the water temperature at 25-30°C.
- **Nurturing:** Special feed materials, including microalgae and other nutrients, are used for feeding Artemia larvae. Optimal development conditions are ensured by regularly monitoring water quality and salinity levels.

5.3. Irrigation System and Reservoir Maintenance

- **Water Circulation:** Pumps and filtration systems are installed to ensure continuous water circulation. This creates a clean and healthy habitat for Artemia.
- **Feeding:** Automated systems are used for preparing and distributing feed materials, optimizing Artemia nurturing.

5.4. Harvesting and Packaging

- **Harvesting:** Artemia are harvested using special equipment once they are fully grown.

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- **Packaging:** Finished products are packaged in special containers and stored in cooling warehouses.

5.5. Storage and Transportation

- **Storage:** Products are stored in special climate-controlled warehouses.

- **Transportation:** Products are delivered to international markets through express transport services, ensuring sufficient conditions for quality and safety.

6. Solutions to Infrastructure and Transport Issues


Infrastructure and transport solutions are crucial in the process of Artemia shrimp farming and export in the Republic of Karakalpakstan. Improving local and international transport infrastructure, introducing cooling and packaging technologies, and developing logistics management systems can help preserve product quality and ensure efficient delivery to international markets.

6.1. Local Transport Infrastructure

6.1.1. Modernizing Local Roads

- **Road Construction and Repair:** Modernize existing roads and construct new ones in the Republic of Karakalpakstan. This facilitates the transportation of products from reservoirs to warehouses and subsequently to export points.

- **Improving Road Quality:** Reconstruct asphalt roads and asphalt dirt roads to facilitate the movement of transport vehicles.

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6.1.2. Local Transport Vehicles

- **Special Transport Vehicles:** Purchase or rent trucks equipped with cooling systems to help preserve product quality during delivery to warehouses.

- **Modular Transport Systems:** Implement special modular transport systems adapted to local conditions, such as re-equipping truck cargo spaces to ensure product safety in various climate conditions.

6.1.3. Establishing Logistics Centers

- **Logistics Centers:** Establish logistics centers in strategic locations to facilitate product collection, storage, and preparation for export.

- **Cooling Warehouses:** Warehouses equipped with cooling systems are necessary to preserve product quality. Local logistics centers must have cooling warehouses.

6.2. International Transport Infrastructure


6.2.1. International Transport Routes

- **High-Quality Transport Routes:** Modernize international transport routes to ensure fast and safe delivery of products.

- **Regional Transport Corridors:** Explore opportunities for exporting products through regional transport corridors. For example, strengthen transport connections between Uzbekistan and neighboring countries.

6.2.2. Rail Transport

- **Rail Infrastructure:** Modernize and develop local rail infrastructure to provide cost-effective delivery of large cargo over long distances.

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- **Adapting Rail Cars:** Equip rail cars with cooling systems to ensure safe transport of Artemia products by rail.

6.3. Product Packaging and Storage

6.3.1. Packaging Technologies

- **Packaging Technologies:** Use special packaging technologies for storing and transporting Artemia products. For example, vacuum packaging and special containers help preserve product quality.

- **Ecological Packaging Materials:** Use recyclable and environmentally friendly packaging materials, considering environmental protection.

6.3.2. Storage Methods


- **Cooling Systems:** Use warehouses and transport vehicles equipped with cooling systems. This extends the storage life of products and helps maintain their quality.

- **Logistics Chain Management:** Implement cold chain management systems to ensure product quality and safety. This includes continuous monitoring of product temperature and humidity.

6.4. Technological Solutions

6.4.1. GPS and Monitoring Systems

- **GPS Systems:** Install GPS systems in transport vehicles to track shipments and determine their arrival time.

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- **Monitoring Systems:** Install monitoring systems to control water quality, temperature, and humidity. These systems help ensure product quality.

6.4.2. Logistics and Transport Management

- **Logistics Software:** Use modern software to automate logistics processes. This helps optimize shipments and reduce costs.

- **Transport Management:** Implement transport management systems for efficient management of transport vehicles and prompt delivery of shipments.

6.5. Collaboration and Partnership

6.5.1. Collaboration with Logistics Companies


- **Local and International Logistics Companies:** Collaborate with local and international logistics companies to improve and expand transport services. This collaboration helps ensure fast and reliable product delivery.

6.5.2. Collaboration with Government and Organizations

- **Collaboration with Government Agencies:** Collaborate with the government and other organizations to implement infrastructure projects. This helps create new roads and logistics centers.

- **Collaboration with International Organizations:** Collaborate with international donor organizations to attract grants and investments for infrastructure development.

The above solutions help provide the necessary infrastructure for the safe and efficient transportation of products. Effective implementation of these processes requires collaboration with government agencies, international organizations, and logistics companies.

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6.5.3. Air Transport

- **Air Transport Opportunities:** Use air transport services through international airports in Samarkand, Nukus, or Tashkent. This expands quick export opportunities.
- **Air Freight Services:** Collaborate with international freight companies to use air freight services. This is important for exporting high-value products.

6.6. Electricity Supply Strategy

6.6.1. Local Electrical Network

- **Connection to the Network:** Connection to existing electrical networks in the area where the project is located.
- **Stability of Electricity Supply:** Ensuring the stability and continuity of the local electricity supply.


6.6.2. Alternative Energy Sources

- **Solar Energy:** Installation of solar panels as an additional energy source. This reduces energy costs and ensures a stable energy supply.
- **Energy-Saving Technologies:** Use of efficient equipment to reduce energy consumption.

6.6.3. Electricity Consumption

1. Irrigation and Water Circulation

- **Pumps:** Pumps that ensure the circulation of water.
- **Electricity Consumption:** Continuous operation of pumps and filtration systems is required.

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2. Cooling Systems

- **Refrigerated Warehouses:** Warehouses equipped with cooling systems to preserve the quality of products.
- **Electricity Consumption:** Cooling systems must operate continuously.

3. Incubation and Care

- **Incubation Equipment:** Electricity is necessary to control the temperature during the incubation of Artemia eggs.
- **Care Equipment:** Electrical power is required for the operation of the equipment.

7. Financial Plan


The financial plan covers the main financial aspects of the Artemia shrimp farming and export project. Below is a detailed breakdown of each cost type:

7.1. Natural Resources and Preparation of Reservoirs

- **Reservoir Preparation and Equipment:**
 - **Costs:** \$250,000 (3,150,000,000 UZS)
 - **Description:** Creating suitable conditions for Artemia farming in saline lakes or special reservoirs, including installing pumps and filtration systems.

7.2. Artemia Eggs and Nurturing

- **Egg Purchases:**
 - **Costs:** \$70,000 (882,000,000 UZS)
 - **Description:** Purchasing high-quality Artemia eggs from suppliers.

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- Nurturing Costs:

- **Costs:** \$80,000 (1,008,000,000 UZS)

- **Description:** Preparing feed materials for Artemia nurturing, controlling water quality, and combating pests.

7.3. Irrigation and Circulation System

- Irrigation and Water Circulation System:

- **Costs:** \$120,000 (1,512,000,000 UZS)

- **Description:** Installing pumps and filtration systems for continuous water circulation and automated control systems.

7.4. Warehouses and Storage System

- Storage and Cooling Warehouses:

- **Costs:** \$150,000 (1,890,000,000 UZS)

- **Description:** Warehouses equipped with cooling systems for storing finished products.

7.5. Marketing and Advertising

- Digital Marketing and Advertising Campaigns:


- **Costs:** \$40,000 (504,000,000 UZS)

- **Description:** Advertising on online platforms and social networks.

- Exhibitions and Trade Events:

- **Costs:** \$30,000 (378,000,000 UZS)

- **Description:** Participating in international exhibitions and trade events.

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7.6. Transportation and Logistics

- Domestic Transport and Logistics:

- **Costs:** \$30,000 (378,000,000 UZS)

- **Description:** Costs of delivering products in the domestic market.

- International Transport and Export:

- **Costs:** \$50,000 (630,000,000 UZS)

- **Description:** Costs of delivering products to international markets, customs, and freight services.

7.7. Wages and Operational Expenses

- Wages:

- **Costs:** \$150,000 (1,890,000,000 UZS)

- **Description:** Annual salaries for employees and workers, including project management, nurturing, technical service, and logistics staff.

- Operational Expenses:


- **Costs:** \$60,000 (756,000,000 UZS)

- **Description:** Costs of energy, technical services, stationery, and office expenses.

Total Costs: \$950,000 (11,970,000,000 UZS)

7.8. Electric Energy Costs Report

Electric energy costs are included in the project's operational expenses and are important for accurately calculating annual income and assessing project profitability. Electric energy is required for the irrigation system, water circulation, cooling systems, pumps,

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and other equipment requiring electrical power. Below are detailed descriptions of these costs.

Cost Type	Amount (USD)	Amount (UZS)
Pumps and Circulation System	\$20,000	252,000,000 UZS
Cooling Systems	\$15,000	189,000,000 UZS
Incubation and Nurturing	\$10,000	126,000,000 UZS
Lighting and General Needs	\$5,000	63,000,000 UZS
Total Electric Energy Costs	\$50,000	630,000,000 UZS

Electric energy costs are crucial for the Artemia shrimp farming and export project in the Republic of Karakalpakstan.

7.9. Income

1. From Artemia Exports:

- **Export Price per Kilogram:** $\$15.00 \times 12,600 \text{ UZS/USD} = 189,000 \text{ UZS}$
- **Annual Production Volume:** 500,000 kilograms
- **Annual Income:** $500,000 \text{ kg} \times 189,000 \text{ UZS/kg} = 94,500,000,000 \text{ UZS}$


2. Result:

- **Project Payback Period:** The project is expected to break even in approximately 1 year, allowing for cost recovery and profit generation.

8. Marketing Strategy

1. Entering the International Market:

- Participate in international trade exhibitions and attract new customers.
- Register products on global trade platforms (Amazon, Alibaba).
- Expand the network of sales agents and distributors.

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2. Brand Creation and Development:

- **Brand Name:** "UzArtemia" - High-quality Artemia shrimp from Uzbekistan.
- **Brand Image:** High-quality, natural, eco-friendly, and nutrient-rich products.
- **Quality Assurance:** Ensure products meet international quality standards.

3. Advertising and Promotion:

- **Digital Marketing:** Conduct advertising campaigns on online platforms and social networks.
- **Product Certifications:** Obtain international certificates for quality and eco-friendliness.
- **Exhibitions and Trade Events:** Promote products internationally.

9. Risk Management

1. Natural Risks:


- Climate change and natural disasters. Implement insurance and modern technologies for safety measures.
- Water resource shortages. Introduce water-saving technologies.

2. Market Risks:

- Price fluctuations and competition. Establish long-term contracts and regularly conduct market analyses.

3. Technical Risks:

- Equipment and technology failures. Provide preventive maintenance and create spare parts reserves.

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4. Legal and Financial Risks:

- Changes in export and import regulations. Obtain legal advice and monitor legislative changes.
- Currency exchange rate fluctuations. Implement short- and long-term currency management strategies.

10. Detailed Description of the Production Process

1. Incubation and Nurturing of Eggs:

- **Egg Selection:** Choose high-quality and disease-resistant Artemia eggs.
- **Incubation:** Eggs are incubated in warm, saline water for 24-48 hours.

2. Larval Nurturing:


- **Feeding:** Larvae are regularly fed with nutrient-rich materials.
- **Water Quality Control:** Temperature, pH, and salinity levels are constantly monitored.

3. Harvesting and Packaging:

- **Harvesting:** Artemia are harvested once they are fully grown.
- **Packaging:** Finished products are packaged in special containers and stored in cooling warehouses.

4. Storage and Transportation:

- **Storage:** Products are stored in special climate-controlled warehouses.
- **Transportation:** Products are delivered to international markets through express transport services.

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11. Human Resources and Management

1. Workers:

- **Technical Staff:** Skilled technicians for reservoir and Artemia nurturing.
- **Production Workers:** Workers involved in incubation, nurturing, harvesting, and packaging.
- **Management Staff:** Project managers, quality control specialists, and logistics personnel.

2. Management System:

- **Project Planning:** Efficient management of the production process and optimal use of resources.
- **Quality Control:** Ensure product quality and compliance with international standards.
- **Logistics:** Safe and efficient transport, storage, and delivery of products.

3. Training and Development:

- **Staff Training:** Organize training on modern aquaculture technologies and management.
- **Motivation System:** Implement incentive systems for workers (rewards, bonuses).

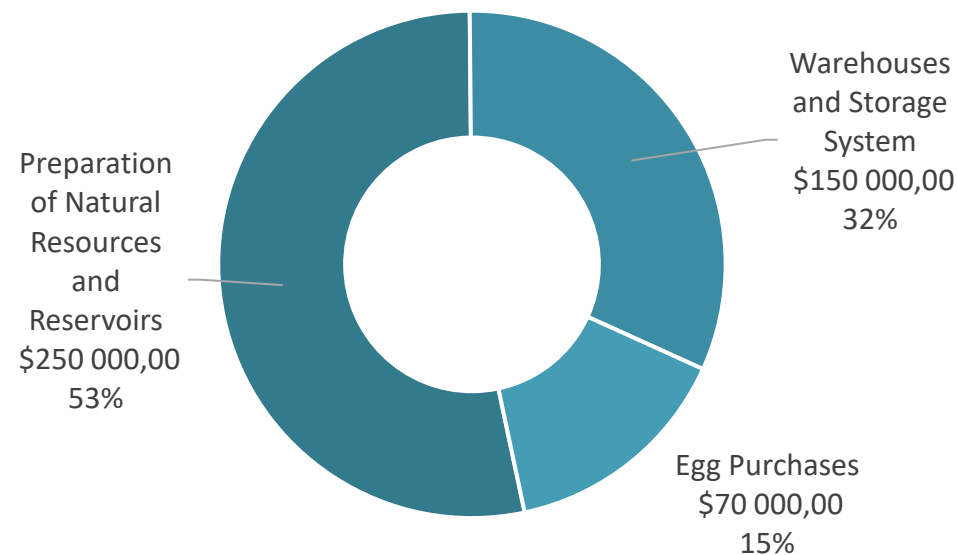
Conclusion

The Artemia shrimp farming and export project in the Republic of Karakalpakstan has the potential to be a highly profitable and efficient business. By implementing high-quality products and effective marketing strategies, the project can secure its position in the global market. This business plan aims to achieve high profits and create new job opportunities. The project's success depends on the use of modern technologies, accurate assessment of market demands, and effective marketing strategies.

Appendix. Financial Indicators and Cash Flow Chart

Composition of Investments (in US dollars)

Total Investments	470 000,00
Preparation of Natural Resources and Reservoirs	250 000,00
Warehouses and Storage System	150 000,00
Egg Purchases	70 000,00





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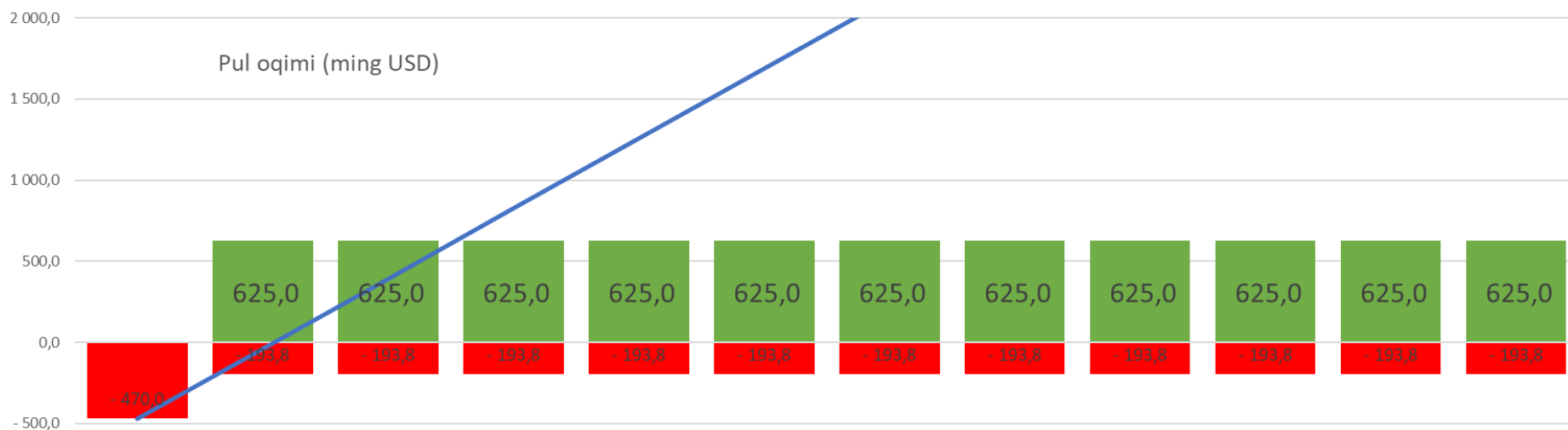
Financial Indicators (in US Dollars)

Total for 12 Months	
Total Investments	470 000,00
Total Cost of Goods Sold	2 325 175,00
Salaries	150 000,00
Irrigation and Circulation	120 000,00
Nurturing expenses	80 000,00
Marketing and Advertising	70 000,00
Operational Expenses	60 000,00
International Transport and Export	50 000,00
Domestic Transport and Logistics	30 000,00
Tax Payments	1 765 175,00
Total Expenses	2 795 175,00
Total Revenue	7 500 000,00
Internal Rate of Return	High
Payback Period (months)	3 months



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	1 oy	2 oy	3 oy	4 oy	5 oy	6 oy	7 oy	8 oy	9 oy	10 oy	11 oy	12 oy
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— Jami pul oqimi	-470,0	-38,8	392,5	823,7	1 254,9	1 686,2	2 117,4	2 548,6	2 979,9	3 411,1	3 842,4	4 273,6