



DETAILED PROJECT REPORT

FOOD DEHYDRATION UNIT



By



2023



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1. OVERVIEW OF THE JLG MEMBERS

Name of the JLG:

Number of the members.

Name of Gram Panchayat/Taluk:

Name of the District:

Account details of JLG:

Details of JLG members with Hierarchy;

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

KYC:

Aadhar/PAN/Photo:



2. OBJECTIVES OF SVSY

Under Yuva Niti 2022, the new Swami Vivekananda Yuva Shakti Yojana is proposed on the following grounds to achieve holistic development of 2.1 crore youth of the state and to bring about constructive social change by the youth in keeping with the India@2047 vision of the Hon'ble Prime Minister.

The current scenario of the state on various parameters is as follows:

- i. Political Representation:** Out of total 1,01,308 members in rural local bodies, 12,411 (12.25 per cent) youths and 360 youths (5.36 per cent) out of 6713 municipal councillors are political representatives.
- ii. Education:** Out of a total of 2.1 crore youth, 21.55 lakh (10.37 per cent) students are in high school, 11.75 lakh (5.65 per cent), 6.45 lakh (3.10 per cent) in general degree colleges, 1.51 lakh (2.72 per cent), 1.11 lakh in polytechnics. (0.53 per cent), 0.74 lakh (0.36 per cent) The total number of students studying in medical courses is 43.12 lakh, which is per cent of the total youth. 21 percent will be. Remaining 157.88 lakh youth have below 10th standard education.
- iii. Employment:** According to the National Skill Development Corporation report, out of the total 2.1 crore youth in the state, 82 lakh (41 per cent) youth are in the labour force. As the remaining 119 lakh youth (59 per cent) are not in the professional labour force, they need to be given skill training to make them self-reliant.
- iv. Skill Development:** Out of the total 82 lakh youth in the workforce, 16 lakh youth (20 per cent) have received skill vocational training. The remaining 66 lakh (80



percent) youth need to be given skill development training. Out of this, only one lakh youth are being trained by the NLRM department every year. Therefore 65 lakh untrained rural youth need skill training. To achieve this every school needs to provide vocational education from class 6 onwards.

- v. **Internship:** According to the 6th Economic Census, there are a total of 28.80 lakh enterprises in the state, out of which 78,022 enterprises employ more than 8 people. About 30 lakh youths can be trained in skills by undertaking the internship program for a period of three months in local industries related to agriculture and agri-based/MSME/self-employment/service sector.
- vi. **Migration Control:** Rural people have migrated from various districts to urban areas for job opportunities, of which 40 lakh (20 percent) youth are in Bangalore city. Therefore, there is a need to provide more employment opportunities at the village level.
- vii. **Consolidation of programs for rural employment:** In total there are 27,395 revenue villages in the state and it is proposed to form Swami Vivekananda Self Help Groups, one in each village, on the model of Women's Self-Help Groups to provide self-employment to the unorganized workers in these. There are about 15 to 20 youth in each group, and 5.50 lakh youth in 27,395 self-help groups have received Rs. 1.5 lakh to provide margin money estimated at Rs. 410 crores will be required.
- viii. **Bank Linked Schemes:** Coordination and inclusion of Yuva Shakti schemes with schemes linked to 25 banks. There are 35000 shelves of projects under the Mudra loan scheme, and steps will be taken to select the financial activities of the self-help societies based on these models.



- ix. Training:** Skill development training will be imparted to the youth under the National Entrepreneurship Mission under the 18 programs being implemented by various departments under this scheme. Training for agriculture and other activities will be provided through the Rural Development Self Employment Training Institute (RUDSETI).
- x. Formation of State Level Committee:** It is proposed to constitute a committee under the chairmanship of the Minister of Youth Empowerment and Sports at the State level for implementation and monitoring of the programme. RDPR, Commerce and Industry, Labour, Skill Development and Bank representatives will be members of this committee.
- xi. District Level Committee:** It is proposed to constitute a District Level Committee under the Chairmanship of the Chief Executive Officer of the Zilla Panchayat for the implementation and supervision of the program at the district level. The members of this committee are the officers of Rural Development and Panchayat Raj, Commerce and Industry, Labour, Skill Development Departments and District Lead Bank Managers.
- xii. Village level stewardship:** The village level stewardship of this program will be handled by Rural Development and Panchayat Raj Departments and Youth Empowerment and Sports Departments.

3. ABOUT VKF

VKF is a Think Tank of Community Change Champions who are from various walks of Social Spaces with diverse backgrounds and specialists from their domains.



VKF is a platform that enables as a think tank to evolve an aggregation of the social impact service providers and entrepreneurs for bringing about a transformational movement of social Change that is measurable on the lines of the Strategic Sustainable Development Goals (SSDG) of United Nation (UN).

VKF's strong focus is on enhancing the rural mass entrepreneurship development clubbed with rural livelihood options. In this direction, VKF team is working with the rural livelihood SHGs members and handholding them to elevate themselves to newer socio-economic status and uplifting the whole geography of the cluster by setting up of Common Facility Centres.

VKF's experience spans across conceptualizing cluster mapping, conducting baseline surveys, awareness creation, trust building activities, capacity building, design thinking activities etc., to enhance capabilities of the artisans and livelihood SHGs in the clusters.

VKF also indulges in working with MSME, ESTC, IDEMI, Tribes India, NRLM and WCD to support rural masses in terms upgrading their livelihood opportunities. It also facilitates in preparation of DPR, Govt. liaising, market linkage activities, brand awareness, branding initiatives, value addition of the products produced by clusters etc.

4. NAME OF PRODUCT AND TECHNOLOGY

Food Dehydration Technology

Dehydration is one of the oldest methods of food preservation, though methods for drying food have become sophisticated over time. For many people, dehydrating food at home is a convenient way to preserve foods. Molds, yeast, and bacteria need water



to grow. When foods are sufficiently dehydrated, microorganisms cannot grow and foods will not spoil. Dried fruits and fruit leathers may be used as snack foods; dried vegetables may be added to soups, stews, or casseroles. Campers and hikers value dried foods for their light weight, keeping qualities and ease of preparation.

The nutritive value of food is affected by the dehydration process. Vitamins A and C are destroyed by heat and air. Using a sulfite treatment prevents the loss of some vitamins but causes the destruction of thiamin. Blanching vegetables before drying, while crucial to a better-quality product, results in some loss of vitamin C and B-complex vitamins as well as the loss of some minerals, because these are all water soluble. Yet blanching reduces the loss of thiamin and vitamins A and C during dehydration and storage.

Dried foods have more calories on a weight-for-weight basis because of their nutrient concentration. For example, 100 grams of fresh apricots has 51 calories, whereas 100 grams of dried apricots has 260 calories. Nutritive value, as well as flavor and appearance, is best protected by low temperature and low humidity during storage.

Foods can be dehydrated by various means: the sun, a conventional oven, an electric dehydrator, a microwave oven (for herbs only), air drying and solar drying. Dehydration, like other preservation methods, requires energy. Unless sun drying is possible where you live, the energy cost of dehydrating foods at home is higher than for canning and, in some cases, more expensive than freezing.



5. DELIVERABLES AND MARKET OF THE PRODUCT

Food Dehydrated Products

The rising adoption of ready to eat food products with longer shelf life is increasing the space allotted to dehydrated vegetables across retail shelves. The advent of drying technologies has made it possible to manufacture dehydrated vegetables/fruits in less time while retaining the original nutrient value in vegetables. This has been fueling the demand in the dehydrated foods market.

The dehydrated food products are having demand due to following reasons:

- Increasing demand for convenient and ready-to-eat food products
- Rising awareness about the health benefits of consuming dehydrated fruits and vegetables
- Growing popularity of organic and non-GMO products
- Expanding distribution channels, such as online retail and supermarkets

Project Assumptions:

This model DPR for Food Dehydration Unit is basically on certain assumptions that may vary with capacity, location, raw materials availability etc. An entrepreneur can use this model DPR format and modify as per requirement and suitability. The assumptions made in preparation of this particular DPR are given in Table below. Therefore, land and civil infrastructures are assumed as already available with the entrepreneur.

Table: Detailed Project Assumptions		
Parameter	Value	
Average Output Capacity of the Food dehydrator m/c	50 Kgs/day	
Utilization of capacity:	Year 1	70%



	Year 2	75%
	Year 3	80%
	Year 4	85%
	Year 5	90%
Working days per year:	225 days	
Working hours per day:	8-10 hours	
Average price of raw material (Fruits/vegetables):	Rs. 60/ kg	
Average sale price of Finished product	Rs. 500/ kg	

Details of Machinery



Multipurpose Food Dehydrator

No of Trays: 24 Nos

Power: 3200 Watts

Material: SS

Supplier: Pro B Products

Location: Peenya, Bengaluru

Suppliers are available in Bengaluru and Coimbatore



Market Output:

VKF will hand hold them to facilitating better packing and market linkage.

Market Linkage

- ❖ Star Hotels
- ❖ Super Markets/Hyper Markets
- ❖ Convenience Stores

- ❖ Bakeries
- ❖ Speciality Retailers
- ❖ E-commerce
- ❖ Restaurants

6. ROLE OF EACH OF THE JLG MEMBERS

How JLG will participate:

2 persons will be used to procurement

2 persons for production

2 persons for the logistics & sales

3 persons for value addition

1 person for waste management like selling the waste to end users

7. SOFT INTERVENTION

The following are the soft interventions to be arranged:

- Awareness on financial inclusion will help in getting the assistance from Government and other sources.
- Export promotional orientation for the JLG members.
- Awareness/ training programme on product quality, handling practices.
- Capacity Building activity
- Trust Building activities



- Programmes on technical skill enhancement to unit owners.
- Programmes on Business and entrepreneurship skill enhancement to unit owners
- Mass entrepreneurship development program in the JLG eco system.

8. BREAK UP COST AND MARGIN OF THE PROJECT AND THE IMPLEMENTATION SCHEDULE

The proposed cost of the project is as follows:

Sl. No.	Details	Cost in Rs.	Percentage
1.	Bank Loan	4,50,000	90%
2.	JLG contribution	50,000	10%
3.	Total	5,00,000	100%

Sl. No.	Details	Cost in Rs
1.	Machine cost	3,10,000
2.	Furniture	40,000
3.	Working capital (Shed deposit, electric connection deposit, Miscellaneous and preoperative expenses)	1,50,000
	Total	5,00,000



The proposed project implementation schedule is as follows:

Sl. No.	Project Component	Schedule
1	Shed for the project on rental basis	Identified
2	Electricity and Water facility Installation	Present
3	Arrival of Machinery	Within 1 months of Order
4	Erection of Machinery	Within 5 days of arrival
5	Commissioning	Within 2-4 days of erection
6	Commercial Usage	Within 2 months from approval

9. LAND/SHED STATUS:

The JLG has already identified the shed required for the project within the project area.

10. SWOT ANALYSIS OF THE PROJECT

I. Strength

- JLG members are very young and aware of demand of processed dehydrated fruits and vegetables in the local as well as the national market.
- The source of raw material procurement is very convenient due to local availability and helping farmers.
- Farmers bring fruits and vegetables and get dehydrated them in the machines, where they pay service charges.
- Waste from fruits and vegetables will be used for making compost.



- The JLG members are having good coordination and co-operation among themselves and their friends. From this process they can support lot of their friends.

II. Weakness

- There are hardly any systematic efforts made to improve in the local food processing industries which is so vital from the point of view of its importance of using dehydrated fruits and vegetables for greater self-employment potential.
- Products have lower export potential as there is poor quality due to lack of proper packing.
- The JLG members lack insufficient place for working/processing in their units. All the process was being carried at one small area.
- The JLG members are unable to purchase modern machineries due to financial limitations.
- The JLG members have poor access to national and international markets. This will affect initially the profitability of the JLG members.
- There is no branding for the product.

III. Opportunities

- JLG members are still very young if they start performing well in business and in future modern process machinery with better productivity and quality as well as special features for the final products also can be done within JLG members.



- There will be a huge demand for healthy diet dehydrated processed foods.
- Young JLG members have long way to go with new innovation of value addition products of processed dehydrated fruits and vegetables.

IV. Threats

- Due to poor market access the profitability of the JLG members may fall bit low level. This may discourage initially to JLG members.
- Major player in the industry will sell it for lower price at the beginning and JLG members need to work hard.

11. YOUTH EMPOWERMENT IMPACT OF THE PROJECT ON ECOSYSTEM

We have surplus youths in the state, graduate, undergraduate etc. supporting them to create self-employment will motivate to become entrepreneurs, they will live independent life.

Entrepreneurship will greatly impact the lifestyle of the youths, if businesses work along with their involvement of all the members towards creating awareness and promoting positive impacts on others.

Ecosystem Support from Project-

The youth service program will empower fruits and vegetables farmers a kind of model in sense of concern. Youth while experiencing the business will help spread the value by processing dried fruits and vegetables and usage will give better health to



society. Technological advancements in drying methods involve development and optimization of novel drying techniques, including their combination to obtain quality products. As the demand for new and healthier ready-to-eat goods with lengthy shelf lives and greater rehydration capability expands, advancements in the drying of fruits and vegetables are crucial. The drying process has a tremendous impact on the product's quality and cost. New drying procedures may provide advantages such as enhanced energy efficiency, higher product quality, lower costs, and decreased environmental impact. Dehydration of agricultural products is a critical process that must be carried out with caution.

12. THE END PRODUCTS PRODUCED WITH THE MACHINE



Fig: Dehydrated food products with packing



13. FINANCIALS

CASH FLOW STATEMENT

Particulars	Year				
	Year 1	Year 2	Year 3	Year 4	Year 5
<u>REVENUE FROM SALE OF DEHYDRATED PRODUCTS</u>					
No. of working days in a Year	300	300	300	300	300
Less : Days for off Season	75	75	75	75	75
No. of Machine Running days in a Year	225	225	225	225	225
Capacity of the machine in kgs per day	50	50	50	50	50
Production in KGs	50%	50%	50%	50%	50%
Utilisation of the Capacity (%)	70%	75%	80%	85%	90%
Production during the year (in KGs)	3,938	4,219	4,500	4,781	5,063
Rate per KG	500	550	605	666	732
Gross Revenue earned per annum - A	19,68,750	23,20,313	27,22,500	31,81,922	37,06,003
<u>COST OF RAW MATERIALS</u>					
Consumption of Raw Materials	7,875	8,438	9,000	9,563	10,125
Rate per KG	60	66	73	80	88
Total Cost of Raw Material per annum - B	4,72,500	5,56,875	6,53,400	7,63,661	8,89,441
<u>EXPENDITURE</u>					
Salaries and Wages	8,40,000	9,66,000	11,10,900	12,77,535	14,69,165
Electricity Charges	84,000	92,400	1,01,640	1,11,804	1,22,984
Transportation and Travelling	24,000	26,400	29,040	31,944	35,138
Rent	1,44,000	1,58,400	1,74,240	1,91,664	2,10,830
Packaging and Promotion Expenses	25,000	27,500	30,250	33,275	36,603
Miscellaneous Expense	36,000	39,600	43,560	47,916	52,708
Total Expenditure - C	11,53,000	13,10,300	14,89,630	16,94,138	19,27,429
Net Profit before Interest /Cash Flow (A-B-C)	3,43,250	4,53,138	5,79,470	7,24,123	8,89,134

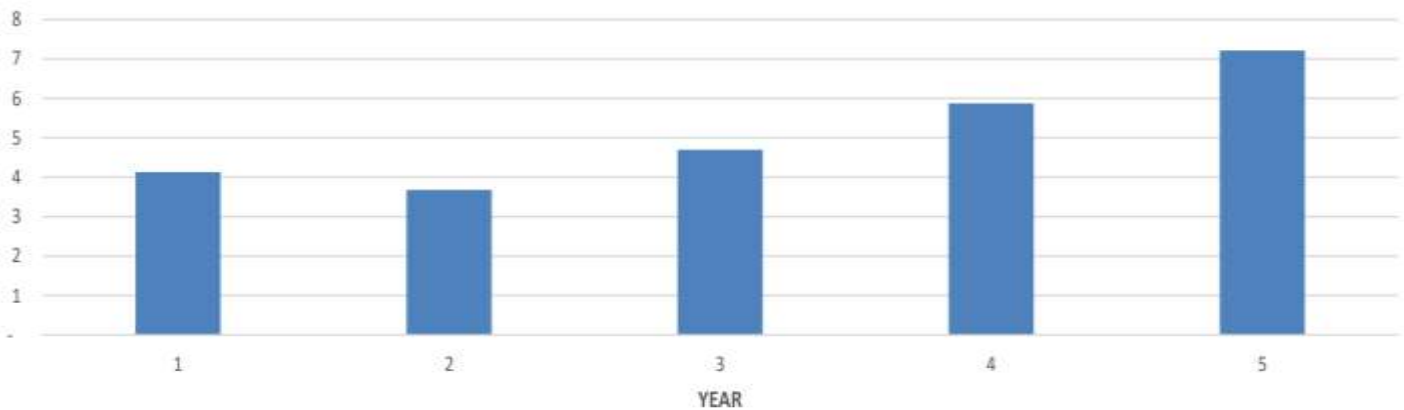


DSCR STATEMENT

PROJECTED TERM LOAN DSCR STATEMENT

	Year 1	Year 2	Year 3	Year 4	Year 5
	Projected	Projected	Projected	Projected	Projected
Profit available to service the debt	3,43,250	4,53,138	5,79,470	7,24,123	8,89,134
Loan Repayment	41,072	88,210	96,964	1,06,588	1,17,166
Interest on Term Loan	41,945	35,073	26,318	16,695	6,116
Debt to be Served	83,016	1,23,283	1,23,283	1,23,283	1,23,283
Debt Service Coverage Ratio	4	4	5	6	7
AVERAGE DSCR	5				

DEBT SERVICE CEVERAGE RATIO





REPAYMENT SCHEDULE

DETAIL REPAYMENT SCHEDULE

Year	Quarter	Loan Installment	Principal Payment	Loan Outstanding	Interest at 9.5%	Cumulative Interest
1	1	10,688	-	4,50,000	10,688	41,945
	2	10,688	-	4,50,000	10,688	
	3	30,821	20,293	4,29,707	10,528	
	4	30,821	20,779	4,08,928	10,042	
2	1	30,821	21,276	3,87,652	9,544	35,073
	2	30,821	21,786	3,65,867	9,035	
	3	30,821	22,307	3,43,560	8,514	
	4	30,821	22,841	3,20,719	7,980	
3	1	30,821	23,388	2,97,331	7,433	26,318
	2	30,821	23,948	2,73,383	6,873	
	3	30,821	24,521	2,48,862	6,300	
	4	30,821	25,108	2,23,754	5,713	
4	1	30,821	25,709	1,98,045	5,112	16,695
	2	30,821	26,324	1,71,721	4,496	
	3	30,821	26,955	1,44,766	3,866	
	4	30,821	27,600	1,17,166	3,221	
5	1	30,821	28,261	88,906	2,560	6,116
	2	30,821	28,937	59,969	1,884	
	3	30,821	29,630	30,339	1,191	
	4	30,821	30,339	0	482	
Total		5,76,147	4,50,000		1,26,147	1,26,147



BREAKEVEN ANALYSIS

Investment Value Including Margin Rs. 500000

Year ended	Year 1 Projected	Year 2 Projected	Year 3 Projected	Year 4 Projected	Year 5 Projected
Cash Flow as per Statement of Income	3,43,250	4,53,138	5,79,470	7,24,123	8,89,134
Less : Interest on Loan	41,945	35,073	26,318	16,695	6,116
Less : Estimated Drawings/Personal Expenses	1,71,625	2,26,569	2,89,735	3,62,061	4,44,567
Net Cash Flow	1,29,680	1,91,496	2,63,417	3,45,366	4,38,451
Cumulative Cash Flow	1,29,680	3,21,176	5,84,593	9,29,959	13,68,410
Break Even Investment (in years)	2 Year and 8.1 Months				



Designated Contact Details for this project

Email ID : contact@vkfoundations.org
Mobile : 9845938269 / 9986024478 / 9902256304
Website: vkfoundations.org

