



DETAILED PROJECT REPORT

AQUAFONICS



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

Aquafonics

Aquafonics is a food production system that couples culturing of plants in preset temperature and water supply is given, aquaculture water is fed to hydroponically to growing plants. As existing hydroponic and aquaculture farming techniques form the basis of all aquaporin systems, the size, complexity, and types of foods grown in an aquaporin system can vary as much as any system found in either distinct farming discipline.

5. DELIVERABLES AND MARKET OF THE PRODUCT

Aquaponics

One of the significant benefits of aquaponics growing is the minimal water wasted compared to conventional farming. Although the name implies water, aquaponics uses approximately 90% less water than traditional farming.

In aquaponics, the water is recycled and used timely. The big reason for this is that there is no soil to absorb water, and aquaponics continuously uses the same recycled water. So there is no extra water involved unless the water becomes significantly stagnated. The only water lost in aquaponics is through evaporation, which is very little and will require you to replenish the water from time to time.



- Organic and Nutritional Benefits. ...
- Food is Grown All Year Round.
- Reduces Water Usage. ...
- No Soil, No Weeding.
- Accelerated Plant Growth. ...
- Two Incomes for Commercial Aquaponics Farmers. ...
- Reduces the Planet's Carbon Footprint. ...
- Supports a Self-Sufficient Way of Living.

Project Assumptions:

This model DPR for AQUAPONICS 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 Aquaponics unit	150 Kgs/day	
Utilization of capacity:	Year 1	80%
	Year 2	85%
	Year 3	90%
	Year 4	95%



	Year 5	95%
Working days per year:	300 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. 50/ kg	

Details of Machinery



AQUAPONICS SET UP

No of Trays: 22 Nos

Power: 3000 to 4300 kwh/month

Material: SS

Supplier: greentech india, selco

Location: Bengaluru

Suppliers are available in Bengaluru



Market Output:

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

<u>Market Linkage</u> <ul style="list-style-type: none">❖ <u>Agri hubs</u>❖ <u>Super Markets/Hyper Markets</u>❖ <u>Exhibitions</u>	<ul style="list-style-type: none">❖ <u>Speciality Retailers</u>❖ <u>E-commerce</u>❖ <u>Online</u>
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6. ROLE OF EACH OF THE JLG MEMBERS

How JLG will participate:

- 2 persons will be used to do procurement
- 2 persons for seedlings, extra other works
- 2 persons for the logistics & sales
- 1 person to accounts

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	2,70,000	90%
2.	JLG contribution	30,000	10%
3.	Total	3,00,000	100%

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



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.
- Usage of less amount of water
- 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

- Products have lower export potential as there is poor quality due to lack of marketing, 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.

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.
- Growing health concerns owing to consumption of pesticides ridden vegetable and the rising need to meet the agricultural demand for the increasing human populace are further predicted boost the aquaponics market.
- 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.



12. THE END PRODUCTS PRODUCED WITH AQUAFONICS





13. FINANCIALS

CASH FLOW STATEMENT

Particulars	Year				
	Year 1	Year 2	Year 3	Year 4	Year 5
<u>REVENUE FROM ACQUAPONICS UNIT</u>					
No. of working days in a Year	300	300	300	300	300
Less : Days for off Season	-	-	-	-	-
Working Days in a Year	300	300	300	300	300
Capacity of the unit in KGs per day	150	150	150	150	150
Production in KGs	90%	90%	90%	90%	90%
Utilisation of the Capacity (%)	80%	85%	90%	95%	95%
No of KGs Produced in a year	32,400	34,425	36,450	38,475	38,475
Rate per KGs	50	55	61	67	73
Gross Revenue earned per annum - A	16,20,000	18,93,375	22,05,225	25,60,511	28,16,562
<u>COST OF RAW MATERIALS</u>					
Consumption of Raw Materials and processing charges	36,000	38,250	40,500	42,750	42,750
Rate per Kgs	20	22	24	27	29
Total Cost of Raw Material per annum - B	7,20,000	8,41,500	9,80,100	11,38,005	12,51,806
<u>EXPENDITURE</u>					
Salaries and Wages	3,84,000	4,22,400	4,64,640	5,11,104	5,62,214
Electricity Charges	96,000	1,05,600	1,16,160	1,27,776	1,40,554
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	36,000	39,600	43,560	47,916	52,708
Miscellaneous Expenses	24,000	26,400	29,040	31,944	35,138
Total Expenditure - C	7,08,000	7,78,800	8,56,680	9,42,348	10,36,583
Net Profit before Interest /Cash Flow (A-B-C)	1,92,000	2,73,075	3,68,445	4,80,158	5,28,174

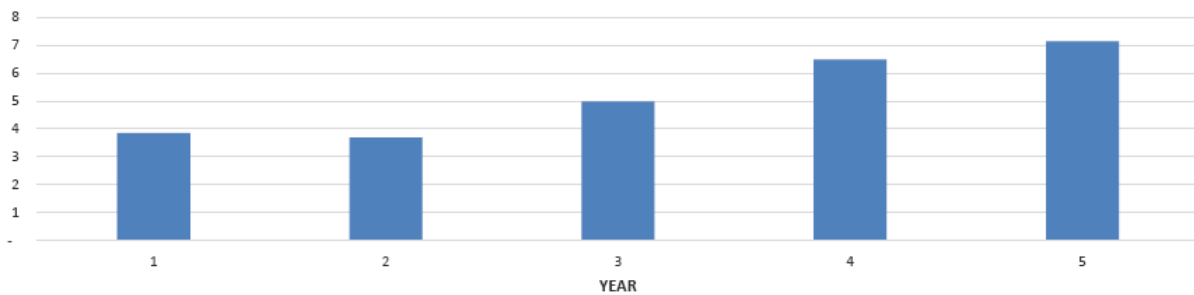


DSCR STATEMENT

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	1,92,000	2,73,075	3,68,445	4,80,158	5,28,174
Loan Repayment	24,643	52,926	58,179	63,953	70,300
Interest on Term Loan	25,167	21,044	15,791	10,017	3,670
Debt to be Served	49,810	73,970	73,970	73,970	73,970
Debt Service Coverage Ratio	4	4	5	6	7
AVERAGE DSCR	5				

DEBT SERVICE COVERAGE RATIO



BREAKEVEN ANALYSIS

Investment Value Including Margin Rs. 300000

Year ended	Year 1 Projected	Year 2 Projected	Year 3 Projected	Year 4 Projected	Year 5 Projected
Cash Flow as per Statement of Income	1,92,000	2,73,075	3,68,445	4,80,158	5,28,174
Less : Interest on Loan	25,167	21,044	15,791	10,017	3,670
Less : Estimated Drawings/Personal Expenses	96,000	1,36,538	1,84,223	2,40,079	2,64,087
Net Cash Flow	70,833	1,15,494	1,68,431	2,30,062	2,60,417
Cumulative Cash Flow	70,833	1,86,327	3,54,758	5,84,821	8,45,238
Break Even Investment (in years)	2 Year and 8.1 Months				



REPAYMENT SCHEDULE

DETAIL REPAYMENT SCHEDULE

Year	Quarter	Loan Installment	Principal Payment	Loan Outstanding	Interest at 9.5%	Cumulative Interest
1	1	6,413	-	2,70,000	6,413	25,167
	2	6,413	-	2,70,000	6,413	
	3	18,492	12,176	2,57,824	6,317	
	4	18,492	12,467	2,45,357	6,025	
2	1	18,492	12,766	2,32,591	5,727	21,044
	2	18,492	13,071	2,19,520	5,421	
	3	18,492	13,384	2,06,136	5,108	
	4	18,492	13,705	1,92,431	4,788	
3	1	18,492	14,033	1,78,398	4,460	15,791
	2	18,492	14,369	1,64,030	4,124	
	3	18,492	14,713	1,49,317	3,780	
	4	18,492	15,065	1,34,253	3,428	
4	1	18,492	15,425	1,18,827	3,067	10,017
	2	18,492	15,795	1,03,032	2,698	
	3	18,492	16,173	86,860	2,320	
	4	18,492	16,560	70,300	1,933	
5	1	18,492	16,956	53,344	1,536	3,670
	2	18,492	17,362	35,981	1,130	
	3	18,492	17,778	18,203	715	
	4	18,492	18,203	-	289	
Total		3,45,688	2,70,000		75,688	75,688



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