**A REPORT**

ON

**IDEAS FOR SMALL BUISNESS ENTERPRISES IN PROJECT VILLAGES FOR THE BENFIT OF THE COMMUNITIES DURING THE PRESENT COVID-19 PANDEMIC**

BY

**Names of the ID.No.s**

**Students**

GURSIMRAN SINGH 2019B3A20535H

AJIT GADHE 2019B1A41552H

**AT**



**A Practice School-I Station of**



**BIRLA INSTITUTE OF TECHNOLOGY & SCIENCE,PILANI(June,2021)**

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**Name of the Students ID Numbers Discipline**

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Prepared in partial fulfillment of the Practice School - I Course Nos.

BITS C221 / BITS C231/ BITS C241 AT

**GMR Varalakshmi Foundation**

A PRACTICE SCHOOL –I STATION OF

**BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI**

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#### **BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE PILANI (RAJASTHAN)**

**Practice School Division**

**Station:** GMR Varalakshmi

**Centre:** Hyderabad

**Duration:** 6 Weeks

**Date of Start:** 18th June 2021 **Date of Submission:** 27th June, 2021

**Title of the Project: IDEAS FOR SMALL BUISNESS ENTERPRISES IN PROJECT VILLAGES FOR THE BENFIT OF THE COMMUNITIES DURING THE PRESENT**

**COVID-19 PANDEMIC**

#### **Name/ID No./Discipline of the Student**:

|  |  |  |
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| Gursimran Singh | 2019B3A20535H | B.E. Civil, M.Sc. Economics |
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**Name & Designations of the Experts:**

Mr. Ch. Ramesh

GMR Varalakshmi, Hyderabad

**Name of the PS Faculty:** Sandeep Kayastha

**Key Words:** Project, Cost -benefit analysis , excel , covid 19 , business , investment .

#### **Project Areas:** General Management

**Abstract**

The nation-wide lockdown imposed in India from March 25 to May 31, 2020 following the breakout of the Covid-19 pandemic affected rural India in diverse ways. This was only to be expected given the great variation in production systems and socio-economic conditions in villages across agro-ecological zones. The impact of the lockdown – which brought almost all economic and public activity in India to a halt.The NGOs have mobilised themselves to work together on several fronts including a very significant research exercise that has been providing in-depth information on the economic, nutritional, physical and mental health situation among rural residents. And GMR Varalakshmi is trying to help the villages affected by covid-19 through by providing business opportunities to sustain themselves even after covid-19 pandemic is ended

#### **Signature(s) of Student(s) Signature of Faculty**

**Date: June 27th, 2021 Date:**

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**Introduction**

GMR Varalakshmi Foundation (GMRVF), the Corporate Social Responsibility wing of the Group, develops innovative and locale-specific initiatives in the areas of Education; Health, Hygiene & Sanitation; Empowerment & Livelihoods; and Community development programmes. The vision of the Foundation is to make a sustainable impact on the human development of communities through initiatives in Education, Health and Livelihoods. The Foundation is registered as a Section-8 (not-for-profit) Company and the mandate is to improve the quality of life of communities neighboring GMR Group’s business operations. Currently, the Foundation is working in about 200 villages and urban communities across 18 locations in India. And we are helping them now for creating business opportunities for the villages that are affected by covid 19 so that they can sustain themselves even when the pandemic is over .

COVID-19 lockdown flooded streets with migrant labourers which were marching to their villages to find warmth and empathy. Many reached their homes but several failed and died on streets and railway tracks. The current study offers insights on the plight of migrant labourers and impact of COVID-19 on rural economy in India. The major finding of the study suggests 400 million workers in India in the informal economy are at the risk of falling deeper into poverty during the crisis. The low reporting of COVID-19 cases due to low testing will result in community spread. The reverse migration will create excess pressure on the agriculture and rural economy which will result in a significant number of people to fall into abject poverty. COVID-19 will have both short and long-run effect on the rural economy in India. The government economic package contains majorly long-term measures whereas short-term measures such as cash incentive and wage subsidy should be given to save migrant labourer and marginal farmers. Above all, mass corruption in the system is the biggest challenge in the effective implementation of plans. So that’s why GMR Varalakshmi is trying to provide livelihood other than the agriculture sector and provide alternative which will be both beneficial to the village community and also themselves and their future generation.

**CURRENT PROJECTS**

**Backyard Poultry**

Backyard or homestead poultry farming is commonamong rural and landless families in India and is a lucrative source of supplementary income. It involves low investment and yields high economic returns,and can be easily managed by women, children and the elderly. Meat and eggs from such birds are inexpensive and rich source of protein and energy for poor households.

Backyard poultry farming is characterized by an indigenous night shelter system, scavenging, natural hatching of chicks, low productivity of birds, scant supplementary feed, local marketing and minimal health care practices.

**Viability of the Project:**

a)Poultry has the potential to meet the protein requirements of a nation where malnutrition is rampant,since both egg/meat are source of protein.

b) Helps to augment the income in rural areas. This improves socioeconomic status of rural areas.

c)Litter has high manure values and can be used in agricultural activities.

d) Chicken is widely accepted in India, and is cheaper than meat of goat and other meat,thus it can be sold easily compared to other meat.

e) Generate easy and quick income with low investment.

**Feasibility in our target villages**:

Backyard poultry production is an old age profession of rural families of India. It is the most potent source for subsidiary incomes for landless and poor farmers. It is an enterprise with low initial investment but higher economic returns and can easily be managed by women, children and old aged persons of the households. Now-a-days, poultry meat and eggs have been the best and cheapest sources for meeting out the per capita requirement of protein and energy for rural areas of India.

**Project cost:**

**Fixed Cost:**

|  |  |
| --- | --- |
| a)Land Existing | Existing |
| b)Poultry Shed | Rs.3000 |

**Total Fixed Cost:Rs3000**

**Variable Cost:**

|  |  |  |
| --- | --- | --- |
| a)Cost of day old chick | @Rs.20 per chick | **20×40=800** |
| b)Cost of feed up to 28 days of age  20 kg for 40 chicks | @ Rs. 20/- per Kg of broken rice | **20×20=400** |
| c**)** Cost of vaccine | @Rs. 2.0/chick | **2×20=40** |
| d) Cost of medicine, feed supplements etc. | @ Rs. 2.50 per bird | **2.5×40=100** |
| e)Cost of labour @ 10 hrs. per month=1.25 Man-days, Total Man-days: 22.5 | @ Rs. 134/- per Man-day | **1,500** |

**Total Variable Cost:800+400+40+100+1500=2840**

**Total Production Cost:2840+3000=6840**

**Cost and Benefit analysis:**

|  |  |  |
| --- | --- | --- |
| **Particulars** | **Production** | **Total Amount** |
| a) Income from sale of eggs (from 20 hens) | Av. Annual egg production: 65 eggs/hen, Total egg production: 65×20=1300 eggs  nos. @ Rs. 6/egg | 1300×6=7800 |
| b)Sale of cocks(20 cocks) | At weight 1.7kg  Total weight=34kg  @ Rs. 250/Kg | 250×34=8500 |
| c)Sale of spent hens | @ Rs. 250/- per hen | 250×20=5000 |

**Total Gross Income:7800+8500+5000=21300**

**Net profit:**

Total Gross Income-Total cost production=21300-6840=14460

**Approximate rate of return or cost benefit analysis:**

Rate of return=(Total benefit/Total cost production)=14460÷6840=2.12

**Minimum size of intervention**.

Upgrade of extensive scavenging systems to semi-intensive or small-scale intensive systems.

Generally, the aim of these interventions is to bring benefits to a few targeted smallholder producers, as they require a larger investment per household and relatively important changes in the allocation of resources in the farming system.

**How can it be ensured that this is not just a one-time activity, but that the change sustained? What are the plans for sustainability?:**

We can buy new chicks once the old stock is sold,this will make sure of continuous income from backyard Poultry farming,will give profit to the owners.

**Plans for sustainability:**

Manure from the birds can be used to fertilize feed crops, especially when raised on the same farm as the birds. Or poultry can be fed by-products, such as fruit pulp or cull crops, to increase nutrient cycling. Insects raised on crop and food residues can also provide sustainable feeds for poultry**.**

**MUSHROOM CULTIVATION**

Mushrooms are the fleshy, spore-bearing fruiting body of a fungus, typically produced above ground on soil or on its food source. They contain numerous spores, functionally similar to seeds of the higher plants for propagation of fungi.

The economic importance of mushroom lies primarily in their use as food for human consumption. The exotic flavour, taste and fleshiness of mushroom have made it an important delicacy in human diet. Mushroom is considered to be a complete, healthy food and suitable for all age groups. Though, the nutritional value is determined by the type, stage of development and other environmental conditions, mushrooms are rich in proteins, dietary fibre, vitamins and minerals. They have insignificant lipid level and high proportion of polyunsaturated fatty acids resulting in low calorific value. The protein content, though varies greatly in different mushrooms, is usually high. Mushrooms are an excellent source of vitamins especially C and B (Folic acid, Riboflavin, Niacin and Thiamine) and minerals like potassium, sodium and phosphorus. It also contains other essential minerals like Cu, Zn and Mg in traces.

Mushrooms are also known to have medicinal values as these have been shown to promote immune function, boost health, lower risk of cancer inhibiting tumour growth and support body’s detoxification mechanism. Fresh mushrooms have very limited life hence processing is recommended to enhance the shelf life. Mushroom, thus has great potential for the production as quality food.

Considering the potential market opportunity of such units, the present detail project report has been developed. The main objective of such initiative is to productively utilize the abundantly available resources of the local area and to enable uninterrupted supply of the products to market throughout the year

**PROJECT DESCRIPTION**

The proposed project is that of setting up of a Mushroom Processing unit at suitable location

The key products of the proposed project are as follows; Fresh Mushroom in Packets and Canned Mushroom

The proposed project would procure the raw materials locally. After processing, the products would be supplied to the market through distributors/ wholesalers/retailers.

**MARKET PROSPECT**

Mushroom is an exotic and nutritious source of vegetarian food. It is considered as a suitable substitute for meat and eggs. It is easily digestible. Market for mushroom is growing rapidly because of its rich nutritional value and special taste aroma, flavour etc

Mushrooms are very popular item in most of the star hotels and in urban households. Thus, there is a good market for the processed mushroom. Processed and preserved mushrooms will ensure the availability through out the year. The major limitation with the bulk of green vegetables is that they are grown in a limited period lasting only for 3-4 months and thus their availability is restricted to this period. Properly preserved and canned mushrooms also helps in exporting the product to other countries

Many exotic preparations are made from mushroom like soup, pickles etc. It can also be cooked in traditional way as standard vegetable. It is used as stuffing for various food preparations and for garnishing. Fresh mushrooms have very limited shelf life and are sold in fresh form. Their shelf life is enhanced by processing and properly packing in good quality polythene or proper canning. This can then be stored and transported for selling in far off markets.

**CONSUMABLES, POWER AND UTILITY**

The major consumables required are as follows;

1. Mushroom

2.Salt, Citric Acid and Preservatives

3. Packaging Materials including Cans, Labels, Cardboard Boxes and Adhesive

**POWER**: The total requirement of power for the project is **16.92 KW**.

The total power supply would be distributed in the following way;

**Plant & Machinery - 14.92 KW**

**General Lighting - 2.00 KW**

**UTILITY:**

**WATER**: Constant flow of water would be necessary in the operation of the plant. Water would be obtained from bore well and can be stored in an overhead tank, from where it will be supplied to the required areas. Process water should be free of mud and suspended particles. It should be available at a pressure of 3 Kg/sq.cm.

**OTHER UTILITIES**: Other utilities includes fuel etc. those should be locally available

**PROJECT COST ESTIMATES AND MEANS OF FINANCE**

**TOTAL PROJECT COST**: The Capital cost of the project has been estimated on the basis of installed capacity assuming 200 working days per annum. The total cost of the Project including margin for working capital has been estimated at **Rs. 16,50,000.00**

**LAND, BUILDING AND CIVIL WORKS**: The approximate cost of civil works including Building, Electrification, Water Supply, Sanitation and Drainage etc will be **Rs. 5,25,000.00.**

**PLANT & MACHINERY**: The total cost of Plant & Machinery has been estimated at **Rs.5,63,000.00**

**PLANT EXPENDITURE:** The total cost on Plant expenditure includes admissible taxes, transportation, insurance of the machineries and installation etc.

**FIXED ASSET**: The cost of Misc. Fixed Assets has been estimated at around **Rs. 2, 22,000.00.** These include cost of furniture and fixture’s and office equipment.

**PRELIMINARY & PRE-OPERATIVE EXPENDITURE**: An expenditure of

**Rs. 1, 63,000.00** has been earmarked on this account,

**CONTINGENCY AND ESCALATION**: This has been calculated @ 5% on Civil Work, Plant & Machinery and Misc. Fixed Assets to provide safeguard against escalation of prices or any other unforeseen expenditure. The total amount works out to **Rs. 66,000.00.**

**WORKING CAPITAL ESTIMATES**: The details of the Working Capital requirements of the proposed unit. In arriving at the working capital estimates, various components vis Administrative Expenses/Consumables and Working Expenses have been taken on the basis of usual norms. The Working Capital requirement is proposed to be met from project margin money and cash credit loan borrowings from the financial institution.

**MEANS OF FINANCE**: The Proposed Project Cost of Rs. 16.50 Lakhs would be financed under MSME development schemes of financial institutions/commercial banks, in the following manner as shown below.

1. LOAN FROM BANK/FI @ 60% = 9.90 LAKHS

2. PROMOTERS CONSTRIBUTION @ 40% = 6.60 LAKHS TOTAL = 16.50 LAKHS 10.10. DEBT-EQUITY RATIO: Based on the above financing pattern, the **Debt-Equity ratio** of the Project **is 1.5:1.**

**ECONOMIC VIABILITY AND FINANCIAL ANALYSIS**

**COST OF PRODUCTION**: The cost of production has been estimated annually for the first five years of operation. The various cost components taken into account are cost of administrative expenses, consumable stores, utilities, wages and salaries, repairs and maintenance, insurance, interest rates, taxes etc. depreciation.

**REPAIR & MAINTENANCE**: Cost under Repair and Maintenance expenses have been assessed by charging 1% on Land & Building, 2% on Machineries and 1.5% on Fixed Assets on first year with increase of 2% on subsequent years.

**ADMINISTRATIVE EXPENSES**: This has been considered in the cost and profitability statement under other expenses etc.

**SELLING EXPENSES**: This has been considered in the cost and profitability statement under other expenses etc.

**DEPRECIATION**: In calculating the cost of operation, depreciation has been calculated under straight line method after absorbing the pre-operative and contingencies expenses .

**FINANCIAL CHARGES**: The interest on proposed term loan amount of Rs. 9.90 Lakhs has been calculated@ 8% being the rate of interest. The interest calculation for various years after considering the repayments due in respective years.

**SALES REALISATION:** The total annual income of the Project is shown in Appendix-D2. Based on 70% capacity utilisation, total turnover is estimated at Rs. 54.60 Lakhs on third year, the sale for other years are estimated at different capacity utilization.

**NET PROFIT**: The proposed project is expected to generate profit from the first year of operation itself and will gradually increase with increase in capacity utilisation.

**INTERNAL ACCRUALS**: The net profit after tax with depreciation added back would make up sufficient internal accruals to meet the term loan, working capital loan repayment obligations without any liquidity problems.

**FINANCIAL ANALYSIS**: The break-even point of the proposed project is 48.67%at 70% operating capacity. The DSCR of the project has been worked out with an average of 1:2.18, which is considered quite satisfactory to meet the repayment and interest obligations in respect of the term loan. The internal rate of return of the project works out to 21.00 %, which is satisfactory.

**ESTIMATED COST OF THE PROJECT**

|  |  |
| --- | --- |
| Particulars | Amount (Rs. lacs) |
| Land & Site development | Own Land/ On Lease |
| Building & Civil Works | 5.25 |
| Plant & Machinery | 5.63 |
| Misc. Fixed Assets | 2.22 |
| Preliminary & Pre-operative Expenses | 1.63 |
| Contingencies & Escalation @ 5% | 0.66 |
| Working Capital | 1.11 |
| TOTAL | 16.50 |

**Total Project Cost :Rs. 16, 50, 000.00**

**(Rupees Sixteen Lakhs and Fifty Thousand Only).**

**COST AND PROFITABILITY ESTIMATES**

(Rs. in lacs)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Particulars | Yr 1 | Yr 2 | Yr 3 | Yr 4 | Yr 5 | Yr 6 |
| A. INCOME |  |  |  |  |  |  |
| Production Capacity (Ton/ annum) | 120 | 120 | 120 | 120 | 120 | 120 |
| Capacity utilisation | 50% | 60% | 70% | 70% | 70% | 70% |
| Production/ annum at capacity utilisation | 60 | 72 | 84 | 84 | 84 | 84 |
| Total income/ annum | 39.00 | 46.80 | 54.60 | 54.60 | 54.60 | 54.60 |
| B. OPERATING EXPENSES |  |  |  |  |  |  |
| Raw Materials | 26.75 | 32.10 | 37.45 | 37.45 | 37.45 | 37.45 |
| Power & Utility | 1.37 | 1.64 | 1.92 | 1.92 | 1.92 | 1.92 |
| Salary | 8.22 | 8.26 | 8.30 | 8.34 | 8.39 | 8.43 |
| Repair & Maintenance | 0.21 | 0.21 | 0.22 | 0.22 | 0.23 | 0.23 |
| Other Expenses | 0.39 | 0.47 | 0.55 | 0.55 | 0.55 | 0.55 |
| Total Operating Expenses | 36.94 | 42.68 | 48.43 | 48.48 | 48.52 | 48.57 |
| Operating profit | 2.06 | 4.12 | 6.17 | 6.12 | 6.08 | 6.03 |
|  |  |  |  |  |  |  |
| C. FINANCIAL EXPENSES |  |  |  |  |  |  |
| Depreciation | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 |
| Interest on Term Loan | 0.79 | 0.72 | 0.56 | 0.40 | 0.24 | 0.09 |
| Interest on Working Capital Loan | 0.40 | 0.46 | 0.52 | 0.52 | 0.52 | 0.52 |
| Net Profit | 0.10 | 2.17 | 4.32 | 4.43 | 4.54 | 4.65 |
| Net Cash Accruals | 0.87 | 2.94 | 5.09 | 5.20 | 5.31 | 5.42 |
| Principal Repayment | 0.00 | 1.98 | 1.98 | 1.98 | 1.98 | 1.98 |

|  |  |  |
| --- | --- | --- |
| **Sl. No.** | **Particulars** | **Description** |
| **A. Project Description** | | |
| 1. | Proposed Project | Processing and Packaging of Mushroom |
| 2. | Capacity of the Plant/Unit (At 100% Capacity) | * Fresh Mushroom : **60 Ton** * Canned Mushroom: **60 Ton**   **Total : 120 Ton** |
| 3. | Year-wise Capacity Utilisation | Yr 01 Yr 02 Yr 03 Yr 04 Yr 05  **50% 60% 70% 70% 70%** |
| **B. Project Cost** | | |
| 1. | Land | Own Land/ On Lease |
| 2. | Civil Works & Buildings | Rs. 5,25,000.00 |
| 3. | Plant & Machinery | Rs. 5,63,000.00 |
| 4. | Fixed Assets | Rs. 2,22,000.00 |
| 5. | Pre-operative Expenses | Rs. 1,63,000.00 |
| 6. | Contingency & Escalation | Rs. 66,000.00 |
| 7. | Margin for Working Capital | Rs. 1,11,000.00 |
| **Total** | | **Rs. 16,50,000.00** |
| **C. Means of Finance** | | |
| 1. | Equity @ 40% | Rs. 6,60,000.00 |
| 2. | Loan from Bank @ 60% | Rs. 9,90,000.00 |
| **Total** | | **Rs. 16,50,000.00** |
| **D. Financial Benchmarks** | | |
| 1. | Break Even Point (at Operating  Capacity on Third Year) | **48.67%** |
| 2. | Average DSCR | **1: 2.18** |
| 3. | Internal Rate of Return | **21.00%** |
| **E. Basic Assumptions** | | |
| 1. | Power Rate Per Unit | **Rs. 6.00/- Per Unit** |
| 2. | Interest Rate | **Term Loan: 8%; WC Loan: 12%** |
| 3. | Repayment Period | **6 Years including moratorium period of 1 Year.** |

**Production of Paper Cups, Plates**

**Introduction**

A paper cup is a disposable cup made out of paper and often lined or coated with plastic or wax to prevent liquid from leaking out or soaking through the paper. It may be made of recycled paper and is widely used around the world. Paper cups and glasses are made in a variety of sizes and shapes according to the amount of material to be filled.

They are designed and processed in many ways. Wax coated paper cups are used cold foods and drink. Simple paper cups are used for hot food and Drinks, prepared meat, vegetable and quick frozen food.

Disposable paper plates are conveniently used for serving eatables during family functions, eating chats and snacks, fruits, sweets etc. The paper plates and bowls are made by fusing two layers of good quality paper with a sheet of polythene. The product can be in any desired shape and size depending upon the die employed for manufacture.

Corrugated boxes and solid fibre containers are extensively being used in place of wooden boxes. The lower cost, lightweight and superiority over other packaging have been the key to the remarkable growth of fibre boxes.

With increasing levels of organized retail and marketing of consumer goods in India, the packaging industry is shifting towards higher end packaging materials. Carton box mostly used in pharmaceuticals companies, health and beauty products, processed food product and many more items. Thus, due to demand it is a good project for entrepreneurs to invest.

**MARKET PROSPECTS**

Global sales of disposable cups were valued at close to US$ 12 Bn in 2016 and are projected to reach more than US$ 20 Bn by 2026. Sales revenue is expected to increase at a CAGR of 5.9% in terms of value during the projected period.

The demand for paper plates is likely to grow substantially in future both in urban as well as rural areas. Paper plates are produced from paperboards classed in the category of industrial paper. Due weightage is given to the fact that demand for boards and industrial paper is rising at a much faster rate than writing and printing paper. It has been estimated that demand for boards and industrial paper could be as high as nine per cent compared with five per cent now.

According to recent data, globally, per capita paper consumption for Europe is 129 kg, Australia 116 kg, Asia 45 kg and in China it is 75 kg. In India, on the other hand, the per capita paper consumption hovers between nine and 11 kg. Even developing countries have a much higher per capita consumption as compared to India.

India’s per capita paper consumption at nine kg, against 22 kg in Indonesia, 25 kg in Malaysia and 42 kg in China. The global average stands at 58 kg.\

**Means of financing**

i**. Basis And Presumption Of The Project**

• Number of working days =300

• Number of Shifts = 1

• Plant produces = 80 Kgs output per day

• Number of kg produced in an year = 24000 Kgs (100% plant utilization)

• Price of per kg = Rs 200

**ii. Cost of the Project Finance**

is the most important part of any project. We would look into various financial aspect surround the Handmade Paper Manufacturing unit in this chapter

|  |  |  |  |
| --- | --- | --- | --- |
| **S No** | **Particulars** | **Quantity** | **Amount (Rs.)** |
|  | Capital Expenditure |  |  |
| 1 | Land 4000 sq. ft. |  | 250000.00 |
| 2 | Work Shed |  |  |
|  | A. 1500 sq. ft x 200 (For Production Shed) |  | 300000.00 |
|  | B. 1500 sq. ft x 26 (For Drying Shed ) |  | 40000.00 |
| 3 | Required machineries / Equipment |  |  |
|  | A. Rag Chopper | 1 | 61192.00 |
|  | B. Hollander Beater | 1 | 265000.00 |
|  | C. Auto Vat | 4 | 160000.00 |
|  | D. Hydraulic press | 1 | 248136.00 |
|  | E. Calendaring machine | 1 | 223136.00 |
|  | F. Cutting machine | 1 | 261192.00 |
|  | G. Weighing balance | 1 | 6000.00 |
| 4 | Bore well | 1 | 85000.00 |
|  | **Total** |  | **1899656.00** |

**Means of Financing**

Loan can be processed under different programs of government of India,

* Prime Minister's Employment Generation Program (PMEGP) under [Khadi and Village Industries Commission](http://www.kvic.org.in/) (KVIC)
* National Rural Livelihood Mission under State Rural Livelihood Mission (NRLM)
* ASPIRE under Micro, Small & Medium enterprises
* MUDRA- Pradhan Mantri Micro Units Development and Refinance Agency Limited (MUDRA)
* Startup- Start Up India
* SIDBI - Small Industries Development Bank Of India
* Different Bank’s startup fund- e.g[. ‘Bank Of India and Innovations’](http://ruralinnovations.gov.in/)
* And other allied programs in government

**ECONOMIC VIABILITY**

|  |  |  |
| --- | --- | --- |
| **S No** | **Particulars** | **Amount (Rs.)** |
| 1 | Raw Materials (Cotton hosiery rags, Cotton jeans waste cutting, jute bag waste, office  record waste paper ) | 1800000.00 |
| 2 | Adhesives (@ 3 per kg) | 90000.00 |
| 3 | Color (@0.88 per kg) | 26625.00 |
| 4 | Maintenance | 50000.00 |
| 5 | Salaries |  |
| 1 Supervisor @ 20000 \* 12 | 240000.00 |
| 6 | Wages |  |
| 2 Male Skilled Labor 8000 @ month \*12 | 192000.00 |
| 2 Female Skilled labor @ 8000 @ month \* 12 | 192000.00 |
| 4 Unskilled labour (2 Male & 2 Female) | 204000.00 |
| 7 | Electricity @ 1 unit per 1 kg production (1  unit= 8 Rs) | 192000.00 |
| 8 | Miscellaneous (grease, oil, cloth, Galvanized  Iron sheets etc.) | 80000.00 |
|  | **Total** | **3066625.00** |

1. Cost of production per unit with 70% plant capacity utilization

|  |  |  |
| --- | --- | --- |
| **Sr. No** | **Particulars** | **Amount** |
| 1 | Unit produced (Kg) | 16800.00 |
| 2 | Unit fixed Cost (Rs) | 90.59 |
| 3 | Unit Variable Cost (Rs.) | 67.33 |
|  | **Total (Rs.)** | 157.92 |

1. Income Projection
   * Production capacity of plant = 80 kg per day

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sr. No** | **Particulars** | **1st Year 70%**  **utilization**  **(Rs.)** | **2nd Year 80%**  **utilization**  **(Rs.)** | **3rd Year 100%**  **utilization**  **(Rs.)** | **4th Year 100%**  **utilization**  **(Rs.)** | **5th Year 100%**  **utilization**  **(Rs.)** |
| **A** | **Revenue** | | | | | |
| 1 | Sales | 3360000.00 | 3840000.00 | 4800000.00 | 4800000.00 | 4800000.00 |
|  | **Total**  **revenue** | 3360000.00 | 3840000.00 | 4800000.00 | 4800000.00 | 4800000.00 |
| **B** | **Expenses** | | | | | |
| 1 | Raw materials | 1260000.00 | 1440000.00 | 1800000.00 | 1800000.00 | 1800000.00 |
| 2 | Colors | 15975.00 | 18637.50 | 26625.00 | 26625.00 | 26625.00 |
| 3 | Adhesives | 54000.00 | 63000.00 | 90000.00 | 90000.00 | 90000.00 |
| 4 | Electricity  expenses | 192000.00 | 192000.00 | 192000.00 | 192000.00 | 192000.00 |
| 5 | Salary expenses | 240000.00 | 240000.00 | 240000.00 | 240000.00 | 240000.00 |
| 6 | Wages  expenses | 588000.00 | 588000.00 | 588000.00 | 588000.00 | 588000.00 |
| 7 | Depreciation  on equipment  and building @ 10% | 173065.00 | 173065.00 | 173065.00 | 173065.00 | 173065.00 |
| 8 | Maintenance | 50000.00 | 50000.00 | 50000.00 | 50000.00 | 50000.00 |
| 9 | Miscellaneous | 80000.00 | 80000.00 | 80000.00 | 80000.00 | 80000.00 |
| 10 | Cost of  production | 1521975.00 | 1713637.50 | 2108625.00 | 2108625.00 | 2108625.00 |
| **C** | **Total cost** | **2653040.00** | **2844702.50** | **3239690.00** | **3239690.00** | **3239690.00** |
| 11  (A-C) | EBIT | 706960.00 | 995297.50 | 1560310.00 | 1560310.00 | 1560310.00 |
| 12 | Interest @  12% | 221053.00 | 182058.00 | 138117.00 | 88603.00 | 32809.00 |
| 13 | Tax @ 5% | 168000.00 | 192000.00 | 240000.00 | 240000.00 | 240000.00 |
| 14  [12-(12+13)] | EAT | 317907.00 | 621239.50 | 1182193.00 | 1231707.00 | 1287501.00 |

Note: - EBIT- Earnings Before Interest and Taxes,EAT- Earnings After Taxes

1. Loan Calculation
   * Loan Amount Rs.1980000.00, Interest Rate= 12%,
   * Loan repayment calculation

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Period** | **Installment (Rs.)** | **Interest (Rs.)** | **Net payment (Rs.)** | **Balance (Rs.)** |
| 1st Year | 307475.00 | 221053.00 | 528528.00 | 1672525.00 |
| 2nd Year | 346470.00 | 182058.00 | 528528.00 | 1326055.00 |
| 3rd Year | 390411.00 | 138117.00 | 528528.00 | 935644.00 |
| 4th Year | 439925.00 | 88603.00 | 528528.00 | 495719.00 |
| 5th Year | 495719.00 | 32809.00 | 528528.00 | 0.00 |

1. Profitability table (@ 70% plant capacity utilization) Total unit produced per year =16800.00 Kg

|  |  |  |
| --- | --- | --- |
| **Sr. No** | **Particulars** | **Amount** |
| 1 | Annual Gross Profit ((Rs.) | 706960.00 |
| 2 | % of profit on sales | 21.04% |
| 3 | Annual fixed cost (Rs.) i.e. ( 67.33 X 16800) | 1131065.00 |
| 4 | Annual Variable cost (Rs.) i.e. ( 90.59 X 16800) | 1521975.00 |
| 5 | Annual sales(Rs.) i.e. ( 200 X 16800) | 3360000.00 |
| 6 | Break Even Point (Units per Kg) | 10338 |

\*BEP= Fixed cost/ (Selling price per unit – Variable cost per unit)= 1131065/ (200-90.59)

1. Cash flow statement Discounted at 12% interest rate

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Year** | **Cash Outflow**  **((Rs.))** | **Cash Inflow (Rs.)** | **Cash Flow (Rs.)** | **PV of cash Outflow (Rs.)** | **PV of cash Inflow (Rs.)** |
| 1 | 2653040.00 | 3360000.00 | 706960.00 | 2368785.71 | 3000000.00 |
| 2 | 2844702.50 | 3840000.00 | 995297.50 | 2539912.95 | 3428571.43 |
| 3 | 3239690.00 | 4800000.00 | 1560310.00 | 2892580.36 | 4285714.29 |
| 4 | 3239690.00 | 4800000.00 | 1560310.00 | 2892580.36 | 4285714.29 |
| 5 | 3239690.00 | 4800000.00 | 1560310.00 | 2892580.36 | 4285714.29 |
| **Total** |  |  |  | **13586439.74** | **19285714.30** |

Note: PV- Present value

Benefit Cost (BC) ratio=1.41,Internal rate of return (IRR) =32.61 %, hence the project is feasible

1. Debt Service Coverage Ratio(DSCR) Calculation

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sr. No** | **Particulars** | **1st Year 70%**  **utilization**  **(Rs.)** | **2nd Year 80%**  **utilization**  **(Rs.)** | **3rd Year 100%**  **utilization**  **(Rs.)** | **4th Year 100%**  **utilization**  **(Rs.)** | **5th Year 100%**  **utilization**  **(Rs.)** |
| **A** | **COVERAGE** | | | | | |
| 1 | Net Profit | 317907.00 | 621240.00 | 1182193.00 | 1231707.00 | 1287501.00 |
| 2 | Depreciation | 173065.00 | 173065.00 | 173065.00 | 173065.00 | 173065.00 |
| 3 | Int. on Loan | 221053.00 | 182058.00 | 138117.00 | 88603.00 | 32809.00 |
|  | TOTAL(Rs.) | 712025.00 | 976363.00 | 1493375.00 | 1493375.00 | 1493375.00 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sr. No** | **Particulars** | **1st Year 70%**  **utilization (Rs.)** | **2nd Year 80%**  **utilization (Rs.)** | **3rd Year 100%**  **utilization (Rs.)** | **4th Year 100%**  **utilization (Rs.)** | **5th Year 100%**  **utilization (Rs.)** |
| **B** | **REPAYMENT** | | | | | |
| 1 | Int. on Loan | 221053.00 | 182053.00 | 138117.00 | 88603.00 | 32809.00 |
| 2 | Repay. Amounts | 307475.00 | 347475.00 | 390411.00 | 439925.00 | 495719.00 |
|  | TOTAL (Rs.) | 528528.00 | 528528.00 | 528528.00 | 528528.00 | 528528.00 |
|  | DSCR=A/B | 1.35 | 1.85 | 2.83 | 2.83 | 2.83 |

Average (DSCR) = 2.33, which is well above the ideal DSCR value i.e. 2 and it clearly indicates that the venture is profitable.

In the above table for production of 24000kg of output 30000 kg raw material requirement has been considered. In the next table Project cost has been considered as Rs1899656, as a matter of fact 30% margin and 70% loan i.e. Rs 1329000 has been considered. As per the norms of RBI committee, generally the working capital requirements have to be 25% of projected sales. Out of it 20% is provided by bank and 5%margin by the borrower. So 20% of projected sales, Rs 3360000i.e. Rs 672000 is the loan. Thus, adding term loan of Rs 1329000 and Cash Credit loan of Rs 672000.Total loan amount has been rounded off to Rs 1980000.

From the above tables and justifications it clearly establishes the fact that the project is economically viable. Judging by all counts the handmade paper conversion unit seems to a viable business and this has the potential to generate livelihood for few families and can also act as an environment friendly initiative for the world.

1. Sensitivity Analysis –

This technique has been used to determine how different values of an independent variable can impact a particular dependent variable under a given set of assumptions. All figures mentioned above are only indicative and may vary from place to place.

1. There is a possibility where the entire investment cost can be reduced as per the options given below:-
   1. If work shed can be built on own land
   2. If a work shed already exists as readymade or a shed on rent is taken
   3. Work of two unskilled laborers can be done by two skilled manpower if situation demands.

Other than the above two fixed cost factors, variable cost may be altered too. In fact there are factors which will force the investor to alter the cost.

1. The variable factors are as follows:-
   1. Cost of raw materials

Based on above mentioned conditions

* + 1. Profitability will increase
    2. Interest on Capital Expenditure will also reduce
    3. BEP will improve

A detailed calculation has been worked out in Annexure.

i) Handmade papers are manufactured in different forms which are given below. Paper differs in thickness. Thickness depends on content of cotton fiber etc.

* Water mark paper for certificates
* Filter paper and pads
* Insulation paper
* File covers
* Duplicating paper
* Tissue paper
* Drawing paper for art work
* Permanent document paper
* Dark coloured card sheets
* Deckle edged stationery
* Exclusive greetings
* Unique carry bags

1. List of some of the Suppliers of Raw Material

For cotton waste, fabric waste:

* 1. Banyan, hosiery fabrics may be procured from Tirupur.
  2. All fabric manufacturers in Erode, Salem, Karur, Kumarapalayam
  3. Cotton and jeans fabrics may be procured from Bangalore

1. Usage of manufactured Product

Handmade Paper manufacturing units has multiple usages. Price of handmade paper varies based on thickness of the paper. These papers are sent to conversion unit from the manufacturing units for diverse usage. Activities related to conversion unit will be discussed in the second part of this proposal.

**CONCLUSION**

In the end while working on these projects made us learn about the excel and its amazing function which helped easing our calculations. While working on these projects we also gained amazing knowledge on how the cost benefit analysis work . While identifying the cost and benefits both direct and indirect it helped us get critical thinking on what are right things that should be included and what shouldn’t be included.

The work also provided with critical research tips and motivation on how to write proper reports , We especially want to thank our industry expert MR. CH. Ramesh for providing us his guidance and giving us tips for completing our projects completely. We also want to thank our PS Station GMR Varalakshmi Foundation , Hyderabad for providing us with such amazing project idea to work on. We also want to thank our PS Instructor MR. Sandeep Kayastha for providing us the motivation to work 24 hours and also giving us tips for completing our projects in time

These project ideas which we have worked are surely to bring about change in the target villages which were affected by covid-19 and surely will bring about change even if its not implanted. The covid -19 pandemic has surely bought a lot of chaos in the world but we hope that our reports will bring about some change in that

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