



Model Detailed Project Report

APPLE WINE MANUFACTURING UNIT

*Under the Formalization of Micro Food Processing Enterprises Scheme
(Ministry of Food Processing Industries, Government of India)*



Prepared by

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1. The Project at a Glance

1. Name of the proposed project	:	Apple Wine Manufacturing Unit
2. Name of the entrepreneur/FPO/SHG/Cooperative	:	
3. Nature of proposed project	:	Proprietorship/Company/Partnership
4. Registered office	:	
5. Project site/location	:	
6. Names of Partner (if partnership)	:	
7. No of share holders (if company/FPC)	:	
8. Technical advisor	:	
9. Marketing advisor/partners	:	
10. Proposed project capacity	:	Apple Wine: 75000 Ltr/annum (50,55,60,65,&70% capacity utilization in 1 st to 5 th Year respectively)
11. Raw materials	:	Apple Fruits , Yeast & Packaging material (Bottles)
12. Major product outputs	:	Apple Wine
13. Total project cost	:	Rs. 29.74 Lakh
• Land development, building & civil construction	:	Nil
• Machinery and equipments	:	Rs. 22.96 Lakh
• Other Fixed Assets	:	Rs. 3 Lakh
• Working capital margin	:	Rs. 2.74 Lakh
• Contingencies	:	Rs. 1.04
14. Working capital requirement		Rs. 8.22 Lakh
15. Means of Finance		
• Subsidy grant by MoFPI (max 10 lakh)	:	Rs. 10.00 Lakh
• Promoter's contribution (min 20%)	:	Rs. 8.06 Lakh
• Term loan (45%)	:	Rs. 11.68 Lakh
16. Debt-equity ratio	:	1.04
17. Profit after Depreciation, Interest & Tax		
• 1 st year	:	2.87 Lakh
• 2 nd year	:	4.72 Lakh
• 3 rd year	:	7.06 Lakh
• 4 th year	:	10.16 Lakh
• 5 th year	:	12.58 Lakh
18. Average DSCR	:	3.14
19. Term loan repayment	:	5 Years with 6 months grace period

2. About the Project

2.1. Apple Wine Manufacturing Unit

An apple is an edible fruit produced by an apple tree (*Malus domestica*). Apple trees are cultivated worldwide and are the most widely grown species in the genus *Malus*. The tree originated in Central Asia, where its wild ancestor, *Malus sieversii*, is still found today. In India, Apple is primarily cultivated in Jammu & Kashmir; Himachal Pradesh; hills of Uttar Pradesh and Uttaranchal. It is also cultivated to a small extent in Arunachal Pradesh; Nagaland; Punjab and Sikkim. Cider is an alcoholic drink (7-8% alcohol) made by fermenting apple juice. It comes in a variety of iterations still, naturally sparkling, bottle-fermented, method champenoise, carbonated, dry, medium, sweet, ice cider, cider brandy, acidic, tannic, wild yeast fermentation. Apple wine contains polyphenols, which are compounds in plants that act as antioxidants. They can help the body to fight against free radicals and cell damage, lowering your risk of certain types of cancer, diabetes, and heart disease. Polyphenols also help to ease inflammation in the body. As Apple wine isn't filtered, it has more polyphenols than apple juice. It does, however, contain less than fresh, whole apples, which also contain a significant amount of fibre.

2.2. Raw Material Requirements

Major raw materials that are used are as follows:

- Apple Fruit
- Yeast
- Packaging Materials (Bottles)

2.3. Technology

IIFPT has all the advanced technical know on apple wine manufacturing & packaging with respect to specific parameters' for getting good quality standards. These technologies are available through consultancy.

2.4. Market Demand and Supply

The global cider market size was estimated at USD 4.33 billion in 2018 and is anticipated to register a CAGR of 3.1% from 2019 to 2025. One of the biggest growth factors is a growing demand for premium spirits due to rising per capita income as well as alcohol consumption as a status symbol. In alcoholic beverages, customers increasingly favour heritage, efficiency, and novelty. The brand is touted as a gender-balanced group in which male drinkers account for 51% and women account for 49% worldwide. This percentage reflects 40% of citizens aged 20 to 30 years of age. The younger generation prefers to drink less alcohol and choose healthy alternatives that position cider as one of the preferred drinks in different categories. Compared to conventional beers, dry cider contains low sugar and carbohydrates and is considered healthier. While cider is a millennia-old drink in the Western world, in India it is a relatively new introduction popularized by the microbrewery revolution. While there have been attempts to brew cider primarily as a means of tackling wastage in apple-growing areas like Himachal Pradesh, the initiatives have remained on a minuscule scale.

Good quality cider still comes via imports from the West countries. There is clearly a gap in the market triggered by a growing interest in craft brews and spirits.

2.5. Marketing Strategy

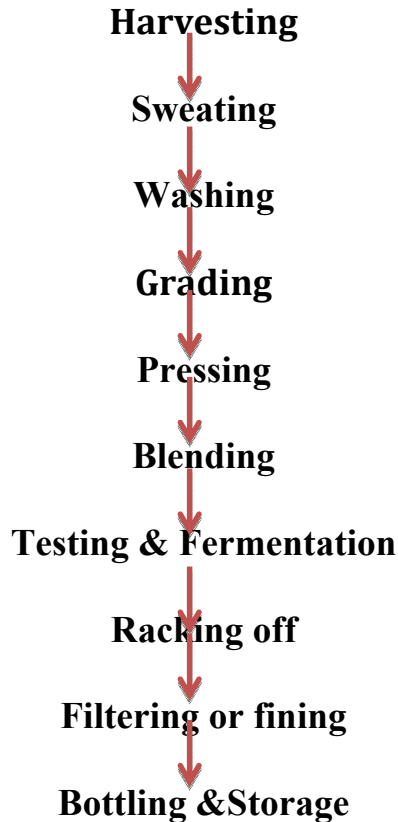
The increasing urbanization and income offers huge scope for marketing of apple wine. Urban organized platforms such as departmental stores, malls, super markets can be attractive platforms to sell well packaged apple wine. Processors can also have tie-up with hotels, caterers and restaurants for supply.

2.6. Manufacturing Process

There are various steps involved in cider-making: harvest, sweating, washing, grinding, pressing, blending, testing, fermentation, racking off, filtering or fining, bottling, storage. Each step has its importance in the overall “image” of the final product.

In modern plants, the apples are crushed in a grater type mill made of stainless steel. Next, the pulp is crushed to extract the juice using a cider press. In modern plants, mechanic-hydraulically operated plate presses are used. The freshly pressed juice may be fermented straight away or concentrated and stored for later conversion to cider, in which case it is extensively treated to pasteurize and remove pectin.

Process Flow:



2.7. Basic Project Assumptions

Capacity of Apple wine manufacturing Unit: Apple Wine 75000 Ltr/annum

Apple wine is packed in bottle of 750 ml. Therefore number of bottles per annum is 1 Lakh

Working hours per day : 8-10 hrs.

Working days per year : 300 days.

Interest on capital investment : 11% on term loan and working capital loan.

Repayment period : Five years with six months grace period is considered.
 Utilization of capacity : 50% 1st year, 55% in 2nd year, 60% in 3rd year, 65% in 4th year & 70% 5th year onwards
 Average prices of raw material : Rs. 140/ Bottle
 Average sale price : Bottle of 750 ml Rs 220 (Apple wine)

2.8. Fixed Capital Investment

2.8.A. Land & Building

The DPR is for FME scheme to upgrade/formalize existing micro enterprises which already has land & built-up area. However, they can invest to expand the built-up area as required.

2.8.B. Machinery & Equipment: Rs. 22.96 Lakh

Description	Rate	Unit	Amount
Fruit washing machine	486000	1	486000
Fruit Mill	45000	4	180000
Juice Press	95000	2	190000
Filtration Unit	150000	1	150000
Fermentation Tanks (Capacity 100 Ltr.)	380000	2	760000
Filling & Capping machine	180000	1	180000
Total Amount			1946000
GST @18%			350280
Net Amount			2296280
Net Amount (Round off)			2296000

2.8.C. Other Fixed Assets:

i. Furniture and Fixtures	Rs. 3 Lakh
ii. Plastic trays capacity	
iii. Electrical fittings	

2.8.D. Total Fixed Capital Investment (A+B+C): Rs. 25.96 Lakh

2.9. Working Capital Requirement

Working capital is critical input in Apple wine manufacturing & packaging unit.

COMPUTATION OF CLOSING STOCK & WORKING CAPITAL					
PARTICULARS	I	II	III	IV	V
Finished Goods					
(15 Days requirement)	5.50	6.35	7.20	8.13	9.17
Raw Material					
(15 Days requirement)	3.50	4.04	4.62	5.27	5.95
Closing Stock	9.00	10.40	11.82	13.39	15.12

COMPUTATION OF WORKING CAPITAL REQUIREMENT			
Particulars	Amount	Margin(25%)	Net Amount
Stock in Hand	9.00		
Less:			
Sundry Creditors	3.27		
Paid Stock	5.73	1.43	4.30
Sundry Debtors	5.23	1.31	3.92
Working Capital Requirement			8.22
Margin			2.74
MPBF			8.22
Working Capital Demand			8.22

2.10. Total Project Cost and Means of Finance

Particulars	Amount (Rs. in Lakh)
i. Land and building	Nil
ii. Plant and machinery	22.96
iii. Other Fixed assets	3.00
iv. Working capital margin	2.74
v. Contingencies	1.04
Total project cost (i to v)	29.74
Means of finance	
i. Subsidy	10.00
ii. Promoter's contribution	8.06
iii. Term loan	11.68
Total Means of Finance(i to iii)	29.74

2.11. Manpower:

BREAK UP OF LABOUR				
Particulars		Wages Per Month	No of Employees	Total Salary
Machine Operator		13,000.00	2	26,000.00
Skilled/Unskilled Worker		11,000.00	4	44,000.00
Helper		8,000.00	3	24,000.00
				-
				94,000.00
Add: 10% Fringe Benefit				9,400.00
Total Labour Cost Per Month				1,03,400.00
Total Labour Cost for the year (In Rs. Lakhs)			9	12.41

BREAK UP OF SALARY				
Particulars		Salary Per Month	No of Employees	Total Salary
Accountant cum store keeper		18,000.00	1	18,000.00
Sales		15,000.00	2	30,000.00
Total Salary Per Month				48,000.00
Add: 5% Fringe Benefit				2,400.00
Total Salary for the month				50,400.00
Total Salary for the year (In Rs. Lakhs)			3	6.05

2.12. Financial Analysis:

PROJECTED BALANCE SHEET					
PARTICULARS	I	II	III	IV	V
SOURCES OF FUND					
Capital Account					
Opening Balance	-	20.02	23.35	26.40	29.57
Add: Additions	8.06	-	-	-	-
Add: Net Profit	2.87	4.72	7.06	10.16	12.58
Less: Drawings	0.90	1.40	4.00	7.00	9.00
Subsidy/Grant	10.00	-	-	-	-
Closing Balance	20.02	23.35	26.40	29.57	33.15
CC Limit	8.22	8.22	8.22	8.22	8.22
Term Loan	10.38	7.79	5.19	2.60	-
Sundry Creditors	3.27	3.77	4.31	4.91	5.55
TOTAL :	41.89	43.13	44.13	45.29	46.92
APPLICATION OF FUND					
Fixed Assets (Gross)	25.96	25.96	25.96	25.96	25.96
Gross Dep.	1.05	2.31	3.76	5.41	7.26
Net Fixed Assets	24.92	23.65	22.20	20.55	18.70
Current Assets					
Sundry Debtors	5.23	6.32	7.23	8.26	9.28
Stock in Hand	9.00	10.40	11.88	13.55	15.26
Cash and Bank	2.75	2.76	2.81	2.93	3.69
TOTAL :	41.89	43.13	44.13	45.29	46.92

PROJECTED PROFITABILITY STATEMENT					
PARTICULARS	I	II	III	IV	V
A) SALES					
Gross Sale	104.50	126.47	144.60	165.11	185.54
Total (A)	104.50	126.47	144.60	165.11	185.54
B) COST OF SALES					
Raw Material Consumed	70.00	80.85	92.40	105.30	119.00
Electricity Expenses	3.36	3.69	4.03	4.36	4.70
Repair & Maintenance	5.23	5.69	7.23	8.26	9.28
Labour & Wages	12.41	13.65	14.33	15.54	16.31
Packing & other overhead cost	1.05	1.26	1.45	1.65	1.86
Cost of Production	92.04	105.15	119.44	135.11	151.14
Add: Opening Stock /WIP	-	5.50	6.35	7.26	8.29
Less: Closing Stock /WIP	5.50	6.35	7.26	8.29	9.31
Cost of Sales (B)	86.54	104.29	118.53	134.08	150.12
C) GROSS PROFIT (A-B)	17.97	22.18	26.07	31.03	35.41
	17.19%	17.54%	18.03%	18.80%	19.09%
D) Bank Interest (Term Loan)	1.27	1.04	0.75	0.46	0.18
ii) Interest On Working Capital	0.90	0.90	0.90	0.90	0.90
E) Salary to Staff	6.05	7.26	8.35	9.60	11.04
F) Selling & Adm Expenses Exp.	3.14	5.06	5.49	5.78	6.49
G) Depreciation as per Schedule	3.74	3.20	2.73	2.33	1.99
TOTAL (D+E+F+G)	15.10	17.45	18.23	19.08	20.61
H) NET PROFIT	2.87	4.72	7.84	11.96	14.80
	2.7%	3.7%	5.4%	7.2%	8.0%
I) Taxation	-	-	0.78	1.79	2.22
J) PROFIT (After Tax)	2.87	4.72	7.06	10.16	12.58

PROJECTED CASH FLOW STATEMENT					
PARTICULARS	I	II	III	IV	V
SOURCES OF FUND					
Own Contribution	8.06	-			
Reserve & Surplus	2.87	4.72	7.84	11.96	14.80
Depriciation & Exp. W/off	1.05	1.26	1.45	1.65	1.86
Increase In Cash Credit	8.22	-	-	-	-
Increase In Term Loan	11.68	-	-	-	-
Increase in Creditors	3.27	0.51	0.54	0.60	0.64
Subsidy/Grant	10.00	-	-	-	-
TOTAL :	45.14	6.50	9.83	14.21	17.30
APPLICATION OF FUND					
Increase in Fixed Assets	25.96	-	-	-	-
Increase in Stock	9.00	1.40	1.49	1.67	1.71
Increase in Debtors	5.23	1.10	0.91	1.03	1.02
Repayment of Term Loan	1.30	2.60	2.60	2.60	2.60
Taxation	-	-	0.78	1.79	2.22
Drawings	0.90	1.40	4.00	7.00	9.00
TOTAL :	42.38	6.49	9.77	14.09	16.55
Opening Cash & Bank Balance	-	2.75	2.76	2.81	2.93
Add : Surplus	2.75	0.01	0.06	0.12	0.75
Closing Cash & Bank Balance	2.75	2.76	2.81	2.93	3.69

2.13. Depreciation Schedule:

COMPUTATION OF DEPRECIATION				
Description	Land	Plant & Machinery	Miscellaneous Assets	TOTAL
Rate of Depreciation		15.00%	10.00%	
Opening Balance	Leased	-	-	-
Addition	-	22.96	3.00	25.96
	-	22.96	3.00	25.96
		-	-	-
TOTAL		22.96	3.00	25.96
Less : Depreciation	-	3.44	0.30	3.74
WDV at end of Ist year	-	19.52	2.70	22.22
Additions During The Year	-	-	-	-
	-	19.52	2.70	22.22
Less : Depreciation	-	2.93	0.27	3.20
WDV at end of IIInd Year	-	16.59	2.43	19.02
Additions During The Year	-	-	-	-
	-	16.59	2.43	19.02
Less : Depreciation	-	2.49	0.24	2.73
WDV at end of IIIrd year	-	14.10	2.19	16.29
Additions During The Year	-	-	-	-
	-	14.10	2.19	16.29
Less : Depreciation	-	2.12	0.22	2.33
WDV at end of IV year	-	11.99	1.97	13.95
Additions During The Year	-	-	-	-
	-	11.99	1.97	13.95
Less : Depreciation	-	1.80	0.20	1.99
WDV at end of Vth year	-	10.19	1.77	11.96

2.14. Repayment Schedule:

REPAYMENT SCHEDULE OF TERM LOAN						11.0%	
Year	Particulars	Amount	Addition	Total	Interest	Repayment	CI Balance
I	Opening Balance						
	Ist Quarter	-	11.68	11.68	0.32	-	11.68
	Iind Quarter	11.68	-	11.68	0.32	-	11.68
	IIIrd Quarter	11.68	-	11.68	0.32	0.65	11.03
	Ivth Quarter	11.03	-	11.03	0.30	0.65	10.38
					1.27	1.30	
II	Opening Balance						
	Ist Quarter	10.38	-	10.38	0.29	0.65	9.74
	Iind Quarter	9.74	-	9.74	0.27	0.65	9.09
	IIIrd Quarter	9.09	-	9.09	0.25	0.65	8.44
	Ivth Quarter	8.44		8.44	0.23	0.65	7.79
					1.04	2.60	
III	Opening Balance						
	Ist Quarter	7.79	-	7.79	0.21	0.65	7.14
	Iind Quarter	7.14	-	7.14	0.20	0.65	6.49
	IIIrd Quarter	6.49	-	6.49	0.18	0.65	5.84
	Ivth Quarter	5.84		5.84	0.16	0.65	5.19
					0.75	2.60	
IV	Opening Balance						
	Ist Quarter	5.19	-	5.19	0.14	0.65	4.54
	Iind Quarter	4.54	-	4.54	0.12	0.65	3.89
	IIIrd Quarter	3.89	-	3.89	0.11	0.65	3.25
	Ivth Quarter	3.25		3.25	0.09	0.65	2.60
					0.46	2.60	
V	Opening Balance						
	Ist Quarter	2.60	-	2.60	0.07	0.65	1.95
	Iind Quarter	1.95	-	1.95	0.05	0.65	1.30
	IIIrd Quarter	1.30	-	1.30	0.04	0.65	0.65
	Ivth Quarter	0.65		0.65	0.02	0.65	- 0.00
					0.18	2.60	

2.15. Financial Ratios:

FINANCIAL RATIOS					
	I	II	III	IV	V
TURNOVER	104.50	126.47	144.60	165.11	185.54
GROSS PROFIT	17.97	22.18	26.07	31.03	35.41
G.P. RATIO	17.19%	17.54%	18.03%	18.80%	19.09%
NET PROFIT	2.87	4.72	7.84	11.96	14.80
N.P. RATIO	2.7%	3.7%	5.4%	7.2%	8.0%
CURRENT ASSETS	16.98	19.48	21.92	24.74	28.22
CURRENT LIABILITIES	11.49	11.99	12.53	13.13	13.77
CURRENT RATIO	1.48	1.62	1.75	1.88	2.05
TERM LOAN	10.38	7.79	5.19	2.60	-
TOTAL NET WORTH	10.02	13.35	16.40	19.57	23.15
DEBT/EQUITY	1.04	0.58	0.32	0.13	-
TOTAL NET WORTH	10.02	13.35	16.40	19.57	23.15
TOTAL OUTSIDE LIABILITIES	21.87	19.78	17.72	15.73	13.77
TOL/TNW	2.18	1.48	1.08	0.80	0.59
PBDIT	8.78	9.86	12.23	15.66	17.88
INTEREST	2.17	1.94	1.65	1.37	1.08
INTEREST COVERAGE RATIO	4.04	5.09	7.39	11.44	16.52
WDV	24.92	23.65	22.20	20.55	18.70
TERM LOAN	10.38	7.79	5.19	2.60	-
FACR	2.40	3.04	4.28	7.92	-

2.16. Breakeven Point Analysis:

BREAK EVEN POINT ANALYSIS					
Year	I	II	III	IV	V
Net Sales & Other Income	104.50	126.47	144.60	165.11	185.54
Less : Op. WIP Goods	-	5.50	6.35	7.26	8.29
Add : Cl. WIP Goods	5.50	6.35	7.26	8.29	9.31
Total Sales	110.00	127.33	145.50	166.14	186.56
Variable & Semi Variable Exp.					
Raw Material & Tax	70.00	80.85	92.40	105.30	119.00
Electricity Exp/Coal Consumption at 85%	2.85	3.14	3.42	3.71	3.99
Wages & Salary at 60%	11.07	12.54	13.61	15.08	16.41
Selling & administrative Expenses 80%	2.51	4.05	4.40	4.62	5.19
ii) Interest On Working Capital	0.90	0.90	0.90	0.90	0.90
Repair & Maintenance	5.23	5.69	7.23	8.26	9.28
Packing & other overhead cost	1.05	1.26	1.45	1.65	1.86
Total Variable & Semi Variable Exp	93.61	108.44	123.41	139.52	156.64
Contribution	16.39	18.89	22.10	26.62	29.92
Fixed & Semi Fixed Expenses					
Electricity Exp/Coal Consumption at 15%	0.50	0.55	0.60	0.65	0.70
Wages & Salary at 40%	7.38	8.36	9.07	10.05	10.94
Interest on Term Loan	1.27	1.04	0.75	0.46	0.18
Depreciation	3.74	3.20	2.73	2.33	1.99
Selling & administrative Expenses 20%	0.63	1.01	1.10	1.16	1.30
Total Fixed Expenses	13.52	14.16	14.26	14.66	15.12
Capacity Utilization	50%	55%	60%	65%	70%
OPERATING PROFIT	2.87	4.72	7.84	11.96	14.80
BREAK EVEN POINT	41%	41%	39%	36%	35%
BREAK EVEN SALES	90.76	95.47	93.87	91.52	94.25

3. Limitations of the Model DPR and Guidelines for Entrepreneurs

3.1. Limitations of the Model DPR

- i. This model DPR has provided only the basic standard components and methodology to be adopted by an entrepreneur while submitting a proposal under the Formalization of Micro Food Processing Enterprises Scheme of MoFPI.
- ii. This is a model DPR made to provide general methodological structure not for specific entrepreneur/crops/location. Therefore, information on the entrepreneur, forms and structure (proprietorship/partnership/cooperative/ FPC/joint stock company) of his business, details of proposed DPR, project location, raw material base/contract sourcing, entrepreneurs own SWOT analysis, detailed market research, rationale of the project for specific location, community advantage/benefit from the project, employment generation and many more detailed aspects not included.
- iii. The present DPR is based on certain assumptions on cost, prices, interest, capacity utilization, output recovery rate and so on. However, these assumptions in reality may vary across places, markets and situations; thus the resultant calculations will also change accordingly.
- iv. This particular DPR is made on three components of means of finance i.e. grant, owner's contribution and loan/debt as followed in many central sector schemes. However, if the DPR is for credit linked subsidy then the calculation may slightly change without changes in the general structure and methodology adopted in the DPR.

3.2. Guidelines for the Entrepreneurs

- i. The success of any prospective food processing project depends on how closer the assumptions made in the initial stage are with the reality of the targeted market/place/situation. Therefore, the entrepreneurs must do its homework as realistic as possible on the assumed parameters.
- ii. This model DPR must be made more comprehensive by the entrepreneur by including information on the entrepreneur, forms and structure (proprietorship/partnership/cooperative/ FPC/joint stock company) of entrepreneur's business, project location, raw material base/contract sourcing, entrepreneurs own SWOT analysis, detailed market research, comprehensive dehydrated product mix based on demand, rationale of the project for specific location, community advantage/benefit from the project, employment generation, production/availability of the raw materials/crops in the targeted area/clusters and many more relevant aspects for acceptance and approval of the competent authority.

- iii. The entrepreneur must be efficient in managing the strategic, financial, operational, material and marketing aspects of a business. In spite of the assumed parameter being closely realistic, a project may become unsustainable if the entrepreneur does not possess the required efficiency in managing different aspects of the business and respond effectively in changing situations.
- iv. The machineries should be purchased after thorough market research and satisfactory demonstration.
- v. The entrepreneur must ensure uninterrupted quality raw materials' supply and maintain optimum inventory levels for uninterrupted operations management.
- vi. The entrepreneur must possess a strategic look to steer the business in upward trajectory.
- vii. The entrepreneur must maintain optimum (not more or less) inventory, current assets. Selecting optimum source of finance, not too high debt-equity ratio, proper capital budgeting and judicious utilization of surplus profit for expansion is must.
- viii. The entrepreneur must explore prospective markets through extensive research, find innovative marketing strategy, and maintain quality, adjust product mix to demand.
- ix. The entrepreneur must provide required documents on land, financial transaction, balance sheet, further project analysis as required by the competent authority for approval.
- x. The entrepreneur must be hopeful and remain positive in attitude.

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