

Lemon Cultivation and Processing

[NPCS/5242/23749]

ANNEXURE 1

ASSUMPTIONS FOR PROFITABILITY WORKINGS

Land Measures	
1 acre	100 decimal
1 acre	4000 sq mt
1 hectare	2.5 acres

Lemon Cultivation and Processing

[NPCS/5242/23749]

ANNEXURE 2

PLANT ECONOMICS

Rated plant Capacity	Lemon Juice production per day	
total production per day	88	per bottles/ day
total production per month	2200	per bottles/ month
total production per annum	26,400	per bottles / annum
Basis		
no. of working days	25	days/months
	300	days/annum
no of shifts	3	shifts per day
one shifts	8	hours
total working hours per day	24	hours per day
Total working hours per annum	7200	hours

Lemon Cultivation and Processing

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ANNEXURE 3

PRODUCTION SCHEDULE

(Amount in ₹)

Name of the product	Bottles per day	bottles per annum	Total batch	UOM
Lemon Juice	88	26400	26400	litres
Total	88	26400	26400	

In the first year, the production capacity is considered at 40% since the factory becomes operational only after 6 months and then the factory operates at 80% capacity

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ANNEXURE 4

LAND AND BUILDING

(Amount in ₹)

Particulars of Assets Proposed	UOM	Rate	Total
Licensing		4,000	4,000
Site Development			
Architecture Drawing		80,000	80,000
Lease land	sq. mts	3,488	3,488
Construction of factory site (building)			
Construction of Factory Sheet	sq.mts	350,000.00	350,000.00
Construction of Storage	sq.mts	200,000.00	200,000.00
Construction of Office	sq.mts	150,000.00	150,000.00
Drip Irrigation	sq.mts	50,000	50,000
Total cost		837,488	837,488

Proposed Land & Building	Rate
Construction of Factory Sheet	350,000.00
Construction of Storage	200,000.00
Construction of Office	150,000.00

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ANNEXURE 5

PLANT AND MACHINE

(Amount in ₹)

Particulars of Assets proposed (UOM)	Quantity	Price	Estimated Amount
Machineries/Equipment			
Beverage Fresh Fruit Juice Processing Plant Line	1	1,470,000	1,470,000
Bottle Packing Machine	1	1,050,000	1,050,000
Power Tiller	1	243,865	243,865
Farming Tools(Spades, Sissors, Sickles, Others)		Lumpsum	40,450
Building	1	700,000	700,000
Total			3,504,315
Furniture & Fixture			
Table	1	3,000	3,000
Chairs	3	1,000	3,000
Total			6,000
Computers & Accessories			
Computer	1	30,000	30,000
Total			30,000
Vehicles			
Marketing Van	1	100,000	300,000
Total			300,000
Grand Total			3,840,315

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ANNEXURE 1

COST OF THE PROJECT AND MEANS OF FINANCE

(Amount in ₹)

Particulars	Estimated Amount
Capital Items	3,840,315
Working Capital	
HR Costs	732,000
Administration Costs	177,232
Marketing Cost	156,000
Inventory Cost	2,052,000
Preliminary expenses	837,488
Total Cost	7,795,035
Equity(20%)	1,559,007
Total Project Cost	6,236,028

Financing

Financing	Estimated Amount
Owner's Funding	
	1,559,007
Total Owners Funding	1,559,007
Loans	
CSI LOAN	6,236,028
Total Loans	6,236,028
Total Funding	7,795,035

Lemon Cultivation and Processing

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ANNEXURE 2

Profitability and Net cash Accruals

(Amount in ₹)

Particulars	Year 1	Year 2	Year 3	Year 4	Year 5
Total Revenue (A)	5,280,000	5,544,000	6,098,400	7,013,160	8,415,792
Less: Working Capital (B)					
HR Costs	732,000	732,000	732,000	732,000	732,000
Administration Costs	177,232	178,838	180,461	182,099	183,754
Inventory Cost	2,052,000	2,257,200	2,482,920	2,731,212	3,004,333
Marketing Cost	156,000	156,000	156,000	156,000	156,000
Total (B)	3,117,232	3,324,038	3,551,381	3,801,311	4,076,088
Less: Depreciation (C)	545,747	545,747	545,747	545,747	545,747
Less: Interest Cost (D)	436,522	404,928	371,122	334,949	296,245
total (B+C+D)	4,099,501	4,274,713	4,468,250	4,682,008	4,918,080
Gross Profit: A-(B+C+D)	1,180,499	1,269,287	1,630,150	2,331,152	3,497,712
Less: Tax (25% on gross)	295,125	317,322	407,538	582,788	874,428
Net Profit After Tax	885,374	951,965	1,222,613	1,748,364	2,623,284

Lemon Cultivation and Processing

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ANNEXURE 3

ASSESSMENT OF WORKING CAPITAL REQUIREMENTS

(Amount in ₹)

Particulars	Year 1	Year 2	Year 3	Year 4	Year 5
HR Costs	732,000	732,000	732,000	732,000	732,000
Administration Costs	177,232	178,838	180,461	182,099	183,754
Inventory Cost	2,052,000	2,257,200	2,482,920	2,731,212	3,004,333
Marketing Cost	156,000	156,000	156,000	156,000	156,000
Total	3,117,232	3,324,038	3,551,381	3,801,311	4,076,088

Lemon Cultivation and Processing

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ANNEXURE 4

SOURCES OF FINANCE

(Amount in ₹)

Financing	
Owner's Funding	Estimated Amount
	1,559,007
Total Owners Funding	1,559,007
Loans	
CSI LOAN	6,236,028
Total Loans	6,236,028
Total Funding	7,795,035

Disposition of funds

Particulars	Estimated Amount
Capital Items	3,840,315
Working Capital	
HR Costs	732,000
Administration Costs	177,232
Marketing Cost	156,000
Inventory Cost	2,052,000
Preliminary expenses	837,488
Total Cost	7,795,035
Equity 20%)	1,559,007
Total Project Cost	6,236,028

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ANNEXURE-5

PROJECTED BALANCE SHEET

(Amount in ₹)

Assets	Year 1	Year 2	Year 3	Year 4	Year 5
Capital Items	3,840,315	3,294,568	2,748,821	2,203,073	1,657,326
less: Depreciation	545,747	545,747	545,747	545,747	545,747
total capital items	3,294,568	2,748,821	2,203,073	1,657,326	1,111,579
Cash in hand	4934493	5949263	7200875	8942065	11519472
Total Assets	8,229,061	8,698,084	9,403,948	10,599,391	12,631,050
Liabilities					
Loans (outstanding)	5,784,680	5,301,737	4,784,989	4,232,068	3,640,443
Profits Transferred from P&L a/c	885374	951965	1222613	1748364	2623284
Owners' Equity	1559007	2444381	3396346	4618959	6367323
Total Liabilities	8,229,061	8,698,084	9,403,948	10,599,391	12,631,050

Lemon Cultivation and Processing

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ANNEXURE -5

PROJECTED BALANCE SHEET

(Amount in ₹)

ROI (Average Fixed Assets)

	Year 1	Year 2	Year 3	Year 4	Year 5
Net Profit After Tax	885374.0925	951965.1295	1222612.824	1748364.163	2623284.364
Opening Fixed Assets (Net Block)	-	3,840,315	3,294,568	2,748,821	2,203,073
Closing Fixed Assets (Net Block)	3,840,315	3,294,568	2,748,821	2,203,073	1,657,326
	1,920,158	5,487,599	4,668,978	3,850,357	3,031,736
ROI (Average Fixed Assets)	0.46	0.17	0.26	0.45	0.87

ROI (Average Total Assets)

	Year 1	Year 2	Year 3	Year 4	Year 5
Net Profit After Tax	885374.0925	951965.1295	1222612.824	1748364.163	2623284.364
Opening total Assets (Net Block)		8,698,084	9,403,948	10,599,391	12,631,050
Closing total Assets (Net Block)	8,229,061	8,698,084	9,403,948	10,599,391	12,631,050
	4,114,530	13,047,125	14,105,922	15,899,087	18,946,575
ROI (Average Total Assets)	0.22	0.07	0.09	0.11	0.14

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ANNEXURE-5

PROJECTED BALANCE SHEET

RONW (Average of Investment)	(Amount in ₹)				
	Year 1	Year 2	Year 3	Year 4	Year 5
Net Profit After Tax	885374.0925	951965.1295	1222612.824	1748364.163	2623284.364
Opening Investment (Net Block)	-	7,795,035	7,795,035	7,795,035	7,795,035
Closing investment (Net Block)	7,795,035	7,795,035	7,795,035	7,795,035	7,795,035
	3,897,518	11,692,553	11,692,553	11,692,553	11,692,553
ROI (Average Fixed Assets)	0.23	0.08	0.10	0.15	0.22

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ANNEXURE-6

PROFITABILITY RATIOS

(Amount in ₹)

Debt Service Coverage Ratio					
	Year 1	Year 2	Year 3	Year 4	Year 5
Profit Before Tax	1,180,498.79	1,269,286.84	1,630,150.43	2,331,152.22	3,497,712.49
Debts (Term Loans)	5,784,679.87	5,301,737.36	4,784,988.89	4,232,068.01	3,640,442.68
Debt Service Coverage Ratio	0.20	0.24	0.34	0.55	0.96
Debt Equity Ratio					
	Year 1	Year 2	Year 3	Year 4	Year 5
Debt (Term Loans)	5,784,679.87	5,301,737.36	4,784,988.89	4,232,068.01	3,640,442.68
Shareholders equity	1,559,007.00	1,559,007.00	1,559,007.00	1,559,007.00	1,559,007.00
	3.71	3.40	3.07	2.71	2.34

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ANNEXURE-7

BREAKEVEN ANALYSIS

(Amount in ₹)

	Year 1	Year 2	Year 3	Year 4	Year 5
Fixed Expenses					
Admin Expenses & Marketing Expenses	190232	334838.32	336460.7032	338099.3102	339754.3033
Depreciation	3,092,568	2,546,821	2,001,073	1,455,326	909,579
Total Fixed Cost (A)	3282799.75	2881658.82	2337533.953	1793425.31	1249333.053
No of Units Sold	26,400	27,720	30,492	35,065.8	42,078.96
Total Sales Value	5,280,000	5,544,000	6,098,400	7,013,160	8,415,792
Total Cost of Production	3,117,232	3,324,038.32	3,551,380.703	3,801,311.31	4,076,087.503
Total Contribution	2,162,768.00	2,219,961.68	2,547,019.30	3,211,848.69	4,339,704.50
Contribution Per Sold(B)	81.92	80.09	83.53	91.59	103.13
Break Even Point in Units(A/B)	40,071.76	35,982.42	27,984.12	19,579.97	12,113.87

Profit Volume Ratio	Year 1	Year 2	Year 3	Year 4	Year 5
Sale Value	5,280,000	5,544,000	6,098,400	7,013,160	8,415,792
Cost of Production	3,117,232	3,324,038.32	3,551,380.703	3,801,311.31	4,076,087.503
Contribution	2,162,768.00	2,219,961.68	2,547,019.297	3,211,848.69	4,339,704.497
Break Even Point	41.0%	40.0%	41.8%	45.8%	51.6%

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ANNEXURE-8 to 11

SENSITIVITY ANALYSIS

(Amount in ₹)

	Year 1	Year 2	Year 3	Year 4	Year 5
Resultant Gross Profit	1180498.79	1269286.84	1630150.43	2331152.22	3497712.49
Resultant Net Profit Before Tax	885374.1	951965.1	1222612.8	1748364.2	2623284.4
Resultant ROI (Average Fixed Assets)	0.46	0.17	0.26	0.45	0.87
Resultant ROI (Average Total Assets)	0.22	0.07	0.09	0.11	0.14
Resultant ROI (Average Fixed Assets)	0.23	0.08	0.10	0.15	0.22
Resultant Debt Service Coverage Ratio	0.20	0.24	0.34	0.55	0.96
Resultant Debt Equity Ratio	3.71	3.40	3.07	2.71	2.34
Resultant Break Even Point in units(A/B)	40071.76	35982.42	27984.12	19579.97	12113.87
Resultant Break Even Point	41.0	40.0	41.8	45.8	51.6

Lemon Cultivation and Processing

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ANNEXURE-12

SHAREHOLDING PATTERN AND STAKE STATUS

Total Cost	7,795,035
Equity (20%)	1,559,007
Total Project Cost	6,236,028

Lemon Cultivation and Processing

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ANNEXURE-13

QUANTITATIVE DETAILS OF OUTPUT AND SALES

(Amount in ₹)

Achievable Efficiency / Yield % of Product						
Output	Monthly production in kg	1st year (kg)	2nd year (kg)	3rd year (kg)	4th year (kg)	5th year (kg)
Actual Yield	2200	26400	29040	33396	40075.2	50094
Theoretical Yield	2500	30000	30000	30000	30000	30000
Yield percentage (%)		88	96.8	111.32	133.584	166.98

Expected Sales /Revenue/ Income of Product

Products	Price Per Unit	Qty	Demand Forecast (Month)	Demand Year1	Demand Year 2	Demand Year3	Demand Year 4	Demand Year5
Lemon Juice	200	2000	400000	4800000	5040000	5292000	5556600	5834430
Total			400,000	4,800,000	5,040,000	5,292,000	5,556,600	5,834,430

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ANNEXURE-14

TOTAL RAW MATERIAL COST

(Amount in ₹)

Items	UoM	Quantity	Price
Lemon	Kg	600	50
Sugar	Kg	500	30
Sodium Benzonate (Preservative)	Litre	10	500
Dilute HCL	Litre	100	20
Bottle	Pieces	5,000	15
Stickers	Pieces	5,500	8

Lemon Cultivation and Processing

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ANNEXURE-15

TOTAL PACKING MATERIAL COST

(Amount in ₹)

Sl.no	Particulars	Units	Price
1	bottles	pieces	15
2	stickers	pieces	8
total			23

Lemon Cultivation and Processing

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ANNEXURE-16

Packing Material Cost Per Unit

(Amount in ₹)

Sl.No	Particulars	Units	Quantity	Price
1	Bottles	Pieces	1	15
2	Stickers	Pieces	1	8

Lemon Cultivation and Processing

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ANNEXURE-17

FUEL EXPENSES

(Amount in ₹)

Particulars	Litres	Price	Total Amount
Petrol	20	49.5	990

Lemon Cultivation and Processing

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ANNEXURE-18

POWER/ELECTRICITY EXPENSES

(Amount in ₹)

Items/Particulars	Estimated Cost Per Month	Estimated Cost Year 1	Estimated Cost Year 2	Estimated Cost Year 3	Estimate Cost Year 4	Estimate Cost Year5
Telephone Bill	500	6,000	6,060	6,121	6,182	6,244
Internet Charges	300	3,600	3,636	3,672	3,709	3,746
Electricity Bill	8,586	103,032	104,062	105,103	106,154	107,216
Total		112,632	113,758	114,896	116,045	117,205

Lemon Cultivation and Processing

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ANNEXURE-19

ROYALTIES AND OTHER CHARGES

(Amount in ₹)

Items/Particulars	Estimated Cost Per Month	Estimated Cost Year 1	Estimated Cost Year 2	Estimated Cost Year 3	Estimated Cost Year 4	Estimated Cost Year 5
Miscellaneous Expenses	3000	36000	36360	36723.6	37090.84	37461.744
Total Cost	3000	36000	36360	36723.6	37090.836	37461.7444

Lemon Cultivation and Processing

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ANNEXURE-20

REPAIRS AND MAINTENANCE EXPENSES

(Amount in ₹)

Sl no	Description	Cost Estimated (Year)	Year 2	Year 3	Year 4	Year 5
1	Expenses on painting, repair and maintenance	300,000	330,000	363,000	399,300	439,230
2	Computer and peripherals repairs	5,000	5,500	6,050	6,655	7,321
3	Equipment Repairs	5,000	5,500	6,050	6,655	7,321
4	others	1,000	1,100	1,210	1,331	1,464
Total Expenses		311,000	342,100	376,310	413,941	455,335

Lemon Cultivation and Processing

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ANNEXURE-21

ADMINISTRATIVE EXPENSES

(Amount in ₹)

Items/Particulars	Estimated Cost Per Month	Estimated Cost Year 1	Estimated Cost Year 2	Estimated Cost Year 3	Estimate Cost Year 4	Estimate Cost Year 5
Telephone Bill	500	6,000	6,060	6,121	6,182	6,244
Internet Charges	300	3,600	3,636	3,672	3,709	3,746
Office Stationaries	1,000	12,000	12,120	12,241	12,364	12,487
Miscellaneous Expenses	3,000	36,000	36,360	36,724	37,091	37,462
Water Bill	300	3,600	3,600	3,600	3,600	3,600
Storing Boxes	13,000	13,000	13,000	13,000	13,000	13,000
Electricity Bill	8,586	103,032	104,062	105,103	106,154	107,216
Total		177,232	178,838	180,461	182,099	183,754

Lemon Cultivation and Processing

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ANNEXURE-22

SELLING AND DISTRIBUTION EXPENSES

(Amount in ₹)

Particulars	Estimate Per Month	Estimate Year 1	Estimate Year 2	Estimate Year 3	Estimate Year 4	Estimate Year 5
Advertisement						
Television	5,000	60,000	60,000	60,000	60,000	60,000
Newspapers	3,000	36,000	36,000	36,000	36,000	36,000
Social Media						
Facebook	-	-	-	-		
Instagram	-	-	-	-		
Transportation Expenses	5,000	60,000	60,000	60,000	60,000	60,000
Total	13,000	156,000	156,000	156,000	156,000	156,000

Lemon Cultivation and Processing

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ANNEXURE-23

DEPRECIATION CHARGES AS PER BOOKS (TOTAL)

(Amount in ₹)

Capital Items	Cost	Depreciation Amount	End Value Year 1	End Value Year 2	End Value Year 3	End Value Year 4	End Value Year 5
Beverage Fresh Fruit Juice Processing Plant Line	1,470,000	220,500	1,249,500	1,029,000	808,500	588,000	367,500
Bottle Packing Machine	1,050,000	157,500	892,500	735,000	577,500	420,000	262,500
Power Tiller	243,865	36,580	207,285	170,706	134,126	97,546	60,966
Farming Tools (Spades, Scissors, Sickles, Others)	40,450	6,068	34,383	28,315	22,248	16,180	10,113
Building	700,000	105,000	595,000	490,000	385,000	280,000	175,000
Chairs	1000	150	850	700	550	400	250
Tables	3,000	450	2,550	2,100	1,650	1,200	750
Computer	30,000	4,500	25,500	21,000	16,500	12,000	7,500
Marketing Van	100,000	15,000	85,000	70,000	55,000	40,000	25,000
Total Fixed Assets	3,638,315	545,747	3,092,568	2,546,821	2,001,073	1,455,326	909,579

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ANNEXURE-24

DEPRECIATION CHARGES AS PER BOOKS (P&M)

(Amount in ₹)

Capital Items	Cost	Depreciation Amount	End Value Year 1	End Value Year 2	End Value Year 3	End Value Year 4	End Value Year 5
Beverage Fresh Fruit juice processing plant line	1,470,000	220,500	1,249,500	1,029,000	808,500	588,000	367,500
Bottle packing machine	1,050,000	157,500	892,500	735,000	577,500	420,000	262,500
Power tiller	243,865	36,580	207,285	170,706	134,126	97,546	60,966
Farming tools (spades, scissors, sickles, others)	40,450	6,068	34,383	28,315	22,248	16,180	10,113
Building	700,000	105,000	595,000	490,000	385,000	280,000	175,000
Computer	30,000	4,500	25,500	21,000	16,500	12,000	7,500
marketing van	100,000	15,000	85,000	70,000	55,000	40,000	25,000
Total Fixed Assets	3,634,315	545,147	3,089,168	2,544,021	1,998,873	1,453,726	908,579

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ANNEXURE-25

INTEREST AND REPAYMENTS- TERMS OF THE LOANS

(Amount in ₹)

No	Payment due	Interest	Principal	Balance
0				6,236,028
1	887,870	436,522	451,348	5,784,680
2	887,870	404,928	482,943	5,301,737
3	887,870	371,122	516,748	4,784,989
4	887,870	334,949	552,921	4,232,068
5	887,870	296,245	591,625	3,640,443
6	887,870	254,831	633,039	3,007,404
7	887,870	210,518	677,352	2,330,052
8	887,870	163,104	724,766	1,605,285
9	887,870	112,370	775,500	829,785
10	887,870	58,085	829,785	-

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ANNEXURE-26

TAX ON PROFITS

(Amount in ₹)

	Year 1	Year 2	Year 3	Year 4	Year 4
Gross: A-(B+C+D)	1,180,499	1,269,287	1,630,150	2,331,152	3,497,712
Less: Tax (25% on gross)	295,125	317,322	407,538	582,788	874,428
Net Profit After Tax	885,374	951,965	1,222,613	1,748,364	2,623,284

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ANNEXURE-27

PROJECTED PAYBACK PERIOD

	Year 1	Year 2	Year 3	Year 4	Year 5
Total Investment	7,795,035				
Cash Flow	4934493.209	5949263.09	7200874.7	8942065.223	11519471.5
Payback Period	1.58				

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ANNEXURE 28

INTERNAL RATE OF RETURN

Initial Investment	-7,795,035
Year 1	4,934,493
Year 2	5,949,263
Year 3	7,200,875
Year 4	8,942,065
Year5	11,519,472
Internal Rate of Return	74.67%

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ANNEXURE-27

PROJECTED PAYBACK PERIOD & IRR

Present Value Of Future Cash Flow	32,698,527.16
Initial Investment	-7795035
NPV	40,493,562.16
IRR	74.67%

