

Dairy Australia - Whey Process Model

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This Web Application provides users with an operational and commercial analysis for a selected range of cheese whey options. The App gives an indication of the required capital, expected operating costs, Internal Rate of Return (IRR) and Net Present Value (NPV) for each of these options.

Users of the App start by entering their target cheese production quantities, or expected milk supply curve, across a 10 year period. The volume and composition of whey is subsequently calculated from the selected cheese production plan (type and quantity).

When the whey volume has been calculated, users can select from a range of whey products and by-products. The whey products currently available are D40 and WPC35 liquid concentrates plus whole whey, D40 and WPC35 powders. It is also possible to test a number of scenarios based on production and sale of raw or pasteurised liquid whey.

The model runs detailed operational and financial calculations for the chosen whey product and selected scale. These calculations are based on the operational and financial structure of an Australian dairy manufacturing business. Default settings are provided by the model. Alternatively, the user can set their own inputs including factors such as capital, labour, overheads, product yield, and utilities usage and cost.



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Model Data Input Summary

Cheese Production & Milk Supply

Cheese Production Basis: Annual cheese quantity & milk supply curve

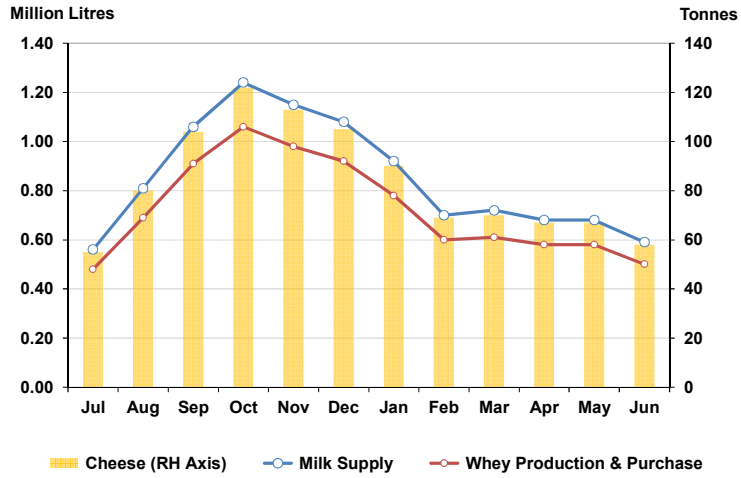
Base Year Cheese Production (Tonnes)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
Cheddar	55.2	79.6	104.2	121.8	113.2	105.4	90.2	68.9	70.2	66.7	66.6	57.9	1,000
Mozzarella	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Gouda	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Edam	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
White Mould	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Total Cheese	55	80	104	122	113	105	90	69	70	67	67	58	1,000

Seasonal Milk Supply Curve: Typical Southeast Australia

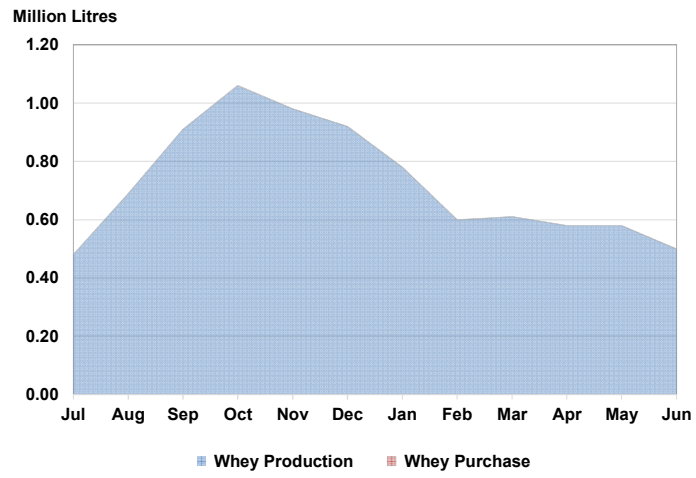
Milk Supply	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
Cheese	55	80	104	122	113	105	90	69	70	67	67	58	1,000
Volume	0.56	0.81	1.06	1.24	1.15	1.08	0.92	0.70	0.72	0.68	0.68	0.59	10.20
	5.5%	8.0%	10.4%	12.2%	11.3%	10.5%	9.0%	6.9%	7.0%	6.7%	6.7%	5.8%	100.0%
Fat	4.21%	4.16%	4.06%	4.00%	4.01%	4.11%	4.26%	4.46%	4.62%	4.72%	4.66%	4.44%	4.26%
Protein	3.39%	3.36%	3.31%	3.32%	3.24%	3.27%	3.26%	3.33%	3.48%	3.56%	3.60%	3.54%	3.37%
SNF	9.0%	9.0%	9.0%	9.0%	8.9%	8.9%	8.9%	9.0%	9.1%	9.2%	9.3%	9.2%	9.0%

Production Charts

Cheese Production, Milk Supply & Whey Production by Month - Year 1



Whey production and purchase by month - Year 1



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Whey Production & Sales Plan

Calculated production of each whey product and by-product by month in year 1

Selected Whey Product: **Liquid - WPC 35**

Whey Production	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total	By-Product Selected
Liquid Raw Whey - Waste	0.48	0.69	0.91	1.06	0.98	0.92	0.78	0.60	0.61	0.58	0.58	0.50	8.7	
Liquid Raw Whey - Sale	0.48	0.69	0.91	1.06	0.98	0.92	0.78	0.60	0.61	0.58	0.58	0.50	8.7	
Liquid Pasteurised Whey	0.48	0.69	0.90	1.05	0.98	0.91	0.78	0.59	0.60	0.57	0.57	0.50	8.6	
Liquid - Demin 40 Whey	0.19	0.27	0.36	0.42	0.39	0.36	0.31	0.24	0.24	0.23	0.23	0.20	3.4	
Liquid - WPC 35	0.10	0.15	0.20	0.23	0.21	0.20	0.17	0.13	0.13	0.12	0.12	0.11	1.9	
Whey Powder	31	44	58	68	63	59	50	38	39	37	37	32	558	
Demin 40 Whey Powder	28	41	54	63	58	54	46	36	36	34	34	30	515	
WPC 35 Powder	10	14	18	21	20	19	16	12	12	12	12	10	176	
Ricotta Cheese	19	28	36	42	39	37	31	24	24	23	23	20	348	
Whey Cream	4	6	8	9	9	8	7	5	5	5	5	4	77	FALSE
Liquid - Whey Permeate	0.37	0.54	0.70	0.82	0.76	0.71	0.61	0.46	0.47	0.45	0.45	0.39	6.7	FALSE
Liquid - Ricotta Whey	0.51	0.74	0.97	1.13	1.05	0.98	0.84	0.64	0.65	0.62	0.62	0.54	9.3	FALSE

Calculated annual production of each whey product and by-product in each year

Annual Production	Y1	Y 2	Y 3	Y 4	Y 5	Y 6	Y 7	Y 8	Y 9	Y 10	Sales Price	Freight Cost
Liquid Raw Whey - Waste	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	0.00	0.00
Liquid Raw Whey - Sale	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	0.00	0.02
Liquid Pasteurised Whey	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	0.03	0.02
Liquid - Demin 40 Whey	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	0.04	0.02
Liquid - WPC 35	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	0.10	0.02
Whey Powder	558	558	558	558	558	558	558	558	558	558	1.20	0.03
Demin 40 Whey Powder	515	515	515	515	515	515	515	515	515	515	1.30	0.03
WPC 35 Powder	176	176	176	176	176	176	176	176	176	176	3.00	0.03
Ricotta Cheese	348	348	348	348	348	348	348	348	348	348	1.80	0.30
Whey Cream	77	77	77	77	77	77	77	77	77	77	0.50	0.00
Liquid - Whey Permeate	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	0.02	0.02
Liquid - Ricotta Whey	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	0.00	0.00

Capital Investment Decisions

Capital Item Selection Table - This is used to identify the capital items associated with each whey product and by-product

	Liquid Waste	Liquid Sales	Liquid Past.	Liquid Demin40	Liquid WPC35	Powder Whey	Powder Demin40	Powder WPC35	Ricotta Chese	Whey Cream	Whey Permeate	Ricotta Whey	Number Required
Land	0	0	0	0	0	1	1	1	0	0	0	0	0
Buildings	0	0	0	0	0	1	1	1	0	0	0	0	0
Gas	0	0	0	0	0	1	1	1	0	0	0	0	0
Boiler	0	0	0	0	0	1	1	1	0	0	0	0	0
Electricity	0	0	0	0	0	1	1	1	0	0	0	0	0
Water	0	0	0	0	0	1	1	1	0	0	0	0	0
Waste	0	0	0	0	0	1	1	1	0	0	0	0	0
CIP	0	0	0	0	0	1	1	1	0	0	0	0	0
Chilling	0	0	0	0	0	1	1	1	0	0	0	0	0
Whey Silos	0.2	0.5	1	1	1	2	2	2	1	0	1	0.5	1
Ricotta	0	0	0	0	0	0	0	0	1	0	0	0	0
Past / Clarify	0	0	1	1	1	1	1	1	0	0	0	0	1
D40Membrane	0	0	0	1	0	0	1	0	0	0	0	0	0
WPCMembrane	0	0	0	0	1	0	0	1	0	0	0	0	1
Whey Dryer	0	0	0	0	0	1	1	0	0	0	0	0	0
WPC Dryer	0	0	0	0	0	0	0	1	0	0	0	0	0

Item Cost Table - Scenario cost is determined by interpolation or extrapolation from this data

Item - Price in \$ Thousands	Small	Medium	Large	Adjust	Cost
Land	200	300	500	100%	0
Buildings	1,300	1,800	2,500	100%	0
Services - Gas Connection	100	150	200	100%	0
Services - Boiler	300	500	700	100%	0
Services - Electricity Connection	10	20	30	100%	0
Services - Water & Waste Connection	10	20	30	100%	0
Services - Waste Treatment	20	30	50	100%	0
Services - CIP	200	300	450	100%	0
Services - Chilling	200	300	450	100%	0
Whey Liquid Silo(s)	200	350	500	100%	173
Ricotta Production	200	500	800	100%	0
Pasteuriser / Clarifier	300	500	800	100%	264
Demin 40 Membrane Plant	200	400	600	100%	0
WPC Membrane Plant	200	400	600	100%	164
Whey Dryer	3,500	4,500	6,000	100%	0
WPC Dryer	2,000	3,000	4,000	100%	0
Total	700	1,250	1,900	100%	601

Capital Calculation Basis

Capital sizing - % Utilisation at maximum production

Small

90%

Production Capacity Guide *

	Small	Medium	Large	Model Data	Peak Prodn
Tonnes Cheese	2,000	5,000	10,000	1,000	1,464
Million Litres of Liquid Whey	17.4	43.5	87.0	8.7	12.7
Litre / Hour Processing	2,648	6,621	13,242	1,324	1,939
Tonnes Ricotta Cheese	696	1,740	3,480	348	509
Tonnes Whey Powder	1,116	2,790	5,580	558	817
Tonne / Hour Whey Drying	0.17	0.42	0.85	0.08	0.12
Tonnes WPC	352	880	1,760	176	258
Tonne / Hour WPC Drying	0.05	0.13	0.27	0.03	0.04

* Standard factory rates assume 20 hours per day x 365 days per year x % utilisation

* Model data is the annualised production of the highest month of production

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Production Staffing

Salary & Wages Cost

	Per annum	<small>ii-center pad-1</small> + Oncost (\$)	<small>ii-center pad-</small> \$ / Week	<small>ii-center pad-</small> \$ / Hour	<small>ii-center pad-12</small> Include in Model
Daily Staff					
Production Management	80,000	0	0	0	No
Quality Assurance	40,000	0	0	0	No
Logistics Coordinator	40,000	0	0	0	No
Shift Operators (per shift)					
Wet processing	50,000	60,350	1,161	30.54	Yes
Drier	50,000	0	0	0.00	No
Packing & Warehouse	40,000	0	0	0.00	No
Shift Labour Premiums					
	Hours / Wk	Cost Premium			
Single Shift - 5 day	40	1.33			
Triple Shift - 5 day	120	1.47			
Single Shift - 7 day	56	1.60			
Triple Shift - 7 day	168	1.71			
			Other oncosts		
			Superannuation	9.0%	
			Payroll Tax	5.0%	
			Workcover	5.0%	
			Long Service Leave	1.7%	
			Total	20.7%	

Finance and Overhead Assumptions

Financing - Capital Investment

Long term debt	50%
Term of Loan (Years)	10
Shareholder equity	50%
Dividend Policy	Pay YE cash surplus

Interest Rates

Short term borrowings (overdraft)	10%
Long term borrowings	8%
Cash deposits	4%

Insurance - % of depreciable assets

1%

Depreciation

Buildings	5%
Process equipment	10%

Taxation Rate

30%

Maintenance Cost as % of Capital Investment

Selection	Model Data
Medium	6.0%

QA Materials as % of Revenue

Selection	Model Data
Medium	0.5%

Sales as % of Revenue

Selection	Model Data
Medium	0.5%

Admin as % of Revenue

Selection	Model Data
Medium	0.5%

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Utilities Parameters

Electricity Charges - Variable

Peak - \$ / kWh	0.07
Off Peak - \$ / kWh	0.03

Annual Maximum Demand \$ / kw	126.5
Peak Power Factor: Maximum Demand / Normal Operation	125%

Gas Charges - Variable

	\$ / GJ	Annual Contract (GJ)
Min	6.3	50,000
Max	9.2	5,000

Fixed Gas Charge \$ / year

* Energy prices include 15% increase due to carbon tax

Water & Trade Waste Base Charges

		Min	Melb	Adelaide	Max	Model
Water use	\$/kL	0.956	1.9819	3.450	1.9819	1.9819
Trade waste	\$/kL	0.6895	0.8671	0.107	0.9768	0.8671
BOD	\$/kg	0.4331	0.8684	0.360	0.8684	0.8684
SS	\$/kg	0.4442	0.4706	0.300	0.4706	0.4706
TKN	\$/kg	0.7678	1.6711	0.341	2.0628	1.6711
ITDS	\$/kg	0.0171	0.0171	1.888	0.0318	0.0171
Sodium	\$/kg				0.9649	
Phosphorus	\$/kg			1.659	1.7333	

Trade Waste Pricing - % of Melbourne Benchmark

100%

Chemical Costs

Caustic Price - \$ / Tonne 50% NaOH	500
Acid Cleaning Cost - % of Caustic	20%

Input Ends

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Model Output Report

Costing basis: Zero Base Costing

Income Statement										
	Y 1	Y 2	Y 3	Y 4	Y 5	Y 6	Y 7	Y 8	Y 9	Y 10
Sales - Liquid Whey	187,015	187,377	187,377	187,377	187,377	187,377	187,377	187,377	187,377	187,377
Sales - Whey Powders	0	0	0	0	0	0	0	0	0	0
Sales - Whey Cheese	0	0	0	0	0	0	0	0	0	0
Sales - Whey Byproducts	0	0	0	0	0	0	0	0	0	0
Total Sales Revenue	187,015	187,377	187,377	187,377	187,377	187,377	187,377	187,377	187,377	187,377
Whey Purchase & Transfer Cost	0	0	0	0	0	0	0	0	0	0
Raw Materials & Other	0	0	0	0	0	0	0	0	0	0
Utilities & Chemicals	482,295	482,295	482,295	482,295	482,295	482,295	482,295	482,295	482,295	482,295
Waste Cost Savings	0	0	0	0	0	0	0	0	0	0
Distribution Costs	37,403	37,475	37,475	37,475	37,475	37,475	37,475	37,475	37,475	37,475
Distribution Cost Savings	0	0	0	0	0	0	0	0	0	0
Stock Adjustments	(1,113)	0	0	0	0	0	0	0	0	0
Total Cost of Goods Sold	518,586	519,771	519,771	519,771	519,771	519,771	519,771	519,771	519,771	519,771
GROSS PROFIT	(331,571)	(332,394)	(332,394)	(332,394)	(332,394)	(332,394)	(332,394)	(332,394)	(332,394)	(332,394)
Salaries & Wages	359,878	359,878	359,878	360,853	359,878	360,853	359,878	360,853	359,878	359,878
Maintenance	36,074	36,074	36,074	36,074	36,074	36,074	36,074	36,074	36,074	36,074
Other Production	1,671	2,570	2,570	2,572	2,572	2,570	2,572	2,572	2,572	2,570
Depreciation & Insurance	66,135	66,135	66,135	66,135	66,135	66,135	66,135	66,135	66,135	66,135
Sales & Administration	1,870	1,874	1,874	1,874	1,874	1,874	1,874	1,874	1,874	1,874
Total Expenses	465,628	466,531	466,531	467,508	466,531	466,531	466,531	467,508	466,531	466,531
EBIT	(797,199)	(798,925)	(798,925)	(799,902)	(798,927)	(798,925)	(798,925)	(799,902)	(798,927)	(798,925)
Interest & Other Income/ (Expense)	(59,626)	(146,173)	(241,990)	(347,864)	(464,878)	(594,066)	(736,783)	(894,468)	(1,068,719)	(1,261,138)
Income Tax	257,048	283,529	312,274	344,330	379,141	417,897	460,712	508,311	560,294	618,019
PAT	(599,778)	(661,569)	(728,640)	(803,436)	(884,663)	(975,094)	(1,074,995)	(1,186,059)	(1,307,352)	(1,442,044)

Balance Sheet (June 30)											
	Y0	Y 1	Y 2	Y 3	Y 4	Y 5	Y 6	Y 7	Y 8	Y 9	Y 10
Cash and cash equivalents	0	0	0	0	0	0	0	0	0	0	0
Trade and other receivables	0	10,908	10,908	10,908	10,908	10,908	10,908	10,908	10,908	10,908	10,908
Inventories	0	2,010	2,010	2,010	2,012	2,010	2,010	2,010	2,012	2,010	2,010
Other Current Assets	0	0	0	0	0	0	0	0	0	0	0
Total Current Assets	0	12,917	12,917	12,917	12,919	12,917	12,917	12,917	12,919	12,917	12,917
Property, plant & equipment	601,229	541,107	480,984	420,861	360,738	300,615	240,492	180,369	120,246	60,123	0
Total Non-current Assets	601,229	541,107	480,984	420,861	360,738	300,615	240,492	180,369	120,246	60,123	0
TOTAL ASSETS	601,229	554,024	493,901	433,778	373,657	313,532	253,409	193,286	133,165	73,040	12,917
Overdraft	0	805,631	1,720,667	2,731,520	3,849,226	5,082,967	6,445,897	7,951,543	9,615,854	11,453,436	13,483,436
Trade and other payables	0	34,050	34,050	34,050	34,050	34,050	34,050	34,050	34,050	34,050	34,050
Tax liabilities	0	(257,048)	(540,577)	(852,851)	(1,197,181)	(1,576,322)	(1,994,219)	(2,454,932)	(2,963,243)	(3,523,536)	(4,141,555)
Total Current Liabilities	0	(222,998)	(506,527)	(818,801)	(1,163,131)	(1,542,272)	(1,960,169)	(2,420,881)	(2,929,193)	(3,489,486)	(4,107,505)
Financial liabilities	300,615	270,553	240,492	210,430	180,369	150,307	120,246	90,184	60,123	30,061	0
Total Non-current Liabilities	300,615	270,553	240,492	210,430	180,369	150,307	120,246	90,184	60,123	30,061	0
TOTAL LIABILITIES	300,615	47,556	(266,035)	(608,371)	(982,762)	(1,391,965)	(1,839,923)	(2,330,697)	(2,869,070)	(3,459,425)	(4,107,505)
NET ASSETS	300,615	506,468	759,936	1,042,149	1,356,419	1,705,497	2,093,333	2,523,983	3,002,235	3,532,465	4,120,422
Issued capital	300,615	300,615	300,615	300,615	300,615	300,615	300,615	300,615	300,615	300,615	300,615
Retained earnings	0	(599,778)	(1,261,346)	(1,989,986)	(2,793,422)	(3,678,085)	(4,653,179)	(5,728,174)	(6,914,233)	(8,221,585)	(9,663,629)
TOTAL EQUITY	300,615	(299,163)	(960,731)	(1,689,371)	(2,492,807)	(3,377,470)	(4,352,564)	(5,427,559)	(6,613,619)	(7,920,970)	(9,363,014)

Cash Flow Statement*											
	Y0	Y 1	Y 2	Y 3	Y 4	Y 5	Y 6	Y 7	Y 8	Y 9	Y 10
Receipts from Customers	0	176,107	187,377	187,377	187,377	187,377	187,377	187,377	187,377	187,377	187,377
Payments to Suppliers	0	(892,051)	(926,178)	(926,179)	(927,158)	(926,179)	(926,179)	(926,179)	(927,158)	(926,179)	(926,179)
Borrowing Costs	0	(59,626)	(146,173)	(241,990)	(347,864)	(464,878)	(594,066)	(736,783)	(894,468)	(1,068,719)	(1,261,138)
Income Tax (Paid) / Refunded	0	0	0	0	0	0	0	0	0	0	0
Net cash flows from operating activities	0	(775,570)	(884,975)	(980,791)	(1,087,645)	(1,203,679)	(1,332,868)	(1,475,585)	(1,634,249)	(1,807,520)	(1,999,939)
Payment for Property, Plant & Equipment	(601,229)	0	0	0	0	0	0	0	0	0	0
Net cash flows from investing activities	(601,229)	0	0	0	0	0	0	0	0	0	0
Proceeds from shares	300,615	0	0	0	0	0	0	0	0	0	0
Proceeds from borrowings	300,615	(30,061)	(30,061)	(30,061)	(30,061)	(30,061)	(30,061)	(30,061)	(30,061)	(30,061)	(30,061)
Dividends paid	0	0	0	0	0	0	0	0	0	0	0
Cash flows from financing activities	601,229	(30,061)	(30,061)	(30,061)	(30,061)	(30,061)	(30,061)	(30,061)	(30,061)	(30,061)	(30,061)
Net increase / (decrease) in cash	0	(805,631)	(915,036)	(1,010,853)	(1,117,706)	(1,233,741)	(1,362,930)	(1,505,646)	(1,664,311)	(1,837,582)	(2,030,001)
Cash at beginning of period	0	0	(805,631)	(1,720,667)	(2,731,520)	(3,849,226)	(5,082,967)	(6,445,897)	(7,951,543)	(9,615,854)	(11,453,436)
Cash and equivalents at end of period	0	(805,631)	(1,720,667)	(2,731,520)	(3,849,226)	(5,082,967)	(6,445,897)	(7,951,543)	(9,615,854)	(11,453,436)	(13,483,436)

Key Performance Indicators

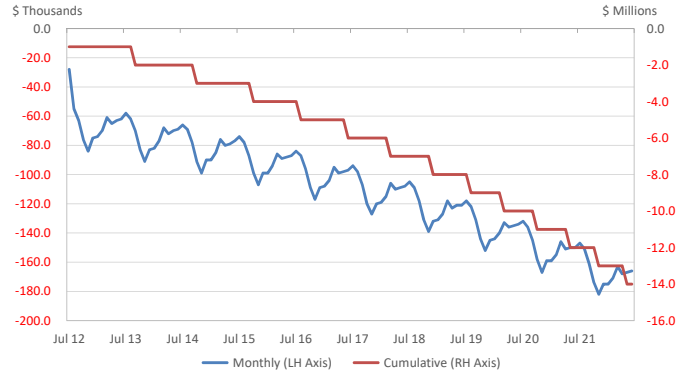
	Y 1	Y 2	Y 3	Y 4	Y 5	Y 6	Y 7	Y 8	Y 9	Y 10
Sales - Liquid Whey	187,015.0	187,377.0	187,377.0	187,377.0	187,377.0	187,377.0	187,377.0	187,377.0	187,377.0	187,377.0
Sales - Whey Powders	0	0	0	0	0	0	0	0	0	0
Sales - Whey Cheese	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sales - Whey Byproducts	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Sales Revenue	187,015.0	187,377.0	187,377.0	187,377.0	187,377.0	187,377.0	187,377.0	187,377.0	187,377.0	187,377.0
Whey Purchase & Transfer Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw Materials & Other	0	0	0	0	0	0	0	0	0	0
Utilities & Chemicals	482,295	482,295	482,295	482,295	482,295	482,295	482,295	482,295	482,295	482,295
Waste Cost Savings	0	0	0	0	0	0	0	0	0	0
Distribution Costs	37,403	37,475	37,475	37,475	37,475	37,475	37,475	37,475	37,475	37,475
Distribution Cost Savings	0	0	0	0	0	0	0	0	0	0
Stock Adjustments	(1,113)	0	0	0	0	0	0	0	0	0
Total Cost of Goods Sold	518,586	519,771	519,771	519,771	519,771	519,771	519,771	519,771	519,771	519,771
GROSS PROFIT	(331,571)	(332,394)	(332,394)	(332,394)	(332,394)	(332,394)	(332,394)	(332,394)	(332,394)	(332,394)
Salaries & Wages	359,878	359,878	359,878	360,853	359,878	359,878	359,878	360,853	359,878	359,878
Maintenance	36,074	36,074	36,074	36,074	36,074	36,074	36,074	36,074	36,074	36,074
Other Production	1,671	2,570	2,570	2,572	2,572	2,570	2,570	2,572	2,570	2,570
Depreciation & Insurance	66,135	66,135	66,135	66,135	66,135	66,135	66,135	66,135	66,135	66,135
Sales & Administration	1,870	1,874	1,874	1,874	1,874	1,874	1,874	1,874	1,874	1,874
Total Expenses	465,628	466,531	466,531	467,508	466,533	466,531	466,531	467,508	466,533	466,531
EBIT	(797,199)	(798,925)	(798,925)	(799,902)	(798,927)	(798,925)	(798,925)	(799,902)	(798,927)	(798,925)
Interest & Other Income/ (Expense)	(59,626)	(146,173)	(241,990)	(347,864)	(464,878)	(594,066)	(736,783)	(894,468)	(1,068,719)	(1,261,138)
Income Tax	257,048	283,529	312,274	344,330	379,141	417,897	460,712	508,311	560,294	618,019
PAT	(599,778.0)	(661,569.0)	(728,640.0)	(803,436.0)	(884,663.0)	(975,094.0)	(1,074,995.0)	(1,186,059.0)	(1,307,352.0)	(1,442,044.0)
Water kL	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
Waste kL	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5
Waste BOD mg/L	1,535	1,535	1,535	1,535	1,535	1,535	1,535	1,535	1,535	1,535

Capital Utilisation and Returns

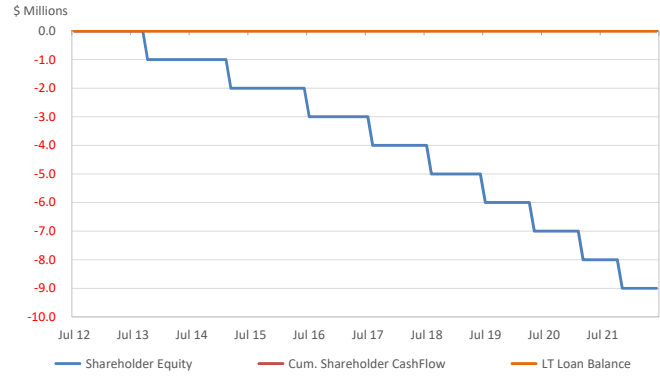
	\$ million									
Total Capital Investment	0.6									
Land & Buildings	0.0									
Services	0.0									
Silos	0.2									
Liquid process equipment	0.4									
Drier	0.0									
Total	0.6									
Internal Rate of Return (EBIT)	#NUM!									
Year	Y 1	Y 2	Y 3	Y 4	Y 5	Y 6	Y 7	Y 8	Y 9	Y 10
Annual Cash Flow	(601,229)	(797,199)	(798,925)	(798,925)	(799,902)	(798,927)	(798,925)	(798,925)	(799,902)	(798,927)
Internal Rate of Return (EBITD)	#NUM!									
Year	Y 1	Y 2	Y 3	Y 4	Y 5	Y 6	Y 7	Y 8	Y 9	Y 10
Annual Cash Flow	(601,229)	(737,076)	(738,802)	(738,802)	(739,779)	(738,804)	(738,802)	(738,802)	(739,779)	(738,804)

Output Charts

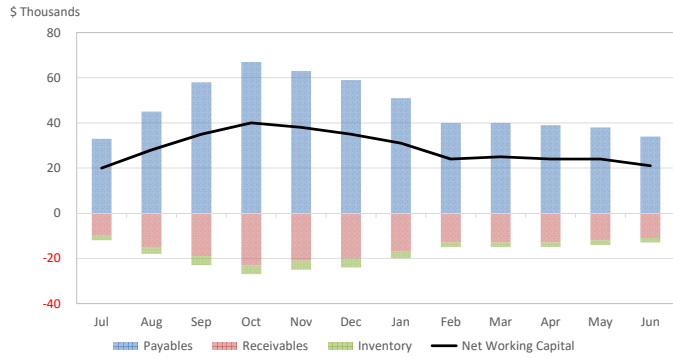
Operational Cash Flow



Shareholder Equity and Loan Balance



Working Capital Summary - year 2



Income Statement Summary

