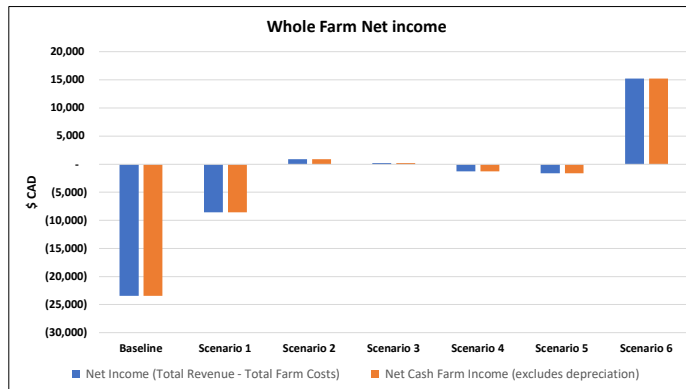


Baseline Farm Description	Dairy Operation with overproduction of milk (raw or acid) taking calves to 300 lbs (using existing facilities). Milk priced at market value.
Ration (lb/head/day as fed)	First 3 days, mother's milk colostrum, 4L twice a day, from day 4 to 10 weeks old: free choice acidify milk (10L/day) and free choice calf starter (about 0.4kg/day, totaled 25kg/hd over the entire period of 9 weeks) and 2kg/day hay From 10-12 weeks, transition to 1kg/day calf starter and 6.5kg/day hay .
Scenario 1	Change from using over-produced milk at market value to milk replacer at \$1.40/lb.
Scenario 2	Change from using over-produced milk at market value to milk replacer at \$0.90/lb.
Scenario 3	Change milk price from market value to 40% of market value
Scenario 4	Change milk price from market value to 40% of market value, ADG from 2.8lb to 2.2lb .
Scenario 5	Change milk price from market value to 40% of market value, ADG from 2.8lb to 2.2lb, purchase shortage of hay.
Scenario 6	Assume overproduced milk is free.
Summary	MT-5a is more sensitive to milk price than ADG due to the majority of the ration being on milk. Hence, profitability is heavily impacted by price of milk and the opportunity cost of milk from the dairy. Lower ADG was assumed to result in more days on feed post-weaning right before sale.
Disclaimer:	This benchmark is based on 3 farms of data; outliers were excluded as required

Environment	
Average Annual Temperature	5.5°C
Average Annual Precipitation	900–1150 mm
Ecoregion	PRINCE EDWARD ISLAND

Physical Performance Indicators	
Breed	Holstein
Sale date	Year Round
Retained ownership	Dairy Calves
% of feed purchased	N/A
Annual sales of Cattle (no. head)	72
Placement weight (lbs)	79
Sale Weight (lbs)	300
Days on Feed	80
Average Daily Gain (lbs/day)	2.76

Financial Descriptor	
Operation Maturity	Mature



Whole Farm Overview	Baseline	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6
Market Revenue							
Dairy-Beef Receipts	31,050	31,050	31,050	31,050	31,050	31,050	31,050
Crop Market Receipts	1,618	1,618	1,618	1,618	1,618	1,681	1,618
Other Farm Revenue †	-	-	-	-	-	-	-
Total Revenue	32,668	32,668	32,668	32,668	32,668	32,731	32,668
Expenses							
Direct costs enterprises	51,548	38,127	29,544	30,188	31,546	31,888	15,345
Overhead costs	871	871	871	871	871	871	871
Paid labour	1,174	1,174	1,174	1,174	1,174	1,174	1,174
Rents paid	49	49	49	49	57	49	49
Interest paid	2,453	1,011	132	160	305	364	0
Depreciation	1	1	1	1	1	1	1
Total Farm Costs	56,096	41,234	31,771	32,444	33,954	34,347	17,440
Profits							
Net Income (Total Revenue - Total Farm Costs)	(23,427)	(8,565)	898	226	(1,285)	(1,615)	15,229
Net Cash Farm Income (excludes depreciation)	(23,429)	(8,566)	897	224	(1,286)	(1,616)	15,233

Footnotes:

Cost of Production = Cash Cost + Depreciation + Opportunity Costs

Cash Costs = Cash cost for purchased feed, fertiliser, seeds, fuel, maintenance, land rents, interest on liabilities, wages paid, veterinary costs plus medicine, water, insurance, accounting, etc (excl.

Depreciation = Linear depreciation on machinery and buildings, calculated on replacement values

Opportunity Costs = Calculated cost for using own production factors like labour (family working hours * wage for qualified local labour, land (own land * regional land rents) and capital (non-land equity * long-term government bonds interest rate)

Whole Farm Profitability = Market returns (+ coupled payments) – whole-farm costs +/- changes in inventory +/- capital gains/losses.

Whole Farm Net Income = Whole farm profitability + depreciation + changes in inventory + capital gains/losses. Known as: 'Net farm income' (Agri Profits, 2018)

Revenue = sales of calves, cull cows, breeding stock, government payments and other revenue applicable to the specific enterprise

NOTE: Feed costs are based on cost of producing if homegrown.

FINISHING	Baseline	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6
No. of beef cattle sold per year	69	69	69	69	69	69	69

Note: breeding stock sales are in the cow-calf enterprise

REVENUE (\$/head Sold)	Baseline	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6
Market Returns from Retained Ownership	450.00	450.00	450.00	450.00	450.00	450.00	450.00
Other Returns (Government payments, by-products)	-	-	-	-	-	-	-
Total	450.00	450.00	450.00	450.00	450.00	450.00	450.00

Costs (\$/head Sold)	Baseline	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6
VARIABLE COSTS							
Animal purchases	111.30	111.30	111.30	111.30	111.30	111.30	111.30
Feed (purchase feed, fertiliser, seed, pesticides)	557.02	363.97	239.57	247.46	266.19	271.17	32.34
Machinery (maintenance, depreciation, contractor)	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Fuel, energy, lubricants, water	8.23	8.23	8.23	8.23	8.43	8.21	8.23
Vet & medicine	23.77	23.77	23.77	23.77	24.14	24.14	23.77
Other inputs	36.13	34.68	34.68	36.13	36.69	36.69	36.13
Labour							
Paid Labour	16.17	16.17	16.17	16.17	16.17	16.14	16.17
Unpaid Labour							
Total Variable Costs	752.63	558.13	433.73	443.07	462.94	467.66	227.95

CAPITAL COSTS	Baseline	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6
Insurance, taxes	-	-	-	-	-	-	-
Buildings (maintenance, depreciation)	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Land Cost							
Rented Land	0.46	0.46	0.46	0.46	0.56	0.46	0.46
Owned Land	0.87	0.87	0.87	0.87	1.04	0.87	0.87
Capital Costs							
Liabilities	2.12	1.45	4.50	4.76	3.00	1.95	2.29
Own capital	2.12	1.45	1.82	2.20	2.10	1.57	0.00
Total Capital Costs	5.58	4.24	7.65	8.30	6.71	4.86	3.63

TOTAL COSTS	Baseline	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6
Cash Costs	755.20	560.03	435.99	445.72	465.58	469.67	228.39
Depreciation Costs	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Opportunity Costs	0.87	0.87	3.55	3.43	1.94	1.25	3.17
Total Production Costs (excludes own capital)	756.09	560.92	439.57	449.17	467.54	470.95	231.58

Profits	Baseline	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6
Margin over operating costs	4.95	4.95	4.95	4.95	4.82	4.82	4.95
Short-term profit (cash costs)	(305.20)	(110.03)	14.01	4.28	(15.58)	(19.67)	221.61
Medium-term profit (cash + depreciation)	(305.22)	(110.05)	13.99	4.26	(15.60)	(19.70)	221.59
Long-term profit (cash + depreciation + opportunity)	(306.09)	(110.92)	10.43	0.83	(17.54)	(20.95)	218.42

Net Income (\$/head sold)	Baseline	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6
Net Income	(336.90)	(122.53)	13.99	4.26	(17.70)	(23.13)	221.66
Net Cash Farm Income	(336.88)	(122.51)	14.01	4.28	(17.68)	(23.11)	221.61

Labour		Baseline	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6
Paid Labour	hours per year	80	80	80	80	80	80	80
Unpaid Labour	hours per year	-	-	-	-	-	-	-
Return to labour input	\$/hour	(251)	(82)	23	15	(1)	(4)	203
Average wages (paid and calculated)	\$/hour	14	14	14	14	14	14	14

Net Income (annual total)	Baseline	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	
Net Income	\$ per year	(23,246)	(8,454)	965	294	(1,221)	(1,596)	15,295
Net Cash Farm Income	\$ per year	(23,245)	(8,453)	967	296	(1,220)	(1,594)	15,291

