

The Costs of Poor Fertility and What to do About Them
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 Paper to BCVA Conference, Amsterdam, October 24-26th 2003

Table 9
Effect of Lactation Shape on Cost of Poor Fertility in Dairy Cows
Yield level
7500 litres

		Type of Lactation Curve Shape							
		Very Flat		Flat		Flat Holstein		Well Managed Friesian	
		Treated	Control	Treated	Control	Treated	Control	Treated	Control
Variables	Voluntary Waiting Period VWP (days)	65	50	65	50	65	50	65	50
	Heat Detection/Submission Rate	45	80	45	80	45	80	45	80
	Conception Rate	50	45	50	45	50	45	50	45
	Last service days postpartum	280	200	280	200	280	200	280	200
	Min % Culled Failure to Conceive (FTC) Allowed	6	6	6	6	6	6	6	6
	Litres at start of lactation	20		20		20		20	
	No Litres at 305 days into lactation	25		20		15		10	
	Peak Yield litres	25.7		30		34.5		38.6	
	Decline in Yield per Month (%)	0.3		3.9		4.5		8.6	
	Persistency Score Factor Yield 305 over Peak:	292		250		217		194	
Outcomes	Litres per day (dry & in milk)	21.9	21.65	20.8	21.2	19.4	20.7	18.1	19.98
	Milk Cash Flow £	1267	1249	1202	1225	1117	1195	1044	1153
	Calving to conception (days)	126	90	126	90	126	90	126	90
	Calving Interval (days)	408	372	408	372	408	372	408	372
	100 day in calf rate (%)	35	65.4	35	65.4	35	65.4	35	65.4
	200 day Not In Calf Rate (%)	19.3	6	19.3	6	19.3	6	19.3	6
	Culling FTC Difference (%)		-1.31		-1.31		-1.31		-1.31
Per 100 Cows	Increase Income from calves	£3.24		£3.24		£3.24		£3.24	
	Increased saving Semen & Breeding Costs	-£4.44		£4.44		£4.44		£4.44	
	Increased milk flow £	-£17.99		£22.59		£77.47		£109.00	
	Cost of extra FTC Culling £	£11.53		£11.53		£11.53		£11.53	
	Difference in Days Open Calc	37.5		36.2		36.3		36.0	
Per Cow	Total Saving or Benefit per Cow	-£7.88		£32.92		£87.80		£118.33	
	Benefit per 1% increase in 100 day in calf rate	-£0.25		£1.08		£2.89		£3.92	
	Benefit per 1 day shorter days open	-£0.21		£0.91		£2.42		£3.29	
	Difference Milk Flow £	-£105.82		£132.88		£455.71		£641.18	
	Difference Litres/day difference in CI	-£2.94		£3.69		£12.66		£17.81	
	Percent of 305 day yield lost per day open	-0.04		0.05		0.17		0.24	
Herd Benefits	Total Cost or Benefits per Herd	-£766.00		£3,292.00		£8,780.00		£11,932.00	
	Total Costs or Benefit/Day Shorter Days Open	-£21.20		£90.70		£241.90		£328.90	

Assumptions Common to all runs

Days to peak	42	Cost of replacement	1000
Dry off litres	10	Price received for a cull	220
Min Dry Days	50	Milk Price/litre p	17
Calf price £	40	Gross Margin per cow £	700
Semen Cost £	20	Discount Rate	7

Adapted from John Morton InCalf Project