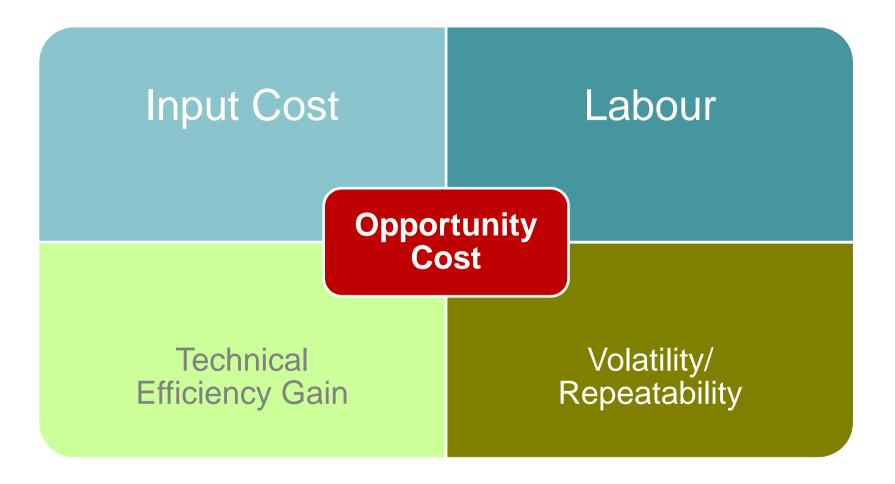
The Economic Challenges for Specialist Liquid Milk Production

Joe Patton, Teagasc IFA Liquid Milk Forum, July 18th 2014



Economic Challenges for Liquid Milk: Key Elements









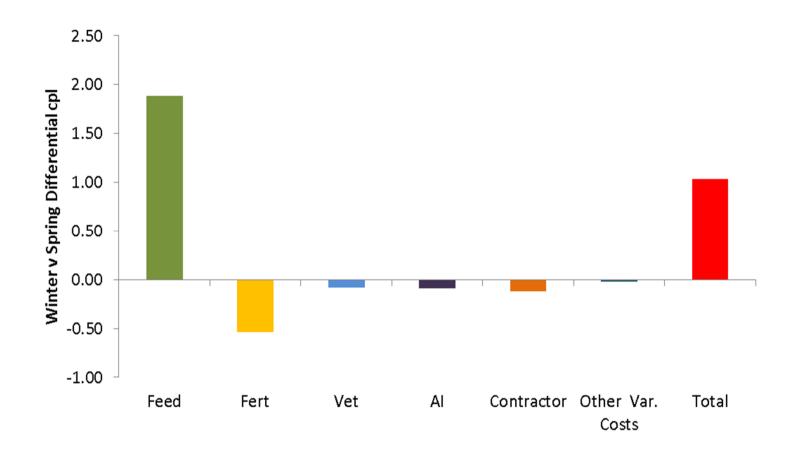
Teagasc eProfit Monitor

- Physical/financial benchmarking tool
 - 1595 farms
 - 13% as liquid milk
 - Voluntary data submission
 - Greater rate of participation in technical discussion groups
- Some limits to interpretation of ePM financial data
 - Potential sample bias
 - Depreciation @ slower rate than capital allowances
 - Paid labour only
 - Other cash items excluded (tax, loan principal)

Gross Output	39.73
Variable Costs	
Feed	8.58
Fert	2.22
Vet	1.09
AI	0.50
Contractor	1.69
Other Var. Costs	1.92
Gross Margin	23.74
Fixed Costs	
Labour (Paid)	1.87
Machinery	1.92
Car/ESB/Phone	1.34
Depr	2.01
Leases	0.95
Interest	0.82
Other Fixed Costs	2.06
Margin/litre	12.78

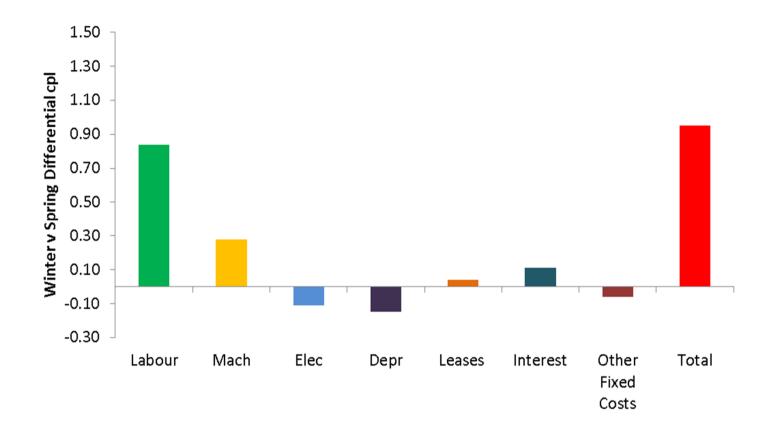


Variable Cost Comparison – Liquid Milk v Spring Milk herds





Fixed Cost Comparison – Liquid Milk v Spring Milk herds





Summary of Input Cost Challenges

- Significant cost inflation in both milk sectors since 2010
 - Feed cost the main driver
 - Fertilizer spending rising in spring calving herds- by choice?
 - Some evidence of labour increase in spring milk

Comparing spring and liquid milk sectors

- **Feed cost** up in both but \pm 2cpl relative differential maintained
 - 1.8cpl difference in feed in 2013 but 0.91cpl difference in total variable cost
- Fixed costs 0.95cpl higher for liquid milk
 - **Paid labour** accounts for 0.84cpl possible this will close post-expansion
 - Machinery running costs 0.25cpl
- 2013 profit per litre, per cow and per ha all better for spring milk herds

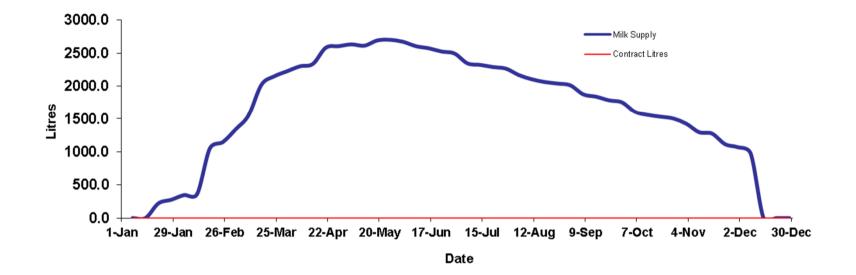


A closer look at feed cost..

- Purchased feed consistently identified as the main variable cost differential between spring and liquid milk systems
- Feed cost affected by a large number of interacting variables
 - Milk yield per cow
 - Calving pattern
 - Herd Fertility
 - Stocking rate
 - Land type
 - Pasture growth/quality
- Possible to model the direct effect of liquid milk contract
 - Adjust caving pattern to meet contract but fix all other variables



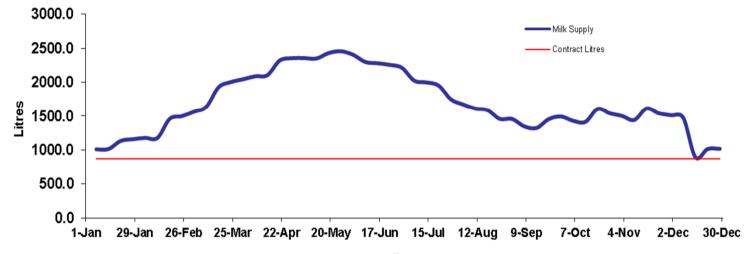
Spring Calving Herd- Milk Profile



Calving Month	Jan	Feb	Mar	Apr	Мау	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Cows Calving	15	45	25	10	5	0	0	0	0	0	0	0
Cows in milk	15	60	85	95	100	100	100	100	100	100	85	0
Monthly litres	3,582	20,926	66,915	70,814	76,701	92,759	66,459	60,333	66,743	44,684	36,822	14,715



Autumn Calving Herd- Milk Profile



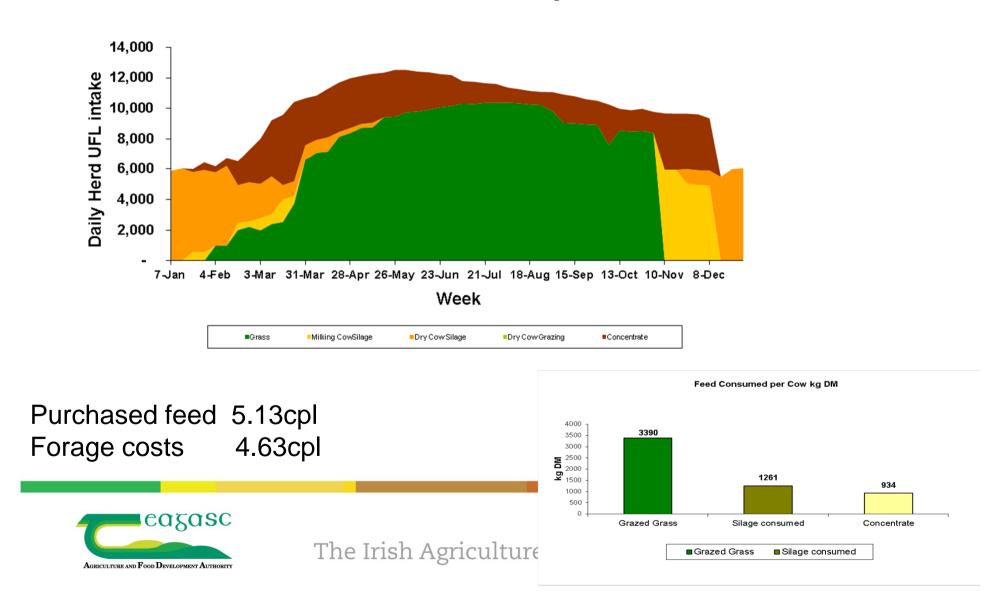
Date

Calving Month	Jan	Feb	Mar	Apr	Мау	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Cows Calving	8	18	16	10	5	0	0	2	15	11	9	6
Cows in milk	51	69	85	95	100	98	83	74	80	85	86	0
Monthly litres	31,091	38,278	66,182	63,949	69,151	82,582	55,704	45,630	50,997	43,172	43,953	42,605

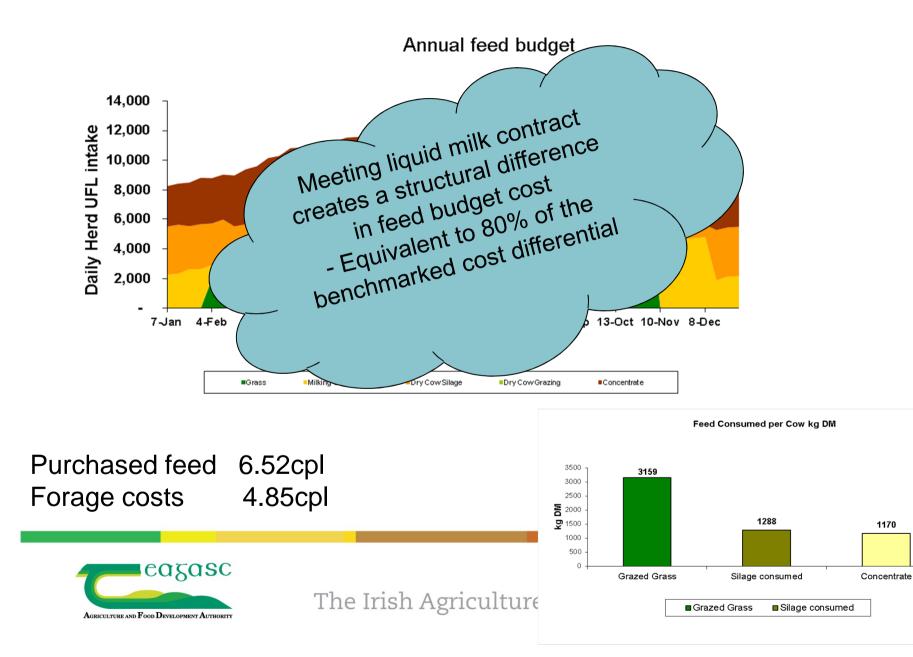


Annual Feed Budget- Spring Calving herd

Annual feed budget

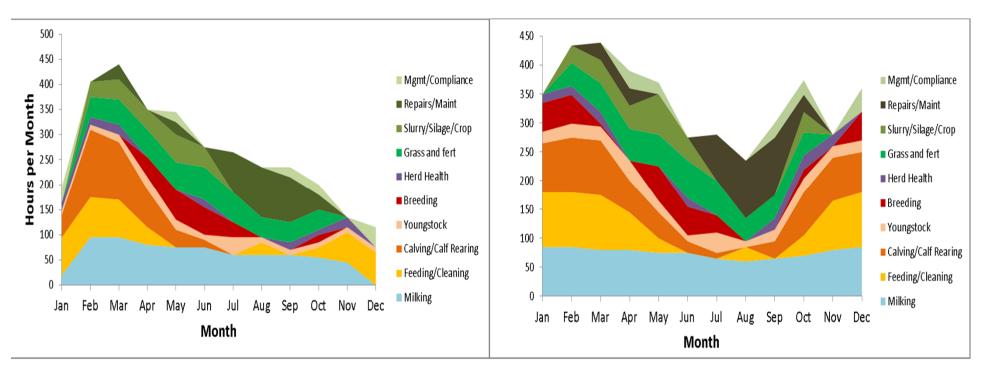


Annual Feed Budget- Autumn Calving Herd









Annual labour demand for seasonal and year-round systems

- Differential in total labour input = 892 hours per annum
 - Equivalent to 7.4 hours per cow or
 - €10,704 additional labour @ 120-cow scale
- Differential divided between paid and extra unpaid operator/family labour in ePM figures



Technical Efficiency



Technical Efficiency

- Increase rate of technical efficiency gain by:
 - Streamlining the number of critical system decisions
 - Reducing the complexity of those decisions

Milk from forage • **Cash Flow Ratio** Grazing • Liquid Strategy Contract Stocking Rate Imposition of milk supply Meal feeding profile conditions System increases the complexity Vinter calves of decision-making Silage Winter Diet Strategy Spec Animal Health Management Forage Quality Spring Spring Maize Breeding calves.

KPI

Milk solids %

Calving Interval

Forage Utilised

EBI

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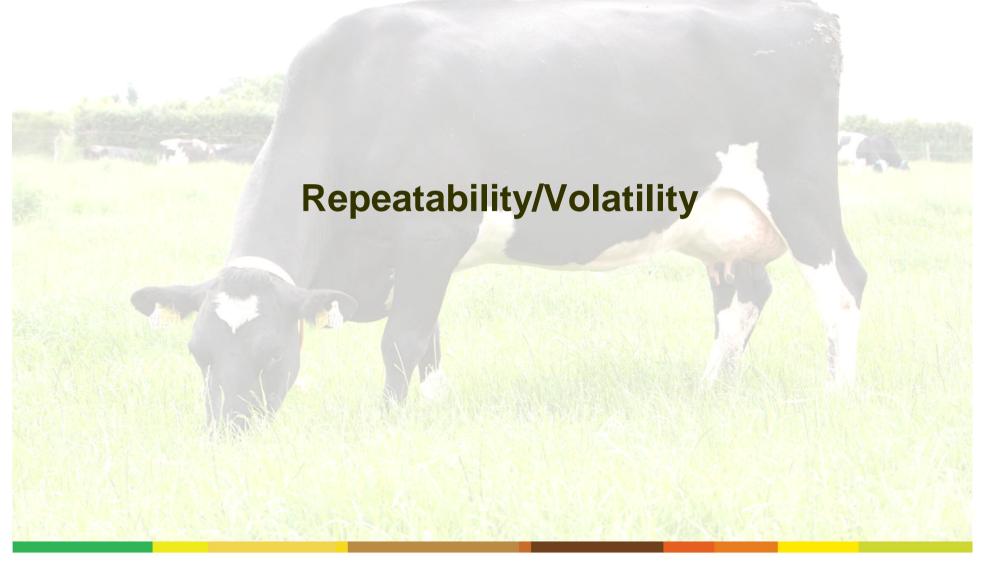
Comparing NI and ROI dairy farms 2008-2011

REDP

Net margin per hour IE - NI IE farms more likely than NI 8 ٠ farms to have higher NM NM more variable for IE farms 90 Density 8 02 0 -20 60 20 40 0 Euro/hour IE NI Gillespie, 2014

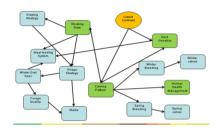
Net Margin per Labour Unit







Repeatability/Volatility



Repeatability (Internal)

Greater system complexity:

- Increased risk of sub-optimal performance (forage quality, fertility)
- Reduced capacity for profitable internal growth (resource limits)
- Effects likely to be scale-dependent

Volatility (External)

Increased exposure to rising volatility:

- International grain markets
- Feed protein costs
- Energy costs
- Cost of capital



System Comparison- UK benchmarking data 2012

	Cows at grass	Composite
Number of farms	65	88
Average herd size (cows)	231	123
Total non-forage feed (kg DM/cow/year)	1087	2225
Yield (litres/cow/year)	5741	7750
Proportion of paid labour in total labour requirement (%)	52	27
Total cost of production (ppl)	27.3	30.3
Net margin (ppl)	3.6	-1.3
Net margin (£/Ha/year)	477	-65

DairyCo, 2012



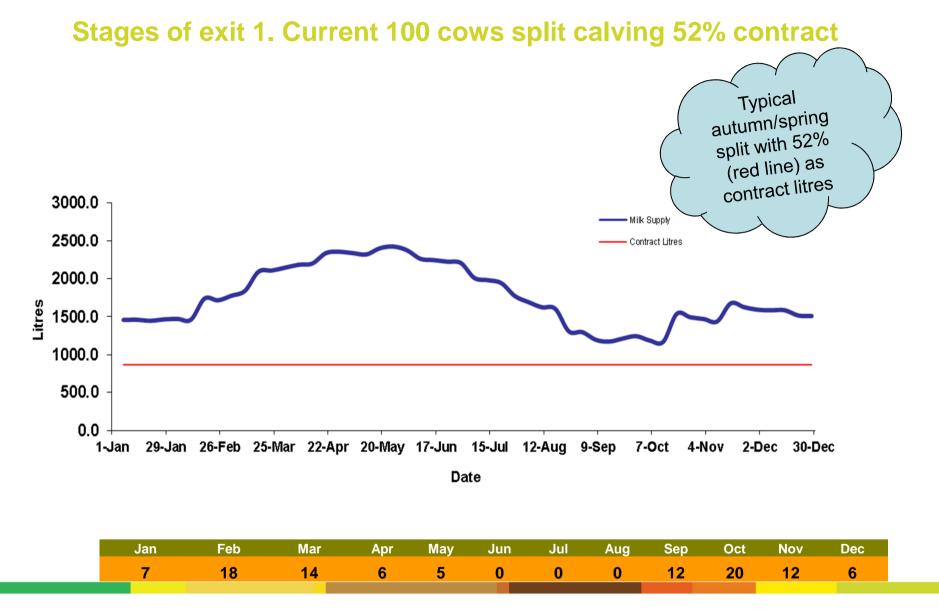




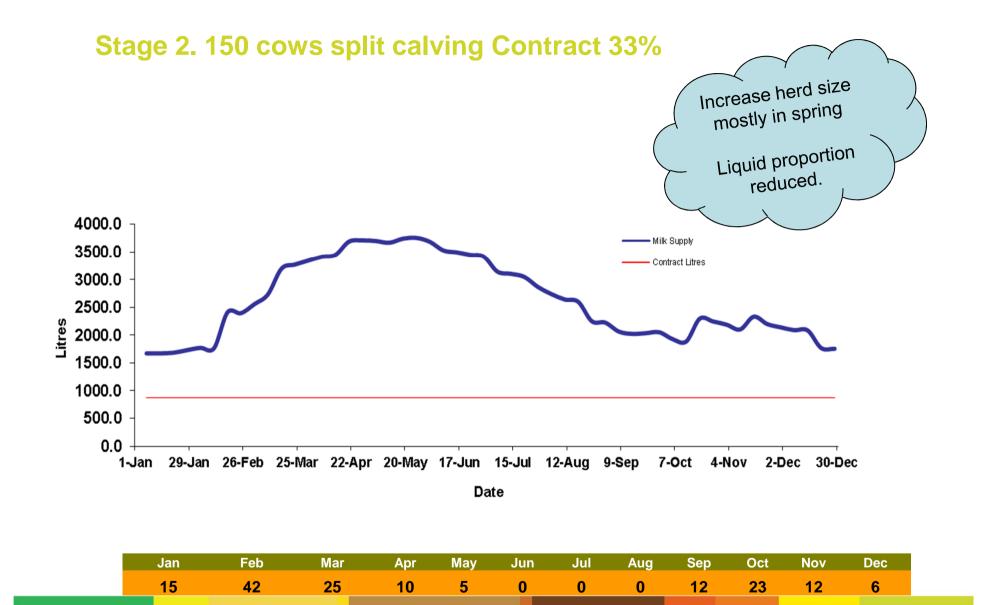
Opportunity Cost..

- 'The value of the best alternative foregone'
- Abolition of EU milk quotas:
 - Potential for profitable expansion within current land resources
 - Collaboration/partnerships to extend current operations
 - Opportunities to develop green-field operations in some cases
- Simple, repeatable dairy farming systems are best placed to exploit these opportunities
- Many liquid milk farms will be best served by exiting liquid milk in this context
- <u>A game-changer for the opportunity cost of liquid milk?</u>

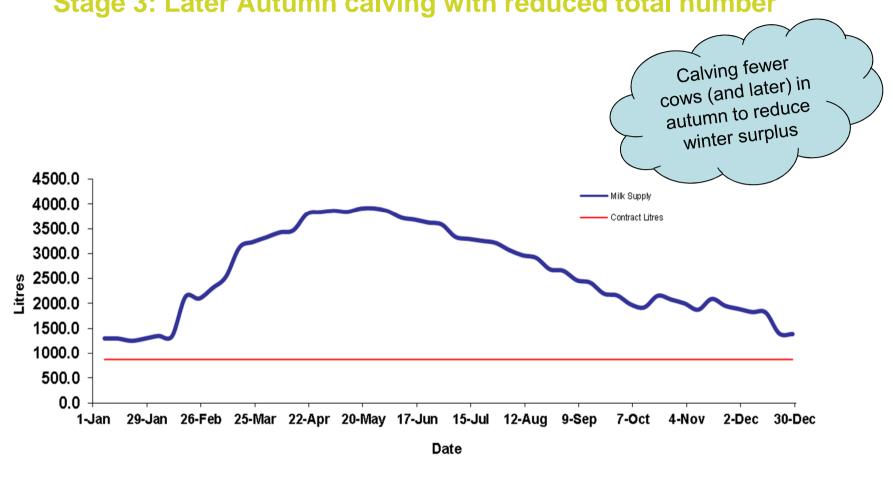




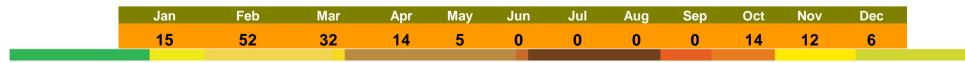




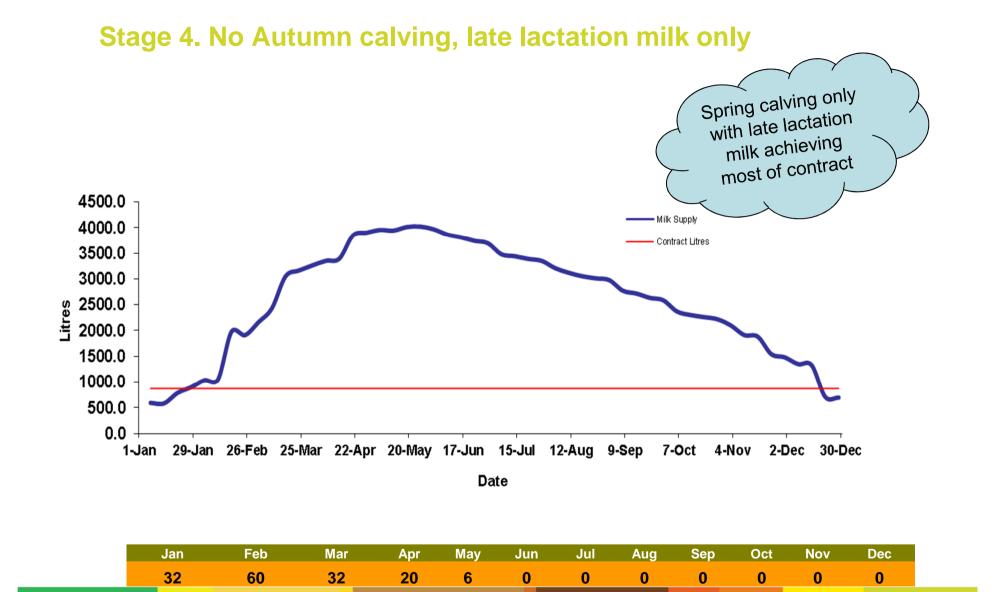




Stage 3: Later Autumn calving with reduced total number



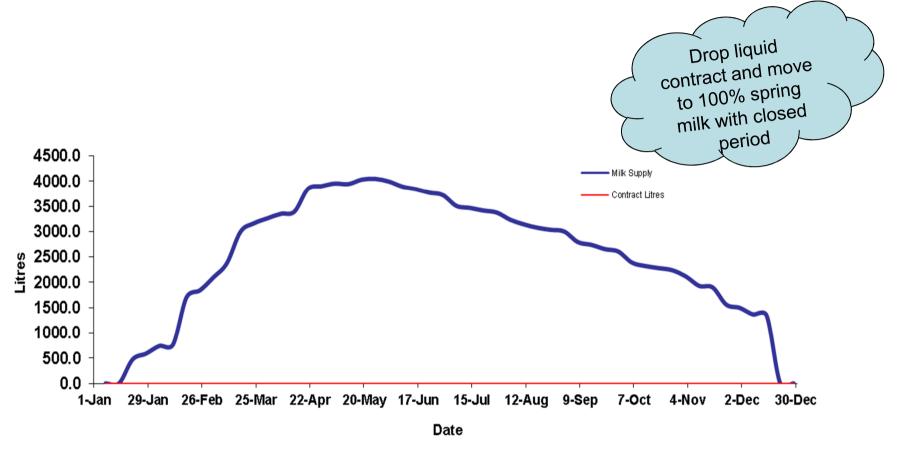




AGRICULTURE AND FOOD DEVELOPMENT AUTHORITY

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Stage 5: Exit liquid milk







In summary

