

Kavanagh Demonstration Farm Open Day



Dairy Trust
TARANAKI

Wednesday 10th February 2021
10:30am – 1.30pm



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TARANAKI



SILVER FERN[®] FARMS

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Agenda

10:45am Welcome & Introduction to Autumn calving

- Results from Kavanagh Trial
- Autumn calving at Inaha
- Farm walk
- Summary

1:00pm Lunch

DTT Kavanagh – Autumn Calving Trial

Summer dry has been identified by farmers as being the most challenging climatic event in many coastal areas of the North Island. The average summer rainfall in coastal Taranaki is 240mm with evapotranspiration of 410mms. The result is long periods of moisture deficit, reduced pasture growth rates, and greater size and duration of feed deficits. In comparison, winter pasture growth rates have increased over the past 20 years, with more widespread use of urea and gibberellic acid, improved ryegrass cultivars, and increased soil temperatures (+1.6°C in 30 years).

To add to the incentive of feeding and milking cows during the winter, compared with summer, Fonterra and Open Country were offering Winter milk contracts for UHT exports to China and short shelf-life products that need to be made during winter. For example, Fonterra is offering winter premiums of \$2.85 to \$3.80 for the period 16 May to 15 July (less transport charges).

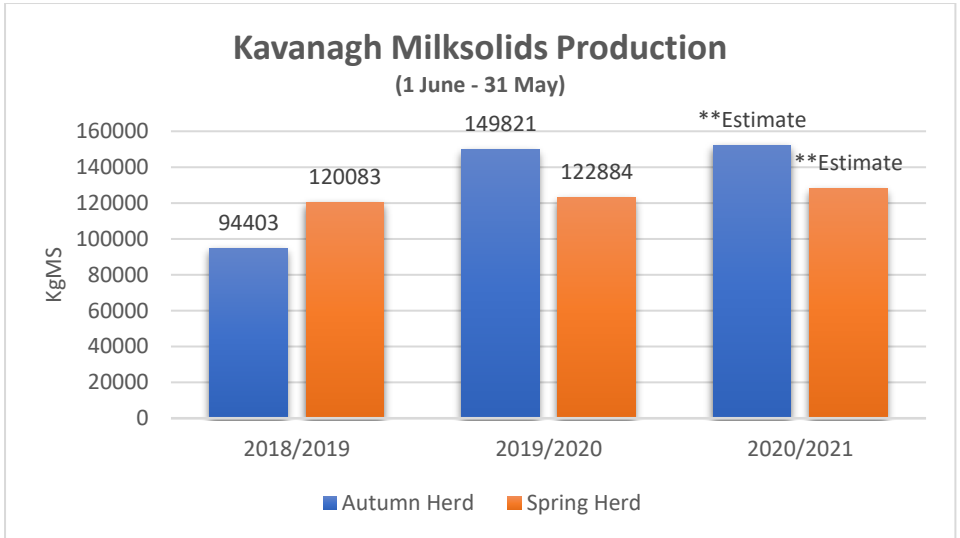
The current trial at DTT Kavanagh is investigating the benefits and costs of Autumn Calving. The Kavanagh farm is coastally located on the outskirts of Hawera.

Trial Outline:

- 2x 104ha farmlets established spring 2017 – 4-5ha paddocks randomized for soil fertility, location/block (equal number on coastal side of farm), and equal effluent paddocks
- Each farmlet 300 friesian X cows – randomized, balanced herd based on age, PW, BW, LWT, calving date, MS Production from previous season
- 300 cows mated in spring 2017 & dried off in May 2018
- 300 cows not mated in spring, milked through and mated in June 2018, then dried off in Feb 2019

*****Please note all seasonal totals and averages are taken from 1 June – 31 May, so the Autumn herd will include 2x part lactations.***

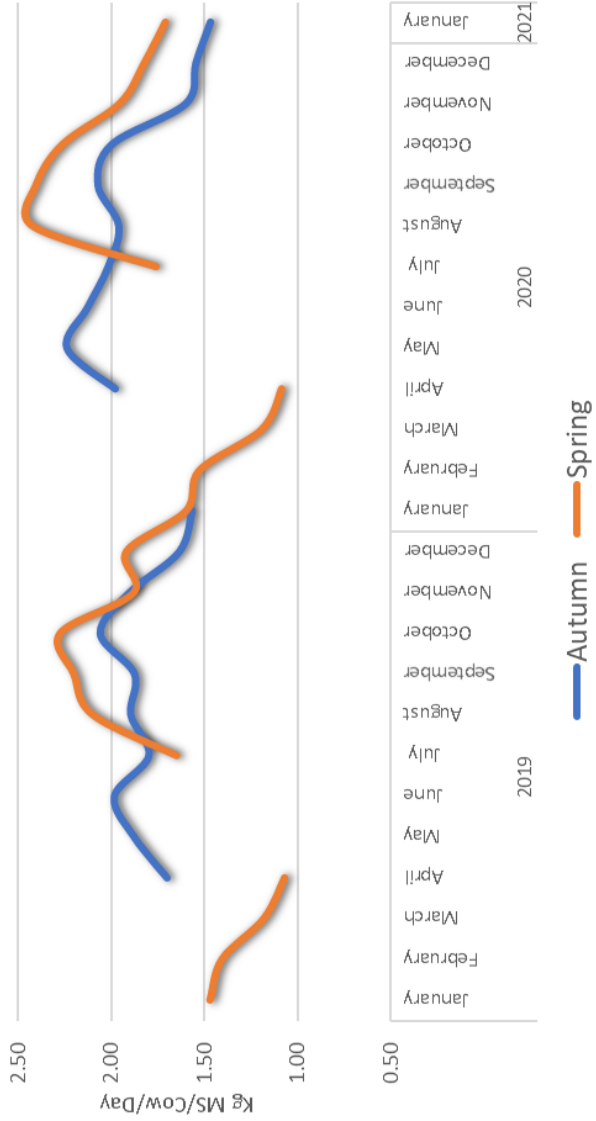
Milksolids production past three seasons:



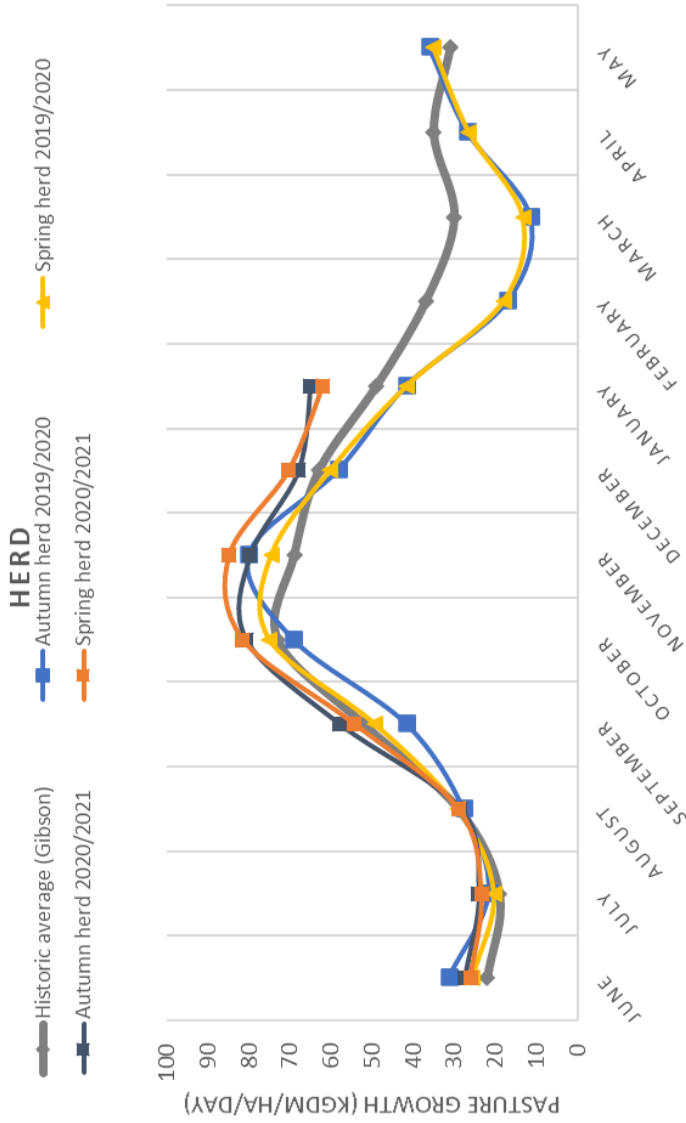
Season	Autumn Herd		Spring Herd	
	KgMS/cow	KgMS/ha	KgMS/cow	KgMS/ha
2018/2019	343	900	400	1144
2019/2020	504	1427	417	1170
2020/2021*	512	1450	422	1220

**Current season is an estimate*

Kavanagh Production Curve Autumn Vs. Spring

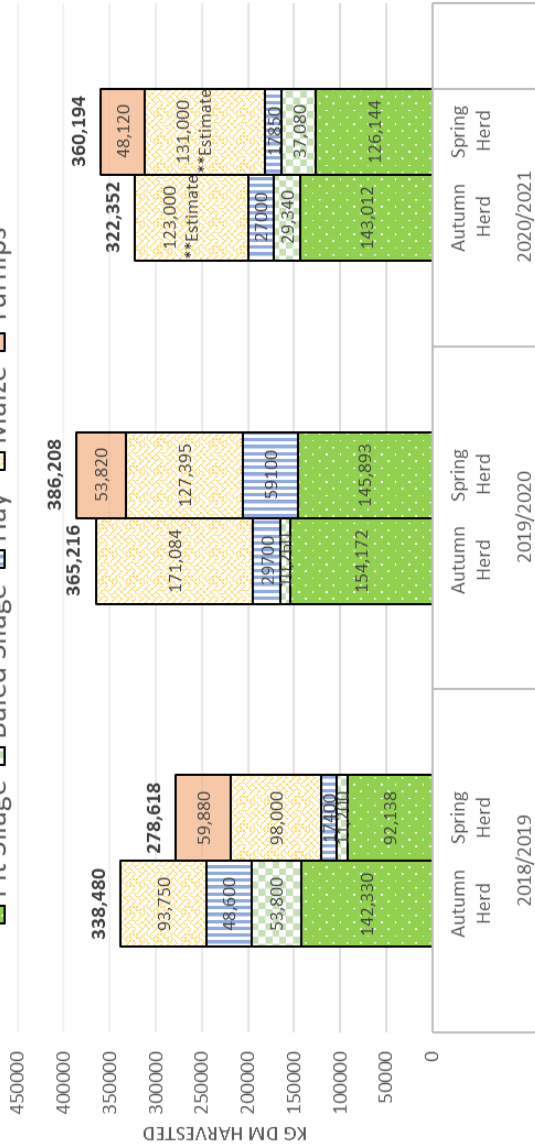


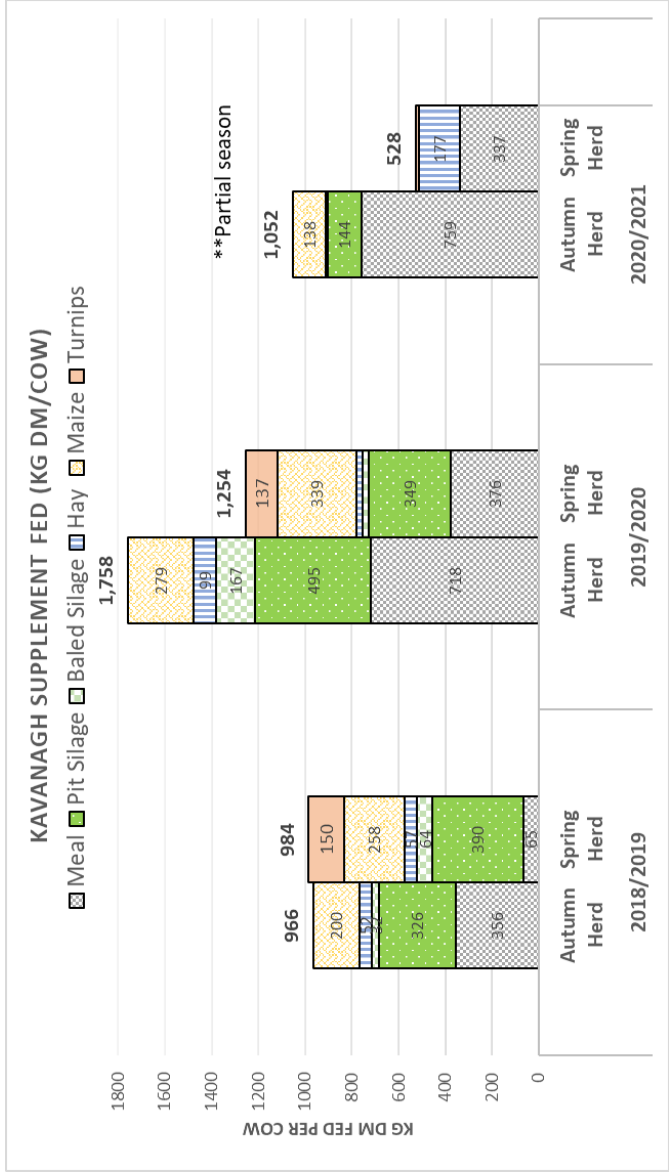
KAVANAGH PASTURE GROWTH AUTUMN HERD VS. SPRING



KAVANAGH SUPPLEMENT HARVESTED PAST THREE SEASONS

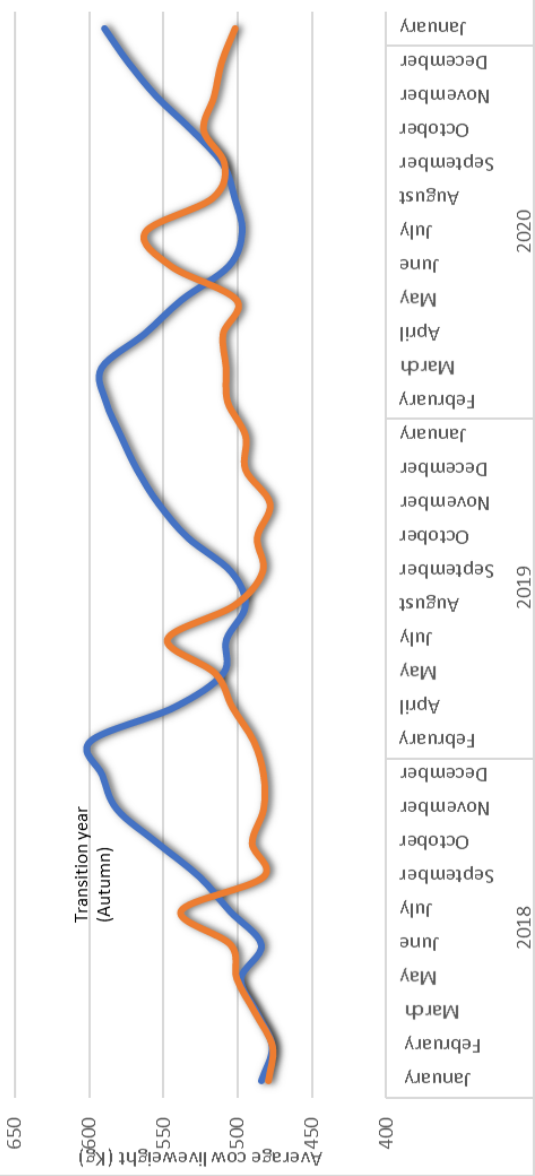
■ Pit Silage
 ■ Baled Silage
 ■ Hay
 ■ Maize
 ■ Turnips



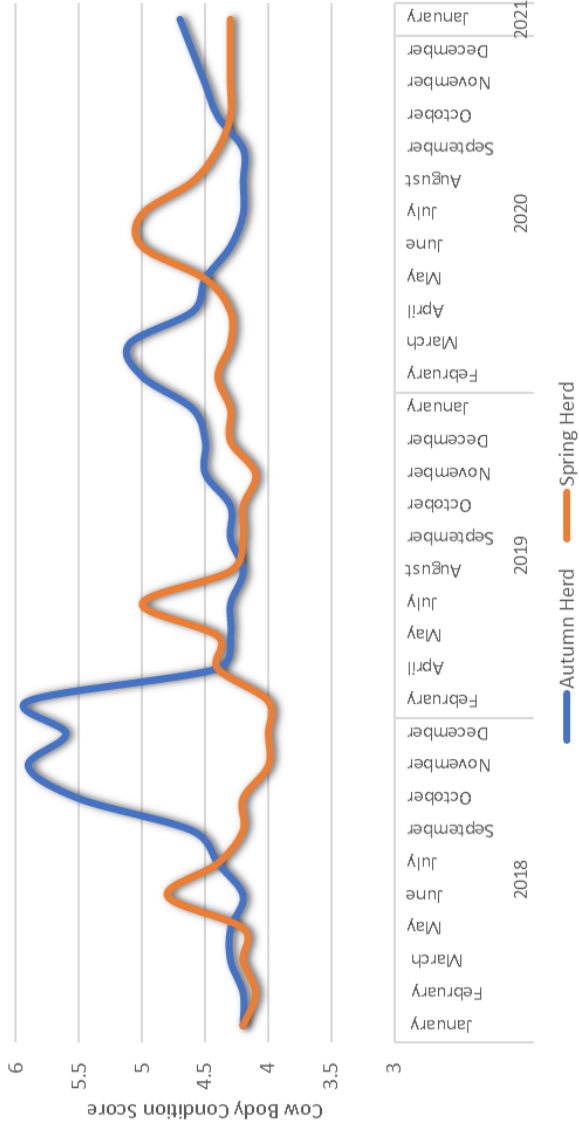


Kavanagh liveweight change over time

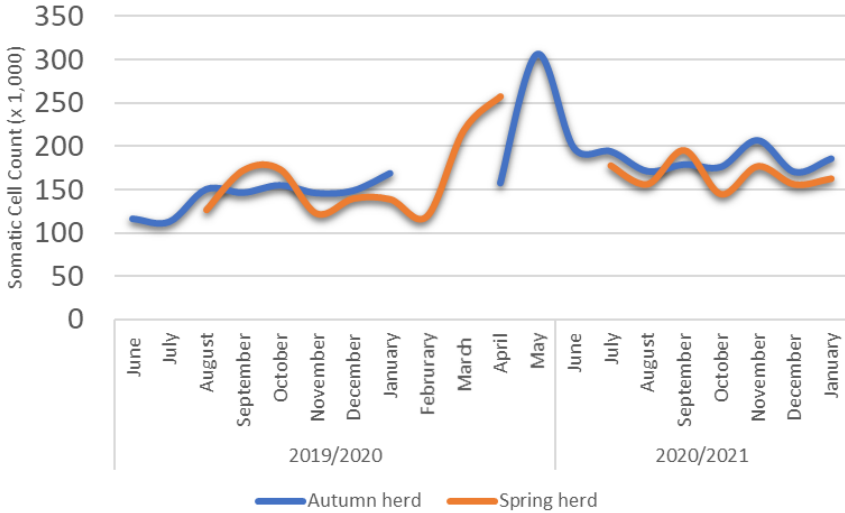
— Autumn Herd — Spring Herd



Kavanagh body condition score over time (Autumn Vs. Spring)



Average SCC Autumn Herd Vs. Spring Herd



Average SCC (from herd test data)

	Autumn herd	Spring herd
2018/2019	233	132
2019/2020	161	163
2020/2021	185	166

Animal health incidences:

	2019/2020 Season		2020/2021 Season (to 29 Jan)	
	Autumn Herd	Spring Herd	Autumn Herd	Spring Herd
Treated lameness	29	26	19	33
Mastitis cases	102	97	64	82

Feed Conversion efficiency 2019.2020

	Autumn	Spring
Pasture growth (kg DM/ha)	14,167	14,351
Supplements fed (kg DM/ha)	5071	3582
Total feed (kg DM/ha)	19,238	17,933
Kg MS/ha	1450	1220
Feed conversion (kg DM/kg MS)	13.3	14.7

Economic Results

Profit/\$ha	Autumn	Spring
17/18	2013 *	2959
18/19	2368 *	3820
Average	2191	3390

* Includes infrastructure & additional share costs

2019.2020 season	Autumn	Spring
Income/ha	\$11,779	\$8708
Income - \$/kg MS	\$7.82	\$7.05
Operating expenses/ha	\$5,947	\$5,158
Total profit/ha	\$5,833	\$3,550
Total expenses / kg MS	\$4.17	\$4.41

Summary

Overall, we see the benefits to an Autumn calving system to include taking advantage of the winter premium milk price, the second flush in production, extra days in milk & higher per cow & per ha production. Many farmers are also finding it to be a good lifestyle change. However, it does come at a cost with a greater amount of supplementary feed required to get through the winter feed deficit period.

Our trial will run for a further two seasons. A full financial analysis will then be undertaken.

Feel free to follow the Kavanagh Farm Autumn Calving Trial progress via our weekly Farm Walk Notes, available on <http://www.dairytrusttaranaki.co.nz/>

Linda Cruickshank & Debbie McCallum

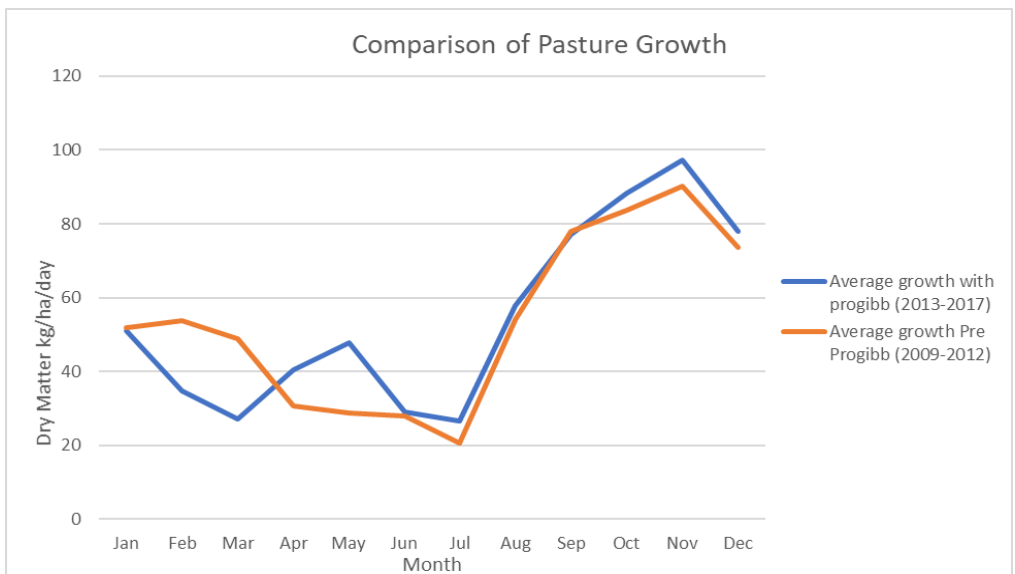
Autumn Calving at Riverwind Farm, Manaia

Tracee Judd and Alastair Snowdon

- Home Farm 56 ha (effective), Run Off 24 ha.
- 200 kiwi cross cows.
- 3.5 cows/ha.
- System 4 – In-shed ‘Custom Blend’ from BHL and proliq.
- 101 years, Snowdon family farm, we are the 3rd generation.

Why did we change to Autumn Calving?

- Poor performance in late lactation.
- Climate change, longer summer dry periods, warmer winters.



Transition to Autumn Calving

2016/17	2017/18	2018/19	2019/20	2020/21
last spring calving July 2016	No spring calving. Cows milked on to end of December 2017	1 st autumn calving March 2018	2 nd autumn calving March 2019	3 rd autumn calving March 2020
	Cows mated in June 2017	Cows mated in June 2018	Cows mated in June 2019	Cows mated in June 2020

- purchased and installed 'In-shed' feed system (30k).
- started applying Progibb and urea (SustainN) from May – August.
- nitrogen use increased from 112kgN/ha under spring calving to 196kgN/ha under autumn calving.

What happened to Milk Production?

	Spring Average	Spring Best	2016/17	2017/18 Transition	2018 /19	2019/ 20	2020/21
Total kg milksolids	76000	82000	84000	54000	91000	87000	98000
Milksolids kg/ha	1357	1464	1500	964	1625	1553	1750
Milksolids kg/cow (cow no.s)	400 (190)	432 (190)	442 (190)	300 (180)	479 (190)	483 (180)	503 (195)

Some Key Performance Indicators (2019/20 Season)

	Riverwind Farm	Autumn Calving Farms – benchmark	Spring Calving Farms – benchmark
Gross Farm Revenue \$/ha	12837	11919	10466
Operating Expenses \$/ha	8307	8139	7508
Operating Profit (EFS) \$/ha	4530	3779	2958

Gross Farm Revenue \$/kg MS	8.06	7.89	7.65
Operating Expenses \$/kg MS	5.22	5.39	5.49
Operating Profit (EFS) \$/kg MS	2.85	2.50	2.16

Autumn Calving benchmark group – Owner Operator, Winter Milk farms.

Spring Calving benchmark group – Owner Operator, Spring Calving, High Input (system 4&5)

Pro's

- Much improved production and profitability
- Full lactation achieved
- Calving in March/April/May we've seen:
 - o Improved calf health
 - o Improved cow health
 - o Improved farmer wellbeing
- Better cow condition year round
- Cows always fully fed during winter cold spells

Con's

- Mating and heat detection in June is difficult:
 - o 6-10% empties under Spring calving.
 - o 22% empties in June 2018 mating.

- 10% empties in June 2019 mating.
- 14% empties in June 2020 mating.
- Intense period of tractor work, May-August applying pro-gibb and SustainN.
- Good track condition and maintenance essential to minimise lame cows.
- Messy gateways in winter.

Conclusion:

Our change to Autumn Calving has proved to be more productive and more profitable. We are very happy that our new system has achieved:

- a longer, more productive lactation.
- a better match of pasture growth to cow requirements.
- happier cows, calves and farmers.

Season	6 Week In-Calf Rate	3 Week Submission Rate	Conception Rate	Not In-Calf Rate	Mating Length (Days)	Number of herds	Number of cows
2019 Spring Seasonal	67.8	80.4	54.2	15.7	75.1	4430	2377370
2019 Spring Split	61.3	75.0	50.0	24.5	66.9	324	119757
2020 Autumn Split	57.0	75.3	46.2	39.5	52.0	155	31950
2020 Autumn Seasonal	59.6	73.9	51.5	28.6	68.9	93	34853

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