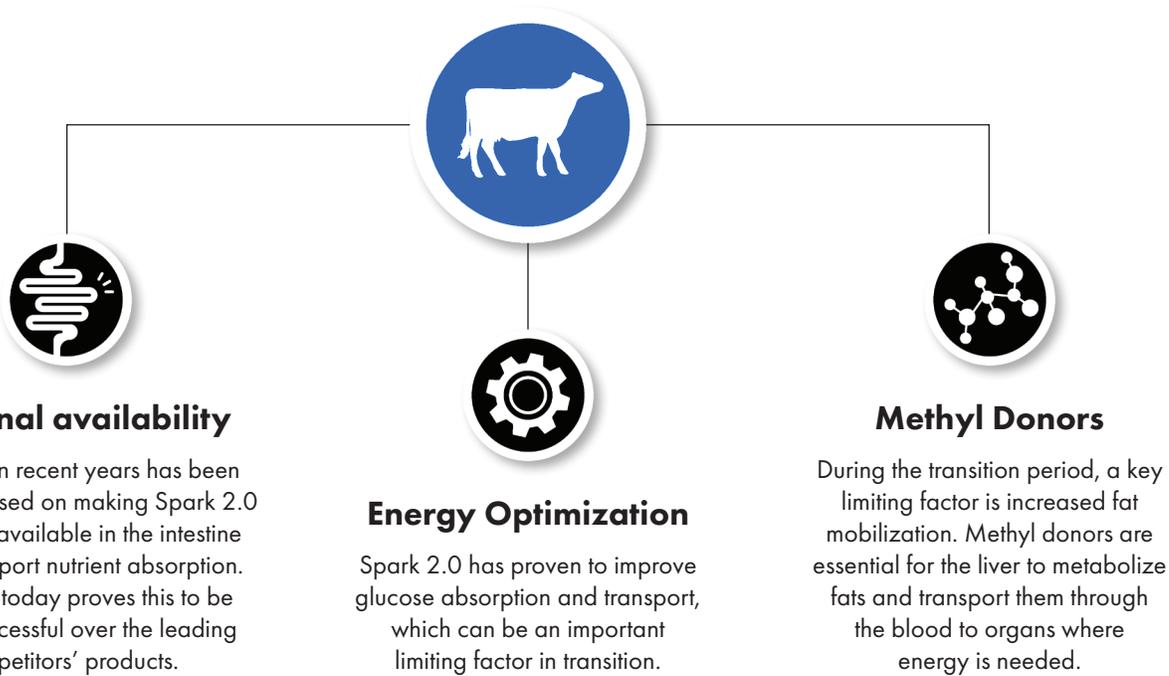


You work incredibly hard to reach high production peaks – but what if there’s a way to earn even more litres while making your job a bit easier? Introducing Spark 2.0.

The right transition diet prevents metabolic issues and nurtures fresh cows, helping them reach their full potential. Spark 2.0 takes a proactive approach to your dry and fresh cow diets, promoting and improving liver and immune function during the natural stresses of transition.

The science of Spark 2.0

The first 21 days in production are especially critical. Our programs aim to provide ultimate health, driving dry matter intake, that translates to greater milk yields. Spark 2.0 is a story of methyl donors working to improve nutrient absorption and energy metabolism to achieve production success.



Spark 2.0	=	Increased liver function	=	Improved fat and energy metabolism + Reduced risk of metabolic diseases
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Spark 2.0 aims to:

- | | | | | |
|--|----------------------------|--|---|---------------------------------------|
| Mitigate the risk of fatty liver and ketosis | Reduce body condition loss | Reduce both clinical and sub clinical metritis | Increase conception and pregnancy rates | Ultimately, increase milk production! |
|--|----------------------------|--|---|---------------------------------------|

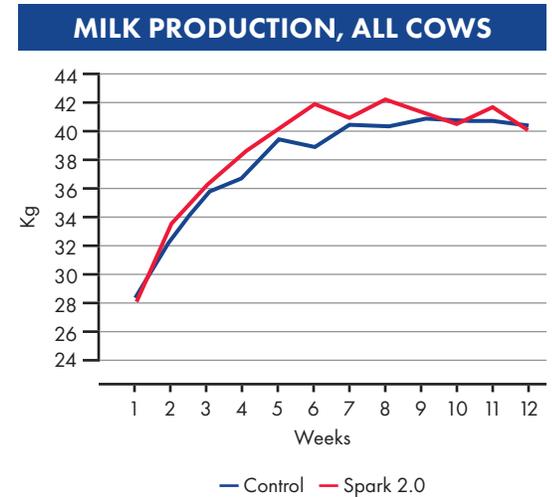
Proven, trusted technology

When Cargill brings an innovative product to market, the trials don’t stop. Since the original launch of Spark in Canada, research has continued, with further data to support the gains in peak milk and herd reproduction with Spark 2.0.

Win the peak milk battle

A recent on-farm trial was conducted where a herd of Holsteins were split into 2 groups. The "Control" group was fed the competitors leading transition product, while the second group was fed "Spark 2.0". Both groups were fed from the close-up dry period (approximately 21 days) and into the post-calving period, up to 50 days in milk (DIM). The trial was run sequentially. The result was clear. By week 2, cows fed Spark 2.0 were taking off for higher peaks which held throughout the 12 weeks cows were monitored. Spark 2.0 provided the smoother transition and that paid off for the producer.

*Recommended feeding rate is 21 days pre- and post-calving, for a total of 42 days.



Return on Investment from this trial:

Additional revenue: \$0.90/L X 305 kg = \$274.50

Additional cost: 42 d of SPARK 2.0 at \$0.65/d = \$27.3

Profit: \$247.20/cow x 100 cows calving/year = \$24,720 profit in the year

Ensure the next transition is on track with stronger reproduction

In another study comparing Spark 2.0 with a similar transition product, reproductive and metabolic performance post-calving were monitored.

Spark 2.0 significantly reduced the percentage of cows open at 150 DIM and had fewer instances of almost all metabolic issues. If we set the cost of a metabolic event at \$250/cow and the cost for every additional day open at \$4.50. Spark 2.0 puts **\$158/cow** back in this producers pocket.

REPRODUCTIVE PERFORMANCE			PATHOLOGIES OCCURED		
	Control	SPARK 2.0		Control	SPARK 2.0
Observed animals	22	22	Observed animals	22	22
Pregnant Cows	15	14	Average Lactation	2.09	2.09
Average Lactation	2.2	2.0	Events		
Interval Calving-1 ^o service (d)	83.5	76.1	• Ovaric Cysts	25.0% (6)	14.3% (2)
Day Open (d)	126	116	• Displaced Abom.	16.7% (4)	7.1% (1)
AI/C (pregnant cows)	2.13	1.86	• Retained Placenta	25.0% (6)	14.3% (2)
AI/C (all cows)	3.07	3.00	• Uterus Ipoplasia	4.2% (1)	14.3% (2)
% of open cows at 150 DIM	50.0%	31.8%	• Uterus problems	8.3% (2)	14.3% (2)
			• Mastitis	8.3% (2)	0.00% (0)
			• Total events	100% (24)	100% (14)

FEEDING DIRECTIONS: Spark 2.0 has the best return on investment when fed 3 weeks pre- and 3 weeks post-calving. At 85g/head/day, Spark 2.0, can be added directly into your Complete Feed, Supplement or Premix. Consult your Purina® Representative for full feeding directions of your ration.

Our proactive approach with Spark 2.0 means doing what's best for the cow, the farmer and the operation's bottom line. Spark 2.0, where our aim is to make every transition a smooth one.