DEFEND
Day 1

Do you want to use your own on-farm colostrum but **struggle with the quality?**

This simple protocol allows producers to take available free, on-farm colostrum and make it better through enrichment! Enrichment is adding colostrum powder to maternal colostrum to improve the quality through these simple steps.

1

Use a refractometer to test the Brix % of your batch of maternal colostrum.

2

Reference the chart provided on back to determine the quality level and your goal level.

3

Use the Colostrum Calculator app to calculate the amount of powder to add to your maternal colostrum.

4

Feed within 2 hours after birth for healthier calves!

The calculation is simple. Add 15g of powder to increase one liter of colostrum by 1% Brix.

If pasteurizing maternal colostrum, test the Brix % before pasteurizing and then add the recommended amount of powder.

Best Practice

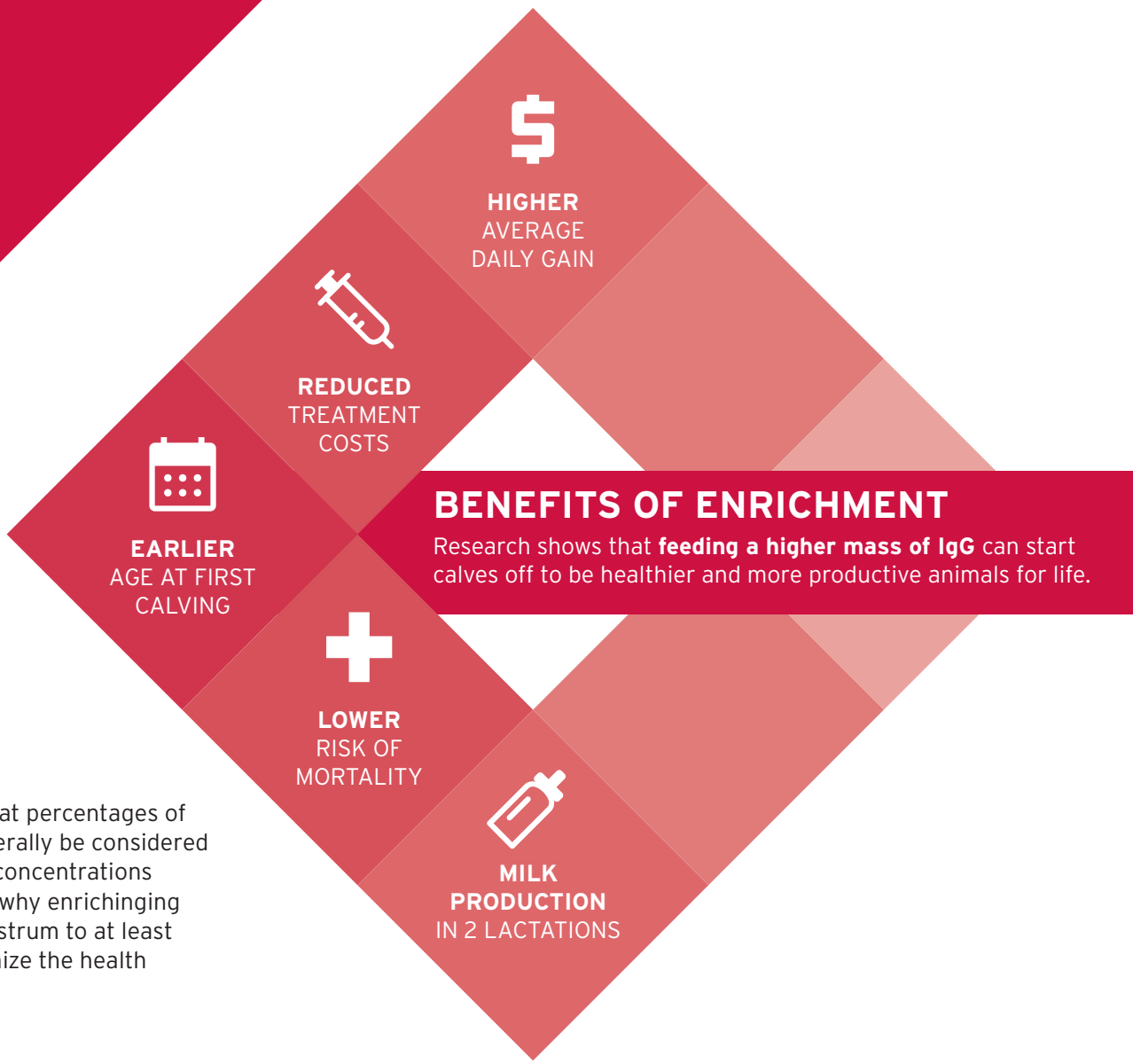
You can also enrich using one standard protocol (rather than testing each batch). For this, we recommend adding 350g of powder to each feeding of 2-4 liters of colostrum that is <24% Brix.

Download the Colostrum Calculator app

Day 1 Calf Feeding Protocol

Maternal Colostrum Brix %	Colostrum Concentration	Recommendation*
< 20%	Low	Keep for 2nd feeding Replace with powder for 1st feeding
20-24%	Moderate	**ENRICH**
> 25%	Excellent	Feed as is

*Consult with your animal health specialists.



BENEFITS OF ENRICHMENT

Research shows that **feeding a higher mass of IgG** can start calves off to be healthier and more productive animals for life.

Research[1] shows that percentages of <24% Brix can generally be considered to contain low IgG concentrations (<100g IgG). This is why enrichinging your maternal colostrum to at least 25% Brix will optimize the health of your calves.

Effect of feeding more Colostrum on key production parameters

Production Parameter	2L n=37	4L n=31	Difference with calves fed 4L
Milk production in 2 lactations (kg/day)	26.9	27.8	+0.90
Milk production in 2 lactations adjusted to 305 days (kg)	**18,594**	**21,201**	**+2,607***
Average daily weight gain (kg)	0.8 ⧺0.02	1.03 ⧺ 0.03	+0.23**
Heifers culled before the second lactation	9/37 24.3%	4/31 12.9%	-47%

Faber SN, et al. Prof. Animal Sci. 2005; 21:420-25

* p<0.01
** p<0.001

[1]Haines, et al. Assessment of Brix Refractometry to Estimate Immunoglobulin G. 2020.
Faber SN, et al. Prof. Animal Sci 2005; 21 :420-25