

Manejo del Calostro in Ranchos Lecheros

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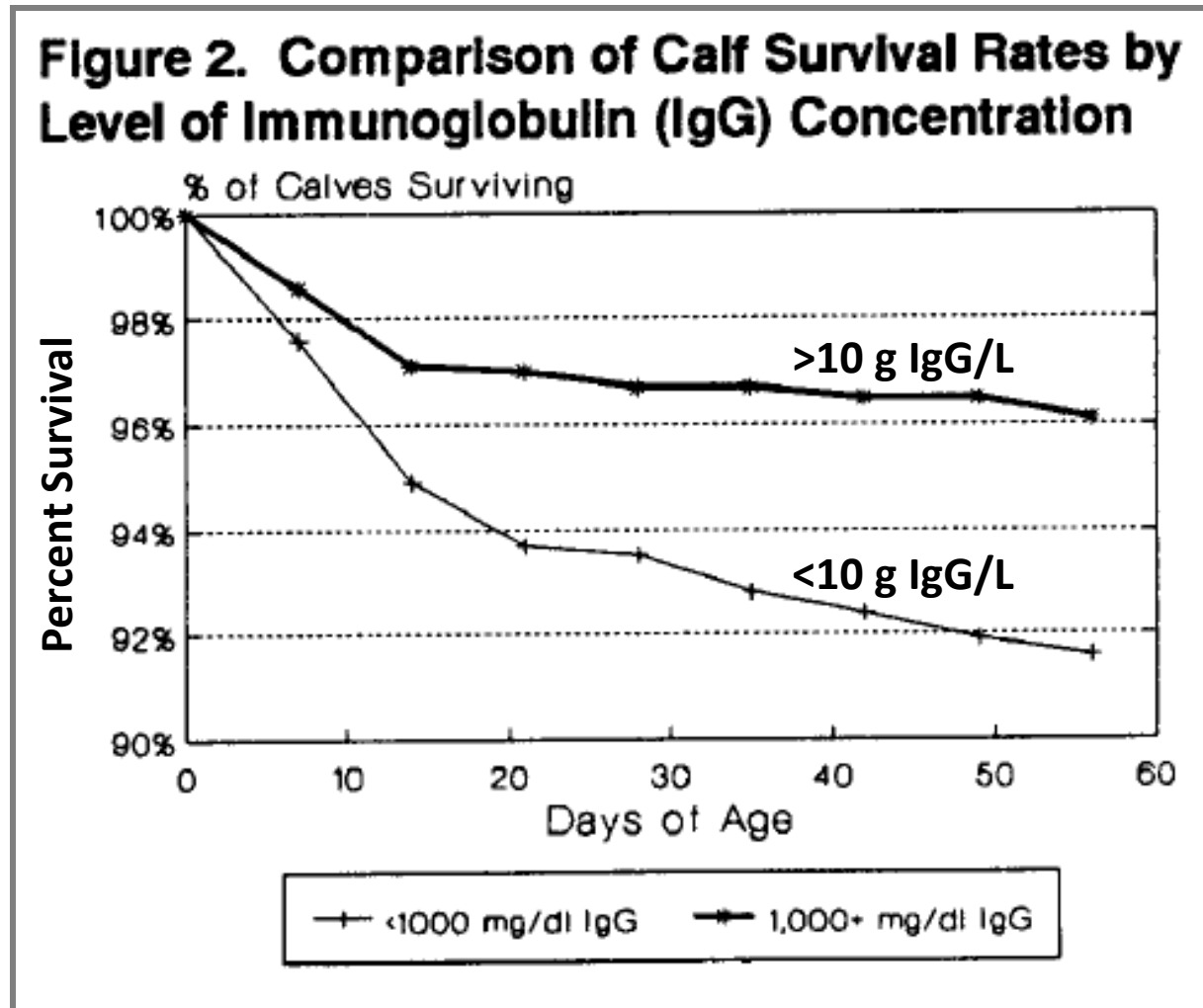


Mi Trabajo Durante el Día:

- **Monitorear vacas con signos de parto**
- **Identificar al becerro/o y cuidarlos**
- **Colectar calostro (monitorear calidad)**
- **Alimentar calostro/leche a becerros/os**
- **Monitorear proteínas totales en suero (FTP)**
- **Limpieza e higiene**
- **Tomar datos**
- **...**



Efecto del Manejo del Colostro sobre Mortalidad del Becerra/o



(National Dairy Heifer Evaluation Project, NAHMS, 1992)

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Motivadores para un MEJOR Manejo del Colostro?

- **Falla de la Transferencia Passiva de Inmunidad:**
 - Incrementa riesgo de enfermedad
 - Incrementa perdidas por muerte
 - Decrece performance (leche) a largo plazo
 - Decrece ganancia de peso
 - ...

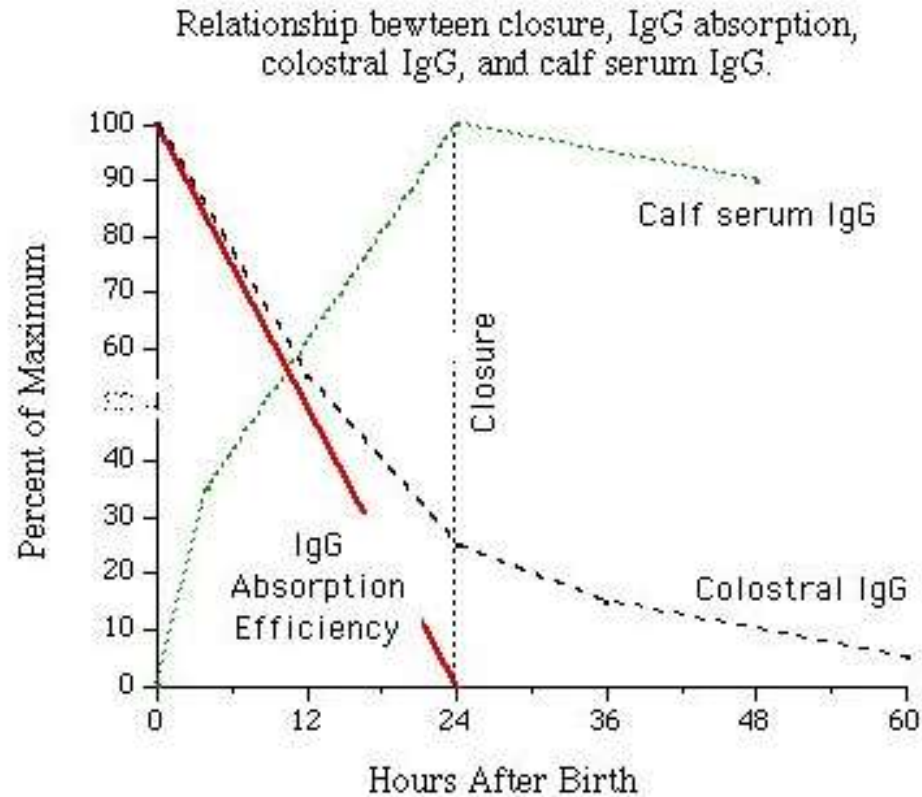


Factores Influenciando la Transferencia Pasiva

- **Calidad**
 - >50 mg/mL IgG (50 g/L)
- **Cantidad**
 - Al menos 4 L (1 gallon or 4 qts)
- **Tiempo**
 - 4 L dentro de 3 horas
- **Limpieza e higiene**
 - Carga bacteriana mínima



Absorción de IgG del Colostrum



See Staley and Bush, 1985, J. Dairy Sci. 68:184; Bush and Staley, 1980, J. Dairy Sci. 63:672; Larson et al., 1980 J. Dairy Sci. 63:665.

Tiempo de Colecta - Colostro

- **Concentración de IgG decrece 3.7% cada hora después del parto**
- **La higiene afecta la carga bacteriana**

Alimentar Calostro

- Método: Botella y tubo esofageal
- Tipo: Fresco, refrigerado, congelado



Monitorear Calidad



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Evaluation of a Brix refractometer to estimate serum immunoglobulin G concentration in neonatal dairy calves

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ABSTRACT

The objective of this study was to evaluate the use of a digital Brix refractometer for the assessment of immunoglobulin G concentration in neonatal dairy calves. The refractometer was used to measure the Brix of colostrum and serum. The refractometer was found to be a reliable method for estimating IgG concentration in neonatal dairy calves. The refractometer was used to measure the Brix of colostrum and serum. The refractometer was found to be a reliable method for estimating IgG concentration in neonatal dairy calves.



Parameter	Brix (%)	IgG	Reading at
Colostrum	≥22	≥50 g/L	68 °F/20 °C (Sample & Instrument)
STP	≥8.4	≥5.5 g/dL	

Contaminación del Calostro

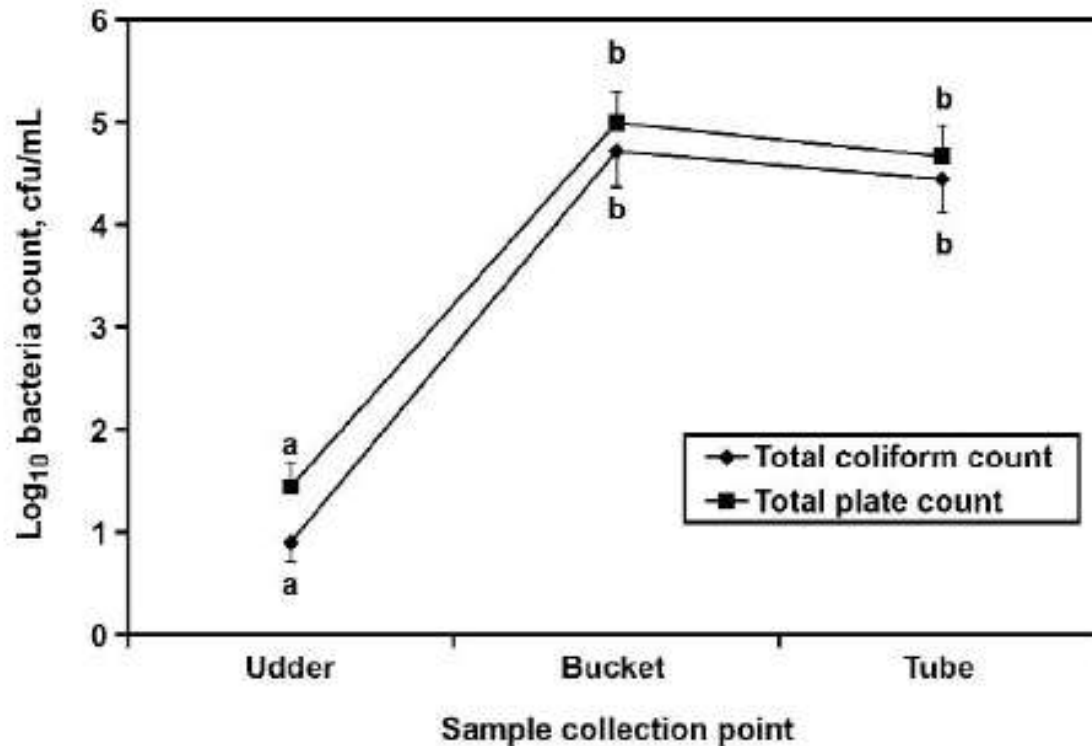


Figure 1. Mean log₁₀ total plate count and mean log₁₀ total coliform count for colostrum samples collected from the udder, the milking bucket, and the esophageal feeder tube. ^{a,b}Different subscripts differ within bacteria type group, $P < 0.05$.

(Stewart et al., 2005)

Fresco o Refrigerado



Potassium sorbate como preservante
Alimentar calostro refrigerado dentro de las 48 horas

...

(Stewart et al., 2005)

Congelar en Bolsas de 4 L



Puede estar congelado por un max. de 6 meses
Mejor almacenar en bolsas de 2 galones (zip-lock bags)
Mata las células blancas (lymphocytes)

...

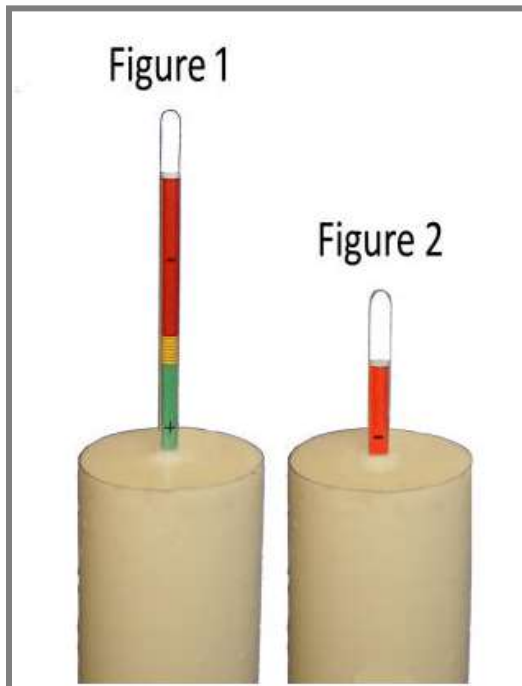
Pasteurización

- 140 °F (60 °C) por 30 min:
 - Reduce el conteo de bacterias sin afectar [IgG]
 - Puede controlar *Mycoplasma bovis*, *Listeria monocytogenes*, *Escherichia coli* O157:H7, o *Salmonella enteritidis*
- 140 °F (60 °C) por 60 min:
 - Concentraciones de IgG no son significativamente reducidas (2-10%)
 - Buena absorción de IgG
 - Reducción en leukocytes

Medir la Calidad del Calostro

Colostrometro:

- Dependiente de T° del calostro. Medir a temperatura ambiente (20-25 °C)
- Semi-cuantitativo (color)



Rojo: calidad pobre, IgG <22 mg/mL

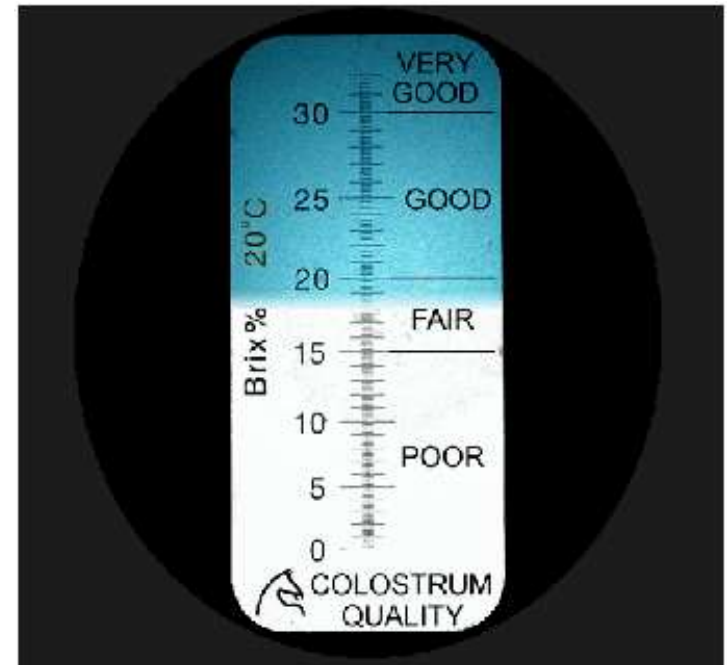
Amarillo: moderada calidad, IgG 22-50 mg/mL

Verde: excelente calidad, IgG > 50 mg/mL

Medir Calidad del Calostro



Brix (%)	IgG Conc. (g/L)	Colostrum Quality
< 15	0 - 28	Poor
15 - 20	28 - 50	Fair
20 - 30	50 - 80	Good
> 30	> 80	Very Good



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GRACIAS!



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