

Passive Transfer

Assessing Failure of Passive Transfer (FPT)

Colostrum management practices are considered successful when:

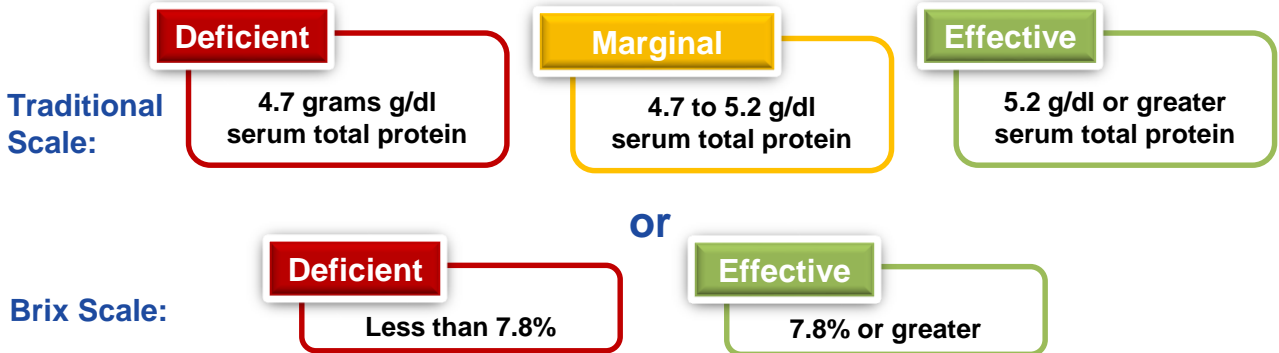
- 90% of the tested calves have a serum total protein concentration ≥ 5.2 g/dl or
- 80% of tested calves have a serum total protein concentration ≥ 5.5 g/dl

Step 1: Collect a 2-cc blood sample from a week old calf's jugular vein using a red-topped blood tube.

Step 2: Separate the blood into serum and solids by letting the vial sit at room temperature for three to four hours or centrifuge. The blood will separate into a liquid (serum) and solid (red blood cells) fraction.



Step 3: After the sample separates, withdraw a portion of the serum from the vial with a pipette or needle and syringe. Place serum on the glass of the refractometer and lower the cover. Look into eyepiece for reading. Interpret the values as follows:



Reasons for Failure of Passive Transfer

<p>Colostrum immunoglobulin absorption is impaired</p> <ul style="list-style-type: none"> • Colostrum feeding is not within 0 to 3 hours of birth • Excessive bacterial contamination • Colostrum supplement or replacement powder is added to colostrum • High level of calving assistance 	<p>Colostrum quality is inadequate</p> <ul style="list-style-type: none"> • High producing cows • Delayed milking • Calving cows are suckled before colostrum collection • Cow has leaked milk or been pre-milked before calving • Dry period less than 30 days
<p>Inadequate volume of colostrum is administered</p>	<p style="text-align: right;">Source: Adapted from S. M. McGuirk, DVM, PhD</p>