

Higher Production Profit Starts with Colostrum Management

The Study: 1000 calves were evaluated for passive transfer immunoglobulins (IgG) at 1 to 2 days of age. They were followed through to first calving and 180 days into their first lactation.

The Results:

- Age at first calving (AFC): Average AFC was 26.5 months. Most calving took place between 24.5 and 28.5 months. NO EFFECT of calf IgG levels on AFC.

- Milk Production:

ME milk - As IgG levels in the calves went up the milk they gave as heifers went up. **Each 100mg/dL increase in calf IgG predicted 18.7 pounds more milk.** For example, a heifer with an IgG level of 1800mg/dL compared to one with an IgG level of 800 produced in the first 180 days 187 pounds more milk (18.7 x 10).

ME fat – As IgG levels in the calves went up the fat they gave as heifers went up. **Each 100mg/dL increase in calf IgG predicted .62 pounds more fat.** For example, a heifer with an IgG level of 1800 mg/dL compared to one with an IgG level of 800 produced in the first 180 days 6.2 pounds more fat (.62 x 10).

- Survival in the herd: Heifers with calf IgG levels below 1200mg/dL had combined death losses (1 percent) and culling losses (20.5 percent). These rates were 52 percent higher than heifers with higher calfhood IgG levels.
- \$\$\$ Comparison: Comparison is between heifers that started out in life low in IgG's (less than 1200mg/dL) and heifers that started out in life high in IgG's (more than 1200mg/dL).

Net difference for this dairy, total = \$25,624

Net difference for this dairy, per heifer = \$57.71

Reference: S.K. DeNise, J.D. Robison, G.H. Stott and D.V. Armstrong, " Effects of Passive Immunity on Subsequent Production in Dairy Heifers." 1989 Journal of Dairy Science 72:552-554

Calculations: Net difference for this dairy, total = difference in death loss (\$14,000) plus difference in milk productions between groups (\$22,901). Net difference for this dairy, per heifer = net difference for this dairy, total divided by number of heifers post-culling with complete records (444). Death and culling losses were computed at 14 greater losses for the low group compared to the high group valued at a net loss of \$1,000 (herd value of \$1,500 less salvage value of \$500) or \$14,000 total. Milk production was computed for each group above 1200 mg/dL using average total protein levels and actual post culling heifer numbers. Higher IgG levels resulted in 144,503 extra milk pounds. Valued at \$14.00 per cwt. This equals \$11,624.

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