Group Feeding Calves for an Organic Production System

Dr Brad
B. Heins
West Central Research and Outreach Center
University of Minnesota, Morris, MN

Take Home Message

- Late weaned calves grew faster than early weaned calves; however, the optimum time for weaning of organic dairy calves may be between 30 and 90 days.
- Successful group feeding of organic dairy calves is enhanced with aggressive suckling during infancy and early consumption of high quality organic calf starter.

The number of organic dairies has been steadily growing during the past decade in the United States and the Midwest. However, current research and extension programs do not adequately support the needs of the increasing number of organic dairies, and scientific research on methods used to raise organic dairy calves is lacking.

The main objective of an organic dairy herd is to sustainably produce milk and meat, while maintaining excellent animal health and welfare. Dairy replacement feeding and management systems have undergone major evolution in the last 25-30 years. As herd sizes increased, individual hutches were introduced to protect calves from contaminated and overcrowded environments. Recently higher levels of milk feeding are recommended to promote early growth, and now some farmers are adopting extended suckling until calves are weaned. Group calf rearing offers opportunities to reduce labor and to aid in socializing calves, but performance of group managed calves in enlarged hutches is not well documented.

The maintenance of health and growth of organic dairy calves is very important in their first few months of life. As no organic milk replacers are available, whole milk from high somatic cell organic cows, as well as bulk tank milk, must be fed. The cost versus benefits of milk consumption and weaning age is very important and has not been researched with organic dairy calves. Therefore, our objective was to evaluate the growth, health, and most importantly, the economic performance of organic dairy calves fed once per day and weaned at different ages.

Heifer calves (n=67) were assigned to feeding groups of 10 in super hutches by birth order, and were born at the University of Minnesota West Central Research and Outreach Center, Morris, Minnesota from March to June 2011. Breed groups of calves were: Holsteins (n=11) selected for high production (**HO**), Holsteins (n=10) maintained at 1964 breed average level (**H64**), crossbreds (n=28) including combinations HO, Montbeliarde, and Swedish Red selected for high production (**HMS**), and crossbreds (n=18) including combinations of HO, Jersey, and Swedish Red selected for durability (**HJS**). Calves were weaned at 30, 60, or 90 days of age, and groups were fed 1.5% of birth weight of 13% total solids organic milk once daily and weaned when the group consumption averaged 0.91 kg of starter/calf/day. Body weight was recorded at birth and at weaning. Analysis was with PROC GLM of SAS, and independent variables were weaning group and breed. Average

daily gain (kg) was 0.52±0.03, 0.68±0.02, and 0.75±0.02 for the 30, 60, and 90-d weaning groups, respectively. Total costs (grain and organic milk) to weaning were $108.81±7.70 for 30-d, $167.68±5.83 for 60-d, and $275.79±6.85 for 90-d groups; however, the cost per pound of gain was higher for the 30-d group than the 60-d or 90-d groups. The average daily gain (kg) for breed groups was: HO (0.72±0.03), H64 (0.61±0.03), HMS (0.67±0.02), and HJS (0.60±0.03).