

Study: Colostrum health benefits for dairy calves not affected by cold storage

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Fresh, refrigerated or frozen, colostrum still is the best thing dairy owners can feed newborn calves, according to a joint study by Texas A&M AgriLife Research and the University of Florida.

Colostrum is the milk secreted for a few days from a mother, whether human or animal, after giving birth and is characterized by high protein and antibody content.

"It is well known that an adequate colostrum feeding is the most important management factor determining calf health and survival," said Dr. Pablo Pinedo, AgriLife Research ruminant animal health scientist in Amarillo.

"Passive transfer of immunoglobulins is the key element; however, colostrum also is an important source of nutrients, nonspecific immune factors and biologically active compounds."

Colostrum storage is a common practice that provides an immunoglobulin source when administration of dam colostrum is impractical or when the quality of the mother's colostrum is poor, Pinedo said.

Most studies analyzing the effect of storage at 39 degrees and freezing on colostrum quality have determined adequate preservation of immunoglobulins, but the effect of storage on other immunological factors remains unclear, he said.

Pinedo has joined with Dr. Arthur Donovan, professor, and a group of students at the University of Florida College of Veterinary Medicine in Gainesville, Fla. to determine if there is a difference in the health benefits of colostrum comparing fresh to stored.

"The objective was to assess the performance, health and survival of calves fed fresh colostrum from their dams compared to calves receiving colostrum that was not from their dams and had been treated with potassium sorbate preservative and stored frozen or refrigerated," Pinedo said.

The study looked at 489 Holstein calves born within a single month at a large north central Florida dairy farm, he said. The [calves](#) were divided into groups that were fed fresh, refrigerated or frozen colostrum within minutes after birth. Each calf was monitored for survival, number and length of illnesses, and average daily gain.

The preliminary results indicate that colostrum origin, fresh maternal versus stored, did not have a significant effect on performance, health and survival in this population, he said.

"This is good news: proper colostrum storage is a very convenient tool in the dairy farms and the absence of unfavorable effects on frozen or refrigerated [colostrum](#) would be a very good result," Pinedo said.

Provided by Texas A&M University

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