

Strategic Human Resource Management in Commercial Dairy Calf Raising: Mentoring and Making Professional Managers and Labors

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ABSTRACT

This strategy review article aimed to discuss the importance of farm staff and labor education and management on optimizing dairy calf nutrition, welfare, and health. The high rates of pre-weaning calf death and diverse growth performance are amongst the most critical issues that the global dairy industries are facing today. Disease pathophysiology and treatment protocols of neonatal calves have been investigated in many studies, yet gastrointestinal disorders continue to cause major losses in young dairy calves (> 50% of calf mortality).

As a global concern, calf mortality could be analyzed in two aspects:

- a) the updated knowledge and insight into pathophysiology of calf diseases, and
- b) applying fundamental scientific guidelines on-farm.

Since much scientific information is available online and in paper concerning calf diseases etiology and prevention strategies, it does not seem that disease outbreak could be a consequence of knowledge deficit. However, a major concern is that how much updated information farmers and labors possess about basic and advanced calf-raising programs, especially when deciding to hire and maintain personnel for nursing newborn and young calves. Our on-farm observations have revealed that calf mortality decreases remarkably when professional workers are employed, or labors are educated and mentored meticulously. As such, providing on-farm opportunities to permanently educate labors about basic concepts of rearing neonatal calves such as assisting with calving, calf immunity system, colostrum and milk feeding methods, and general treatment protocols can be immensely helpful in controlling calf morbidity and mortality. This strategy will improve farm economics and sustainability.

KEYWORDS: Education; Labor management; Calf, Mentorship; Farm profitability

INTRODUCTION

The objective of this strategy review article was to discuss the importance of farm staff and labor education and management on optimizing dairy calf nutrition, welfare, and health. The future of commercial dairy herds is totally dependent on their success in

rearing healthy and well-grown calves [1]. Calf death in early stages of life especially during the pre-weaning period imposes economic and emotional damages to producers and farm staffs. According to the NAHMS (2014), more than a half of calf mortalities is related to digestive tract diseases. Therefore, it is mandated that calf-rearing

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workers possess general and even specialized information about calf digestive physiology and related disorders, so that they can act timely and effectively against infectious diseases. It is important to note that early diagnosis and proper treatment are key factors determining calf survival [2]. As a result, continuous mentoring and educating farm technicians and workers to profoundly understand the importance of prevention, early diagnosis, and treatment concepts should help producers perform optimally against disease outbreak. However, human resource management (HRM) and continual staff education are two critical concepts that seem to be greatly disregarded.

PHILOSOPHY AND DISCUSSION

The modern and post-modern human life requires integrated local and global education systems in animal agricultural sciences to empower world's economy [3]. It is believed that fostering international communications and attracting research funders to invest in national and international universities and research institutes is more effective than what economists and economic centers per se can present and achieve [4]. In fact, empowering the nature of education and development of mentorship skills could make a powerful foundation for boosting national economies [5]. Besides the importance of international higher education for promoting global economy and human life quality, paying attention to educating people who have been deprived of academic education would be a useful tool to improve work efficiency in small societies such as factories, companies, or agricultural systems. As such, the role of education and applied science mentorship on sustainable agricultural practices has been demonstrated in collective family farming [6]. The implementation of education in all types of activities depends totally on HRM quality [7]. In other words, HR management and education are both integrated with mentorship programs in different organizations. The concept of HRM implies that individual, organizational, or institutional goals can be well achieved when human resources are managed and mentored optimally according to their abilities and functions [7]. Planning, organizing, directing, controlling, compensating, and terminating are the most important aspects of HRM [7]. As a result, success could not be achieved unless companies' strategies and goals relate to personnel qualities [8]. Moreover, all workers and technicians must work together as a team in harmony towards optimizing the future.

Dairy farming is an economic activity in which animal nutritionists, veterinarians, and workers all are involved in different positions to produce high quality milk as a final product, for instance. In addition to milk, producing a healthy calf almost annually is another golden goal in any commercial dairy production system worldwide. Therefore, calf survival is key for significant and timely economic growth. As advanced agricultural systems, commercial dairy farms especially large herds require an intensive management to achieve optimal performance (e.g., higher milk yield efficiency and lower calf morbidity and mortality). Labor mentorship and training, job description, and standard operating procedures are amongst the most important management factors contributing to improved personnel performance and farm profitability [9]. Furthermore, making middle management layers in addition to top managers would be an effective strategy to implement farm objectives [9]. In such systems, top managers or management teams make decision for general farm strategies while do not have direct contacts with workers or labors except for problematic conditions. For the next management layer, middle

managers that are mainly composed of graduated professionals, graduate animal science students, or experienced labors are totally involved in directing workers in different specified sections such as feeding, milking, and nursing of calves. It is important to underline that developing an organized chart in which individuals' duties in different management layers are clearly defined is an inseparable part of success in dairy farming, particularly in calf rearing. In agreement with other studies [10], our farm experience also confirms that managing human resources in an organized structure is more important than updated facilities or equipment in the farm. In other coherent studies, the success of HRM programs is positively associated with productivity [11,12]. Placing right employees in right positions according to their education level, abilities, and interests is an important management decision that directly impacts work efficiency on dairy farms worldwide [10]. With further emphasis, successful calf rearing programs need a specific attention to selecting workforce. It has been demonstrated that human resource planning (HRP) has a key role in effectiveness and efficiency of organization and that HRP should be considered as a priority in each organization [13]. In addition, HRP refers to understanding employees' needs and trying to attract and retain them in organizations [14]. As a result, to achieve optimal performance, employees must be fit into their responsibilities and jobs while their requirements are satisfied. Working with young calves requires some unique personal characteristics that workers should have when managers decide to recruit them for nursing calves. Work conscience, patience, and preferably higher IQ and EQ, and morality are important characteristics that calf-rearing workers must possess.

Generally, two key time points determine the success of calf rearing:

- a) pre-partum cow and calving management, and
- b) the first two weeks of calf life. These two crucial periods require specific consideration with experienced and certified labors recruited and mentored/educated to ensure all scientific advice and recommendations are applied properly.

It seems that the number of certified labors and the duration of their job activities are impressively related to lower calf mortality in the pre-weaning period. In our experience, for instance, calf mortality rates of 25% and 2% were observed for two different large commercial dairy herds with short and long-standing calf-rearing employees, respectively. It is important to note that workers' standing would not be fully effective per se unless well mentored and directed by supervisors or middle management layers. This means that labors' work performance must be monitored and directed continuously over time. Interestingly, promoting competition among workers via monetary or spiritual rewards to reduce calf mortality and improve calf growth could positively influence labors' long-term performance. Thus, labor education and mentorship play the most fundamental role in improving calf production efficiency and health. The educational quality or training properties of farm personnel is the crucial part of any calf-rearing system nowadays. Despite the much scientific findings available, calf mortality is still high in commercial dairy farms worldwide [2] meaning that scientific outcomes are not properly injected into the body of the dairy industry possibly because of lacking integrated intra- or inter-farm educational systems. Calf mortality in modern farms may be likely higher than in traditional farms [15], thus needing much more investigation. As such, personnel in large commercial dairy farms must be well educated and skilled. The training process

includes acquisition of new skills, attitudes, and knowledge for preparing new jobs or improving personnel's current knowledge and insights [16]. As a circular process, training is initiated by identifying needs, and ends with evaluating training activity after several steps [16]. The labors who work in calf-rearing systems must be educated and equipped with basic and important concepts of calf physiology, nutrition, diseases, and treatment to act timely and effectively under normal and emergency situations.

It has been reported that the farms that used HRM tools such as on-farm training, performed better in controlling somatic cell count than those that did not [17]. It is important to mention that education on-farm would be different from academic education. Using related extension and research-fueled PowerPoint slides with proper and well-defined pictures and videos could attract labors to learn new concepts effectively. All educative topics and concepts must be practical and workable on-farm. Training on-farm is an integrated system and must involve top managers down to simple workers. Without continuous education of top managers, mentoring middle supervisors and training labors would be impossible. Moreover, attending applied scientific meetings and workshops provide useful opportunities for all farm staff to update their knowledge and communicate them with farm personnel. Furthermore, holding periodic and frequent scientific meetings intra- and inter-farms can greatly contribute to exchanging applied information and discovering innovative methods in calf-rearing systems. Overall, mentoring and making well-trained and professional personnel is a most important factor that helps dairy producers achieve quality and sustainable production systems globally.

CONCLUSION

Calf mortality and morbidity cause major economic losses and mental damages to farm managers and farm personnel worldwide. Effective mentor-based human resource management improves calf-rearing efficiency and health, and thus, farm profitability. Selecting and continuously mentoring talented and interested labors to work with calves would be a primary factor determining calf-rearing performance and quality. Training and mentoring such prepared staff with updated scientific and industrial insights can create an integrated powerful tool to achieve optimal calf production and health. All farm personnel up from the top managers down to simple labors must be continuously mentored and educated in integrative manners. The consequence will be optimized ongoing farm production sustainability.

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Quality labor mentorship and education is acknowledged as a most determining factor in accomplishing resourceful and sustainable dairy economies worldwide.

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