

Perspective of organic livestock production of bovine veterinarians in the United States

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Introduction

Over the past decade the organic agricultural industry has grown exponentially; dairy production represents its second largest sector. The National Organic Program of the United States limits the list of allowable therapies, therefore the objective of this study was to ask bovine veterinarians regarding their opinion, perception, and challenges while working with organic livestock herds.

Materials and Methods

In the fall of 2014, all members of AABP-L who work as veterinarians in the United States, were invited to participate. The survey was administered online and included questions about the participants' demographics, knowledge, and perceptions of organic livestock production.

Results

In the end, responses from 213 veterinarians from 38 states could be analyzed. Overall, few veterinarians were not

interested in (14%) or opposed to organic livestock production (30%). Most veterinarians did not find organic livestock healthier than conventionally raised livestock and were concerned about animal welfare on organic farms due to the lack of data regarding alternative therapies. The use of alternative therapies within the framework of AMDUCA/ELDU, PMO, and NOP was the biggest challenge area for veterinarians. Easier access to information regarding alternative therapies was identified as 1 of the main needs that have to be addressed.

Significance

In conclusion, although organic livestock production has grown tremendously over the last few years, veterinarians need more information regarding the efficacy and withdrawal times of alternative therapies to feel fully comfortable in advising their organic clients.

Culling perspectives from dairy producers, veterinarians, DHI and feed mill advisors: a Q-methodology study

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Introduction

While minimizing total losses (sum of production loss and disease control expenditures) is recognized to be the most profitable approach, dairy producers still have flexibility regarding the timing of their decisions, the liberty to make

individual choices (e.g., genetic selection), or the handling of certain constraints (e.g., regulations, quotas, etc). Farmer's socio-psychological characteristics were demonstrated to be more important to farm performance than herd-level variables describing production, health, and fertility. Research on motivational and behavioural aspects of farmers' decision

utility are sparse, and nonexistent regarding culling expectations and the associated decision process. Our goal was to identify shared criteria on culling decision held by dairy producers and farm advisors, using a Q-methodological study, which allows for the systematic exploration of subjectivity.

Materials and Methods

Forty-one dairy producers and 43 advisors (17 veterinarians, 14 feed mill advisors, and 12 DHI advisors) undertook a Q sort with 40 statements that represented a range of viewpoints about cow and herd health, production performances, management issues, and material factors that might impact their culling decision-making process. Sorts were analyzed by-person using factor analysis and oblimin rotation.

Results

Dairy producers shared a single view on culling, where udder health, milk production performances, milk quota management, and producing a healthy, secure milk were key criteria. Farm management parameters (debts, amortiza-

tion, employees, milking parlor capacity, herd size) were not considered at all. Two profiles were identified among farm advisors. They all used the same key parameters as producers. The first profile – 81% similar to producers – stressed withdrawal period and animal welfare. The second – 56% similar to producers – differed more clearly by considering reproduction status (pregnancy, gestation stage) as key criteria, followed by post-partum diseases and production financial incentives.

Significance

Our findings suggest that dairy producers and their advisors generally hold a common viewpoint. A subgroup of advisors is using recommendations from economic models where reproduction status is central to farm profitability. Despite outreach programs promoting this approach, it did not reach most of the advisors nor the majority of producers. Understanding and managing these differences is important to assist change management processes required to increase farm profitability.

Particle-induced x-ray emission analysis of trace and major elements in serum of acute coliform mastitis in cattle

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Introduction

Acute coliform mastitis (ACM) is 1 of the most frequent causes culling dairy cattle. This condition is typically associated with local inflammation and systemic inflammatory responses as a result of local responses to inflammation. Interleukin-6, interleukin-1, and tumor necrosis factor-alpha play central roles in the production of acute phase responses associated with inflammation and are well characterized. However, knowledge about the biological significance of alterations in trace and major elements associated with production of cytokines during the immune response is limited. Thus, the aim of this study was to investigate the concentrations and relationships between trace and major elements in

serum from dairy cattle with acute coliform mastitis. Receiver operating characteristic (ROC) curves were used to describe the performance of serum in screening for acute coliform mastitis and to propose diagnostic cutoffs for cattle. Further, this data may provide further understanding of trace and major minerals associated clinically with coliform mastitis.

Materials and Methods

Fifty-three Holstein dairy cattle with ACM were enrolled in this study. The definitive diagnosis of coliform mastitis was made in each animal by culture of *Escherichia coli* and/or *Klebsiella pneumoniae*. Prognosis was divided into animals having good or poor prognosis based upon the