

RISK FACTORS ASSOCIATED WITH BOVINE MASTITIS
FATORES DE RISCO ASSOCIADOS À MASTITE BOVINA
FACTORES DE RIESGO ASOCIADOS A LA MASTITIS BOVINA

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ABSTRACT: Identifying danger elements for mastitis is imperative for the improvement of particular techniques to manage and forestall the disease. Considering that these elements might also range between areas and dairy farms, the goal of this work was once to evaluation the fundamental threat elements related with bovine mastitis, each scientific and subclinical, in 1452 distinct countries, additionally overlaying epidemiological factors of the sickness such as etiology and prevalence. Factors related with bovine mastitis may additionally be associated to the animal, the environment, herd administration and milking equipment. Risk elements for mastitis related with the animal can also be the depth of the udder, the presence of hyperkeratosis on the teats and udder hygiene. Other elements related with a greater hazard of mastitis, such as a greater wide variety of births/lactations/age, greater lactation stage/days in lactation and greater proportion of Holsteins in the herd. Factors related with decrease possibilities of mastitis are: carrying out a milking line, that is, milking cows with mastitis after wholesome cows or separately, the usage of disposable gloves at some stage in milking, pre-milking teat disinfection, drying teats, post-milking teat disinfection and ordinary protection of milking equipment. Regular mastitis research proceed to be imperative for adapting and creating new equipment for controlling and stopping the disease.

Keywords: Associated factors. Clinical mastitis. Subclinical mastitis. Milking.

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RESUMO: A identificação dos elementos de perigo para a mastite é imperativa para o aprimoramento de técnicas específicas de manejo e prevenção da doença. Considerando que esses elementos também podem variar entre áreas e fazendas leiteiras, o objetivo deste trabalho foi avaliar os elementos de ameaça fundamentais relacionados à mastite bovina, cada um científico e subclínico, em diferentes países, além de sobrepor fatores epidemiológicos da doença, como etiologia e prevalência. Fatores relacionados à mastite bovina podem estar associados adicionalmente ao animal, ao ambiente, à administração do rebanho e aos equipamentos de ordenha. Os elementos de risco para mastite relacionados com o animal também podem ser a profundidade do úbere, a presença de hiperqueratose nas tetas e a higiene do úbere. Outros elementos relacionados com maior risco de mastite, como maior variedade de nascimentos/lactações/idade, maior estágio de lactação/dias em lactação e maior proporção de Holandeses no rebanho. Os fatores relacionados com a diminuição das possibilidades de mastite são: realização de linha de ordenha, ou seja, ordenhar vacas com mastite após vacas sadias ou separadamente, uso de luvas descartáveis em algum momento da ordenha, desinfecção pré-ordenha dos tetos, secagem dos tetos, pós-ordenha desinfecção das tetas de ordenha e proteção comum do equipamento de ordenha. A pesquisa regular da mastite continua a ser imperativa para adaptar e criar novos equipamentos para controlar e parar a doença.

Palavras-chave: Fatores associados. Mastite clínica. Mastite subclínica. Ordenha.

RESUMEN: LA identificación de elementos peligrosos para la mastitis es imprescindible para la mejora de técnicas específicas para controlar y prevenir la enfermedad. Teniendo en cuenta que estos elementos también pueden variar entre áreas y tambos, el objetivo de este trabajo fue evaluar los elementos fundamentales de la amenaza relacionados con la mastitis bovina, tanto científica como subclínica, en distintos países, además de superponer factores epidemiológicos de la enfermedad como la etiología. y prevalencia. Los factores relacionados con la mastitis bovina pueden estar asociados adicionalmente al animal, el medio ambiente, la administración del rebaño y el equipo de ordeño. Elementos de riesgo para mastitis relacionados con el animal también pueden ser la profundidad de la ubre, la presencia de hiperqueratosis en los pezones y la higiene de la ubre. Otros elementos se relacionaron con un mayor riesgo de mastitis, como una mayor variedad de nacimientos/lactancias/edad, mayor etapa de lactancia/días de lactancia y mayor proporción de Holstein en el rebaño. Los factores relacionados con la disminución de las posibilidades de mastitis son: realizar una línea de ordeño, es decir, ordeñar vacas con mastitis después de vacas sanas o por separado, el uso de guantes desechables en algún momento del ordeño, desinfección de pezones preordeño, secado de pezones, desinfección de pezones de ordeño y protección ordinaria del equipo de ordeño. La investigación regular de la mastitis sigue siendo imprescindible para adaptar y crear nuevos equipos para controlar y detener la enfermedad.

Palabras clave: Factores asociados. Mastitis clínica. Mastitis subclínica. Ordeño.

1. INTRODUCTION

Cattle farming is one of the predominant highlights of Brazilian agribusiness on the world stage. Brazil has the 2nd greatest high-quality herd in the world, with round 200 million head. The Brazilian cattle herd offers the improvement of two moneymaking segments: the productive chains of meat and milk. The gross manufacturing cost of these two segments,

estimated at R\$ sixty seven billion, blended with the activity's presence in all Brazilian states, show the financial and social significance of cattle farming (MAPA, 2022).

Among the ailments that have an effect on dairy cattle, mastitis is accountable for important harm to the manufacturing chain (Ribeiro et al., 2003). This happens due to the lesions induced in the secretory epithelial cells of the mammary gland, reducing the manufacturing and secretion of the gland as a whole. In addition to the decrease, mastitis reasons adjustments in the composition of milk, commonly in the content material of lactose, fats and protein (Aires 2010).

The epidemiology of this sickness is linked to the triad: animal (host), etiological agent and environment, making this a multifactorial ailment (Prestes et al., 2002). The danger elements associated with this contamination can be person or environmental. Individual elements consist of the animal's protection mechanisms and the anatomy of the teat and udder. The environmental elements are associated with the kind of local weather in the region, cleanliness of facilities, meals and microorganism virulence (Whist et al., 2006).

Bearing in thought the harm that this ailment reasons to the milk manufacturing chain, the goal of this work was once to analyze the chance elements related with bovine mastitis in the microregion of Garanhuns, Pernambuco.

2. METHODOLOGY

This is a bibliographic review of the literature carried out through the Scientific Electronic Library Online (SciELO), Latin American and Caribbean Literature in Health Sciences (LILACS) databases, using the following Health Sciences Descriptors (DeCS): “mastitis” and “cattle” Combined together by the Boolean operator AND. As inclusion criteria: articles available in full, in Portuguese, Spanish and English, which addressed the theme. No time clipping. As exclusion criteria: articles that did not contemplate the theme and repeated studies in the databases (Ercole et al., 2014).

3. RESULTS AND DISCUSSION

Freitas et al. (2005) located a frequency of 59.3% of high-quality samples in the microbiological examination in the agreste area of the State of Pernambuco in a whole of 984 milk samples examined. In a learn about carried out by means of Oliveira et al. (2009) in herds of dairy cattle in the Coastal Tablelands of Sergipe, a frequency of 60.8% of high-quality samples was once discovered from a whole of 893 milk samples submitted to the microbiological test.

Andrade et al. (2009) discovered the increase of microorganisms in 90.1% of a complete of 1072 samples from herds in the metropolitan vicinity of Curitiba, State of Paraná

The distinction between the outcomes of the current study, in relation to these of lookup in different regions, may additionally have happened due to the racial charter of the herds, manufacturing traits and the milking administration employed on the properties. The prevalence of insufficient herd administration practices, terrible hygienic-sanitary administration for the duration of milking, excessive labor turnover, low stage of professionalization, amongst different practices, desire the amplify in the quantity of instances of mastitis in herds (Ferreira et al., 2007).

A decrease frequency of fine animals in the microbiological take a look at was once found in crossbred animals compared to different breeds. This match may also be associated to components of udder conformation, teat size and morphology (Aires, 2010) and manufacturing of the keratin plug (Carneiro et al., 2009). Coentrao et al. (2008) said that the depth of the udder is an vital hazard aspect the place animals that have the base of the udder beneath or shut to the hock are 1.73 instances extra probable to have a SCC above 200,000 cells/ml than animals with the base above the hock.

As for the kind of milking, no statistically vast associations had been found between the kind of guide and mechanical milking. However, Barbosa et al. (2009) record in their work on dairy farms in the Triângulo Mineiro vicinity that milk from guide milking has decrease values of somatic telephone content material in contrast to mechanical milking. 1455

Regarding the rearing system, Kalmus et al. (2006) suggested that animals reared in an intensive device are greater prone to the improvement of mastitis due to increased publicity to natural rely and humidity and, consequently, a larger wide variety of marketers that reason mastitis when in contrast to animals reared in an great system.

Feeding the animals throughout milking protects them towards environmental pathogens, considering that quickly after milking the teat sphincter is open and with that there is a larger risk of udder contamination by way of microorganisms. According to Costa et al. (1998), an choice to forestall contamination would be to furnish post-milking food, encouraging the animals to continue to be stationary, favoring the closure of the teat sphincter.

Dry cow remedy is a approach extensively used in the prevention of mastitis (Pinto, 2009) and in this study, this variable used to be recognized as a chance issue for the sickness (OR=1.5), which can also have came about due to inappropriate use. of antimicrobials in the residences studied, bearing in thinking that the indiscriminate use of antimicrobials may

additionally have contributed to the expand in bacterial resistance (Bueno et al. 2003, Mota et al. 2005). in affiliation with excellent administration practices, enough diet and discount of stress in the surroundings (Tozetti et al., 2008).

Teat washing earlier than milking used to be viewed a protecting thing for mastitis in this learn about (OR=0.6). These effects had been divergent when in contrast to these located through Ramirez et al. (2009), who discovered that teat washing earlier than milking used to be recognized as a threat aspect (OR=1.3). This kind of administration ambitions to minimize the filth existing in the teats and, consequently, minimize the quantity of microorganisms that ought to subsequently penetrate the teat canal in the course of milking via the sphincter and set off an inflammatory process.

Milking administration is one of the most essential factors for the success of a mastitis manipulate program. Practices such as washing the milkers' palms with cleaning soap and water and discarding the first three sprays in a "netted mug" or "black background", with the purpose of diagnosing medical mastitis, are essential measures for controlling this disorder (Fonseca & Santos, 2000). Mendes (2006) advises that after trying out the screened mug, disinfection of teats ought to be carried out earlier than milking (pre-dipping) and after the cease of milking, post-dipping administration need to be carried out, in order to limit the variety of animals contaminated by means of microorganisms existing on the animals' teats.

1456

Teat disinfection earlier than and after milking, the adoption of a milking line and no longer offering meals in the course of milking had been recognized as tactics that make contributions to stopping the make bigger in somatic phone counts in dairy herds in the Zona da Mata de Minas General via Souza et al. (2005). However, in the existing study, the post-dipping variables and the adoption of a milking line did no longer exhibit statistically extensive associations with defensive factors.

Knowledge of threat elements has an amazing influence on the implementation of mastitis manage programs. Another factor that ought to be viewed is the length of infections in cows, due to the fact the quicker mastitis instances are eliminated, the higher the probabilities of success will be for manipulate programs.

The removal of these instances can be carried out by way of discarding the in poor health animals, therapy at some stage in lactation or dry cow therapy. Reducing the length of infections can additionally be bought thru the right use of antimicrobials and different therapeutic sellers in the therapy of medical mastitis and in the cure of dryness. (Tozzetti et al., 2008). The identical authors file that the adoption of appropriate administration practices, enough meals and a stress-

free surroundings can make a contribution to the manipulation of infections in a herd.

FINAL CONSIDERATIONS

In the existing study, the activities related with the emergence of mastitis are associated with the administration that the herd is submitted to and the hygienic and sanitary administration in the course of milking.

With the revolutionary increase of country wide dairy farming, it becomes increasingly more essential to raise out research on the illnesses that have an effect on and damage the improvement of this kind of exploitation.

The evaluation of danger elements related with the prevalence of mastitis offers subsidies for the improvement of sufficient prevention and manipulation applications for the ailment in question, enhancing the productiveness of the animals worried and, consequently, the profitability of the manufacturing system.

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