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PASTURES, SOIL AND COMPOSTING. LITERATURE REVIEW

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Abstract. The Veterinarian must be aware of the pastures and their handling, as the high quality pastures will contribute to an excellent nutrition of the animals. Within this logic, soil is an essential natural resource for the survival of animals, since ecosystems contribute to the growth of plants and to the regulation of water flow in the environment, functioning as an environmental buffer, in the formation, attenuation and degradation of compounds natural. Composting is the process of controlled degradation of organic waste, which is a process in which it seeks to reproduce ideal conditions of humidity, oxygen and nutrients, especially carbon and nitrogen, to favor and accelerate the degradation of waste in a safe manner, avoiding the attraction of disease vectors and eliminating pathogens. Thus, knowing these environmental contributions, will favor in the guidelines that the veterinarian should pass on to the country man, aiming to have a well-nourished herd and with consequent lesser animal convalescence.

Keywords: Alternative technologies; Management of organic waste; Pasture improvement.

PASTAGENS, SOLO E A COMPOSTAGEM. REVISÃO BIBLIOGRÁFICA

Resumo. O Médico Veterinário deve estar inteirado com as pastagens e manejo destas, pois as pastagens de alta qualidade, contribuirá uma excelente nutrição dos animais. Dentro desta lógica, o solo é um recurso natural essencial à sobrevivência dos animais, pois os ecossistemas contribuem para o crescimento das plantas e para a regulação do fluxo de água no ambiente, funcionando como um tampão ambiental, na formação, atenuação e degradação de compostos naturais. A compostagem é o processo de degradação controlada de resíduos orgânicos, sendo este um processo no qual se procura reproduzir condições ideais de umidade, oxigênio e de nutrientes, especialmente carbono e nitrogênio para favorecer e acelerar a degradação dos resíduos de forma segura evitando a atração de vetores de doenças

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e eliminando patógenos. Assim, saber destas contribuições ambientais, favorecerá nas orientações que o médico veterinário deverá repassar para o homem do campo, visando ter um rebanho bem nutrido e com consequente menor convalescência dos animais.
Palavras-chave: Tecnologias alternativas; Manejo de resíduos orgânicos; Melhoramento de pastagens.

PASTOS, SUELOS Y COMPOSTACIÓN. REVISIÓN DE LITERATURA

Resumen. El Veterinario debe estar atento a los pastos y su manejo, ya que los pastos de alta calidad contribuirán a una excelente nutrición de los animales. Dentro de esta lógica, el suelo es un recurso natural esencial para la supervivencia de los animales, ya que los ecosistemas contribuyen al crecimiento de las plantas y a la regulación del flujo de agua en el medio, funcionando como un amortiguador ambiental, en la formación, atenuación y degradación de compuestos. Natural. El compostaje es el proceso de degradación controlada de los residuos orgánicos, que es un proceso en el que se busca reproducir las condiciones ideales de humedad, oxígeno y nutrientes, especialmente carbono y nitrógeno, para favorecer y acelerar la degradación de los residuos de manera segura, evitando la atracción de vectores de enfermedades y eliminación de patógenos. Así, conocer estos aportes ambientales, favorecerá en las pautas que el veterinario debe traspasar al campesino, con el objetivo de tener una herencia bien nutrida y con la consiguiente menor convalecencia animal.
Palabras clave: Tecnologías alternativas; Gestión de residuos orgánicos; Mejora de pastos.

INTRODUCTION

Having a wide territorial extension as well as a privileged climate for the good development of herbaceous plants, Brazil presents itself as a country that has excellent conditions for the formation of good pastures, which culminates in a good development for national livestock (PEDREIRA; PEREIRA; PAIVA, 2013).

The Veterinarian must be aware of the pastures and their management, because when having high quality pastures, there will be an excellent nutrition of the herds and, consequently, the health of the herds will be the reflection of them (GODOI; SILVA, 2010).

The good pastures formation is of a real importance, being this the best option for feeding the national herd, since it is the cheapest food available that tends to offer all the nutrients needed for good nutrition and consequently a good animal health (SILVA, 2018).

Pasture is a management 'unit', closed and separated from other areas by a fence or other barrier, intended for the production of forage to be harvested mainly by grazing. Fodder consists of the aerial parts (except grains) of a plant population, which will can be used in the feeding of grazing herbivores (nutrition) or can be harvested and provided in the trough (SILVA, 2018; SOARES FILHO et al., 2013).

Grazing corresponds to the act of defoliating the plant rooted in the field, carried out by the herbivore and for the animal it involves the search, seizure and ingestion of forage (PEDREIRA; PEREIRA; PAIVA, 2013; SOARES FILHO et al., 2013).

Soil is an essential natural resource for the survival of living beings, since, in ecosystems; it contributes to the growth of plants and to the regulation and participation of water flow in the environment, functioning as an environmental buffer, in the formation, attenuation and degradation of natural compounds. The soil is the substrate for plant fixation and provides the necessary nutrients for its growth and development. Negative effects of the soil on the plant will be verified if it is acidic or poor in nutrients, which will affect the development of the root system and aerial part of the plants (CHIODEROLI et al., 2012; OLIVEIRA et al., 2017).

The soil's life increases with the increments of organic matter resulting from the adequate management of the pastures; the soil structure improves and compaction decreases. For this, the interactive character of the components linked to the soil (plant-animal-environment) and the knowledge of the responses of the pasture plants are essential for the conception, planning and implementation of efficient, sustainable and competitive production systems (CHIODEROLI et al., 2012).

For production animals with high zootechnical indexes, both of milk, meat and wool, they are conditioned to the proper feeding of them, where the pastures assume great importance, because it is the cheapest food available to the animals. However, forage yield in quantity and quality is closely linked, among other factors to soil quality (CHIODEROLI et al., 2012).

The livestock farmer always aims to seek the best production at the lowest possible cost, which is the best way to succeed in the development of his rural property. With the use of residues from the rural property itself, such as cultural remains, manure from herds, residues from the feeding of herds, among others, the rancher can make use of the composting technique, which in addition to being a low-cost action, will provide an excellent result for pastures, providing a better nutritional quality vegetable production (ARAÚJO, 2016; BASTOS; FURTADO, 2017; BASTOS; SILVA; FURTADO, 2019; BATISTA et al., 2016).

Composting is the process of controlled degradation of organic waste. It is a process in which one tries to reproduce some ideal conditions (of humidity, oxygen and nutrients, especially carbon and nitrogen) to favor and accelerate the degradation of residues in a safe way (avoiding the attraction of disease vectors and eliminating pathogens). The creation of such ideal conditions favors that a great diversity of macro and microorganisms (bacteria, fungi) act successively or simultaneously for the accelerated degradation of residues, resulting in a

material of homogeneous color and texture, with characteristics of soil and humus. , called organic compound. It is a simple, safe method that guarantees a uniform product, ready to be used in agricultural crops, such as pastures (BERTONI; LOMBARDI NETO, 2014; FURTADO et al., 2017; MMA, 2018).

The process of assembling the windrows (which are the mounds formed by waste and other materials where composting takes place), is carried out by depositing layers of organic matter and a layer of soil, overlapping these until reaching approximately one meter of the soil, where its base should be slightly wider than the top, as this will favor its balance. In this process, the process of microbiological decomposition of organic matter will occur, where heat generation will occur (which will develop at temperatures above 45 ° C, reaching peaks that can reach over 70 ° C) (ARAÚJO, 2016; SILVA, 2018). This color is directly linked to the stack size, humidity, amount of oxygen, carbon and nitrogen, in addition to the ambient temperature. This temperature can be measured with the advent of an iron bar, where the bar is inserted at +/- 40cm in the middle of the pile and leave for a few minutes. After this, you should hold the bar with your hand and observe the temperature. If you are unable to hold it, you must turn the compost over and irrigate the pile, aiming to lower the temperature.

This occurs due to the action of decomposition of microorganisms and chemical and physical changes of the compound. After approximately 120 days, composting will be completed, with the temperature reduced to environmental levels. The resulting material is a product similar to earth, which is called organic compost, the final material of a successful composting process, which is an excellent material for agricultural use in pasture production (MMA, 2018; SILVA, 2018).

Composting will initially promote physical changes in the soil, favoring better soil aeration, soil permeability, better plant rooting, better aggregation of soil particles, will contribute to soil colonization by beneficial microorganisms, which as a whole will grant a great physical and biological quality of the soil. The compound will also provide macros and micro nutrients, which will be gradually released to the plants. Thus, composting brings together many good attributes, contributing to the better formation of pastures, with lower cost for cattle ranchers and will provide good nutritional quality pasture for herds (BASTOS; FURTADO, 2017; MMA, 2018).

CONCLUSIONS

With the use of residues from the rural property itself, the rancher will be able to compost, at a low cost, which will provide an excellent result for the pastures, providing a better nutritional quality vegetable production.

Composting will also provide a better condition for soils, favoring plant fixation and better conservation of the physics and chemistry of pasture soils.

For the veterinarian, knowing these environmental contributions, will favor in the guidelines that this professional should pass on to the rancher, aiming to have a well-nourished herd and with consequent less animal convalescence.

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