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SOME ASPECTS CONCERNING THE INCIDENCE OF PODAL DISORDERS IN CATTLE REARED AND MAINTAINED IN FREE SYSTEM

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Abstract

The investigations performed at S.C. Agronova Impex SRL. from the county of Cluj, on a stock of 490 Simmenthal cattle (430 dairy cows and 60 gestant heifers), during December 2011 - March 2012, emphasizes a prevalence of the podal disorders of 26.0% in cows (112 animals with podal disorders) and 15% pregnant heifers (9 animals with podal disorders).The incidence of the podal disorders on cattle nucleus stock in this unit, in correlation with the evolution type, emphasizes some aspects: necrotic pododermatites 9.5% (47 cases); podal ulcer – Rusterholz 5.7% (28 cases); necrosis between fingers 6.5% (32 cases); tiloma 2.8% (14 cases). We must note that frequency of these podal disorders reported to the nucleus stock is with 10.4% biger in posterior trend compared to anterior trend (35 cases anterior trend – 7.1% and 86 cases posterior trend – 17.5%. The used therapeutic patterns aimed a rigorous surgical cleaning and use of different drug formulas function of evolution form, meaning: in pododermatites, ether iodoform + Petlain (3 treatments at 3 days interval); in necrosis between fingers, ether iodoform +Spray (2 treatments at 3 days interval); in podal ulcer Spray with antibiotics + sulfonamides (2 treatments at 4 days interval), and in tiloma Spray with antibiotics (2 treatments at 3 days interval)

Key words: *prevalence, pododermatites, ulcer, onglon.*

INTRODUCTION

In the mean time with development of cattle farms in intensive systems with free stabulation, the podopaties in dairy cows are continuously increasing. Majority of specialists recognizes that the podal disorders are the result of the conjugated actions of determinant and advantaging factors on the basis of major deficiencies of zoo-hygien, feeding and motility (Susan et al., 2004; Constantin, 2009; Negrea, 2007). According to performed investigations there was found that recorded loosing, consequent to pododermatitis, in Simmental cows, aimed both dairy production and reproduction process (Constantin, 2009; Telezhenko and Bergten, 2005). Due to these considerations, in order to reduce the harmful economic effects, among others, it is imposed the adaptation of a prophylactic programme consisting in surgical cleaning of onglons within entire nucleus stock at 6 months interval.

MATERIALS AND METHODS

The investigation concerning the incidence of podal disorders in dairy cows reared and maintained in free system were performed in an animal husbandry farm from the county of Cluj, on a nucleus stock of 490 Simmental cattle (430 cows and 60 heifers in gestation). The studied cattle stock was sheltered in 2 modern shelters, built with Sapard European none reimbursing founds. The shelters are supplied with 6 rows of boxes for resting, separated by metallic balustrades, and between them are provided 4 roads destined for manure collection and hygienization. The manure is then directed to a collection channel covered by a lamellar. The animal feeding consists in administration of unique forage, prepared in farm forage kitchen. The study of the frequency of the podal disorders was performed using a serious anatomo-clinical examination of the entire nucleus stock, studying:

- the incidence of the podal disorders by the total studied stock, function of evolution form and age category, respectively;
- their prevalence according to localization (anterior and posterior members).
- putting into practice therapeutic patterns and their value.

RESULTS AND DISCUSSIONS

The data resulted from the anatomo-pathological examinations, performed on a nucleus stock of 490 Simmental cattle, concerning the incidence of podal disorders are presented in table 1.

Table 1. The incidence of podal disorders in cattle

No. crt	Podal disorder	Total stocks: 490 animals, of which:	
		positive	percent, %
1	Pododermatite	47	9.5
2	Interdicital necrosis	32	6.5
3	Podal ulcer – Rusterholz	28	5.7
4	Tiloma	14	2.8
5	Total	121	24.6

From data presented in above mentioned table is emphasized an increased incidence of the anatomo-clinic forms of pododermatites (47 cases – 9.5%) and interdigital necrosis (32 cases - 6.5%), compared to Rusterholz podal ulcer (28 cases – 5.7%), and tiloma (14 cases - 2.8%) (Negrea, 2007; Lischen and Ossent, 2001; Oană and Timen, 2005). The increased incidence of these podal disorders in studied stock emphasize the presence of some major deficiencies in application of the technology of exploitation, as: the excessive humidity at acropoidal level, floor with many irregularities, prolongued stabulation, onglons excessively glowed (favorizing factors), but also presence of an unspecific shelter microbial charge consequent to presence of a big number of cows with endometritis and mammites (determinant factors) (Constantin, 2009; Negrea, 2007).The prevalence of the podal disorders in cattle nucleus stock is graphically presented in figure no. 1.

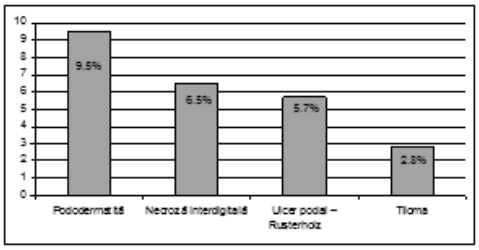

Figure 1. The incidence of the podal disorders in cattle, by evolution forms

The incidence of the podopaties in cattle function of age category and evolution form is presented in table no. 2.

Table 2. The incidence of the podal disorders function of evolution form and age category

Category	Total stocks	Of which							
		Pododermatites		Necrosis between fingers		Podal ulcer		Tiloma	
		No. cases	%	No. cases	%	No. cases	%	No. cases	%
Dairy cows	430	40	9.3	30	6.9	28	5.7	14	2.8
Pregnant heifers	60	7	11.6	2	3.3	-	-	-	-
Total	490	47	9.5	32	6.5	28	5.7	14	2.8

From presented data, we note an increased incidence off the infectious pododermatites, in dairy cows (9.3%) and pregnant heifers (11.6%), but the rest of recorded evolution forms also have big enough values, in dairy cows, especially: interdigital necrosis (6.9%), Rusterholz podal ulcer (5.7%) and tiloma (2.8%). The big frequency of these podal disorders in studied nucleus stock, reveals major deficiencies in exploitation technology applied to dairy cows, especially excessive humidity, micro- and macro-traumas at acropoidal level, excessively grow onglons, metritis and mammitis, thus facilitating the opening of gates for the unspecific poly-microbial microflora (Constantin, 2009; Oană and Timen, 2005; Mates, 2009). The graphic representation of the incidence of the podal disorders in cattle, function of age category and evolution form is presented in figure no. 2. Concerning the prevalence of the podal disorders in cattle function of location; recorded data are presented in table no. 3.

Table 3. The prevalence of the podal disorders in cattle function of location

Localization	Total cases		Of which							
			Pododermatite		Necrosis between fingers		Podal ulcer		Tiloma	
	No.	%	No.	%	No.	%	No.	%	No.	%
Anterior members	35	7.1	17	3.4	8	1.6	2	0.4	8	1.6
Posterior members	86	17.5	30	6.1	24	4.9	26	5.3	6	1.2
Total	121	24.6	47	9.5	32	6.5	28	5.7	14	2.8

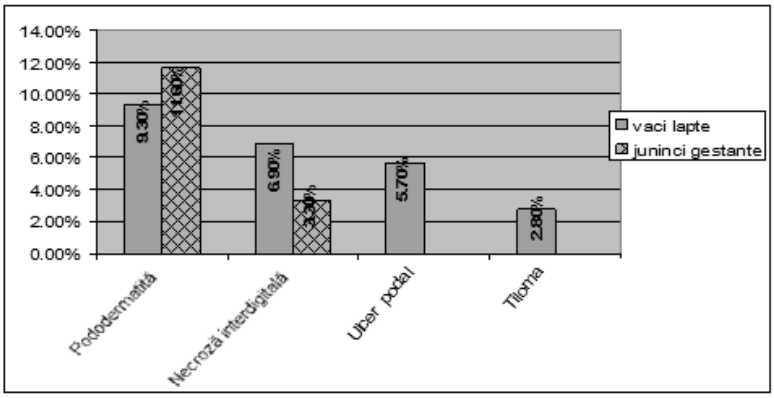

Figure 2. The incidence of the podal dermatitis in cattle function of age category and evolution form

The data we obtained emphasize an increased incidence of podal disorders in posterior members (17.5%) compared to anterior members (7.1%). This is possible, mainly, because of the resting boxes of ″short bed type″, which constraint the animals to permanently expose their posterior members to mechanical and traumatic risks. In the following graph we emphasize the prevalence of the podal disorders in cattle, according to localization (fig.3)

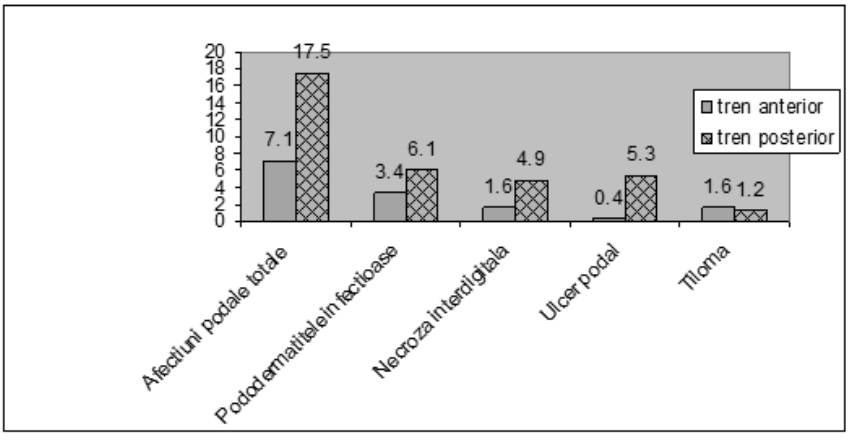

Figure 3. The prevalence of the podal disorders in cattle, function of localization

CONCLUSIONS

The investigations carried out within an animal husbandry unit located in the county of Cluj, în in the Ist trimester of the year 2012, on a nucleus stock consisting of Simmental 490 animals (430 cows and 60 pregnant heifers),

concerning the incidence of the podal disorders, emphasize the following aspects:

1. The prevalence of the podal disorders is 26.0% in cows (112 cases) and 15.0% in pregnant heifers (9 cases), of the total studied stock.
2. The incidence of the padopaties, in correlation with the evolution form exhibits differentiate values, meaning: infectious padodermatite 9.5% (45 cases), Rusterholz podal ulcer 5.7 % (28 cases) interdigital necrosis 6.5 % (32 cases) and tiloma 2.8 % (14 cases). The dairy cows are more exposed to the risk of podal disorders appearance (26.0%) compared to pregnant heifers (15%)
3. The extension of podopaties, according to localization, emphasizes their increased values in posterior members (17.5%) compared to anterior members (7.1%).

The used therapeutic patterns aimed to a serious surgical cleaning and putting into practice of some drug formula correlated to the evolution forms.

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