

RESEARCH ABOUT PRODUCTION QUALITY AT MAIZE FODDER IN TWO DIFFERENT LIVE-STOCK FARMS NEARLY IASI AREA

STUDII ASUPRA CALITĂȚII PRODUCȚIEI DE PORUMB FURAJER ÎN DOUĂ LOCAȚII AGRO-ZOOTEHNICE DIFERITE DIN ZONA LIMITROFĂ IAȘULUI

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Abstract *The food necessity of animals is realized through fodders plants, which from this point of view are considered defining. The nutritive value of fodder is given of many and various factors, especially by conditions of obtain and cultivation, the vegetation level at maturity, hybrid, specieses, preserve conditions, and so on. Paper presents the variation of some quality fodder characteristics, in two live-stock farms near Iasi, knowing that the agricultural technology used during vegetation, are determined in a considerable way, their chemical composition.*

Key words: product quality, nutritional value

Abstract *Satisfacerea cerintelor nutritive a animalelor se realizeaza prin furaje, care din acest punct de vedere sunt considerate definitive. Valoarea nutritiva a furajelor este influentata de numerosi si variati factori, respectiv de condițiile de obtinere – cultivare, stadiul de vegetatie la recoltare, hibridul, soiul, conditiile de conservare etc. Lucrarea prezinta variatia unor indici de calitate a furajelor, in doua unitati de crestere a animalelor din judetul Iasi, stiut fiind faptul ca tehnologiile de cultură utilizate în perioada de vegetație, influențează într-o manieră semnificativă compoziția chimică a acestora.*

Cuvinte cheie: calitatea productiei , valoare nutritiva

INTRODUCTION

A normal animal nutrition can be ensured by addressing nutritional requirements, respectively using balanced rations, adapted to the peculiarities of digestive and as economically as possible. In this direction using a set of rules allowed for providing the nutritional requirements for maintenance and production.

Satisfying the nutritional requirements of animal feed is done, which in this view are considered definitive. The nutritional value of feed is influenced by many and varied factors, including conditions for obtaining – cultivation, state of vegetation at harvest, hybrid, variety, storage conditions. From this perspective, food standards and requirements are relative and chemical composition and nutritive value of fodder varies, depending on their nature and by the species or category of animals that use them.

Nutrients as fodder quality factors, provides information to assess their nutritional value, the research being undertaken in a large study conducted over two years, in two different locations, which concerned an entire trophic chain soil-plant-animal.

MATERIAL AND METHOD

From perimeter of Research and Development Station for Cattle-Dancu-lasi and one in the SC Daniela LLC Raducaneni-lasi, both units specialize in livestock feed in their bases, during the years 2007 and 2008 after methodologies in force, (Davidescu,1972) were identified and were harvested from field samples that average whole plant corn silage, properly defined and analytical units as standard methodologies. Also, from the feeds used in animal nutrition medium samples were harvested corn silage and corn grain.

Samples collected for analysis were prepared and subjected to further stages of analysis, being recorded in a first phase, degree of contamination, moisture and weight.

Analyses were performed:

- Determination of dry matter (SU,%)
- Determination of ash (%) by dry digestion
- Determination of total nitrogen (Nt,%), Kjeldahl method
- Determination of crude protein (PB,%)
- Determination of nitrate nitrogen (NO₃-N, ppm) colorimetric method with acid fenoldisulfonic
- Determination of total phosphorus (Pt,%) colorimetric method with ammonium molidbad
- Determination of crude fiber (CB,%), method-Kürschner Schasser
- Determination of calcium (Ca,%), flame photometry method

RESULTS AND DISCUSSIONS

Plant material analysis results for the two locations are presented in tables 1 and 2.

Table 1

Results analysis of plant material - Farm Dancu

Nr crt	Proba furaj	SU %	ash %	Nt %	PB %	N-NO ₃ ppm	CB %	P %	Ca %
1	green corn silage I	16,6	1,2	2,00	12,50	1732,5	16,29	0,030	0,065
2	green corn silage II	17,5	1,5	2,27	14,18	1017,5	17,32	0,020	0,046
3	corn silage prepared	26,9	1,7	1,29	8,06	1100,0	23,00	0,050	0,200
4	maize	85,0	1,2	8,50	53,12	990	1,95	0,383	2,03

Table 2

Results analysis of plant material - Farm Raducaneni

Nr crt	Proba furaj	SU %	ash %	Nt %	PB %	N-NO ₃ ppm	CB %	P %	Ca %
1	green corn silage I	15,5	1,8	2,32	14,50	770	22,01	0,031	0,042
2	green corn silage II	16,4	1,1	2,00	12,25	495	24,28	0,034	0,053
3	green corn silage 2008	24,5	1,5	1,57	9,81	1100	18,66	0,05	0,12

Compared to these data, the values recorded in samples of corn silage Green I and II - Dancu - are 1.2% and 1.5% ash, 12.50 and 14.18% PB and 16.29, respectively 17.32% CB and for the green corn silage I and II Raducaneni values of 1,8% and 1,1% ash, 14,50% , respectively 14,37% for PB and 22,01% and 21, 28% CB, with quotes in some normal limits for ash and below the reference to PB and CB

Total N content in corn varies in the same samples, recording approximately equal values for both locations of 2.00 and 2.27% samples Dancu I and Dancu II, with the fraction of nitrate is 1732.5 and 1017.5 respectively ppm N-NO₃ and 2,32 and 2,00% total N, samples Raducaneni I and Raducaneni II, with nitrate nitrogen is 770 ppm, respectively 495 ppm N-NO₃. Total nitrogen content for both locations are included in the normal range (2-4% total nitrogen)(Davidescu,1999) and for nitrate registering a content medium.

Total phosphate content was 0.030% and 0.020% for samples of corn silage Green I and II - Dancu, and 0.031% and 0.034% and 0.031% and 0.034% for corn silage samples Raducaneni Green I and II, slightly below normal insurance quoted in the literature (0.04% Pt), while the total calcium content posted under normal values (0.086% Ca) for both locations, 0.065% and 0.046% respectively in samples of corn Dancu I and Dancu II , and 0.042% and 0.053% as the evidence Raducaneni I and Raducaneni II.

Maize sample of registered working point values Dancu ash content of 1.2%, slightly lower than the values quoted in the literature (1.8%). In PB and CB content was 53.12% and 1.95%. Maize grains analysis showed a total nitrogen content of 8.50%, the nitrate content was 999 ppm and containing a total phosphorus 0,383% and calcium 2.03%.

For both locations, the samples prepared corn silage Dancu and corn silage 2008 Raducaneni, values were recorded in ash of 1.7% respectively 1,5%, considered slightly suboptimal (optimal 1,8-1,9%)(Davidescu,1999). PB indicators and CB rates were 8.06% and 23.0% for Dancu and 9.81% and 18.66% for Raducaneni, values considered normal for PB to Dancu and under optimum limit to Raducaneni (best quote of the literature, 22-23%). Values

for total nitrogen were 1.29% for Dancu, in which nitrates were 1100 ppm and 1.57% for Raducaneni, with nitrates 1100 ppm. For total phosphorus and calcium indicators, for location Dancu values were determined of 0,005%, respectively 0,200% while for Raducaneni, for phosphorus was recorded value of 0.05% P and 0.12% for calcium

CONCLUSIONS

1. Following the evolution of quality productions from plants, feed implicitly allows differential routing of fertilizers, in order to obtain higher yields quantitative and qualitative.

2. It appreciates the need for optimal nutrition and fertilization with macro and micronutrients, to eliminate states of insufficient or excess, by favoring the normal dynamics of nutrient accumulation and dry.

3. For both sites, Dancu and Raducaneni farm, feed samples taken, have been normal, insignificant up or down for most determine indicators, properly accepted limits for the species studied.

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