RESEARCH ON THE STRUCTURE OF RACE AND FEATURES PRODUCTION FROM COWS EXPLOITED IN NORTH-EAST OF THE ROMANIA

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Abstract

The purpose of this work was to determine the state of the race structure and the productive performance of cows farmed northeast of the country. The primary data were collected from the offices of improvement and the Livestock Breeding and cattle farmers associations of counties in north-east of the country (Suceava, Botosani, Neamt, Iasi, Bacau and Vaslui). The data are taken from certain current study, the research being taken up to the date 31.12.2009. It was determined the weight of the main breeds of cattle harvested in the north-east and yields obtained by them (duration of lactation, kg milk,% fat,% protein, calving-interval, mammary repose). Following research found that race is heterogeneous structure in the counties of north-east. Thus, Romanian Mottled breed predominates in Suceava County, Neamţ County race predominates in Brown and Romanian black mottled breed prevail in Iasi County. Highest milk production was obtained in Vaslui county, in all breeds followed: Romanian Mottled breed (4997 kg), Brown breed (4768 kg) and Romanian Black Mottled breed (5526 kg).

Key words: race, cows, production, milk

INTRODUCTION

Cattle are of socio-economic, health, biological and ecological outstanding in the economy of many states. They provide a large amount of animal products, consumption of certain importance for both population and industry processors. Thus, cattle provide 96% of the total quantity of milk that is consumed worldwide, 33% of the meat and 90% of heavy leather, good quality, which is used in manufacturing. Meat and beef products are important sources of energy, protein, minerals, vitamins, essential amino acids necessary for proper functioning of the human physiological mechanisms.

MATERIAL AND METHOD

Research method was based on the study in ANARZ and cattle farming associations of counties in north-eastern Romania, is supplemented with direct personal observations of some holdings taken in research, aiming at the following objectives:
►structure pure race;
►indicators yields from the race and counties;
►indicators reproductive exploitation of these breeds.

RESULTS AND DISCUSSION
1. Data on the structure of pure-bred steers harvested in northeast Romania

Total cattle and give existing breed structure in northeastern counties are presented in table 1.

Table 1
The structure of pure-bred steers operated in north-eastern Romania County

County	Population (heads)	Breed				
		B.R.	B.	B.N.R.	S.S.	P.
Botoşani	40.287	22593	60	17634	-	-
		56,08	0,15	43,77	0	0
Suceava	60.268	25717	16182	8660	-	9709
		42,67	26,85	14,37	-	16,11
Neamţ	37.666	4261	27537	5517	15	336
		12,31	73,10	13,64	0,14	0,89
Iaşi	27.245	350	430	26410	55	-
		1,29	1,57	96,93	0,21	0
Bacău	30.308	2355	25060	2893	-	-
		7,70	82,60	9,70	0	0
Vaslui	29.482	543	2871	26068	-	-
		1,84	9,73	88,42	0	0

B.R. – Romanian Mottled; B.- Brown; B.N.R. – Romanian Black Mottled; S.S. - Sura steppe; P – Pinzgau

The data presented in table 1, note the following:
- In the six counties examined first, in the total cattle herd in the race breed lies Suceava County with 60,268 head follows Botosani and Neamt counties with 40,287 head 37,666 head respectively, the last place being ranked Iasi County with 27,245 head;
- Also note that in the north-eastern Romania, the highest share of races actually have Romanian Mottled, Romanian Black Mottled amber and the few races being exploited by Step and Pinzgau Sura;
- In the counties share of races, we see that race is owned Romanian Mottled highest weight in Suceava County (25,717 cap.) And lowest in Vaslui County (543 cap.)
- Brown race has the largest share in Neamt County (27,537 cap.) And lowest in the county of Botosani (60 cap.)
- Race is the Romanian Black Mottled has the highest share in Vaslui County (26,068 cap.) And lowest in Bacau (2893 cap.)

2. Indicators yields from the race and county

Productivity indicators: duration of lactation, milk production, percentage of fat and protein made by counties and races are listed in Table 2.

Duration of lactation is an important production parameter directly influencing milk production.

It has different values in each county and race. Thus, Romanian Mottled breed, the minimum duration of lactation was in Bacau (302 days) and highest in Vaslui County (376 days).

The Brown breed, the minimum duration of lactation was in Suceava County (308 days) and highest in Vaslui County (394 days).

The Romanian Black Mottled race there was minimum duration of lactation in Suceava county (312 days) and the maximum duration of lactation (367 days) in Vaslui.

Milk production is higher, in all breeds: Romanian Mottled (4997 kg), Brown (4768 kg) and Romanian Black Mottled (5526 kg) was obtained in Vaslui. These performances are more productive than the average obtained in the country that breeds, but lower than data provided in the literature for these races [1], [2], [4], [8].

The percentage of fat in the three breeds examined: Romanian Mottled, Brown and Romanian Black Mottled, all counties was higher than the national average in those races. The percentage of protein was in most counties in all three races higher than average for the country.

Table 2 Reproductive indicators obtained on counties and breeds

Counties	Breed	Productivity indicators			
		Duration of lactation (days)	Milk Production (kg)	G (%)	P (%)
Botoşani	B.R.	309	4171	3,98	3,13
	B.	312	3990	3,98	3,25
	B.N.R.	315	4315	3,95	3,13
Suceava	B.R.	316	4021	3,91	3,21
	B.	308	4294	3,81	3,22
	B.N.R.	312	5285	3,86	3,19
Neamţ	B.R.	352	4792	3,86	3,59
	B.	343	4459	3,83	3,52
	B.N.R.	352	4751	3,85	3,53
Iaşi	B.R.	349	4378	4,03	3,32
	B.	346	4281	3,96	3,27
	B.N.R.	338	4111	3,98	3,30
Bacău	B.R.	302	4160	4,11	3,22
	B.	312	3125	3,77	3,24
	B.N.R.	337	4365	4,03	3,23
Vaslui	B.R.	376	4997	3,91	3,38
	B.	394	4768	3,89	3,32
	B.N.R.	367	5526	4,03	3,36
Total country	*B.R.*	*317*	*4680*	*3,88*	*3,25*
	B.	*327*	*4063*	*3,86*	*3,30*
	B.N.R.	*336*	*5350*	*3,84*	*3,27*

3. Produced on reproductive indicators and county breeds

Indicator of breeding best express what is given attention cows (care, feeding, housing, etc..) Is the interval between calving. It is important to have the firm optimal interval between calving, to achieve the greatest possible economic efficiency of their operation.

The best results in breeding cows are obtained when the interval between two parturitions is 365-390 days. Obtaining a larger number of calves causes a greater selection and a better return by selling the calves and heifers.

Analyzing the values recorded in all these indicators reproductive, we appreciate the fact that these results are within the range indicated in the literature for these parameters [3], [5], [6], [8], [9].

Table 3 Reproductive indicators obtained on counties and breeds

County	Breed	Reproductive indicators			
		The first calving (age)		Calving Interval	Mammary Repose
		Month	Days	Days	Days
Botoşani	B.R.	30	16	386	64
	B.	26	7	349	56
	B.N.R.	30	1	399	62
Suceava	B.R.	31	7	403	61
	B.	28	14	424	59
	B.N.R.	26	27	374	59
Neamţ	B.R.	30	3	394	65
	B.	27	6	406	58
	B.N.R.	30	11	400	61
Iaşi	B.R.	30	9	466	74
	B.	27	0	441	75
	B.N.R.	28	24	406	72
Bacău	B.R.	27	16	412	81
	B.	27	1	439	80
	B.N.R.	29	8	456	59
Vaslui	B.R.	35	18	386	62
	B.	29	11	425	58
	B.N.R.	31	8	410	64
Total country	*B.R.*	*31*	*9*	*401*	*70*
	B.	*29*	*11*	*415*	*64*
	B.N.R.	*30*	*7*	*417*	*66*

The data illustrated in table 3 we note the following:

- Age at first farrowing Romanian Mottled breed, the lowest was in Bacau (27 months and 16 days) and the highest was in Vaslui (35 months and 18 days);
- Brown race, age first farrowing was lowest in the county of Botosani (26 months and 7 days) and the highest was in Vaslui (29 months and 11 days);
- Romanian Black Mottled lowest first farrowing age was recorded in Suceava County (26 months and 27 days) and the highest was in Vaslui (31 months and 8 days);
- Comparing the performance of the 6 counties with results at the country note that the vast majority of them are better or equal to the total country;
- Calving interval was lowest Romanian Mottled breeds and Brown in Botosani county and race Romanian Black Mottled in Suceava county;
- The highest level of calving-intevalului was recorded Romanian Mottled breeds (466 days) and Brown (441 days) in Iasi County and the Romanian Black Mottled (456 days) in Bacau;
- Rest breast was generally located within the physiological and the national average (60-65 days) except in Iasi and Bacau counties where levels were above the national average.

CONCLUSIONS

Following research the following conclusions can be drawn:

► structure pure race in counties in northeastern Romania is heterogeneous. Thus, Romanian Mottled breed predominates in Suceava County, Neamţ County race predominates in Brown and Romanian Black Mottled breed prevail in Iasi County;
► on milk production, to ascertain that, in Vaslui County have been the best results in all three breeds studied;

► milk quality expressed by the percentage of fat and protein, was in all counties in all three breeds studied over the average of these parameters that make the country to races;
► analyzing the results recorded in breeding parameters in the 6 counties with results at the country note that the vast majority of them are better or equal to the country total.

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