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THE EVOLUTION OF THE MAIN TRAITS OF THE MILK PRODUCTION BY CONTROLS AND DYNAMICS BY LACTATION

EVOLUTIA PRINCIPALELOR INSUSIRI ALE PRODUCTIEI DE LAPTE PE CONTROALE SI IN DINAMICA PE LACTATII

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The research was performed during 2002-2007, on 317 Romanian Spotted cows, from five private farms and one on ASAS ownership, located in two rearing areas from the central part of our country. By total effective, areas and farms, the dairy production from the control day was emphasized, by milking period and total, its content in fat, protein and lactose, respectively, by dynamics during four lactations, mentioning that the interesting indices were also detailed by four levels of the dairy production in first control. The results led to the first conclusion, according to such studies must be performed in any rearing farm or exploitation. Their evolution, in dynamics by controls, emphasized the efficiency of the adopted technology of exploitation and nominating of the chains that must be improved. According to the processing of the results, the indices that contribute to the simplifying of the diversified control of the dairy production were nominated, with the aim of pre-selection of the cows for C.O.P. network or the production level of those that are not included in above mentioned network, but can be used for the specific rearing aims and more suitable mating.
Key words: milk, technology, Romanian Spotted, dynamics

Introduction

The characterization of the main indices of the quantitative and qualitative dairy production by lactations, differentiated on rearing areas and exploitations, led us to the thoroughgoing of this research within lactations by controls. We consider that these allow a better knowledge and possibility of estimating the evolution of these traits and influence factors. This problem was less studied in our country where seldom can be observed.

Materials and Methods

The research was performed during 2002 - 2007, on 317 Romanian Spotted cows from five private farms and one from ASAS property, located in rearing areas from the central part of our country. We emphasized the evolution of the dairy production by control day, milking and total, content in fat, protein and lactose, in dynamics by all four lactations, four production levels, respectively. The results were calculated and statistically interpreted, and in this paper we synthetically present the most significant results.

Results and Discussions

Analyze of the quantitative and qualitative dairy production (Table 1) emphasizes several aspects concerning the dynamics of the dairy production and its components during each lactation. This evolution, as we already noticed, is equally determined by the biological material and adopted technology of exploitation. Whatever lactation, over 20% of the controlled stock performed duration under the equivalent of the normal lactation, 80% were over this interval, respectively. This aspect is of technical and economical nature and besides other factors, first of all, influences the reproduction indices. The relative low amplitude of the dairy production from the first control and the dynamics by controls, especially, which whatever lactation depicts a constantly descendent line is most surprisingly (Table 1, Figure 1). In the second control, which corresponds to the maximum moment of the lactation, in all cases, and comparative evolution of this trait, the dairy production is lower compared to the first control, and comparative evolution of this trait in dynamics by controls and lactations, emphasizes the constantly decreasing character by milking and total production by control day (Table 2).

Concerning the milk main components, whatever lactation, a slight decrease of the fat content from the first to the 5th control was recorded, then a gradually increase, and in the last two controls their level was over 3 - 5% compared to the first control. Concerning the evolution of the main traits of the milk components, we emphasize the ratio between the quantitative production by milking and some of its components, in their evolution by controls and dynamics by lactations (Table 3). We firstly noticed the evolution of the milk production by milking compared to the average daily quantity by control in dynamics by lactation, the ratio between these, respectively, which can be synthesized as follows:

Lactation	Share (%)		Ratio between milkings			
	evening	morning	E : M	M : E	E : T	M : T
I	46.72	53.28	1:1.14	1:0.88	1:2.14	1:1.88
II	47.20	52.80	1:1.12	1:0.89	1:2.12	1:1.89
III	46.45	53.55	1:1.15	1:0.87	1:2.15	1:1.87
IV	45.57	54.43	1:1.19	1:0.84	1:2.19	1:1.84
average	46.49	53.51	1:1.15	1:0.87	1:2.15	1:1.87

Table 1

The evolution of the main milk production traits in dynamics by controls and lactations for total cow population included in research

Control			Kg milk by control day			Milk content			Production by control, in kg			
I[st] LACTATION												
No	n	Days	Evening	Morning	Total	Fat	Protein	Lactose	Milk	Fat	Protein	Lactose
1	317	23.86±0.31	7.49±0.10	8.77±0.11	16.26±0.20	4.05±0.03	3.20±0.02	4.58±0.03	337.85±7.49	13.69±0.31	10.83±0.24	15.49±0.35
2	317	28.00±0.00	7.44±0.10	8.62±0.12	16.06±0.20	4.02±0.02	3.17±0.02	4.75±0.03	449,68±5.72	18,08±0.24	14,25±0.19	21,36±0.29
3	317	28.00±0.00	7.28±0.09	8.33±0.11	15.61±0.19	3.96±0.02	3.14±0.02	4.79±0.03	437,08±5.43	17,30±0.23	11.93±0.18	18.18±0.28
4	317	28.00±0.00	7.18±0.23	8.04±0.11	15.21±0.29	3.98±0.03	3.17±0.02	4.67±0.03	368.85±8.23	14.68±0.37	11.69±0.27	17.22±0.40
5	317	28.00±0.00	6.69±0.09	7.65±0.10	14.34±0.18	3.99±0.03	3.20±0.02	4.66±0.03	348.71±5.04	13.93±0.21	11.15±0.17	16.25±0.26
6	317	28.00±0.01	6.38±0.09	7.40±0.10	13.78±0.18	4.08±0.02	3.25±0.02	4.70±0.03	385.85±5.02	13.65±0.21	10.87±0.18	15.74±0.25
7	317	28.00±0.00	6.30±0.10	7.25±0.10	13.55±0.19	4.15±0.03	3.28±0.02	4.64±0.03	379,40±5.35	15,75±0.24	10.78±0.19	15.22±0.26
8	317	28.00±0.05	6.07±0.10	7.03±0.11	13.10±0.21	4.18±0.02	3.30±0.02	4.62±0.03	318.28±5.90	13.32±0.25	10.50±0.21	14.71±0.29
9	311	28.04±0.11	5.87±0.10	6.84±0.11	12.71±0.21	4.21±0.02	3.33±0.02	4.55±0.02	303.79±6.08	12.80±0.27	10.12±0.22	13.83±0.29
10	291	28.13±0.16	5.74±0.10	6.69±0.12	12.43±0.22	4.21±0.02	3.33±0.02	4.53±0.03	279.85±6.49	11.79±0.29	9.31±0.23	12.67±0.31
11	249	27.92±0.20	5.56±0.11	6.55±0.12	12.11±0.23	4.24±0.03	3.36±0.02	4.53±0.03	222.37±6.90	9.42±0.30	7.47±0.25	10.07±0.33
II[nd] LACTATION												
1	265	24.06±0,37	9,47±0.16	10,98±0,1	20,37±0,31	4.14±0.03	3.23±0.02	4.52±0.03	490,10±13.72	20,29±0.60	15,83±0.45	22,15±0.64
2	265	28.00±0.00	9.25±0.15	10.62±0.1	19.87±0.31	4.12±0.03	3.21±0.02	4.55±0.02	556,36±8.55	22,29±0.39	15.61±0.30	22.17±0.42
3	265	28.00±0.00	8.90±0.16	10.21±0.16	19.11±0.30	4.06±0.03	3.25±0.09	4.60±0.02	535,08±8.51	21,72±0.37	15.21±0.72	21.56±0.40
4	265	28.00±0.00	8.35±0.16	9.51±0.14	17.85±0.29	4.05±0.03	3.23±0.03	4.67±0.02	437.43±8.16	17.71±0.37	14.11±0.33	20.43±0.39
5	265	28.00±0.00	7.97±0.13	9.11±0.12	17.07±0.25	4.08±0.03	3.23±0.02	4.66±0.02	477,96±7.01	17.07±0.33	13.50±0.27	19.49±0.36

6	265	28.00±0.00	7.46±0.12	8.50±0.12	15.96±0.23	4.14±0.02	3.29±0.02	4.55±0.02	446,88±6.48	16.22±0.30	12.89±0.23	17.83±0.33
7	265	27.99±0.00	7.10±0.13	8.14±0.14	15.24±0.26	4.11±0.02	3.27±0.02	4.60±0.02	371.80±7.39	15.27±0.32	12.15±0.28	17.10±0.36
8	265	28.00±0.00	8.35±0.11	8.68±0.12	17.03±0.22	4.11±0.02	3.28±0.02	4.55±0.02	356.46±6.00	14.66±0.28	11.68±0.22	16.21±0.28
9	259	27.86±0.17	6.50±0.13	7.64±0.14	14.14±0.26	4.19±0.03	3.32±0.02	4.50±0.02	324.85±7.35	13.61±0.31	10.77±0.25	14.63±0.34
10	240	28.23±0.24	6.31±0.13	7.41±0.13	13.72±0.25	4.25±0.03	3.32±0.02	4.50±0.02	281.36±8.09	11.95±0.32	9.35±0.27	12.65±0.37
11	209	27.54±0.30	5.90±0.15	7.03±0.13	12.93±0.26	4.27±0.02	3.38±0.02	4.51±0.01	185.95±9.79	7.94±0.41	6.28±0.35	8.39±0.45

Table 1 – cont.

Control			Kg milk by control day			Milk content			Production by control, in kg			
No	n	Days	Evening	Morning	Total	Fat	Protein	Lactose	Milk	Fat	Protein	Lactose
III[rd] LACTATION												
1	197	24.53±0.50	9.70±0.15	11.35±0.1	21.05±0.31	4.02±0.04	3.24±0.02	4.68±0.02	482.33±18.52	19.41±0.77	15.60±0.56	22.60±0.96
2	197	28.00±0.00	9.41±0.12	10.75±0.12	20.16±0.23	4.03±0.02	3.24±0.01	4.71±0.02	526.40±6.47	21.23±0.34	17.06±0.22	24.80±0.38
3	197	28.00±0.00	8.70±0.12	10.00±0.18	18.70±0.29	4.01±0.04	3.22±0.02	4.71±0.02	488.14±7.98	19.56±0.49	15.73±0.24	22.99±0.42
4	197	28.00±0.00	8.52±0.12	9.84±0.14	18.36±0.25	3.99±0.03	3.24±0.02	4.70±0.03	479.26±7.09	19.10±0.36	15.55±0.23	22.54±0.45
5	197	28.00±0.00	8.08±0.16	9.43±0.18	17.51±0.34	3.98±0.03	3.26±0.02	4.72±0.03	457.19±9.54	18.20±0.36	14.89±0.32	21.60±0.50
6	197	28.00±0.00	7.67±0.19	9.16±0.21	16.83±0.40	4.06±0.03	3.29±0.02	4.66±0.02	439.56±11.32	17.83±0.47	14.46±0.35	20.46±0.56

7	197	28.00±0.00	7.34±0.25	8.81±0.27	16.15±0.52	4.05±0.03	3.28±0.02	4.63±0.03	418.90±14.49	16.94±0.61	13.75±0.47	19.40±0.75
8	197	28.00±0.00	6.95±0.26	8.38±0.26	15.28±0.52	4.05±0.02	3.32±0.02	4.59±0.02	396.39±14.54	16.05±0.64	13.15±0.53	18.20±0.72
9	189	28.53±0.32	6.74±0.25	7.86±0.27	14.60±0.52	4.07±0.03	3.31±0.02	4.47±0.02	359.32±19.89	14.62±0.65	11.88±0.45	16.07±0.56
10	172	28.29±0.05	6.00±0.21	7.03±0.22	13.03±0.43	4.06±0.02	3.33±0.02	4.49±0.02	290.17±11.81	11.78±0.49	9.65±0.40	13.04±0.56
11	129	28.18±0.14	5.86±0.21	6.75±0.20	12.49±0.40	4.02±0.02	3.30±0.02	4.57±0.02	204.55±11.91	8.23±0.47	6.75±0.40	9.35±0.55
IVth LACTATION												
1	131	23.26±0.60	9.16±0.26	11.08±0.34	20.25±0.58	3.96±0.05	3.19±0.03	4.56±0.05	459.22±22.66	18.17±0.86	14.64±0.71	20.94±1.11
2	131	28.00±0.00	9.12±0.26	10.68±0.33	19.81±0.57	4.03±0.05	3.24±0.03	4.56±0.05	530.02±15.95	21.34±0.65	17.17±0.51	24.19±0.80
3	131	28.00±0.00	8.56±0.24	10.23±0.29	18.79±0.51	4.04±0.04	3.24±0.03	4.66±0.05	502.81±14.34	20.30±0.61	16.31±0.48	23.42±0.71
4	131	28.00±0.00	8.10±0.24	9.74±0.29	17.84±0.51	3.92±0.04	3.19±0.03	4.69±0.05	477.36±14.38	18.71±0.58	15.25±0.47	22.38±0.75
5	131	28.00±0.00	7.86±0.23	9.38±0.28	17.24±0.50	3.96±0.04	3.22±0.03	4.66±0.05	461.38±14.01	18.28±0.53	14.85±0.44	21.51±0.73
6	131	28.00±0.00	7.38±0.23	8.92±0.26	16.30±0.48	4.07±0.04	3.26±0.04	4.63±0.06	436.21±13.37	17.73±0.56	14.21±0.43	20.22±0.71
7	131	28.00±0.00	7.01±0.24	8.63±0.27	15.65±0.50	4.12±0.05	3.27±0.04	4.58±0.06	418.70±13.91	17.23±0.64	13.70±0.47	19.17±0.74
8	131	28.00±0.15	6.77±0.24	8.23±0.26	15.00±0.50	4.10±0.04	3.29±0.03	4.48±0.08	403.01±14.07	16.51±0.61	13.26±0.46	18.05±0.71
9	131	28.07±0.13	6.65±0.26	8.00±0.28	14.66±0.53	4.23±0.05	3.36±0.03	4.46±0.05	382.79±14.95	16.17±0.64	12.85±0.50	17.05±0.71
10	126	28.20±0.17	5.90±0.25	7.00±0.26	12.90±0.50	4.17±0.06	3.34±0.03	4.43±0.06	327.64±14.12	13.66±0.62	10.95±0.47	14.51±0.70
11	103	27.45±0.37	5.40±0.23	6.49±0.24	11.89±0.46	4.10±0.05	3.37±0.03	4.49±0.06	241.78±13.27	9.90±0.55	8.14±0.45	10.87±0.63

Table 2

The evolution of some quantitative and qualitative traits of the milk production in dynamics by controls and milking comparatively by lactations

Control	The quantitative dairy production by control day and milking (kg)												Fat content %				Protein content %			
	Evening				Morning				By control day											
	L I	L II	L III	L IV	L I	L II	L III	L IV	L I	L II	L III	L IV	L I	L II	L III	L IV	L I	L II	L III	L IV
TOTAL POPULATION OF COWS IN CONTROL																				
1	7.49	9.47	9.70	9.16	8.77	10.98	11.35	11.08	16.26	20.37	21.05	20.25	4.05	4.14	4.02	3.96	3.20	3.23	3.24	3.19
2	7.44	9.25	9.41	9.15	8.62	10.62	10.75	10.68	16.06	19.87	20.16	19.81	4.02	4.12	4.03	4.03	3.17	3.21	3.24	3.24
3	7.28	8.90	8.70	8.56	8.33	10.21	10.00	10.23	15.61	19.11	18.70	18.79	3.96	4.06	4.01	4.04	3.14	3.25	3.22	3.24
4	7.18	8.35	8.52	8.10	8.04	9.51	9.84	9.74	15.21	17.85	18.36	17.84	3.98	4.05	3.99	3.92	3.17	3.23	3.24	3.19
5	6.69	7.97	8.08	8.86	7.65	9.11	9.43	9.38	14.35	17.07	17.51	17.24	3.99	4.08	3.98	3.96	3.20	3.23	3.26	3.22
6	6.38	7.46	7.67	7.38	7.40	8.50	9.16	8.92	13.77	15.96	16.83	16.30	4.08	4.14	4.06	4.07	3.25	3.29	3.29	3.26
7	6.30	7.10	7.34	7.01	7.25	8.17	8.81	8.63	13.54	15.24	16.15	15.65	4.15	4.11	4.05	4.12	3.28	3.27	3.28	3.27
8	6.07	8.35	6.95	6.77	7.03	8.68	8.38	8.23	13.10	17.03	15.28	15.00	4.18	4.11	4.05	4.10	3.30	3.28	3.32	3.29
9	5.87	6.50	6.74	6.65	6.84	7.64	7.86	8.00	12.71	14.14	14.60	14.66	4.21	4.19	4.07	4.23	3.33	3.32	3.31	3.36
10	5.74	6.31	6.00	5.90	6.69	7.41	7.03	7.00	12.43	13.72	13.03	12.90	4.21	4.25	4.06	4.17	3.33	3.32	3.33	3.34
11	5.56	5.90	5.86	5.40	6.55	7.03	6.75	6.49	12.11	12.93	12.49	11.89	4.24	4.27	4.02	4.10	3.36	3.38	3.30	3.37

Table 3

Ratio between the quantitative milk production by milking and some components in dynamics by lactation and controls

Control		Share of the milk		Ratio of the milk			Of milk compared to first control %			Milk content compared to first control			Ratio G: P
No	n	S	D	S:D	Tot:S	Tot:D	S	D	T	Fat	Protein	Lactose	
I[st] LACTATION													
1	317	46.31	53.69	1.16±0.01	2.16±0.01	1.86±0.01	100	100	100	100	100	100	1.27
2	317	46.55	53.45	1.15±0.01	2.15±0.01	1.87±0.01	99.46	98.50	98.95	114.70	114.11	119.25	1.27
3	317	46.88	53.12	1.13±0.01	2.13±0.01	1.88±0.01	97.46	95.27	96.28	109.68	110.24	117.22	1.26
4	317	47.42	52.58	1.11±0.01	2.12±0.01	1.91±0.01	95.98	91.80	94.23	107.00	107.74	111.14	1.26
5	317	46.94	53.02	1.13±0.01	2.13±0.01	1.88±0.01	90.36	88.34	89.15	102.48	103.55	106.08	1.25
6	317	46.63	53.37	1.14±0.01	2.14±0.01	1.87±0.01	86.21	85.10	85.62	100.51	100.89	102.59	1.26
7	317	46.83	53.17	1.14±0.01	2.14±0.01	1.88±0.01	85.01	83.26	84.07	99.87	100.00	99.27	1.27
8	317	46.69	53.31	1.14±0.01	2.14±0.01	1.88±0.01	82.20	80.95	81.53	97.90	97.82	96.23	1.27
9	311	46.58	53.46	1.15±0.01	2.15±0.02	1.87±0.01	79.25	78.52	78.86	94.08	94.27	90.15	1.26
10	291	46.49	53.51	1.15±0.01	2.15±0.01	1.87±0.01	77.11	76.56	76.81	86.57	86.53	82.10	1.27
11	249	46.75	53.25	1.14±0.01	2.14±0.01	1.88±0.01	77.11	75.75	76.38	68.56	68.79	64.83	1.26
II[md] LACTATION													
1	265	48.64	51.36	1.06±0.01	2.06±0.01	1.95±0.01	100	100	100	100	100	100	1.28
2	265	46.72	53.28	1.14±0.01	2.14±0.01	1.88±0.01	77.88	84.11	81.08	115.61	115.01	116.63	1.29
3	265	47.78	53.22	1.14±0.01	2.14±0.01	1.88±0.01	75.08	80.90	78.07	109.43	113.13	113.23	1.24
4	265	47.05	52.95	1.13±0.01	2.13±0.01	1.89±0.01	70.85	75.52	73.25	102.33	104.42	107.78	1.26
5	265	46.97	53.04	1.13±0.01	2.13±0.01	1.89±0.01	67.63	72.31	70.03	98.48	99.87	103.21	1.26
6	265	47.01	52.99	1.13±0.01	2.13±0.01	1.89±0.01	63.14	67.42	65.33	93.46	95.00	94.18	1.26
7	265	46.81	53.20	1.14±0.01	2.14±0.01	1.88±0.01	60.25	64.85	62.57	87.99	89.93	90.82	1.25
8	265	49.08	50.92	1.04±0.01	2.04±0.01	1.96±0.01	70.93	69.74	70.32	84.44	86.68	86.73	1.25
9	259	46.19	53.82	1.16±0.01	2.16±0.01	1.86±0.01	55.42	61.16	58.33	79.12	80.51	78.48	1.26
10	240	46.29	53.72	1.16±0.01	2.16±0.01	1.86±0.01	53.90	59.23	56.68	70.55	70.70	68.47	1.28
11	209	46.65	53.35	1.14±0.01	2.14±0.01	1.87±0.01	52.54	56.90	54.78	46.68	47.30	45.32	1.27

IIIrd LACTATION													
1	197	46.40	53.60	1.16±0.01	2.15±0.01	1.87±0.01	100	100	100	100	100	100	1.27
2	197	46.93	53.07	1.13±0.01	2.13±0.01	1.88±0.01	97.00	94.99	95.93	111.31	113.29	113.98	1.25
3	197	46.80	53.20	1.14±0.01	2.14±0.01	1.88±0.01	89.77	88.37	89.02	102.72	104.26	105.76	1.25
4	197	46.64	53.40	1.15±0.01	2.14±0.01	1.87±0.01	87.40	86.67	86.96	99.46	102.51	103.29	1.23
5	197	46.30	53.70	1.16±0.01	2.16±0.01	1.86±0.01	82.85	83.18	83.03	94.71	98.37	98.79	1.22
6	197	45.85	54.15	1.18±0.01	2.18±0.01	1.85±0.01	79.34	81.13	80.30	93.28	96.18	94.24	1.23
7	197	45.79	54.27	1.19±0.01	2.18±0.01	1.84±0.01	76.45	78.44	77.47	89.43	92.23	90.00	1.23
8	197	45.65	54.53	1.19±0.01	2.18±0.01	1.83±0.01	72.62	74.87	73.59	85.28	88.59	84.81	1.22
9	189	46.45	53.55	1.15±0.01	2.15±0.01	1.87±0.01	70.25	70.13	70.23	78.11	80.44	75.11	1.23
10	172	46.55	53.45	1.15±0.01	2.15±0.01	1.87±0.01	63.43	63.06	63.23	64.53	66.90	62.34	1.22
11	129	47.7 8	53.22	1.14±0.01	2.12±0.01	1.86±0.01	62.29	61.36	61.27	45.31	47.08	44.68	1.22
IVth LACTATION													
1	131	45.46	54.54	1.20±0.01	2.20±0.01	1.83±0.01	100	100	100	100	100	100	1.24
2	131	46.28	53.72	1.16±0.01	2.16±0.01	1.86±0.01	99.67	96.45	97.92	117.60	117.05	115.39	1.24
3	131	45.82	54.18	1.18±0.01	2.18±0.01	1.85±0.01	93.24	91.91	92.51	111.88	110.89	111.59	1.25
4	131	45.63	54.37	1.19±0.01	2.19±0.01	1.84±0.01	87.79	87.27	87.46	102.49	103.28	106.37	1.23
5	131	45.83	54.17	1.18±0.01	2.18±0.01	1.85±0.01	85.06	83.82	84.38	99.84	100.52	101.69	1.23
6	131	45.69	54.31	1.19±0.01	2.19±0.01	1.84±0.01	80.37	79.64	79.97	97.03	96.46	95.92	1.24
7	131	45.23	54.77	1.21±0.01	2.21±0.01	1.83±0.01	76.44	77.18	76.85	94.49	93.05	91.30	1.26
8	131	45.42	54.58	1.20±0.01	2.20±0.01	1.83±0.01	73.61	73.73	73.67	90.67	90.03	86.07	1.25
9	131	45.52	54.48	1.20±0.01	2.20±0.02	1.84±0.01	71.43	71.18	71.34	88.65	87.15	80.99	1.26
10	126	45.83	54.17	1.18±0.01	2.18±0.01	1.85±0.01	63.58	62.64	63.06	75.66	74.89	69.54	1.25
11	103	45.56	54.44	1.19±0.01	2.20±0.01	1.84±0.01	59.76	59.55	59.64	55.78	56.59	52.82	1.22

As consequence, both milk share by milking and ratio between the obtained quantities by the two milking or between these and milk production by control, reveal uniform and constant values. This aspect was also found in the classification of the biological material function of productions obtained during first control (Table 4).

The research performed on each farm and area, and with supplementary calculations led to establishing several indices that can be used within different diversified methods of estimation of the milk production for the C.O.P. network, estimation of the milk production in farms that are not included in this control, respectively, or do not have other possibilities, for putting into practice the use of the biological material by rearing destinations and supplying correct mating. In all cases, for performed controls the maximum errors were under 10 %, which is a very good value in condition of diversified control.

Table 4

The dynamics of some ratios between quantitative milk production in primiparous function of the level of the daily production of the first control

Control	Milk ratio S: D				%of total evening milking				%of total morning milking			
	V1	V2	V3	V4	V1	V2	V3	V4	V1	V2	V3	V4
By total counties												
1	1.17	1.17	1.11	1.18	45.99	46.08	47.33	45.81	54.01	53.92	52.67	54.19
2	1.16	1.16	1.11	1.17	46.35	46.38	47.42	46.16	53.65	53.62	52.63	53.84
3	1.14	1.15	1.08	1.14	46.82	46.48	48.06	46.79	53.18	53.58	51.94	53.21
4	1.06	1.16	1.09	1.13	48.52	46.29	47.77	46.91	51.48	53.71	52.23	53.09
5	1.13	1.14	1.12	1.04	46.88	46.69	47.12	48.96	53.12	53.31	52.88	51.09
6	1.14	1.16	1.11	1.17	46.64	46.35	47.39	46.17	53.36	53.72	52.61	53.89
7	1.12	1.16	1.11	1.12	47.11	46.17	47.32	47.25	52.89	53.76	52.61	52.75
8	1.13	1.17	1.12	1.12	47.05	46.00	47.18	47.26	53.03	54.00	52.82	52.74
9	1.15	1.17	1.11	1.10	46.41	46.18	47.43	47.54	53.51	53.82	52.57	52.46
10	1.15	1.18	1.09	1.10	46.56	45.87	47.84	47.59	53.44	54.21	52.16	52.41
11	1.12	1.19	1.08	1.16	47.19	45.70	48.11	46.30	52.73	54.22	51.89	53.70

****V1* = *Dairy production under 15 kg/control*
***V2* = *Dairy production between 15.01 – 20 k /control*
***V3* = *Dairy production between 20.01 – 25 kg/control*
***V4* = *Dairy production over 25 kg/control*

Conclusions

Compared to partial conclusions resulted during presentation we must notice two significant aspects. First, the dynamics of the dairy production established by control days, must represent an objective of analyse for each farmer, which allows and in the mean time illustrates the effect of the used technology of exploitation (nutritional, especially), in order to permit the adoption the most efficient possibilities of improvement. The use of the already established indices for equivalent production, supplies simplification and easier put into practice of the diversified control with the aim of early pre-selection, preselection of the primiparous for the C.O.P. network, also for the farms not included in this network respectively, in conditions of errors less than 10 %.

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