Analysis of the Distribution of the Frozen Semen Made By Semtest BVN Targu Mures In 2010

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Abstract
Improvement of the animals, on an economical level, has as main effect the increase of production and reduction of the production cost per product unit. Apparently, the beneficiary is the farmer, but at the level of national economy the increase of production is made by the increase of the offer in products, and its effect is decrease of the sale price. The real beneficiary is thus the consumer. In order to achieve this amount of the zootechnical production in total agricultural production must increase, more viable and efficient exploitations must develop in order to provide the market with competitive products. The final target is for each owner to have cows that will transform efficiently the fodder into milk and meat. This desideratum can only come true if the presently existing cows are inseminated with frozen semen from the most valuable bulls that the given breed has as far as genetics is concerned is used. Only this way can the future generations of cows be better from the perspective of production and more resistant to diseases than the present generation. Romanian and Mures county's zootechnical is in a crisis first of all because of drastic decrease of the cattle in all species of zooeconomical interest- but especially in taurines.

Keywords: artificial insemination, frozen semen, global improvement value, improvement

1. Introduction

Artificial insemination is a biotechnical method that is easily accessible to all taurine breeder categories, having an especially important role in genetic improvement of the taurine herds [1]. On the other hand in order for the biological, genetic potential to be achieved and expressed it is necessary that the normal exploitation and breeding conditions be respected [2].
In previous years, the artificial insemination activity has suffered important organizational changes without being prepared in due time (simulations, pertinent expertise and analysis) and mostly unfinalised [3,4].
The changes bring a decrease or increase, but unfortunately none of the systems functioned a long enough period in order to set a clear efficiency of the system.
In these conditions it was and still is obvious the need for a restructuring program of this activity [5].
Starting 2010, Semtest-BVN Targu Mures offers the service pack that includes distribution of the best quality bull semen and liquid nitrogen, containers for keeping the semen, instruments for artificial insemination and consultancy on how to choose to bulls and improvement of production performances in bovines [6].

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2. Materials and methods

As a working method the analysis of the evolution of production of milk cows and of the herds used in the artificial insemination network and official control of production was used, for the period between 2008-2010. Also data supplied by Semtest - BVN Tg.Mures regarding deliveries of frozen semen to the artificial insemination operators.

3. Results and discussion

As we can see from table 1 in 2010 the sale of frozen semen (MSG) with a global improvement index (VAG) of over 130 was low, most of the sale being made of VAG 116-120, followed by VAG 106-110 and in order by VAG 110-115, 126-130, 101-105 etc.[6]

We can conclude that on the first place is MSG with VAG 116-120 with 44.12%, followed by 106-110 with 28.84%, and in decreasing order by 110-115 with 12.03%, 126-130 with 11.57%, 101-105 with 2,43%, over 130 with 0.74 %, 121-125 with 0.21%.

From the data presented above we can conclude that genetic improvement of the races that were artificially inseminated in Mures county in the year 2010 with frozen semen made by Semtest BVN Tg. Mures, was made in good conditions taking into consideration the fact that MSG with VAG of 116->130 represented 66.7% and MSG with VAG 101-116 represented 33.3% according to figure 1.

This fact significantly contributed to increase of milk production and input of meat mass growth in the resulting descendants.

Table 1. Sale of frozen semen Semtes-BVN Tg. Mures in the year 2010 in Mures county classified according the global improvement index (V.A.G.)

	V.A.G B.G.	>130	126 - 130	121 - 125	116 - 120	110 - 115	106 - 110	101 - 105
Associations	534	0	0	0	304	120	110	0
Farms	3.431	145	1.696	40	920	305	275	50
Operators	18.874	30	947	10	8.854	2.323	6.204	506
TOTAL	22.839	175	2.643	50	10.078	2.748	6.589	556

According Semtest- BVN Tg.-Mures 2011 [6]

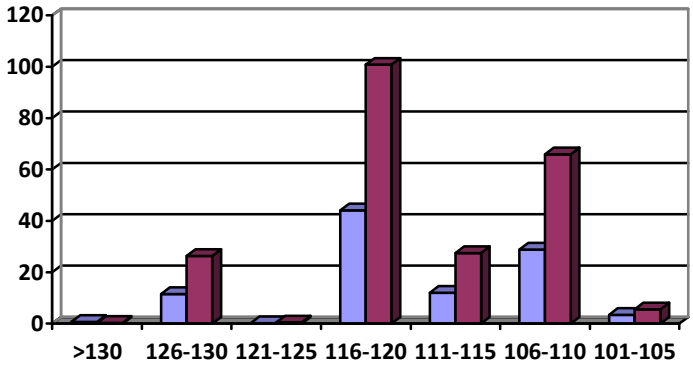

Figure 1. Chart of the improvement values and the doses sold in 2010 by Semtest BVN Tg. Mures Original

The artificial insemination operators were suddenly privatized without essentially a new association type belonging system being created, or other organizations or professional organisms. It is a lack of communication, information, professional support, and the lack if investment along with other presented arguments does not allow this activity to develop and make real progress [7].

Semen producers (Semtest) are privatized but it is in few cases that they have a direct connection with the insemination operators, the way it

happens since the beginning of the year 2010 in Mures county.
The cattle breeders are the direct beneficiaries of the artificial insemination activity and by direct collaboration between Semtest and the artificial insemination operators they have the best services and a permanent maximum efficiency counseling ensured.
Increase of the improvement genetic value increase of the bulls in Semtes-BVN Tg. Mures has brought also economic efficiency into exploitation of the descendants of the bulls.
Reduce of the supply costs and of the liquid nitrogen use was made as a result of the investments in containers and equipment, in order to increase its autonomy in functioning, and a decrease of approx. 2 lei/IA was made.
Also a low cost price was obtained per MSG dose of approx. 8.6 lei.

4. Conclusions

In these conditions the need to organize a reorganization and efficient rendering program for the artificial insemination is more and more obvious based on:
- Production of frozen semen of the genetically valuable bulls in the country
- Prohibition of use of the frozen semen with global improvement index under 115
- Reorganization of the artificial insemination services and elimination of the operators with weak results
- Continuation of the artificial insemination services and elimination of the operators with weak results
- Continuation setting up of the artificial insemination operators with performant facilities
- making extension exercises by the professional association made for continuous professional education, in order to increase the profit of cattle breeders and that of the operators.
- Increase of the artificial insemination with frozen semen from meat bulls at approx. 25% in the last year achieving a total of 35%, leads to the drastic decrease of replacement of the reform cows.
- It is true that on a short term meat taurines bring profit to the breeders, but on a medium and long term will bring loss caused by the lack of generically improved youth in farms.

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References

1. Alexoiu, A., - Regarding the "National Program of taurine herds improvement in Romania 2002-2010"- Taurine breeders's magazine, 2002, 24, Bucharest
2. Bogdan, T. A., AGRAL Project no 6259/2002 "Complex interdisciplinary research regarding zootehnicalization of Romanian agriculture, as a modern and efficient organizational, management and marketing system of agro-food products production and capitalization, with multidisciplinary scientific solutions in accordance with the principles of durable economic development of the national rural area", 2002
3. XXX– Objectives and strategies for durable development of the zootechnical scientific research in Romania- National Research Institute- Development for Biology and Animal Nutrition- IBMA Balotesti, 2008
4. ANARZ –Activity Report, 2009
5. Development strategy for agriculture, food industry and forestry, MAAP Bucharest, 2007-2010
6. SEMTEST – BVN Targu – Mures – Data base 2008-2010
7. Association of the household animals artificial insemination in Romania- 2010