

# RESEARCHES ABOUT THE REPRODUCTION PERFORMANCES OBTAINED BY THE MANGALICA SOWS AT FIRST PARTURITION

G. Hoha, B. Păsărin, Elena Costăchescu, Lenuța Fotea

U.S.A.M.V. Iași  
e-mail: gabihoha@yahoo.com

## Abstract

*The purpose of this work was to establish the reproduction performances realized by the Mangalica sows at first parturition exploited in elite unit of pigs growth from Romania, named S.C. SUINPROD S.A. ROMAN. The researches were made on 25 Mangalica sows, blond variety, being observed the main reproductive parameters. After the researches made, the following results were obtained: age at first parturition (between 228 and 318 days, average 266 days), weight at first seeding (between 97 and 114 kilograms, average 102,12 kg), number of piglets born (between 5 and 10, average 7,6 piglets), number of piglets weaned (between 4 and 10, average 6,64 piglets), weight at birth (between 850 and 1200 grams, average 1030 grams) and the weight at weaning (between 4,5 kg and 7,32 kg, average 5,84kg). The data obtained were compared with the results from the literature of speciality. We can conclude the fact that, at all the reproductive parameters the obtained results indicate the lower performances in comparison with the pure races and with the hybrids of large productivity, in exchange the prices obtained from the valorification of the carcasses from the race Mangalica show that if this race is exploited it is very profitable.*

**Key words:** performances, reproduction, sows, Mangalica, parturition

## INTRODUCTION

With a competition becoming more pronounced, caused mainly by massive imports of pork and large fluctuations of the market in pigmeat, approach a new domain, provide an opportunity for any producer of pork. This paper aims to present the results of breeding to first calving, entered in exploitation Mangalica sows whose products are used to obtain raw-type traditional preparations that are highly valued especially in foreign markets. Sows Mangalica, taken in the study, are exploited in an elite unit in pigs from Romania, namely SC SUINPROD S.A. ROMAN.

## MATERIAL AND METHOD OF WORK

The biological material consisted of 25 sows Mangalica blond variety, the main reproductive parameters are: weight at first mating, age at first parturition, number of

piglets parturition, number of piglets weaned, parturition weight and weaning weight. To get a clear image of performance achieved, the results were compared with data from literature. Working method used was that of animal groups.

Experimental conditions were those of production technology unit, seeking to disturb the animals without the technological flow.

## RESULTS AND DISCUSSION

### 1. Data on fecundity, weight at first mating and age at first mating

The indicator fecundity, assess the concrete situation of the number of females remaining pregnant after mating or artificial insemination. In tab. 1 are presented data on fertility, weight at first mating and age at first mating of gilts obtained from Mangalica.

Table 1

Results on fecundity, weight at first mating and age at first mating of gilts Mangalica

Race	Number of sows mating (heads)	Number of sows farrowing (heads)	Fecundity (%)	Average weight the first mating (kg)	Mean age at first mating (days)
Mangalica	25	18	72	102,12	266,6

The data presented in table 1 shows that the average fecundity in sows Mangalica at first calving was 72%. Value, the percentage is small if we compare it with the percentage obtained in other races or hybrids (80 - 85% to breed Landrace, Large White breed at 79-85%, 81-87% for hybrids PIC [1], [2]) but to consider the fact that Mangalica is a late race and not excels in performance breeding, so we can assess fecundity at first birth as well.

Average weight at first mating was 102.12 kilograms with a minimum 97 and maximum of 115 kg, was presented within the literature (100-120 kg). Mean age at first mating was 266,6 days with limits between 228 and 318 days is approximately 30 days

higher than in other breeds and hybrids of high productivity [5], [6].

## 2. Data on prolificity

Reproductive capacity in pigs is assessed by prolificity, which requires a complex application and enforcement activities and measures, some dependent animal, and others related to ensuring the environment, ending with the number and quality of weaned piglets during a production year. The number of piglets weaned is higher and fertility is good quality even better.

Data on Mangalica prolific sows are presented in table 2.

Table 2

Results of prolific sows Mangalica

Race	Statistical parameters	Piglets birth (heads)			Sex ratio (%)		Piglets weaned (heads)	Piglets weaned from piglets birth (%)
		Total	Piglets live	Piglets dead	Male	Female		
Mangalica	Minimum	5	5	0	20	20	4	70
	Maximum	10	10	2	80	80	10	100
	Average	7,60	7,12	0,48	51,68	48,32	6,64	87,36
	$\pm S_x$	5,12	6,87	1,53	9,23	9,49	7,65	6,51
	V%	18,5	22,7	6,33	37,1	35,4	22,43	21,46

From data illustrated in table 2 can be observed that the number of piglets farrowing had a very varied (minimum 5 heads, maximum 10 heads) with a mean of 7.60 piglets. Note also very good percentage of live birth piglets (73.60%) by birth. In the sex products we see that, on average, it is almost equal, being 1.6% higher in males than in females.

If weaned piglets, we see an average survival for this race very good 87.36%, with variations between 70 and 100%.

## 3. Data on the daily weight gain during pregnancy

Increase average daily gain is an important indicator, with the possibility of expression of growth and fattening performance in pigs, being in close touch with other productivity indicators. In table 3 are presented data on the growth performance of progeny Mangalica made during pregnancy.

Table 3

Result on growth performance achieved during pregnancy

Race	Statistical parameters	Weight piglets at birth (kg)	Weight piglets at weaned (kg)	Age at weaned (days)	A.V.G.* during pregnancy (g)
Mangalița	Minimum	1,03	4,50	28	108
	Maximum	1,21	7,31	35	182
	Average	1,10	6,07	32,24	154
	$\pm S_x$	2,51	6,90	6,15	8,85
	V%	5,21	15,34	12,55	18,93

\*A.V.G.= average daily gain

From data presented in table 3 is observed that:

- piglet weight at birth was close, the differences between the minimum and maximum is around 200g, registering an average of 1.10 kilograms according to data from literature [3], [4], [7]. The standard error of the mean was 2.51 and the coefficient of variability V% was 5.21% which means a low variability (homogeneous groups);
- differences in weaning piglets were significantly higher, by about 3 kg, registering an average of 6.07 kilograms, which is considered a good result considering the fact that race is a race Mangalica late;

- weaning age ranged between 28 and 35 days, with an average of 32 days, being influenced by the flow of technology practiced in the unit;

- throughout the pregnancy has an average daily growth rate, averaging 154 g, with a minimum of 108 g and a maximum of 182 g, values that correspond to data from literature [3], [4]. Coefficient of variability V% recorded during a pregnancy rate of 18.93%, representing a large variability.

To see if the performances of sows Mangalica on the farm SUINPROD SA Roman and performances of Mangalica in Hungary there are differences, they started to compare results (Table 4).

Table 4

The performance of sows Mangalica in different made operating systems

Nr. crt.	Parameters	S.C. SUINPROD SA ROMAN	Farm semi-intensive Ungaria	Farm extensiv Ungaria
1.	Average number of piglets birth / sow (heads)	7,60	6-7	6-7
2.	Piglets deads (heads)	0,48	0,8-1,0	1,0-1,2
3.	Weaned piglets (heads)	7,12	5,9	5,5
4.	% Piglets weaned from piglets birth	87,36	80-90	80-90
5.	Age of weaning (days)	32	42	56
6.	price recovery (€ / kg pig live)	-	1,5 – 2,00	5,00

Analyzing the data presented in table 4 is the following conclusions:

- Average number of sows farrowing piglets Mangalica the 3 farms had an average of 7 piglets / sow;

- In the number of dead piglets, they had a different pattern in the unit SUINPROD SA Roman mortality was 0.48 head, lower compared with farms in Hungary (semi-intensive 0,8-1,0 head., 1,0-1,2 extensive head.)

- The number of piglets weaned from sows Mangalica registered to SUINPROD SA Roman society, there is a higher value compared with the performance obtained in the two types of farms in Hungary;

- The percentage of piglets weaned piglets in farrowing s - have been great values in all 3 farms, farm SUINPROD SA Roman registering a rate of 88.06%, while the other two farms in Hungary this proportion was ranged from 80-90%.

- Weaning age had different values at the three farms, with 30 - 33 days at SC SUINPROD SA Roman, to the two farms, to which even reach 56 days, in the extensive farm.

- Farms in Hungary dealing with the growth of this breed, pigs exported to Spain, at a price different from farm to another depending on the operating system. The holding semi-intensive exported at a price / kg live 1.5 - 2 € and extensive farm at a price / kg live 5 €, prices leading to a very good return.

## CONCLUSIONS AND RECOMMENDATIONS

Following research undertaken on the growth Mangalica race is the following conclusions:

1. Fecundity at first parturition was 72%, the percentage may be small, if we compare it with the percentage obtained in other races or hybrids of high productivity, but to consider the fact that race is a race late Mangalica which not excels in performance breeding, so we can assess fecundity at first birth as well.

2. Weight and age at first mating were the parameters specified in the literature for this race.

3. Number of piglets farrowing (7.60 head.), number of piglets weaned (6.64 head.) and average daily gain increase during pregnancy (154g), is within the range presented in the literature, the results are better than performance profile obtained in farms in Hungary.

4. We recommend this breed and farm expansion in Romania, especially in extensive and semi-intensive, due to low investment needed and very good price you can get export.

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