

Schwarz Tomasz¹, Kiljański Andrzej², Jelonek Magdalena³, Tuz Ryszard¹, Nowicki Jacek¹

AN INVESTIGATION INTO THE EFFECTIVENESS OF ISOTONIC PROTEIN SOLUTION ADMINISTERED ORALLY TO PIGLETS AND ITS' IMPACT ON SURVIVAL RATES AND WEIGHT GAIN.

Journal of Pig Breeding and Small Livestock / University of Agriculture H. Kołłątaj, al. Mickiewicza 24/28, 30-059 Kraków; 2Agrivet Sp. Ul. Szczanieckiej 24, 64-316 Kuślin; 3Sulewski Jarosław Pig Farm, 11-730 Olszewo 38.
E-mail address: rzschar@cyf-kr.edu.pl

The intensive increase in breeding stock levels recorded in the last decade, coupled with the stagnation in milk potential has caused a significant increase in piglet mortality, resulting in an increase in fall rate and a decrease in body weight during the periosteum. Due to limited possibilities of improving the genetic potential of sows due to the low inheritance of reproductive characteristics amongst piglets, nutritional or pharmacological methods have become crucial for the improvement of this situation. The aim of this study was to determine the survival rates in pig breeding after the application of the isotonic protein drink *Tonistry Px*. The research was carried out in a large pig farm located in the province Warmińsko-Mazurskie for 1,034 piglets across 78 litters. On the second day after delivery, litters were standardized and divided into a control group (507 piglets, 38 litters), and an experimental group (527 piglets, 40 litters). Piglets of the experimental group from Days 2 to 8 received *Tonistry Px*, which was administered as a 3% aqueous solution in a 500 ml / litter / day bowl. The fall index and weight gain of piglets during 28 days of breeding was analyzed. There were no significant difference between the groups in the piglet drop index, however, the mean weights of piglets weaned and the average daily gain in sow rearing were significantly higher ($P < 0.01$) in the experimental group (Table 1). The cost of the preparation is PLN 4.13 per pig. The estimated difference in the value of piglets weaned at the assumption of 20 PLN/ 1kg is 6.2 mł, which means the possibility of generating additional income of over 2 PLN per 1 pig.

	Experimental Group	Control Group
Number of Piglets in Litter	13.2 ± 1.1	13.3 ± 0.9
Weight of the Litter (kg)	17.8 ± 2.6	18.1 ± 3.1
Body Weight of Piglets (kg)	1.35 ± 0.2	1.36 ± 0.2
Drop Rate (%)	5.0 ± 5.5	4.5 ± 4.7
Number of Weaned Piglets/Litter	12.5 ± 1.1	12.7 ± 1.0
Weight of Weaned Litter (kg)	90.6 ± 8.7 ^T	88.3 ± 6.9
Weight of Piglets Weaning (kg)	7.3 ± 0.1.3 ^A	6.9 1.4 ^B
Daytime Gain in Rearing (g)	211 ± 12 ^A	198 ± 26 ^B

In conclusion, the use of an isotonic protein supplement can significantly improve the weight gain of the suckling piglets in the experiment, without significantly affecting the fall index. From a cost-to-revenue perspective, the use of a product in a large-scale farm seems reasonable and profitable. However, it is necessary to continue trials in order to analyze the production rates of animals in subsequent stages (piglets and pigs), which will allow us to further assess the long-term impact of this isotonic formula and actual profitability parameters.