

WEIGHT BEHAVIOUR IN SWINE  
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It has always been stated that the optimal market weight for swine should range from 90 to 110 kgs.. In Canada, Sather et al (1980) reports that the maximum range is as far as 90 kgs., and Grimes and Carlisle (1975), have reported that traditionally in the United States the market weight is between 100-110 kgs.. All this communications and criterion comes to us in a direct influence, but the commercial weights in Mexico have a wider range, from 90 to 180 kgs., this situation turns to an indifferent defined market. Martin et al (1980), in an evaluation of carcass composition and meat quality, made their observations of weights ranging from 75 to 137 kgs., and they observed that gilts had leaner carcasses than barrows, but at the moment of sacrifice, barrows had a compensation with higher weights to market at the same age; the results at those ranges of weight were that at 75 kgs. there was a 71% yield and at 137 kgs. it was only of 65%, the difference was mainly because of the linear deposition of fat that exists with weight and age. In Mexico, we seek for leaner carcasses, but there is an economic consideration also for fat, the yield of meat in heavy weights is well accepted, although there are changes like: darker meat color, less percentage drip and higher pale soft exudative scores in barrows.

In the state of Puebla, where there is a moderate dry climate with temperatures between 4°C and 30°C and a mean of 17°C, a total of 374 pigs were evaluated in 7 trials with a control each one of them; the objective was to check up the behaviour to market from the result of the crosses of Large White and Landrac the farm could be described as a total intensive confined unit, for which high yield of profits are to be obtained in account of the amortization of all the economic structure.

It was evaluated every 15 day after weaning till market weight, considering: average daily gain (ADG), feed efficiency (FE) and economic cost per kg. (ECK). There was no difference of sexes stated, barrows and gilts were on the same circumstance, the control groups were on a commercial diet and it was important to obtain the criterion on this matter towards our farm diets. It was only the evaluation of behaviour, without taking into consideration the carcass qualities and yields at sacrifice.

According to Robinson (1979) and what it was observed, the growth pattern of swine post-weaning was linear in weight gained, but in daily gains there were different effects which can be explained by a quadratic and a cubic model, these effects in some instances were explained by different facts:

1. Space problems
2. Changes in the diet or in the ingredients
3. Difference in sizes
4. Disease problems
5. Management

This effects were carried to a minimum during the trials but there were part of the observations to be considered.

There was a positive correlation between what happened with daily gain and feed efficiency, but there was a linear response on age, weight and consumption on account of a major waste of metabolizable energy for maintenance, Sather et al (1980).

On the economic cost per kg., in each evaluation and on the whole result, it is important to mention that the different facts before stated had a tremendous impact, which most of the pig breeders and swine practitioners have a very remote idea, how tough can be a bad decision or a problem of management. The economic cost was considered with different market weights, and there was an added return above feed costs per hog, at low grain costs and high prices for swine; it is interesting to mention that the level curves explained by Jolly et al (1980), on which he considered two types of farms and that a minimum feed cost and maximum value of the pig, only permits 7 to 9 kgs. more per hog, than when market prices are low, very different values of what we obtained.

#### Conclusions:

Market weights and feed performance in order to obtain the maximum economic return, should be on constant evaluation in every swine farm, in order to get to the criterion of market weight, which will be highly correlated with the type of pig, feed costs and season of the year.

Selected references: Grimes, G. and C.R. Carlisle; Purdue University, 1975, U.S.A.; Jolly, R.W. et al Journal of Animal Science, Vol. 51, No. 4, 1980; Martin A.H., Journal of Animal Science, Vol 50, No. 4, 1980; Sather, A.P., Journal of Animal Science, Vol. 51, No. 1, 1980; Whitmore, C.T. and F.W.H. Elsley, Farming Press Ltd., 1976.