

Influence of slaughter weight on growth and carcass characteristics of Alentejano pigs

A.B. Freitas, J. Neves, R. Charneca, J. Tirapicos Nunes and J.M. Martins

Departamento de Zootecnia, Universidade de Évora, Apartado 94, 7002-554 Évora, Portugal

SUMMARY – To study the effects of slaughter weight on growth and carcass characteristics of Alentejano pigs, thirty pigs were used. 20 kg LW animals were allocated in individual pens outdoors and fed a commercial diet (15% CP, 3100 Kcal DE) offered at 85% *ad libitum*. Pigs were sequentially slaughtered in groups (n=5) with an average BW of 40, 70, 80, 90, 100 and 110 kg. The growing period, feed intake, feed: gain and feed cost per Kg gain increased significantly ($P<0.05$) with the increase of slaughter weight, but commercial yield of carcass decreased (51.7% at 40 kg, 45-45.6% at 70-80 kg and 41.5-42.9 at 90-110 kg). Lean percentage of ham decreased slightly (53.8 to 43.1%) and fat increased strongly (15.9 to 32.1%) with the increase of slaughter weight. Results suggested that the most desirable slaughter weight would be between 90-100 kg.

Keywords: Alentejano pig, slaughter weight, growth, carcass characteristics.

RESUME – "Influence du poids d'abattage sur les performances de croissance et les caractéristiques de la carcasse chez le porc Alentejano". Trente porcs Alentejano ont été utilisés. A 20 kg de poids vif les animaux ont été placés en cages individuelles en plein air et nourris avec un aliment commercial (15% PB et 3100 kcal E.D.) distribué à 85% de *ad libitum*. Les porcs ont été abattus (n=5) à un poids vif moyen de 40, 70, 80, 90, 100 et 110 kg. Le poids d'abattage a affecté de façon significative ($P<0,05$) le gain moyen quotidien et l'indice de consommation. Le rendement commercial de la carcasse a diminué avec l'augmentation du poids d'abattage (51,7% à 40 kg, 45,0-45,6% à 70-80 kg et 41,5-42,9% entre 90-110 kg. Le pourcentage de maigre du jambon a diminué faiblement (53,8 contre 43,1%) et le pourcentage de gras a augmenté fortement (15,9 contre 32,1%) avec l'augmentation du poids d'abattage. Les résultats suggèrent que le porc Alentejano devrait être abattu à un poids de 90-100 kg.

Mots-clés : Porc Alentejano, poids d'abattage, performances de croissance, caractéristiques de la carcasse.

Introduction

The Alentejano pig is an autochthonous breed reared in the south of Portugal. This breed derives from the primitive *Sus scrofa mediterraneum*, which colonised the Iberian Peninsula in the sixth millennium B.C. These unselected pigs have poor productive traits, but a very good adaptation to the environment that allows the extensive production system and the use of natural feeding sources such as the grass and the acorns. Until the second half of the 20th century the Alentejano pig was the most important Portuguese swine breed and the main economic product in the majority of the "montados" (oak woods). In the traditional production system pigs were slaughtered with 120-150 kg and with 18-24 months of age. Their meat was used mainly for the elaboration of dry cured meat products of high quality (Nunes, 1993).

The period between 1950 and 1990 was marked by the dramatic decrease in the Alentejano pig population and the strong development of exotics swine breeds and the intensification of the production systems. A new interest in Alentejano breed began during the 1990s with the formation of producer association (UNIAPRA), the regulation of the quality of the products (PDO Presunto de Barrancos), the development of the industrial sector and the attitude of the consumers about questions such ecological animal production, animal welfare or quality of the meat (Freitas *et al.*, 2004).

Today there is a growing interest towards the use of autochthonous pig breeds reared under sustainable and ecologically friend production systems (López-Bote, 1998) and the market of fresh meat had became one of the targets of Alentejano pig producers. In recent years a number of scientific studies about the characteristics of meat and dry meat cured products of Alentejano pigs fattened at acorns have been carried out (Nunes, 1993; Neves *et al.*, 1996; Freitas, 1998). However, there is a little information about the characteristics of fresh meat productive system. The knowledge of the most favourable slaughter weight is essential to improve profitable Alentejano pig fresh meat production.