Slaughter value and pork quality traits in primiparous sows nursing a different number of piglets

K. Śmiecińska¹, S. Wajda¹, W. Kapelański²

¹ Department of Commodity Science of Animal Raw Materials, University of Warmia and Mazury in Olsztyn, Oczapowskiego 5, 10-719 Olsztyn, Poland
² Department of Pig Breeding, University of Technology and Life Sciences in Bydgoszcz, Mazowiecka 28, 85-084 Bydgoszcz, Poland

Abstract

The study involved 70 sows slaughtered after the first farrowing. The carcass dressing percentage and the percentage content of primal cuts in the carcass were evaluated. Samples of m. longissimus dorsi were taken to determine the chemical composition and the physicochemical and sensory properties of the pork. Primiparous sows were divided into five groups, based on the number of piglets they had nursed, i.e. from 11 to 13 piglets, 10 piglets, 9 piglets, 8 piglets, and from 4 to 7 piglets.

It was found that among sows culled after the first farrowing a higher carcass dressing percentage and a higher percentage content of neck and loin in the carcass can be expected in those nursing a lower number of piglets (up to 8). An analysis of the pork quality revealed a similar content of chemical components. Only the mineral content of the carcass was lower in the group of sows that had nursed the fewest piglets. Meat from sows that had nursed fewer piglets was characterized by a higher water-holding capacity, a brighter color and a lower aroma intensity, and it received higher scores for juiciness and palatability.

Key words: primiparous sows, slaughter value, meat quality

Introduction

Breeding and research work conducted at present in Poland focus on improving the carcass meatiness of growing-finishing pigs and pork quality (Koćwin-Podsiadla et al. 2003). Studies on the economic efficiency of pork production are equally important. The slaughtering of gilts after weaning of the first litter enables both valuable raw material to be obtained and piglets for further rearing, thus reducing the overall costs of pork production (Wajda et al. 2005). In order to maximize profits, early-cycling gilts are selected to decrease the age of puberty and increase litter size (Kapelański and Grajewska 2005). Primiparous sows may be culled due to too low reproductive efficiency, including a too small litter size or inherited defects in the newborn piglets. A greater number of such sows may be destined for slaughter if the pork production technology adopted is based on first-litter sows and piglets (Kapelańska et al. 2002, Kapelański and Grajewska 2005). The results of studies conducted to date show that primiparous sows are regarded as hav-