



#### **ANAESTHESIA OF PIGS WITH CO2: GROUPING IS BEST**

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The study consisted in an evaluation of the welfare of pigs before and during anaesthesia with CO<sub>2</sub>. The results in terms of heart rate suggested that stress was highest when the pigs were being led to anaesthesia and during the first 40 s spent in the cage. Thereafter, weaker heart beats suggested the pigs were unconscious. As regards behaviour, the anaesthesia acted in several phases during which the animals' reactions were fairly characteristic. Recoil movements, and the inhalation and excitation phase suggested a stressful or even painful situation for the pigs. Subsequent postural collapse and convulsions are signs of loss of consciousness. Thus during anaesthesia with CO<sub>2</sub>, the period of inhalation of gas, together with that of excitation, are problematic for animal welfare.

*Keywords:* pig, CO<sub>2</sub>, animal welfare, anaesthesia

#### **FOOD CONSUMPTION IN THE USA - PART I: THE DOMINANCE OF CHICKEN**

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The consumption of animal proteins in the USA has been rising since 1970 owing to greater consumption of fish, and especially of chicken, the consumption of which doubled between 1976 and 1998. The consumption of seafood, although it has increased by 24 % since 1970, is restrained by high price increases. Meanwhile the share of 'red' meat - beef, pork, lamb and veal - in the total animal protein consumed has fallen from 70 % in 1970 to 58 % today.

*Keywords:* meat consumption, USA, trend

#### **MARKET VAGARIES: THE LIMOUSINE BREED ADAPTS TO CONSTRAINTS**

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The crisis affecting the whole of the beef industry since the end of October 2000 is still being felt in 2002. The drop in consumption has been marked in France and has spread to numerous other European countries, including our biggest customers, for example Italy. Although since spring 2002, consumption has gradually been rising back to its pre-crisis level, other factors are prolonging the difficulties of the market and depressing income from suckling herds. This paper attests to the capacity of Limousine breeders to adapt to the fluctuating economic context before the first CAP reform up to the first BSE scare. It analyses the trend over 10 years (1989-1999) in a group of Limousine breeders.

*Key words:* Meat production, suckling herds, Limousine breed, breeding system, Common Agricultural Policy, disadvantaged area, BSE.

#### **BEEF CONSUMPTION: RETURN TO NORMAL FAVOURS BEEF BREEDS**

**P. MAINSANT**

Besides a confirmation of re-nationalisation and segmentation movements, initiated at the time of the first BSE crisis, the specific impact of this second crisis may be (i) a widening difference in value between dairy breed and beef breed meat, and (ii) the breakthrough of young cattle in domestic consumption. Consumption levels and trends should revert to their former values despite the new costs generated by the crisis.

*Key words:* BSE, consumption, beef

English

Summary