

國立嘉義大學九十五學年度

動物科學系碩士班招生考試試題

科目：專業英文

一、試將下列英文翻譯成中文 (25%)

Differences in the pork quality traits of tenderness and water-holding capacity that exist between muscles may be related to differences in myosin heavy-chain isoform content, proteolysis, and the rate of activation/ autolysis of μ -calpain. Rate of postmortem pH decline within the first 6 h after exsanguination influences the rate of μ -calpain activity and autolysis and may play a pivotal role in regulating early postmortem proteolysis and ultimately drip loss and the rate of postmortem tenderization. Decreasing the variation in these traits could lead to the production of pork that is more uniform in quality

二、試將下列英文翻譯成中文 (25%)

The freezing point of milk is its most constant physical property. Since the depression of freezing points is directly proportional to the number of particles in solution, the freezing point of milk is primarily determined by the major constituents of low molecular weight, the lactose and the salts, and is nearly independent of variations in the concentrations of colloidal proteins and fat globules. Lactose and chlorides in milk show a general reciprocal relation which keeps the total osmotic pressure of milk close to that of blood and hence the freezing point is maintained within narrow limits of variation. In a comprehensive review regarding the freezing point of milk, Brathen (1976) concluded that the freezing point of the majority of cow milk samples from several countries fall within the range -0.513 to -0.551°C , with an average value close to -0.522°C .

三、試將下列英文翻譯成中文 (25%)

Removal of the pig from the sow earlier than 4 weeks of age can be considered early weaning. The younger the pig at weaning, the more critical are the dietary requirements. Pigs weaned at birth and deprived of colostrum must be fed a highly fortified diet; be kept in a warm, sanitary environment; and be given parenteral antibody protection (porcine gamma-globulins) for a reasonable chance of survival. For best survival, piglets should be left with the sow for 1 to 2 days to receive enough colostrum for adequate immune globulin protection or be given sow or cow colostrum for several feedings during the first day of postnatal life. Cow's milk can serve as a substitute for sow milk, although its lower caloric density does not allow maximum weight gain. Sow milk replacers containing large amounts of milk products are commercially available. Liquid diets must be fed at frequent intervals (minimum of 4 times daily) to provide adequate intake for reasonable growth and to avoid digestive disturbances, particularly diarrhea.

四、閱讀測驗 (25%)

Abstract

A research was conducted to develop estimates of lifetime productivity for breeding female swine calculated longitudinally during time in the breeding herd, and to compare estimates of lifetime productivity for female swine removed from the herd at different parities. There were 9416 breeding female swine from 29 herds in this study.

A frequency distribution for parity at the time of removal was generated. Estimates of lifetime productivity (lifetime nonproductive days [NPD], lifetime NPD as a proportion of herd life, total number of pigs born per litter weaned, number of pigs born alive per litter weaned, number of pigs weaned per litter weaned, number of NPD per year in the herd, number of litters weaned per year in the herd, and number of pigs weaned per year in the herd) were calculated for females with parity ≥ 1 at the time of removal.

For 58% of all females, parity at the time of removal was ≤ 3 . On average, 20.7% of herd life was spent in nonproductive activities, but the proportion of herd life that was nonproductive decreased significantly as parity at the time of removal increased. Number of NPD per year in the herd decreased and number of litters weaned per year in the herd and number of pigs weaned per year in the herd increased significantly as parity at the time of removal increased.

Higher parity at the time of removal from the herd is associated with improved lifetime productivity for female swine. Parity at time of removal is commonly used as an approximation for lifetime productivity, but it does not take into account the impact of NPD, especially NPD during early reproductive cycles.

Questions

1. What is the objective of this study? (5%)
2. Explain the following terms in simple words: (10%)
 - nonproductive days [NPD]
 - number of pigs born alive per litter weaned
 - number of pigs weaned per litter weaned
 - number of litters weaned per year in the herd
 - number of pigs weaned per year in the herd
3. What was the proportion of sows which had stayed in the herd beyond the third parity? (5%)
4. If you are asked to give this research study a "Title", what would it be? (5%)