RESEARCH NOTES

USE OF HEAT LAMPS IN FARROWING PENS

Practically all the literature concerning the adequate handling of the newly-born pig recommends use of heat lamps in farrowing pens. These lamps are supposed to favor a greater number of pigs weaned with larger weaning weights. In such cases it is stressed that the lamp, as a source of artificial heat, enables the piglets to use the heat for the maintenance of their body temperature, leaving the energy obtained from the feed for growth and development. At the same time they also keep away from their dams which reduces losses of pigs that die because their mothers lay on them.

Heat lamps for newly-born pigs have been recommended where the environmental temperature goes to 50° F. or below.[1] Environmental temperatures under which such studies were conducted differ materially from those found in Puerto Rico, thus these studies were undertaken in order to find out whether or not it is advisable and economic to use heat lamps for piglets under our climatic conditions.

The trials included 88 litters of the ¾ Duroc X ¼ English Large Black Landrace strain, a line developed by the Agricultural Experiment Station, Mayagüez Campus.[2] Heat lamps were provided for 45 of these litters, leaving the other 43 litters without artificial heat. The litters, as well as the farrowing pens where the trials were conducted, were distributed at random to each treatment. The farrowing pens were provided with wood shavings on the floor in each treatment.

Heat was provided by infrared lights of 125 watts. The heat lamps were placed 18 inches above the floor at one corner of the pens where the dams could not enter. They were used from the time of birth until the pigs were 15-days old. All males were castrated at about 35 days of age. Management thereafter was equal for both treatments.

All the pigs were provided with a starter ration from the time they were 15-days old to weaning time at 56 days of age. The piglets were ear-notched and weighed at birth, and their weights also recorded at 21 and 56 days of age. The pigs in both treatments were vaccinated against hog cholera when about 45-days old.

From 1962–68, three trials were conducted from December through February and one during April and May. The average minimum tempera-

[1] Bundy, C. E., and Diggins, R. V., Swine Production, 2nd ed., Prentice-Hall, Inc., Englewood Cliffs, N.J., 1963.

[2] Carlo, I., and Arcelay, C. L., The Development of a Swine Line for Puerto Rico, Agr. Exp. Sta., Mayagüez Campus, Univ. P.R. Mayagüez and Río Piedras, P.R., Bull. 193, May, 1965.

ture for all four trials was 62.2° F., with no temperature recorded below 57° F. The lowest minimum temperature recorded in the central highlands of Puerto Rico for that period was 54.9° F., at Cayey in January, 1965. If heat lamps are to be used when the temperature goes below 50° F., from the data given above it is evident that the use of artificial heat was not needed.

The criterion for determining the value of heat lamps in the farrowing pens was the number of pigs and their weight when 21-days old as well as at weaning at 56 days of age.

The group without heat lamps had 85.56 percent of the live pigs alive at 21 days and 81.96 percent at weaning time, while 21-day old pigs had 95.78 percent alive at weaning.

The group under heat lamps had 84.33 percent of the pigs alive at 21 days and 82.40 percent at weaning, while 97.71 percent of the 21-day old pigs were weaned.

The analysis of variance for the number of pigs born alive and for those alive at 21 and 56 days showed no significant difference between the treatments. Apparently, the use of artificial heat, as a method of preventing the crushing or overlaying of pigs by their dams, is not useful in Lajas or in similar areas of Puerto Rico.

The percentages of pigs weaned for both treatments were similar, although there was a tendency toward a greater proportion of pigs weaned among those alive at 21 days of age for litters having heat lamps in their farrowing pens, as compared to those without the artificial heat.

The analysis of variance for the average weight of live pigs at birth, at 21 days, and at weaning, showed no significant difference between the two treatments.

Pigs of the group provided with heat lamps were 4.20 percent heavier at 21 days and 6.29 percent heavier at weaning, as compared to those in the farrowing pens which did not use artificial heat. Statistical analysis of the data, however, showed that the differences in favor of use of artificial heat were not significant, neither were the weight increases sufficient to compensate for the extra cost of providing heat to newly-born pigs.

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