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CHALLENGES AND  
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# A NEW VIEW OF ANIMAL SCIENCE: CHALLENGES AND PERSPECTIVES

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**THEME 1 | ANIMAL PRODUCTION SYSTEMS**

**Influence of the breeding season on the productive and reproductive indicators of the sow**

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Pigs are susceptible to high temperatures, which may have repercussions on the productivity of a farm. The objective was to evaluate the effect of the breeding season on some productive and reproductive indicators of the sow. The study was conducted on the commercial farm, “El Escondido” located in the municipality of Tlacolula de Matamoros, Oaxaca, Mexico. The farm has a reproduction, gestation and weaning area, which is a semi-intensive farm with 120 Genetic lines with different number of parities. The galleys have a tin roof, the curtains have little control on temperature changes. The weaning area has elevated cages. 780 records were evaluated of the years 2014, 2015 y 2016. According to the maximum and minimum temperatures recorded in a local meteorological station, the year was divided into three periods with 4 months each. Cold season (maximum 29.1, minimum 8.38 ° C), transition (maximum 30.5 and minimum 12.5 ° C) and heat (maximum 32.6 ° C, minimum 14.3). The cold season cover the months of January, February, November and December; the transition period the months of March, April, September and October and the heat season May, June, July and August. An analysis of variance was performed where the time of birth was considered a fixed effect, using the SAS prog glm procedure. It was found that the breeding season affected reproductive and productive parameters. The sows that were mated in cold season had a greater ( $P < 0.05$ ) total pigs born (TPB, 11.28), pigs born alive (PBA; 10.68), and weaned piglets (WP, 9.52), compared to those who mated at the time of transition (TPB; 10.45, PBA; 10.17, y WP; 8.89) and heat (TPB; 9.97, PBA; 9.66, y WP; 8.82), there was no difference between the heat and transition period for this variables. With respect to litter weight at birth (LWB), the paired sows in the cold and transition period had a greater weight (16.31 and 15.58 kg, respectively) compared to heat season (14.59 kg). It is concluded that the high temperatures at the moment of the breeding affect the productive and reproductive parameters in the sow, so that measures must be considered to regulate the heat at the moment of the packing.

**Keywords:** born, cold, heat, pigs, sow