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Pig Response to Heat Stress Revisited

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Abstract: Each pig breed has its own features and specific demands such as food, shelter, temperature, and water. Ambient temperature, environmental heat, gestational heat stress, heat stress, high ambient temperature, high temperature, high temperature in summer, season, short-term heat stress exposure, and variation in ambient temperature impact pig behaviour, growth, immune response, metabolism, physiology, production, and thermoregulation in boars, fattening pigs, foetal pigs, finisher / finishing pigs, gilts, grower / growing pigs, lactating sows, piglets, pigs (in general), and sows.

• Introduction

Temperature has a significant impact on pigs, affecting their growth, health, and overall performance:

- Pigs are sensitive to high temperatures because they have a limited number of functional sweat glands: therefore, heat stress can lead to appetite loss, reduced feed intake, decreased growth rates, and poor overall performance;
- Pigs use various mechanisms to regulate their body temperature, but these can be overwhelmed by extreme heat, which can result in health issues and reduced productivity;
- Heat stress in pigs can lead to significant economic losses caused by decreased meat production and fertility rates;
- Genetic selection for heat tolerance and improved management practices can help mitigate the negative effects of high temperatures on pigs.

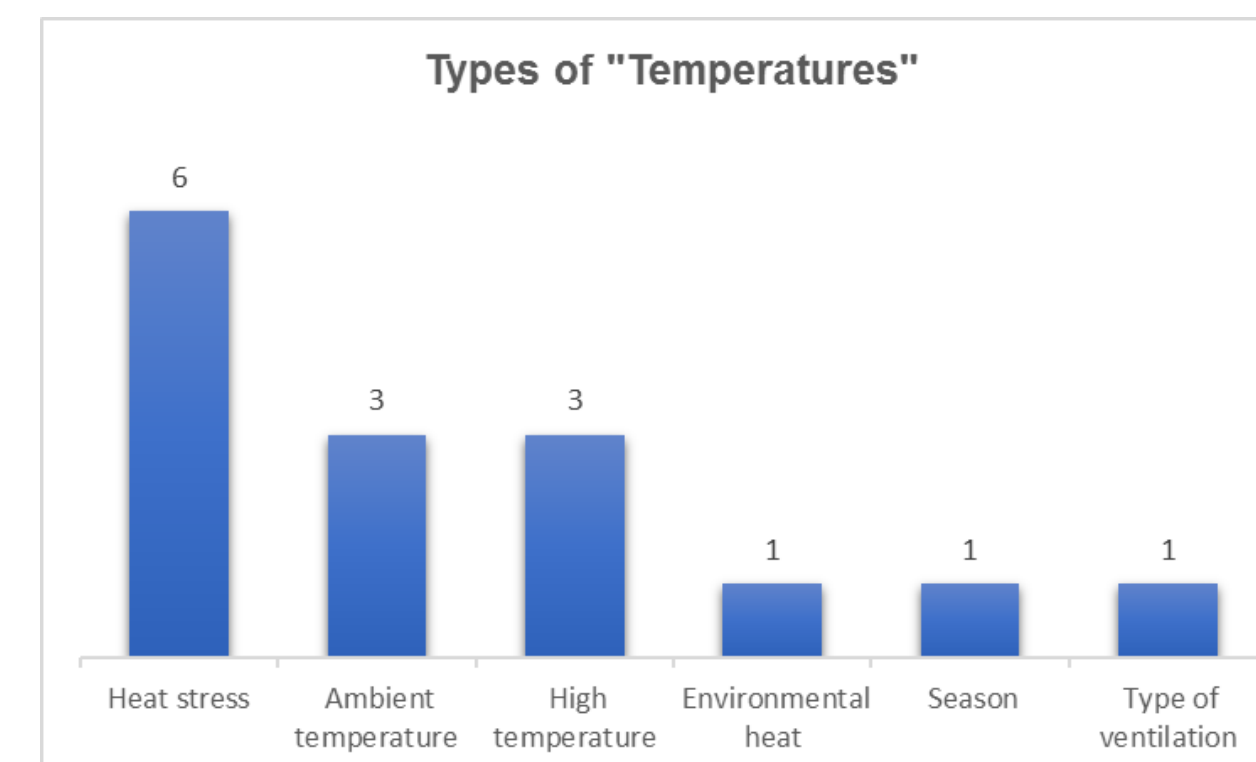
Ambient temperature, environmental heat, gestational heat stress, heat stress, high ambient temperature, high temperature, high temperature in summer, season, short-term heat stress exposure, and variation in ambient temperature impact a wide range of aspects regarding behaviour, fertility, metabolism, physiology, production, reproduction, and welfare in boars, fattening pigs, foetal pigs, finisher / finishing pigs, gilts, grower / growing pigs, lactating sows, piglets, pigs (in general), and sows.

• Material and method

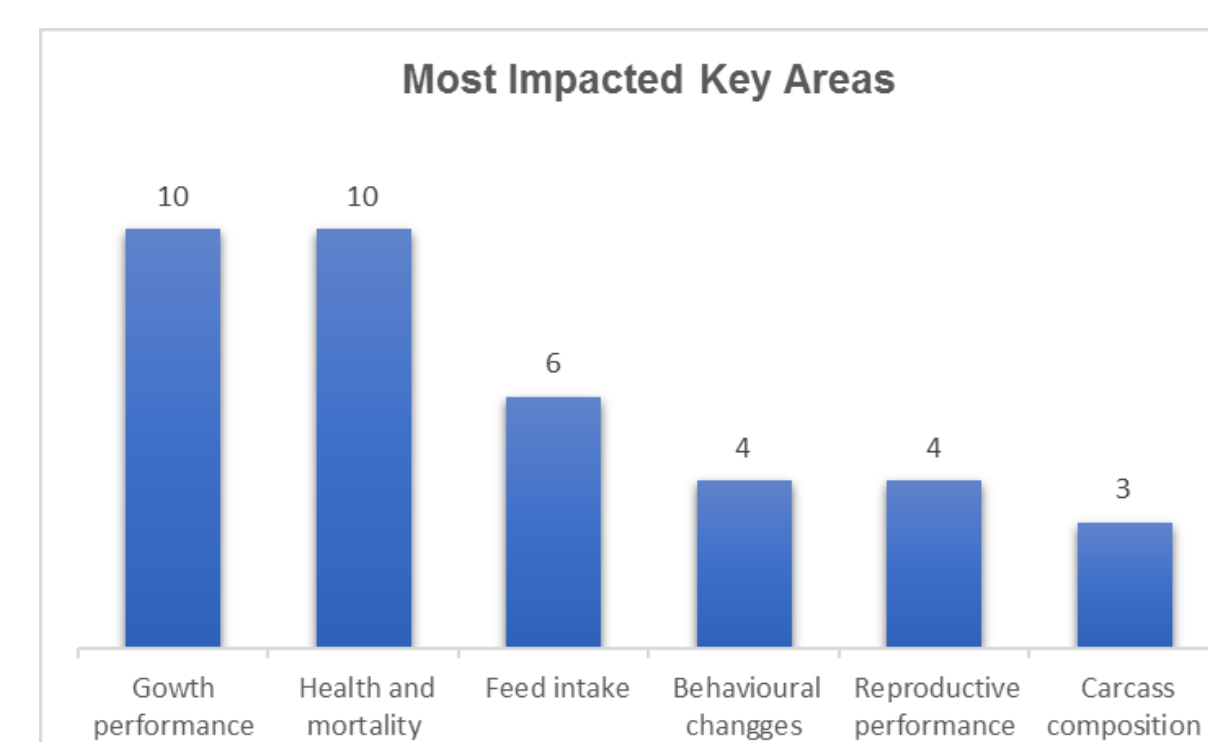
The material used in this paper consists in a corpus of articles on the impact of heat stress on swine published in the last seven years. The research method used is corpus analysis.

• Results and discussions

The investigation of "temperature" variables resulted in six articles on (gestational / summer) heat stress, three articles on (high) ambient temperature, three articles on high temperature (in summer), one on environmental heat, one on season, and one on type of ventilation.



The most impacted key areas related to the impact of heat stress on pigs are approached in growth performance, health and mortality; feed intake; behavioural changes; reproductive performance; and carcass composition.



• Conclusions

The analysis above shows the interest of researchers in the impact of temperature on swine. The most investigated are heat stress, ambient temperature, and high temperature. As far as the most impacted key areas are concerned, they are represented by growth performance, health and mortality, and feed intake – all closely related to production efficiency. Finisher / finishing / grower / growing pigs and pigs raised outdoors are pig categories most impacted by heat stress and studied by researchers – again, closely related to production efficiency.