

Microclimates and animal performances in five pig fattening houses

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In order to determine if the K. L. PETIT's Bioclimatic (B) index we have been using in the Villefranche de Rouergue Experimental Station would allow, on the one hand to estimate microclimates in pig houses and, on the other, to associate this parameter with the performances of the animals, we submitted simultaneously five lots of fattening pigs to five « microclimatic treatments » in five different buildings. It was observed that different buildings submitted at the same time to an identical local climate exhibited different microclimates which could then be evidenced by means of the B Index. Differences also appeared between animal performances : growth rate was higher in one of the buildings and lower in another one ; in a house of the « semi-open-air » type, backfat thicknesses of all the animals were significantly lower than those in the other buildings. In the house showing the best growth rates, B Index values were always : located in the optimum zone whereas in the house showing the poorest growth rates, the B Index values were also the lowest. Using a multiple regression we have set up a new equation of the B Index easier to handle and thus better adapted to technical popularization. This equation puts forward two « specific factors » that could allow to extend the use of the B Index to other domestic species.

Effect of some environmental factors on performances of fattening pigs

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The influence of environmental factors on fattening pig performances is rather difficult to estimate since there are only few possibilities for experimentation in this field and notably because there might be many interactions between these different factors.