REDUCTION OF AMMONIA EMISSION IN SWINE HOUSE

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Summary. Influence of ventilation rate, room temperature, extraction of bad air through manure channels, and state of pens were investigated under the conditions of natural production in order to improve the ways of reducing the emission and concentration of ammonia in swine houses. A polynomial regression equation connecting the intensity of ammonia emission with the air exchange, room temperature and relative humidity was developed. When the surface of the floor is uneven, i.e., it is always covered with a layer of manure, the concentration of ammonia over draws higienic limits (20 ppm), and annual emission was 4 kg per pig , i.e., exceed standart - 3 kg. If the pens of pigsties are littered with straw, the concentration of the ammonia will be 9 ppm and the annual emission - 2,5 kg per animal. While extracting out 60 % of bad air through manure channels, the concentration of ammonia decreased from 26 to 22 ppm, in comparison with the case when air is extracted out only through upper parts of premises, but the emission of ammonia increased from 800 to 900 mg/h per animal.

Keywords: ammonia, emission, concentration, ventilation, management