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日粮料型和料槽对保育猪和育肥猪生长性能的影响

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本论文进行三个试验研究料槽下料口宽度和料型对保育猪（试验一、二）和育肥猪（试验三）生长性能的影响。试验为 2×3 双因素设计，下料口空隙宽度（窄料口和宽料口最窄时宽度为 1.27 和 2.54 厘米），3 种料型为粉料、含粉颗粒料（试验一、二含粉率为 30%，试验三含粉率为 50%）、过筛颗粒料（含粉率 3-10%）。试验一选用 210 头保育猪（平均初始重 11.9kg），每个处理 5 圈，每圈 7 头，试验期 21 天。试验未观察到料槽和料型之间的互作关系。料槽口宽度对日增重、采食量和料比没有显著影响。饲喂粉料的猪比其它两种料型采食量和日增重更高（P＜0.05）。饲喂过筛颗粒料的猪只饲料转化率比其它两种料型料肉比更低（P＜0.05）。试验二选用 1005 头保育猪（初始均重 14.1kg），每个处理 6 圈，每圈 26-28 头仔猪，试验期 28 天。结果表明与宽料口组相比，窄料口组猪只采食量和日增重更低（P＜0.05），饲料转化率差异不显著。粉料组猪只日增重较其他两组更低（P＜0.05）。与过筛颗粒料相比，饲喂粉料和含粉颗粒料的猪只料肉比更高。试验三选用了 246 头育肥猪（初始重 56.8kg），每个处理 5 圈，每圈 6-7 头，试验期 69 天。窄料口组猪只采食量更低，但料肉比更好（P＜0.05），对日增重没有影响。与过筛颗粒料相比，粉料组猪只日增重有降低的趋势（P＜0.10），料肉比更高（P＜0.05）。含粉颗粒料猪只日增重和料肉比处于中间水平。饲喂粉料和含粉颗粒料猪只采食量比过筛颗粒料更高（P＜0.05）。总的来说，保育猪料槽下料口更宽可能增加采食量和日增重并不影响料比。对育肥猪来说，窄料槽能减少耗料量，改善料比。在所有试验中，低含粉率的颗粒料能最大化改善饲料转化率。

Effects of diet form and feeder adjustment on growth performance of nursery and finishing pigs

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ABSTRACT: Three experiments were conducted to determine the effects of feeder adjustment and diet form on growth performance of nursery (Exp. 1 and 2) and finishing (Exp. 3) pigs. Treatments were arranged as a 2 × 3 factorial with the main effects of feeder adjustment and diet form. The 2 feeder adjustments were a narrow and wide feeder adjustment (minimum gap opening of 1.27 and 2.54 cm, respectively). The 3 diet forms were meal, poor-quality pellets (70% pellets and 30% fines for Exp. 1 and 2 and 50% pellets and 50% fines for Exp. 3), and screened pellets with mini -mal fines (3 to 10%). In Exp. 1, 210 pigs (initially 11.9 kg BW) were used in a 21-d trial with 7 pigs per pen and 5 pens per treatment. No feeder adjustment × diet form interactions were observed. There were no differ -ences in ADG, ADFI, or G:F due to feeder adjustment. Pigs fed the meal diet had increased (P < 0.05) ADG and ADFI compared with pigs fed the poor-quality or screened pellets. Pigs fed meal or poor-quality pellets had decreased (P < 0.05) G:F compared with pigs fed screened pellets. In Exp. 2, 1,005 nursery pigs (initially 14.1 kg BW) were used in a 28-d trial with 26 to 28 pigs per pen and 6 pens per treatment. Pigs fed from the narrow feeder adjustment had decreased (P <0.05) ADG and ADFI compared with pigs fed from the wide adjustment with no differences in G:F. Pigs fed the meal diet had decreased (P < 0.05) ADG compared with pigs fed poor-quality or screened pellets. Pigs fed meal or poor-quality pellets had decreased (P < 0.05) G:F compared with pigs fed screened pellets. In Exp. 3, 246 pigs (initially 56.8 kg BW) were used in a 69-d trial with 5

pens per treatment and 6 or 7 pigs per pen. Overall, ADFI decreased ($P < 0.05$) and G:F increased ($P < 0.05$) for pigs fed from the narrow adjusted feeders compared with the wide adjustment with no differences in ADG. Overall, pigs fed meal diets tended to have decreased ($P < 0.10$) ADG and had decreased ($P < 0.05$) G:F compared with pigs fed screened pellets; ADG and G:F in those fed poor-quality pellets were intermediate. Feeding meal or poor-quality pellets increased ($P < 0.05$) ADFI compared with pigs fed screened pellets. In conclusion, feeding nursery pigs from a wide feeder gap may increase ADG and ADFI with no negative effects on G:F. For finishing pigs, reducing feeder gap reduced feed disappearance and improved G:F. In all experiments, the greatest G:F improvements from pelleting were observed when the percentage of fines was minimized.