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Comparison of artificial insemination with natural mating on smallholder farms in Thailand, and the effects of boar stimulation and distance of semen delivery on sow reproductive performance. *Tropical Animal Health and Production, Vol. 42, Issue 5*

Abstract

Following the implementation of artificial insemination (AI) services for smallholder pig farms, we investigated the reproductive performance after AI and its influencing factors. A small-scale boar station with an AI lab was established with two active boars having good genetics and free from reproductive diseases. Individual sow cards were used for reproductive data recording. A total of 171 sows on 92 farms situated within a radius of 50 km from the AI center were included in this study. Sows bred by AI (
n
?=?121) were inseminated twice per estrus by two trained inseminators. A further 50 sows were mated by natural services using local rental boars. The impact of boar stimulation and distance from the AI center to the farm were also determined. Non-return (
P?=?
0.02) and farrowing rates (
P?=?
0.03) were higher for AI than for naturally bred sows (84.0% and 76.0% vs. 74.0% and 70.0% for AI and naturally bred, respectively). For sows bred by AI, boar stimulation increased non-return rate (84.1% vs. 70.0%;
P?=?
0.09), farrowing rate (83.7% vs. 69.2%;
P?=?
0.01) and litter size (11.2?±?2.3 vs. 9.7?±?1.7;
P
? <?0.01). There was no effect on performance due to distance of semen transport. These results clearly indicate that sow performance on smallholder farms will improve if AI is utilized and boar stimulation is employed.

Keywords Smallholder farms - Reproductive performance - Artificial insemination - Natural mating

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