

Hydro Birth: A Prospective Farm Technology

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Abstract

This article describes water birth as a particular agrotechnological subject for research and practice in modern animal agriculture. In view of the rising challenges concerning reproduction and health of livestock, water birth could provide opportunities to tackle at least some of the problems, especially those stemming from dystocia and other environmental stressors. Future research is required for water birth to prove as a promising practice on commercial farms.

Keywords: Water birth; Ruminant; Health; Agrotechnology

Philosophy and Application

Modern animal farming encounters various challenges towards sustainability and profitability [1-3]. Many of the current diseases and related abnormalities in ruminants originate from parturition difficulties that in many ways challenge animal's immunity and health. Reproductive failures, metritis, mastitis, and deficient immune function are amongst the most significant consequences of dystocia or calving difficulty in dairy cows, for instance. Thus, water birth or underwater preparation for parturition comes to play a critical role in minimizing parturition challenges and pains.

Water birth has been a matter of debate in human physiology and medicine [4-10]. Despite the potential benefits and risks, the concept has not been scientifically matured and globalized towards practical applications and specialized guidelines. Possible benefits, although debatable, of water birth include providing a comfortable watery position with some sedative effects for mother. Water immersion could decrease releasing several stress/anxiety related compounds and hormones. An extensive comparison of immersion during the first stage of labor and regional analgesia revealed that water immersion was fitting, relaxing, and side effect-free. In addition, risks of trauma or anaesthesia problems are minimized. Based on these results, a conclusion may be made that water immersion at least during the first stage of labor is healthy technology for acting as analgesia during parturition [6]. In addition, water birth provides a healthy and secure environment for maternal perineal region, potentially reducing risks from tearing and episiotomy [7]. Furthermore, water immersion during the first stage of birth could reduce the need for epidurals.

Based on a recent review, water immersion for the first stage of labor may decrease the first stage duration, labor pains, and analgesia (epidural/spinal) uses. Water preparation may also lower cesarean delivery rate and problems post-delivery. Water immersion during labor could not find increasing infections in both the mother and the neonate [6]. A joint statement issued by the British Royal College of Obstetricians and Gynaecologists and the Royal College of Midwives supports water birth for normal and healthy women with easy and

unproblematic pregnancies. However, that does not recommend water birth to cases where complications exist [8].

In light of the above descriptions, water birth as a new agrotechnological opportunity for research and potential practice holds promises for the modern animal industry. Well-designed extensive studies will allow the concept to be critically evaluated towards general and special uses on animal farms. Several important issues including optimal designing of birth pools need to be appraised before water birth may be considered practical in modern animal farming.

Implications

Water birth or water immersion for at least the first stage of labor is described as a capacious agro technological prospect for research and potential practice on commercial farms. Apart from economy and sustainability, water birth has important implications concerning animal rights, welfare, and health.

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