

Prof. Dr. drh. Wasmen Manalu: Superovulation Technology Boosts Livestock Productivity Tuesday, May 26, 2015

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Livestock productivity is highly dependent on the successful reproduction of the parent animal to produce healthy, strong, and resilient young that grow well from birth to weaning period and adulthood. Constraints faced by the animal farm in Indonesia is the impact of heat stress on the decreased reproductive process, making the development of prenatal growth of the embryo and fetus not optimum.

Available pregnancy hormones during the period of gestation is instrumental in the success of producing healthy and strong offspring. Further, the concentration of progesterone, estrogen and growth hormone as well as other growth factors associated with pregnancy very clearly improves and maintains the pregnancy itself. Injection of exogenous gonadotropins has been shown to increase the secretion of endogenous pregnancy hormones through the improved follicles developing up to ovulation.

A study conducted Prof. Dr. drh. Wasmen Manalu, Professor of the Faculty of Veterinary Medicine, Bogor Agricultural University (IPB) managed to improve the hormonal condition of the parents during pregnancy by injecting gonadotropin before mating. In a press conference held in Exlounge Room, Baranangsiang campus of IPB Bogor (21/5), Prof Wasmen said the increased secretion of endogenous pregnancy hormones fixes the uterus and placenta growth as well as the growth and development of the embryo and fetus of sheep, goats, pigs and cows.

"The end result can improve birth weight and growth of offspring after birth. Increased secretion of the parent's hormone drastically improved the growth and development of the mammary gland during pregnancy, which ultimately improves the parent's milk production. The period of lactation on sheep improved up to 59 percent, on a dairy PE goats by 32 percent and on dairy cows by 33 percent," he said.

The final effects of the increased birth weight and mother's milk production are improved growth, health, and survival of the kids up to post weaning. Piglets born by the parent treated with superovulation have much better gain of body weight, reaching the slaughter weight (95 kg) two weeks faster than the control, with a good carcass quality.

Application of superovulation in goats and sheep in a small-scale farms also shows excellent results, namely increased productivity of kids at the weaning age nearly doubled in superovulated parent. The goats reared off without additional feeding in Kupang Regency also show good growth of kids, with the difference in weight at the age of seven months accounting for four kilograms.

This study concludes that the follicles in the female animal ovarium is greatly potential for use as a source of key hormones that improve the process of gestation to produce superior, healthy, and strong kids with better survival. In fact, this technique is potential for development

in human to generate healthy, intelligent and noble future generation. (Mtd)