Sponsors

University of Minnesota
College of Veterinary Medicine
College of Agricultural, Food and Environmental Sciences
Extension Service
Swine Center

Production Assistants
Steven Claas
Lynn Leary

Layout
David Brown

Logo Design
Ruth Cronje, and Jan Swanson;
based on the original design by Dr. Robert Dunlop

The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, or sexual orientation.

2005 Allen D. Leman Swine Conference
Physiological effects and semen quality changes in boars treated with PGF$_2\alpha$.  
de Grau AF DVM DVSc $^1$, Ruiz A DVM $^2$, Wilson ME PhD $^3$, Friendship RM DVM MSc  
Dip ABVP $^2$, Ward JH BSc $^1$, Rozeboom, KJ PhD $^3$  
$^1$ Minitube Canada, Ingersoll, Ontario.  
$^2$ University of Guelph, Guelph, Ontario  
$^3$ Minitube of America, Madison, Wisconsin.

Introduction  
Prostaglandin-F$_2\alpha$ (PGF$_2\alpha$) has been suggested to facilitate training of sexually active boars to mount artificial sows for semen collection, the use in boars is considered off level. 32 boars from a University boar stud were treated with PGF$_2\alpha$ to determine: Treatments required before mounting, side effects, minimum and maximum dose testosterone levels, semen quality changes, long-term effects post-treatment. Blood samples were taken after treatment to measure Testosterone peak levels, time of onset, response and duration. Semen collections were evaluated for volume, concentration, and total number of cells, motility and progressive motility using Spermvison® at 1, 7, 14 and 21 days post treatment. Data analysed performing regression models utilizing the backwards elimination in Statistix®.

Results  
On average 1.6 treatments were required to jump the phantom sow within 8-10 minutes. Erythema, pruritus, itching, fever, urination, and defecation observed at 5 mg, abdominal muscle spasms, tail movements, increased vocalization, and salivation at 10 mg. And vomit in at 20 mg, 10 % of the boars showed increase irritability and aggression towards the dummy and collectors. Testosterone levels rose within 10 min, peak in 30 min and wane within 60 min. Testosterone level remain unchanged for boars with < 20 nmol/L pre-treatment regardless of dose applied. The ejaculation volume increased (P<0.001) but no effects in concentration, total cells nor motilities at collection, 7, 14 or 21 days post-treatment (P> 0.1).

Implications  
Administration of PGF$_2\alpha$ (Lutalyse®) has often been used to aid the libido and desire of the boar to jump the dummy during training. Boars with poor libido have a correlation with low Testosterone blood levels, there is little effect of PGF$_2\alpha$ in these boars, long term use of the PGF$_2\alpha$ should be discouraged and is un-necessary and the product only should be used after a prescription is written by a licensed veterinarian.