



A159E Folliculogenesis, oogenesis, and superovulation

Retrospective analysis of superstimulation with Folltropin®-V in Wagyu versus other beef breeds

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The demand for Wagyu cattle, which originate from the Kobe region of Japan, is growing in many countries. Nevertheless, Wagyu remains an exotic breed in many places and questions persist in relation to the most efficacious superstimulation protocols. The data in this retrospective study were collected from 2012-2018 at the OvaGenix® (Texas) facilities. A total of 792 donors were collected while under direct care of OvaGenix® and were of the following *Bos taurus* and *Bos indicus* breeds: Angus (AN; n = 120), Beefmaster (BM; n = 139), Brangus (BN; n = 207), Charolais (CH; n = 76), Hereford (HH; n = 45), Wagyu (KB; n = 99), and Red Brangus (RB; n = 106). The superstimulation protocol was the same for all donors and began with insertion of an Eazi-Breed™ CIDR® (Zoetis, Parsippany, USA) on Day 0. An injection (i.m., 100 mcg) of GnRH (Cystorelin®, Merial, Duluth, USA) was administered on Day 2, followed by 7 AM/PM injections (i.m.) of decreasing doses of pFSH (Folltropin®-V, Vetoquinol, Fort Worth, USA) on Days 4-7 and prostaglandin F₂α (i.m., 500 mcg, Estrumate, Merck Animal Health, Madison, USA) in the AM of Days 6-7. After CIDR® retrieval on Day 7, GnRH was injected in the AM of Day 8 and donors were artificially inseminated with frozen/thawed semen the PM of Day 8 and AM of Day 9. Embryos were collected on Day 14 (Day 6 from GnRH). Data from the embryo collections was analyzed with an ANOVA and Tukey's test to compare breed effect with P < 0.05 considered significant. The data indicate that KB donors produce numbers of total ova (number of ova produced by superstimulation) and viable embryos that are comparable to other breeds using the above defined superstimulation protocol. Indeed, KB donors produced more total ova than AN (16.6 ± 1.1 versus 11.4 ± 0.7) and more viable embryos per collection than AN and CH (9.1 ± 0.7, 4.1 ± 0.4, 5.6 ± 0.6, respectively). The BM, BN, RB, and HH donors produced similar numbers of total ova and viable embryos when compared to KB donors. Wagyu donors were also similar to other breeds for the percentage of donors with no ovarian response (5.0%) and donors with no viable embryos (9.0%). It is acknowledged that virtually every other beef and dairy breed responds well to Folltropin®-V and these data indicate that KB donors can also be effectively superstimulated with Folltropin®-V using a similar protocol to other beef breeds. Moreover, these data are similar to mean viable embryo numbers that are audited and published yearly by various national and international embryo transfer associations.