

VitaFerm® Concept•Aid®

REPRODUCTIVE SUCCESS REPORT

SEPTEMBER 2017

OBJECTIVE

The objective of the VitaFerm® Concept•Aid® Reproductive Success Report is to quantify the impact of the Concept•Aid line with the Amaferm® advantage on reproductive success in purebred and commercial beef cattle herds.

METHODS

Breeding, pregnancy, calving and weaning data were collected from ranches across the United States utilizing Concept•Aid products in their breeding operation and compared to industry averages previously reported by external researchers (see Sources).

SUMMARY OF RESULTS

DESCRIPTION OF PARTICIPATING BREEDING OPERATIONS

Data points were collected from 16 different ranches representing 9 states and 5 breeds of purebred cattle as well as commercial beef cattle. Statistics were collected to describe how the breeding operations were managed and indicate the majority of animals were bred via natural service (see Table 1).

TABLE 1. CONCEPT•AID DATABASE STATISTICS

| | |
|---------------------------------|-------|
| Number of Animals | 4,934 |
| Percent artificial insemination | 27.4% |
| Percent natural service | 72.6% |
| Percent cows | 72.9% |
| Percent replacement heifers | 13.3% |
| Percent 2-year-olds | 13.7% |

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IMPACT ON PREGNANCY RATE

Across all ranches sampled, cows and heifers fed Concept•Aid® during conception had an average pregnancy rate of 94.0% with a standard deviation of 3.2%. Pregnancy rates from both northern and southern parts of the United States as well the national Cow Herd Appraisal Performance Software (CHAPS) benchmarks are reported for comparative purposes (Figure 1). Reported values from all of these sources were averaged to represent a national mean. When compared to this national average, the Concept•Aid pregnancy rate shows enhanced reproductive success (Figure 2). The average pregnancy rates are presented in Figure 1.

Figure 1. Average pregnancy rate in externally publicized cow-calf reproduction reports.

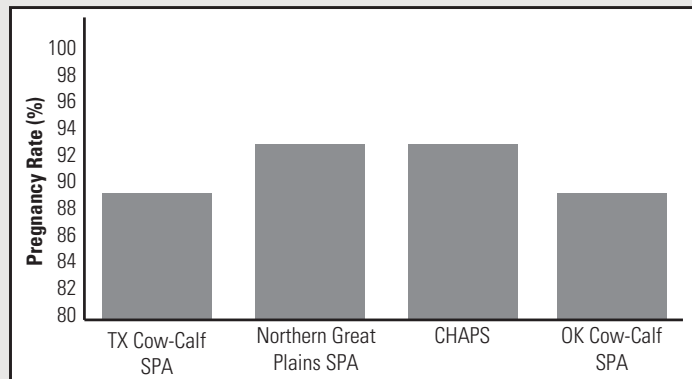
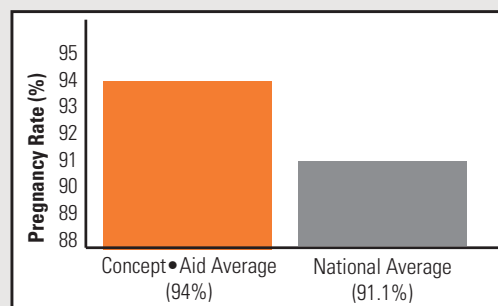
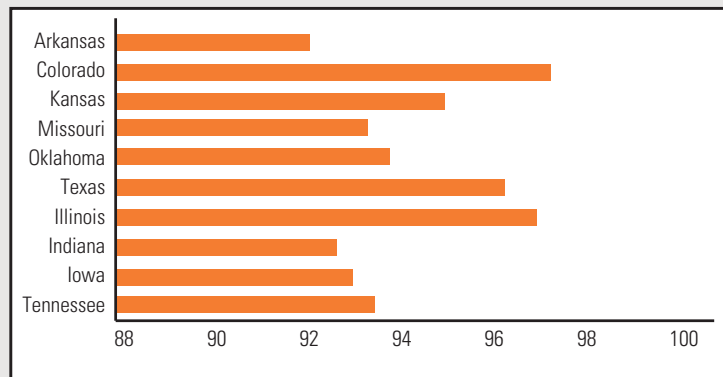


Figure 2. National average pregnancy rate (from external sources) compared to Concept•Aid average pregnancy rate.



Average pregnancy rates by state are reported in Figure 3. When specific regions are compared, even greater success is seen in Concept•Aid pregnancy rates. For example, the Texas cow-calf standardized performance analysis (SPA) reports a pregnancy rate of 88.8%, but of the 1,700 cows bred in Texas and reported to the Concept•Aid database, the pregnancy rate is 96.2%. Similarly, in Oklahoma the SPA reported an average pregnancy rate of 89.4%. The average pregnancy rate of cows in Oklahoma in the Concept•Aid database is 93.8%. These statistics further demonstrate enhanced reproductive success using Concept•Aid with Amaferm® in purebred and commercial cow-calf operations.

Figure 3. Average pregnancy rate by state represented in the Concept•Aid database.



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IMPACT ON CALVING

The number of calves born was reported from 8 of the participating ranches. These ranches reported 1,940 cows bred, 1,843 pregnancies and 1,828 calves with an average calving percentage of approximately 93.6% (standard deviation 4.1%). Figure 4 shows how this calving percentage compares to the calving percentage from external sources. Comparing the national average of these external sources to the Concept•Aid® average continues to indicate increased reproductive success in cows and heifers fed the Concept•Aid line (Figure 5).

Figure 4. Average calving percentage in externally publicized cow-calf reproduction reports.

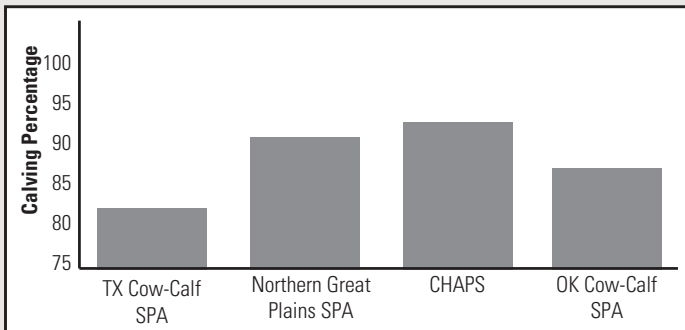
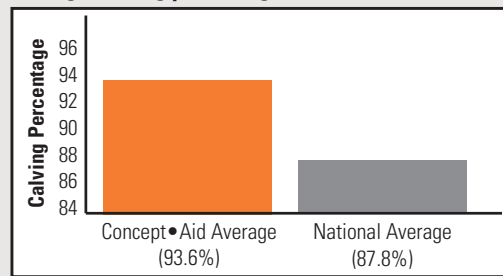


Figure 5. National average calving percentage (from external sources) compared to Concept•Aid average calving percentage.



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IMPACT ON WEANING WEIGHT

Average weaning weights were also provided from both purebred and commercial producers for 2,830 calves, 50.6% of which were males. Male calves were weaned at an average age of 198.5 days and had an average weaning weight of 605.1 pounds. Female calves were weaned at an average age of 199.6 days and had an average weaning weight of 576.7 pounds. Across sexes, the average weaning weight was 590.9 pounds with a standard deviation of 90.1 pounds. Compared to the same external data sources as pregnancy and calving rates, calves from cows and heifers fed Concept•Aid® products show substantially higher average weaning weights (Figures 6-7). These data demonstrate how increased nutrient digestion and absorption, provided in Concept•Aid through the Amaferm® advantage, leads to healthier and heavier calves.

Figure 6. Average weaning weight in externally publicized cow-calf reproduction reports.

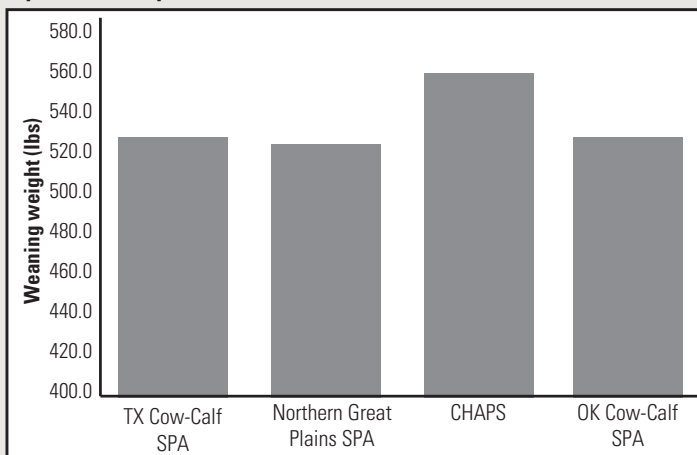
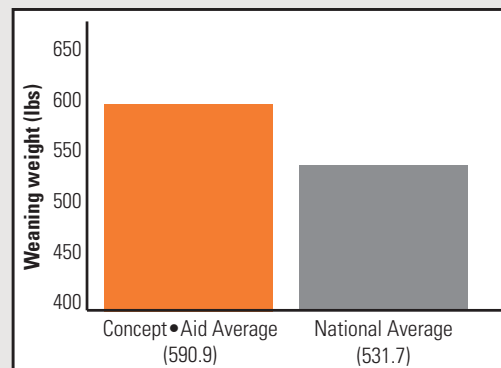


Figure 7. National average weaning weight (from external sources) compared to Concept•Aid average weaning weight.



SOURCES

1. Texas Cow-Calf SPA (2012) via <http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-7350/AGEC-222web2014.pdf>
2. Northern Great Plains (South Dakota, Nebraska, Montana, Minnesota, Iowa, Kansas, Wyoming, and North Dakota) SPA (2003-2009) via <https://www.sdstate.edu/sites/default/files/ars/species/beef/beef-reports/upload/2003-09-Characterization-of-the-Beef-Cow-calf-Enterprise-of-the-Northern-Great-Plains.pdf>
3. CHAPS (2010-2014) via <http://www.chaps2000.com/benchmarks.htm>
4. Oklahoma Cow-Calf SPA (2004-2010) via <http://agrilife.org/agrisk/files/2012/07/OK-Key-Measures-Summary.pdf>