

RESEARCH SUMMARY

Evaluating the impact of FurstSTRIKE™ and Carbadox on growth performance and livability under an *E.coli* challenge in the nursery.



BACKGROUND

McNess has developed several nutritional supplements for feed and water to give pigs the best chance to perform and maintain good health. FurstSTRIKE (feed form) or FurstSTRIKE Direct™ (water form) have been shown in trials¹ to support livability and performance through supporting nutrient and water intake. Collaborative research with Iowa State University conducted with FurstSTRIKE showed benefits in nursery as well as benefits that carried over into finishing.

The goal is to develop a feed and water approach that can be used in combination to support pig performance. Recent research with FurstSTRIKE Direct has shown beneficial impacts on performance, including survivability and feed efficiency during challenges and during 'standard health' live production environments.²⁻⁴ In this trial we evaluated the impact of FurstSTRIKE on growth performance and livability under conditions involving an *E. coli* challenge.

BACKGROUND ON PIGS

- 1,008 DNA-sired weaned pigs (initial BW: 12.6 ± 0.3 lb) sourced from PRRS-negative sow herds
- 36 pens (28 pigs/pen; mixed sex) under commercial wean to finish conditions at McNess Research Center. The trial consisted of a 42-d nursery period.
- On day 10, a 109 CFU inoculum of *E. coli* (a genotype that is susceptible to F18 with a toxin profile that produces EAST1, LT, STb, STx2, and STx2e) was sprayed in each pen as part of the unsanitary environment model, with 5 mL sprayed on the cup waterer, 10 mL on the feeder and 5 mL on the pigs directly.
- On day 24, the trial barn tested positive for Influenza A. Pigs were NOT given any antibiotics through feed or water.

TREATMENTS:

3-phase nursery diet; Zinc oxide was included in N1 and N2 on all treatments

1. Treatment 1, - Negative Control, No Medication
2. Treatment 2, - Positive Control, Carbadox level at 25 g/ton
3. Treatment 3, - FurstSTRIKE at 5 lbs/ton of complete feed

RESULTS

FIGURE 1:

Body Weight, lbs.

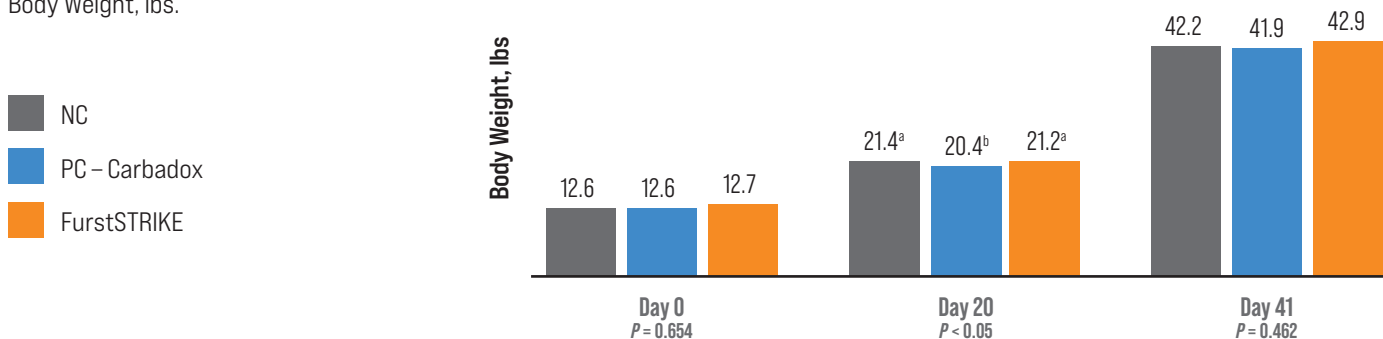


FIGURE 2:
Feed Conversion Ratio (FCR)

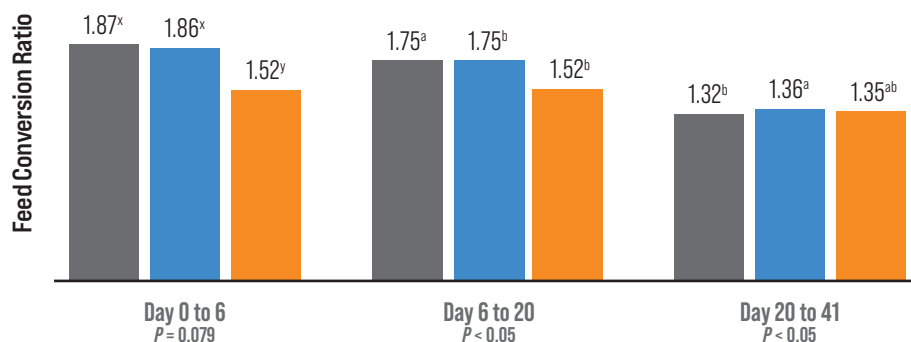
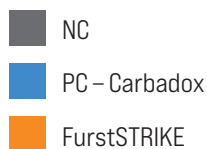
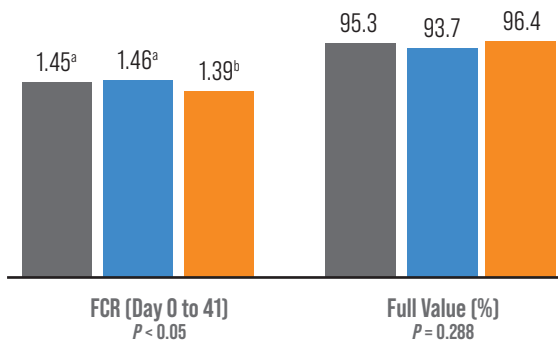
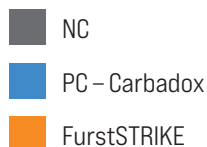


FIGURE 3:
Overall FCR and Full value (%)



RESEARCH SUMMARY

- **1 lb increase in Final body weight from FurstSTRIKE** compared to Carbadox
- **5% improvement in Feed efficiency from FurstSTRIKE** compared to Control or Carbadox
- **3% improvement in Full value (%) from FurstSTRIKE** compared to Carbadox



FURSTSTRIKE™

¹ Crome, T. A., N. K. Gabler, G. A. Hartsook, P. Aparachita, S. J. England, W. B. Kwon and F. Sandberg. 2025. Evaluation of the effect of different doses of an organic acid and monoglyceride blend (FurstSTRIKE) on nursery and finisher growth performance parameters. Oral presentation at the *American Society of Animal Science Midwest Section Meeting*.

² Kwon, W. B., G. A. Hartsook, K. T. Soltwedel, R. L. Fischer and F. B. Sandberg. 2023. Evaluation of a novel nutritional supplement (Furst Protect Direct) via drinking water on growth performance in nursery pigs. *Journal of Animal Science* 101 [E-Suppl. 2]:306-307.

³ Kwon, W. B., G. A. Hartsook, P. Aparachita, K. T. Soltwedel, R. L. Fischer and F. B. Sandberg. 2024. Effectiveness of using a novel water-soluble nutritional supplement (FurstSTRIKE Direct) on recovery and survivability of grow-finisher pigs under a lateral influenza and PRRS 144 LTC challenge. In: *Proceedings of 50th Allen D. Leman Swine Conference*, St. Paul, MN.

⁴ Sandberg, F. B., K. T. Soltwedel, R. L. Fischer and W. B. Kwon. 2023. Effects of FurstSTRIKE Direct on mortality and injectable treatments in nursery pigs. In: *Proceedings of the AASV 54th Annual Meeting*, Denver, CO.

⁵ Sandberg F. B., S. J. England, K. T. Soltwedel, P. Aparachita, R. L. Fischer, G. A. Hartsook and W. B. Kwon. 2024. Impact of a nutritional water supplement on nursery mortality as determined by different statistical methods and consequences for on-farm application of technology. *Journal of Animal Science* 102 [E-Suppl. 2]:9-10.