



# NUTRITION NOTES

Innovation + Research from Kent Nutrition Group

JULY 2, 2018

## SUPPLEMENTAL NUTRIVANTAGE® HYDRA IN WEANLING PIGS: EFFECT ON PERFORMANCE AND ECONOMICS

Michael Edmonds, Ph.D., Vice President, Swine and Poultry Nutrition

NutriVantage Hydra is a highly refined, flavored and soluble nutritional premix that may help the gut and immune system of pigs, especially during times of stress. NutriVantage Hydra contains fresh water humic acid (a source of nutrient rich carbon) that can help support the immune system. Vitamin C is also included that is a key antioxidant that can help improve performance in stressed pigs. In addition, Maltodextrin (Maltrin® M100, Grain Processing Corporation) is also added that is a carbohydrate derived from corn starch. In the trial shown below (Table 1) with early weaned pigs (20 days old), we used NutriVantage Hydra at 2 ounces in 1 gallon of water to make a stock solution which was run through a medicator or proportioner set at 1:128. This nutritional supplement was used when the pigs arrived at the Kent Product Development Center (PDC) for the first 9 days on test. After the 9 day period, all pigs received plain water for the remaining 24 days on test. The pigs were fed Kent Nutrition Group's NexGen grind and mix diets in 3 stages (Days 0-9, 9-19 and 19-33).

**Table 1. Effect of NutriVantage® Hydra (Used During Days 0-9)  
on Performance and Economics in Weanling Pigs**

Group	1	2
NutriVantage Hydra		✓
Number of Pigs	240	240
Number of Pens	30	30
Initial Weight, lb	12.12	12.09
<b>Days 0-9</b>		
ADG, lb	.167	.176
F/G	2.300	2.200
Cost/lb Gain, ¢	69.74	66.71
Net Return, \$/Pig @ 80¢/lb Live Weight	.23	.31
Cost of water treatment/pig1, \$	0.00	0.05
Adjusted Net Return/pig	.23	.26
<b>Days 9-19</b>		
ADGa, lb	.726	.775
F/Ga	1.147	1.115
Cost/lb Gain <sup>a</sup> , ¢	19.71	19.15
<b>Days 0-33</b>		
ADG, lb	.699	.714
F/G	1.413	1.399
Cost/lb Gain, ¢	22.02	21.82
Net Return, \$/Pig@ 60¢/lb Live Weight	8.78	9.00
Cost of water treatment/pig, \$	0.00	0.05
Adjusted Net Return/pig	8.78	8.95

KNG 4N-68; <sup>a</sup>NutriVantage Hydra effect ( $P \leq .07$ )

<sup>1</sup>\$94/2.5 lb pail = \$4.70/2 oz serving of NutriVantage Hydra; \$4.70/128 gallons = \$0.0367 per gallon of water consumed

continued

KENT NUTRITION GROUP





## NUTRITION NOTES (continued)

---

During Days 0-9, there were very small numerical advantages to using NutriVantage Hydra during the first 9 days post-weaning. Pig performance during this stage was not good, with slow gains and high feed efficiencies, but after this stage, pig performance improved quite dramatically. After taking out the expense of \$0.05 per pig for the NutriVantage Hydra, the adjusted net return per pig was \$0.03 in favor of the pigs on NutriVantage Hydra compared to those on water without any supplementation.

During the next stage (Days 9-19), when both groups of pigs were on water alone, the pigs previously on NutriVantage Hydra had a faster gain (6.7%), an improved feed efficiency (2.8%) and a lower feed cost of gain (- 0.56¢) compared to those previously on water only. The overall data (Days 0-33) showed very small numerical advantages in performance in which the pigs previously on the NutriVantage Hydra weighed about half a pound more than those on water alone. This increase in weight along with slight improvements in feed cost of gain resulted in an adjusted net return (after subtracting out the \$0.05/pig for the NutriVantage Hydra) of \$0.17 per pig in favor of those previously on NutriVantage Hydra. The adjusted net return is defined as the value of gain (using 60¢/lb for Days 0-34) minus the feed cost for the gain, minus the cost of the NutriVantage Hydra.

In this trial, the health status of the pigs was good in that there were only four dead pigs for each group of 240 pigs. In addition, there were only three “no value pigs” in each group (defined as a very unhealthy and small pig that likely would not become a marketable hog). Yet in these healthy pigs, we observed small numerical advantages in performance that paid for the investment of 5¢ per pig for the NutriVantage Hydra in this trial. As covered in the introduction, NutriVantage Hydra contains a proprietary source of fresh water humic acid that may help the immune system, along with supplementary Vitamin C that can help performance of pigs under stress based on research trials at the Kent Product Development Center (PDC). These natural ingredients have been extensively evaluated and reviewed in the scientific literature. Moreover, we have conducted many trials at the Kent PDC with these two ingredients to further our understanding of how they may help pigs and poultry.

### **BOTTOM LINE:**

Using a natural and efficient delivery system with KNG's NutriVantage Hydra, via water proportioners, has potential for positive performance and economic returns.