



NUTRITION NOTES

Innovation + Research from Kent Nutrition Group

JANUARY 1, 2018

EVALUATION OF SUPPLEMENTAL HYDRAVANTAGE® IN SEW PIGS: EFFECT ON PERFORMANCE AND ECONOMICS

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

HydraVantage is a highly refined, flavored, soluble nutritional premix that can help the gut and immune system of pigs, especially during times of stress. HydraVantage contains fresh water humic acid (a source of nutrient-rich carbon) that can help support the immune system. It also contains butyric acid that provides energy to intestinal cells and Vitamin C that is a key antioxidant that can help improve performance in stressed pigs. In the trial shown (Table 1) below with SEW pigs (20 days old), we used HydraVantage 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 for the entire 34 days on test. The reason for keeping HydraVantage in the water was due to the fact that the pigs developed a lower health status after the first week so we decided to maintain this natural product in the water throughout this test. The pigs were fed KNG NexGen grind and mix diets in 3 stages (Days 0-11, 11-20 and 20-34).

Table 1.
Effect of HydraVantage® (Used for 34 days) on Performance and Economics in Weanling Pigs (Days 0-20)

Group	1	2
HydraVantage		✓
# Pens	28	28
In. Wt., lb	13.29	13.10
Days 0-11		
ADG, lb	.288	.269
F/G	1.628	1.589
Cost/lb Gain, ¢	52.32	51.06
Net Return, \$/Pig @ 80¢/lb Live Weight	.93	.92
Cost of water treatment/pig ¹ , \$	0.0	.09
Adjusted Net Return/pig	.93	.83
Death Loss, %	2.03	2.03
Days 11-20		
ADG, lb	.713	.735
F/G	1.308	1.271
Cost/lb Gain, ¢	21.99	21.37
Death Loss, %	4.11	3.06

KNG 4N-65

¹\$156/3 lb pail = \$6.50/2 oz serving of HydraVantage; \$6.50/128 gallons = \$0.05 per gallon of water consumed

There were no performance differences between the two groups on test during the first 20 days. The HydraVantage supplementation cost 9 cents/pig during Days 0-11.

continued

KENT NUTRITION GROUP





Table 2.
Effect of HydraVantage® (used for 34 days) on Performance and Economics in Weanling Pigs (Days 20-34 & 0-34)

Group	1	2
HydraVantage		✓
# Pens	28	28
In. Wt., lb	13.29	13.10
Days 20-34		
ADG, lb	.794	.805
F/G	1.590	1.566
Cost/lb Gain, ¢	20.68	20.37
Death Loss ^a , %	10.72	5.64
Days 0-34		
ADG, lb	.598	.602
F/G	1.506	1.462
Cost/lb Gain ^a , ¢	25.93	24.81
Net Return, \$/Pig@ 60¢/lb Live Weight	7.07	7.34
Cost of water treatment/pig ¹ , \$	-	.53
Adjusted Net Return/pig	7.07	6.81
Death Loss, %	16.86	10.73

KNG 4N-6S; ^a HydraVantage effect ($P \leq .06$)

¹ \$156/3 lb pail = \$6.50/2 oz serving of HydraVantage; \$6.50/128 gallons = \$0.05 per gallon of water consumed

Feed cost of gain for Days 0-34 was decreased ($P \leq .06$) by roughly one cent for pigs supplemented with HydraVantage for the entire test. Moreover, we observed a 47% decrease ($P \leq .06$) in death loss from supplemental HydraVantage during Days 20-34 as well as a 36% decrease ($P \leq .06$) in death loss during Days 0-34. Using HydraVantage during the entire 34 days resulted in a cost per pig of \$0.53. We learned from this trial that using HydraVantage at 2 ounces/gallon of stock solution resulted in very small numerical improvements in performance throughout the entire 34 days.

In Table 3, is an illustration showing the economic losses (does not account for any feed expenses) that occur from these differences in death losses when applied to a commercial unit. In addition, we also had data on “no value pigs” that were very unhealthy and small and likely not going to become a marketable hog. With an investment of \$0.53/pig using HydraVantage for 34 days the cost would be \$636. Based on the data in Table 3, we would save \$4,116 since we had more pigs on the HydraVantage group. Thus, we would have an economic advantage to the producer of \$3,480 (\$4,116 - \$636) which is a very positive return on investment in using this proprietary natural product. These data are similar to the Nutrition Note from May 5, 2016 in which we also observed positive data by supplementing HydraVantage for 11 to 21 days in weanling pigs with a lower health status.

Table 3.
Impact of Death Loss and No Value Pigs in a 1200 head Nursery Unit

Group	1	2
HydraVantage		✓
Death Loss, %	16.86	10.73
No Value Pigs, %	5.10	3.06
Death Loss and No Value Pigs, %	21.96	13.79
Number of Dead and No Value Pigs	264	166
Economic Loss at \$42/SEW Pig	-\$11,067	-\$6,951

BOTTOM LINE

Using an effective and quick delivery system with HydraVantage, via water proportioners, may help pigs perform better during periods of stress which has the potential for positive economic results.