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## Effects of Various Water Medications on Performance and Feed and Water Consumption by Pigs Weaned at 3 or 4 Weeks of Age

Gary L. Allee and Dave Schoneweis

### Summary

Two trials using 216 pigs were conducted to evaluate effects various water medications have on performance and feed and water consumption by pigs weaned at 3 and 4 weeks of age. Water medication had no effect on pig performance. Pigs weaned at 3 weeks of age consumed an average of 0.8 quart of water per day for the first five days after weaning, compared with an average of 1.1 quarts per day by those weaned at 4 weeks of age. Adding syrup (500 ml/5 gallon) doubled the water consumption of both groups. Water medications did not reduce water consumption.

### Introduction

Pigs weaned at three to four weeks of age consume little feed the first few days after being weaned. Diarrhea often is a problem during this time even when the feed contains a high level of antibacterial fortification; the actual intake of the drug is minimal because they eat so little feed. Medicating the water appears to be a better way to get sufficient intake of an antibacterial into the young pig immediately after weaning. One of the problems with water medication is the limited information on water consumption of pigs for the first few days after weaning.

The objectives of these studies were to measure water consumption of pigs weaned at 3 and 4 weeks of age for 5 days after weaning, and to study effects of various antibacterials and electrolytes on water consumption, feed consumption, and performance of pigs immediately after weaning.

### Procedures

Two trials using 216 pigs were conducted. Pigs were removed from the sows, weighed, allotted to treatments based on litter, sex, and initial weight and moved to the nursery. Water was provided to each pen from a 25-gallon barrel equipped with a gravity flow watering cup. Water consumption was measured every 24 hours for five days. Each pen contained a self-feeder and a conventional starter feed containing 100 grams of sulfamethazine, 100 grams of chlortetracycline, and 50 grams of penicillin per ton was offered ad libitum. Weight change and feed consumption was determined 5 and 12 days after weaning.

In Trial I, 108 crossbred pigs averaging 28 days of age and 14.1 pounds were assigned to 12 pens representing three replications of four dietary treatments:

- A. Nonmedicated water.
- B. Albon (Sulfadimethoxime) one packet (94.6 g of sulfadimethoxime) added to five liters of water. Five hundred milliliters of this solution was added to five gallons of water.
- C. Electrolytes plus 9.6 grams of sodium arsenate per ounce. Ten ounces were mixed with 5 liters of water. Five hundred milliliters of this solution was added to 5 gallons of water. Syrup (Karo white) was added at 500 ml per five gallons of water.
- D. Biosol (Neomycin sulfate) added at 400 mg of neomycin sulfate per 5 gallons of water.

In Trial II, 108 Yorkshire pigs averaging 21 days of age and 12.4 pounds were assigned to 12 pens representing three replications of these four treatments:

- A. Nonmedicated water.
- B. Albon (Sulfadimethoxime) at the same concentration used in trial I.
- C. Albon + 500 ml of syrup per 5 gallons of water.
- D. Electrolytes plus sodium arsenate at the same concentration used in trial I.

#### Results and Discussion

Adding medications to the water did not affect gain of the pigs in either trial (tables 8 and 9). The four-week-old pigs used in trial I consumed about 1.1 quarts of water daily compared with 0.8 quarts by the three-week-old pigs used trial II for the first 5 days after weaning. Adding syrup more than doubled water consumption in both trials. In trial I, pigs consuming the electrolytes + syrup ate less feed the first 5 days. In trial II, syrup in the water did not reduce feed consumption.

Feed consumption was very low during the 5 days immediately after weaning with little consumed until days 4 and 5. Water medication did not affect the quantity of feed consumed during 12 days after weaning, nor weight gain or death losses. Diarrhea was not a serious problem in these trials; only one pig of 216 pigs died during the trials.

Table 8. Water Intake, Feed Intake and Performance of Pigs Offered Various Water Medications (Trial I)<sup>a</sup>

Treatments	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
Water medication	None	Albon	Electrolytes + Syrup	Biosol
Avg. daily water consumption (0-5 days, qts.)	1.09	1.09	2.33	1.11
Daily feed consumption 0-5 days (lb.)	.44	.44	.29	.38
Daily feed consumption 0-12 days (lb.)	.62	.61	.59	.59
Avg. gain/pig for 12 days after weaning (lbs.)	4.5	4.3	3.9	4.1
Deaths	0/27	0/27	0/27	0/27

<sup>a</sup>Each value is the mean of three pens of nine pigs each with an average initial weight of 14.1 pounds.

Table 9. Water Intake, Feed Intake and Performance of Pigs Offered Various Water Medications (Trial II)<sup>a</sup>

Treatments	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
Water medication	None	Albon	Albon + Syrup	Electrolytes
Avg. daily water consumption (0-5 days, qts.)	.82	.80	1.74	.79
Daily feed consumption 0-5 days (lb.)	.34	.40	.37	.36
Daily feed consumption 0-12 days (lb.)	.59	.61	.63	.60
Avg. gain/pig for 12 days after weaning (lbs.)	3.8	4.1	3.5	4.3
Deaths	0/27	0/27	0/27	1/27

<sup>a</sup>Each value is the mean of three pens of nine pigs each with an average initial weight of 12.4 pounds.