

## A-MAX Concentrate Research Trial in Swine Nursery Feeds

**Introduction:** Two separate feeding trials were conducted at the University of Kentucky by Dr. Merlin Lindemann to compare the efficacy of two yeast culture products in swine nursery feeds.

**Objective:** To compare a newer yeast culture product, A-MAX™ Concentrate (yeast A), with an existing yeast culture product, Leading Brand (yeast B), that has a history of good performance in swine diets.

**Materials & Methods:** Yeast products are commonly used in swine feeds to promote feed intake and palatability. Therefore, a preference trial was conducted in which pigs were given a choice of feeds. Additionally, a performance trial in which pigs were not offered a choice of diets was conducted to evaluate growth performance. A basal diet was formulated and prepared. Then two treatment diets were prepared by adding each of the yeast products to the basal diet at the rate of 1.0%. The trials lasted for four weeks, with a phase 1 diet being fed the first 2 weeks, and a phase 2 diet fed in weeks 3 and 4. The diets are listed in table 1. Pigs were weaned at an average of 20.7 days and weighed about 16 pounds (7.25 kilos) at the start of the trial.

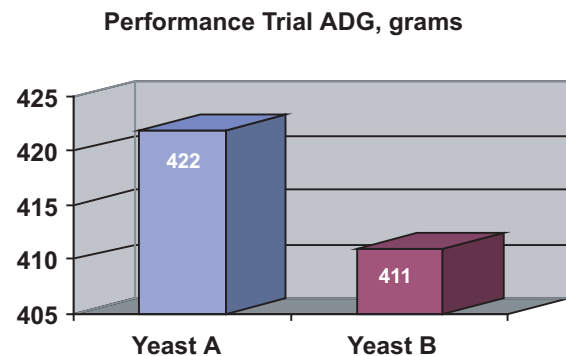
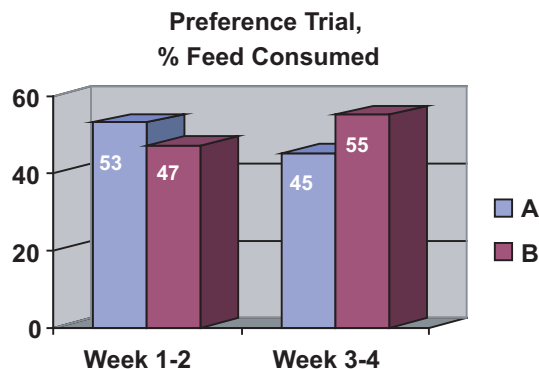
**Preference Trial:** There were 6 pens with 4 to 5 pigs per pen. Each pen was offered two diets, one with yeast A and one with yeast B. The feeder locations were switched 3 times per week to remove any behavioral effects with regard to feed intake in a particular feeder location.

**Performance Trial:** There were 10 pens with 5 pigs per pen. A diet with yeast A was fed to 5 pens, and a diet with yeast B was fed to 5 pens. Pig weight and feed disappearance was measured weekly.

**Preference Trial Results:** Statistical analysis of the data showed no significant differences between the two yeast products. Yeast A showed a slight numerical advantage in phase 1, and yeast B had a slight numerical advantage in phase 2. Three of the six pens with slightly lighter weights showed a stronger preference for the diet with yeast A for the first week of trial. Complete results are shown in table 2.

**Performance Trial Results:** There were no statistical differences between the two yeast products. Feed intake and ADG were similar for both treatments. The diet with yeast A had a numerical advantage in feed/gain in each period, but they were not significant differences. Complete results are shown in tables 3-5.

**Conclusions:** Yeast A, the test yeast product (A-MAX Concentrate), performed equal to Yeast B, the standard yeast product (Leading Brand), in preference and performance in swine nursery feeds.





**Table 1: Basal Diets**

Ingredient	Phase One	Phase Two
Corn	49.7	55.5
Dehulled Soybean Meal	26.0	22.3
Dried Whey	10.0	10.0
Plasma Protein	3.0	0.0
Blood Meal	0.0	2.0
Fish Meal, Menhaden	3.0	2.0
Lactose	4.0	4.0
Choice White Grease	2.0	2.0
Minerals and Vitamins	2.1	2.0
Mecadox	0.25	0.25

Note: Yeast A & B added to basal diets at rate of 1.0%

**Table 2: Results from Preference Trial, percent of feed consumption for each product**

Week	1	1 & 2	3	3 & 4	1 to 4
Yeast A	56.6	53.0	47.9	44.1	47.3
Yeast B	43.4	47.0	52.1	55.9	52.7

**Table 3: Performance Trial ADG, pounds**

Week	Yeast A	Yeast B	P-value
1	0.276	0.311	0.79
1 & 2	0.629	0.622	0.95
3	0.825	0.832	0.92
3 & 4	1.229	1.190	0.58
1 to 4	0.929	0.906	0.79

**Table 4: Performance Trial Daily Feed Intake, pounds**

Week	Yeast A	Yeast B	P-value
1	0.471	0.518	0.71
1 & 2	0.906	0.943	0.78
3	1.312	1.342	0.80
3 & 4	1.825	1.799	0.86
1 to 4	1.366	1.371	0.96

**Table 5: Feed/Gain results from Performance Trial**

Week	Yeast A	Yeast B	P-value
1	1.610	1.663	0.14
1 & 2	1.414	1.515	0.48
3	1.593	1.618	0.47
3 & 4	1.483	1.510	0.60
1 to 4	1.467	1.514	0.30



To learn more contact your nutritionist, veterinarian or Arm & Hammer Animal Nutrition representative.