

Alligator Farming Project

Kris Kohl, field specialist
ISU Extension

Introduction

The project investigated the conversion of swine farrowing house mortalities into value-added products using alligators. Alligator production in the southern states has been a successful farming operation for over 15 years. Production is done in environmentally controlled buildings that have constant, warm temperatures.

Currently, the southern states produce about 500,000 alligators each year; about 80% are farm-raised. Swine producers are facing increased rendering cost because of rising energy costs and diminishing market demand. Alligators can convert the swine mortalities into marketable products of alligator meat and hides.

Alligators need a warm environment and clean water in order to thrive. The building styles and optimum temperatures of commercial alligator buildings are similar to swine nurseries. The big challenge is filtering the water that the alligators live in, to keep it clean and warm.

Materials and Methods

The project at the Western Research Farm has two alligators in a 3 × 8 ft tank in an environmentally controlled room. The temperature of the water is held at

approximately 80°F and the room temperature at 89°F. Inside the alligator pen/tank is an elevated platform that is about one-third the size of the tank. The remaining two-thirds is water. Water is circulated through a gravel filter and an algae filter before returning to the alligator tank.

Nursery piglet mortalities are ground using a meat grinder and are fed to the alligators 5 days/week. Alligators are weighed and measured every two months.

Results and Discussions

The results of the alligator feeding trial are presented in Table 1. The variability in the performance of the alligators is partly due to limited feeding at the end of the summer. Our gains are slightly below the industry standard, which may be due to the lower water temperature of 80°F. As the alligators have grown, their ability to clean up the meat on the platform has diminished. Even though they turn their head sideways to eat, some meat is pushed off the platform and is lost through the filtering system. The project will continue for one more year. We expect that piglet mortality consumption will double in the final year.

Acknowledgments

This project is supported by the Iowa Pork Industry Center.

Table 1. Performance of alligators #1 and #2 during a feeding trial of approximately 12 months.

<u>Date</u>	<u>Alligator length, inches</u>	<u>Weight, lbs</u>	<u>Gain, lbs</u>	<u>Feed conversion</u>
12/12/01	32 (#1)	6	---	---
12/12/01	32 (#2)	6	---	---
02/20/02	38 (#1)	8.6	2.6	2.68
02/20/02	41 (#2)	9.2	3.2	2.68
04/22/02	41 (#1)	10	1.4	4.44
04/22/02	45 (#2)	12.8	3.6	4.44
06/28/02	41 (#1)	13.6	3.6	4.98
06/28/02	45 (#2)	13.6	0.8	4.98
08/19/02	42.4 (#1)	15	1.4	7.25
08/19/02	50 (#2)	20.2	6.6	7.25
10/28/02	46 (#1)	17.2	2.2	12.50
10/28/02	54 (#2)	21.4	1.2	12.50
12/16/02	47(#1)	19.8	2.6	5.40
12/16/02	54 (#2)	24.3	2.9	5.40

Total swine weight consumed = 141.6 lbs

Total weight gain = 32.1 lbs

Overall feed conversion = 4.41 lbs of swine weight consumed/lb of alligator gain.

Average alligator length increase – 18.5 inches.