

# Organic Broiler Chicken Production Trial–Allee Farm

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## Introduction

The Iowa State University Allee Farm is classified as a small conventional grain and livestock operation. Decreasing profit margins for smaller farms have led the Allee Farm into sustainable diversified niche market demonstrations. Five acres of corn were certified organic in 1999 by the Organic Crop Improvement Association. A specialized livestock marketing plan was implemented in June 2000. As a means of adding value to the organic grain, direct market organic broiler chickens were raised. This demonstration will provide knowledge of an integrated farm organic system from a commodity crop to the consumer's plate.

To raise organic grain, no synthetic chemicals, fertilizer or materials can be applied for thirty-six months. The Allee Farm's organic corn, purchased organic soybean meal and premix were processed with an IH 490 grinder/mixer on the farm. Broiler chicken production was chosen for simplicity of organic standards. The chick is organic when it hatches from the egg. The adult hen does not need to be raised organically or to be certified organic.

The ultimate goals were to introduce organic poultry production to the farm system, demonstrate the requirements of organic livestock certification, and compare traditional coop raised birds to an organic pasture environment. The legal requirements of direct-marketing live or processed poultry from the farm were also demonstrated.

## Materials and Methods

Two hundred Cornish Rock broiler chicks were raised in a traditional 10 ft x 12 ft brooder house for three weeks. They were divided into two groups, 100 chickens stayed in the brooder with access to an outside grass pen. The remaining 100 chickens grazed on 2-4 in. high certified organic alfalfa-grass pasture in a 10 ft x 12 ft portable shed (chicken tractor). Daily movement of the chicken-tractor provided fresh forage and a sanitary environment. All were fed an on-farm processed ration of organic corn, soybean meal, and vitamin premix. Production records were kept for the two feeding systems and compared with traditional performance results of growth rate and feed efficiency.

An organic inspector was hired to certify the farm production facilities, the local premix manufacturer, and a state certified poultry processor. All of the chickens were direct marketed locally through a local custom processor, one half as an inspected organic frozen product and the other as live birds. A state certified scale and county inspected freezer were added for the on-farm consumer purchases.

An Iowa State University Food Science sanctioned sensory evaluation (taste test) was conducted at the Allee Mansion. Twenty panelists rated by taste preference, five different brands of chicken compared with the two types of Allee Farm chickens.

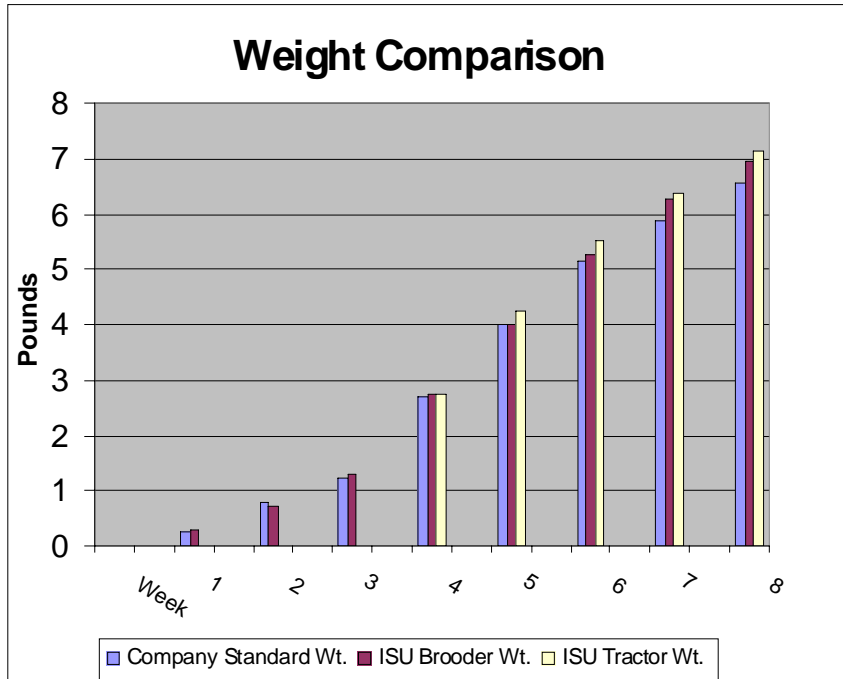
## Results and Discussions

The growth rate and feed efficiency of both organic farm-raised systems out-performed the expected standards from the breeding company of the Cornish Rock chicken. Comparing the two on-farm systems, they were similar in all measures throughout the seven weeks. The Allee chicken tractor chickens gained 7.12 lb and the brooder chickens 6.69 lb, compared with the company average of 6.56 lb (Figures 1 and 2). Farm-raised

organic feed inputs are comparable with commercial feed costs for a small farm. Conventional farm feed costs \$1.31 per bird,

organic feed \$1.79, and commercial feed \$2.00-\$2.43 for the same feed consumption of 15.17 pounds of feed per bird.

**Table 1. Weight Comparison**



**Table 2. Feed Comparison**

