Organic Broiler Chicken Production Trial
Allee Farm, 2001

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Introduction

The Iowa State University Allee Farm is classified as a diversified small grain and livestock operation. Two hundred certified organic Cornish-rock broiler chickens were range fed in 2000. This demonstration provided knowledge of a value-added integrated farm organic system by feeding farm-raised grains to broilers and selling directly to the local consumer. Information on the 2000 production trial is located at www.iastate.edu, under ISU Research and Demonstration Farms, Allee Farm annual report, cross@nwiowa.com or (712) 272-3512 (Lyle).

Interest in the organic demonstrations brought together 12 northwest Iowa family farmers who raise broiler chickens for local markets. Three meetings were held at the Allee Farm Mansion to discuss expanding organic grain and chicken production. Development of a chicken cooperative to increase volume output to maximize marketing, sales, processing, and transportation costs was discussed. The consensus of the group was that the initial capital required to start a cooperative would be too expensive. Two producers and the ISU Allee Farm elected to sell a percentage of their production to an independent organic meat broker, Wholesome Harvest, LLC. Wholesome Harvest arranged and paid for sales, marketing, advertising, processing, transportation, and cold storage of each farmer's whole frozen chickens.

Materials and Methods

The demonstration project was expanded to three groups of 200 Cornish-rock broilers purchased in six-week intervals, beginning April 18. The day-old chickens were received in the mail and raised in groups of 100, in a brooder house, for three weeks. Heat lamps were used for 5–14 days to keep the chickens warm, until their feathers developed. At three weeks of age, all of the chickens were moved to graze on certified organic alfalfa-grass pasture 2–4 inches in height, 100 chickens to each 10' × 12' portable shed (chicken tractor). Daily movement of the chicken tractors provided fresh forage and a sanitary environment.

A 19% protein organic-feed ration of expelled soybean meal, corn, and premix was processed on the Allee Farm with the farm-raised organic soybeans expelled and bagged at Bardole, Inc. (Rippey, Iowa), an organic certified processor. Production records and feed consumption were kept and compared with the 2000 Allee Farm rate of gain and feed efficiency.

Results and Discussion

To become certified to raise organic grain and livestock, all organic regulations and standards must be achieved on the farm each year. An independent organic inspector visits the farm to view farm records, crops, and livestock. The inspector then submits a written evaluation of farm's performance to the organic association to which the farmer has applied. The Allee Farm was certified for grain by the Organic Crop Improvement Association (OCIA), and the chicken production and processing facilities in Hospers, Iowa were certified by the Iowa Department of Agriculture and Land Stewardship (IDALS).

Refrigerated transportation of whole frozen chickens from Hospers to cold storage facilities in Des Moines, Iowa, was scheduled the day after processing by Wholesome Harvest. Individual farmers were paid 95¢/per pound of dress weight upon delivery to three Des Moines white-table restaurants that preferred whole chickens averaging 3 1/2–4 pounds.

In 2001, the 600 range chickens raised on the Allee Farm each gained 5.27 pounds during eight weeks and consumed an average of 11.61 pounds of organic feed. The organic chickens raised in 2000 each gained 6.91 pounds in eight weeks and consumed an average of 15.17 pounds of organic feed. In 2001, a different feed base mix was required for organic certification because a National Organic rule no longer allowed copper sulfate in animal feed. Lack of this micronutrient in the feed as well as weather conditions may have been a factor in slow feather development and lower rate of gain.

Economy of scale in chicken production is an important factor if a producer does not capture margins of marketing, sales, transportation, and processing. To minimize labor and transportation costs, birds in batches of 500 will be included in the 2002 trial. The cost analysis that follows is based on the three groups of 200 chickens that were sold to Wholesome Harvest in 2001.

In 2001, organic chicken production showed a net gain of $.16/bird, not including labor. Organic feed costs were higher with the corn priced at $3.50/ bushel and organic soybeans at $13.00/bushel. All of the grains were produced on the Allee farm, which provided a higher rate of return on grain than on chickens.

Production Cost 600 Cornish-rock broilers.

Chickens processed		557
Death loss		9%
Average weight live		5.27 lbs
Dress weight per bird		3.65 lbs
Dressing percent		69%
Feed consumption/hd		11.61 lbs
Organic feed cost/lb		$0.164
Feed cost per bird		$1.90
600 chickens	$.61 each	$ 366.00
Organic feed	557 × $1.90	$1,061.00
Processing	557 × $1.95	$1,086.15
Transportation	540 mi. × $.32	$ 172.80
Bedding & misc.		$ 80.00
Total variable costs		**$2,765.95**
Variable cost/bird	557	$4.97
Brooder 10 ft x 12 ft	$200/7 yr.	$28.57
Chicken tractors	$400/7 yr.	$57.14
Misc. Equipment	$125/7 yr.	$17.85
Land costs .5 acres	$130/acre	$60.00
Total fixed		**$163.56**
Fixed cost/bird	557	$0.29
Total cost		**$2,929.51**
Total cost/bird		**$5.26**
Wholesome Harvest processing reimbursement		($1.95)
ISU cost/bird		$3.31
Wholesome Harvest dress price $.95 × 3.65 lb		$3.47
ISU profit/bird		$0.16