

Organic Beef Cattle Grazing Demonstration

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Summary and Implications

There is growing interest in grass-fed organic beef. The objective of this study was to compare the performance of conventional feedlot-based cattle finishing with organically acceptable cattle finishing.

Yearling beef steers weighing approximately 730 lb were allotted to cool-season pastures in spring 2004 at the ISU Neely-Kinyon Farm, Greenfield, IA. One treatment group was implanted with Synovex-S. The "organic" treatment group was not implanted. After 89 days of grazing, the implanted group was moved to a feedlot at the ISU Allee Farm, Newell, IA, reimplanted, and fed corn and ground hay and then marketed.

The "organic" group was allowed to continue grazing cool-season grass and standing corn for 137 days. An electric wire was moved every 2 or 3 days to allow the steers to graze more standing corn. Then the organic cattle were moved to the ISU Allee Farm and fed corn and ground hay until marketed 114 days later.

During grazing, the implanted cattle gained 1.9 lb/day and the organic cattle gained 1.7 lb/day for 89 days. For the finishing phase, the implanted cattle were fed from 857 to 1,295 lb for 96 days and gained 4.6 lb/day. At harvest, the implanted cattle had a yield of 60.1% and 48% of the cattle graded choice or better. The overall gain for the implanted cattle was 3.3 lb/day.

The organic cattle grazed corn for 137 days with an ADG of 0.7 lb/day. In the feedlot, the organic cattle were fed 114 days with an ADG of 3.7. The organic cattle were marketed at 1,422 lb, had 61.3% yield, an overall ADG of 2.0 lb/day, and 100% graded choice or better.

Although this was not a comprehensive research project, there were some lessons from the comparison:

- The implanted cattle would have probably graded better if they had been fed longer.
- Grazing corn produced poor gains and the steers wasted a lot of corn. Moving the electric wire every 2 or 3 days was labor intensive.
- The organic cattle performed well on grass and in the feedlot – about 84 to 89% the growth rate of the implanted cattle. However, because of the low gains while grazing standing corn, the organic cattle had an overall growth rate that was 60.6% of the growth rate of the implanted cattle.

- Grazing the cattle, either on grass or corn, increased their frame and thus they needed to be fed to a heavier weight to reach choice grade.
- If costs were calculated, the organic cattle would have had a higher cost of gain because they gained so much slower while grazing corn.
Overall, a more efficient approach than grazing standing corn is needed to produce organic grass-fed beef.

Introduction

There is growing interest in grass-fed organic beef. The objective of this study was to compare the performance of conventional feedlot-based cattle finishing with organically acceptable cattle finishing.

Materials and Methods

Yearling beef steers weighing approximately 730 lb live weight were randomly allotted to cool-season pastures in spring 2004 at the ISU Neely-Kinyon Farm, Greenfield, IA. One treatment group was implanted with Synovex-S. The "organic" treatment group was not implanted. The cattle were rotated among the paddocks. After 89 days of grazing, the implanted group was moved on July 21, 2004 to a feedlot at the ISU Allee Farm, Newell, IA, reimplanted, and fed for 96 days on corn and ground hay and then marketed.

The "organic" group was allowed to continue grazing cool-season grass and standing corn for 137 days. An electric wire was moved every 2 or 3 days to allow the steers to graze more standing corn. On December 8, 2004 the organic cattle were moved to the ISU Allee Farm and fed corn and ground hay until marketed 114 days later.

Results and Discussion

The cattle started grazing at approximately 730 lb average. Cattle growth performance is shown in Table 1. The implanted cattle gained 1.9 lb/day and the organic cattle gained 1.7 lb/day for 89 days. For the finishing phase, the implanted cattle were fed from 857 to 1,295 lb for 96 days and gained 4.6 lb/day. At harvest, the implanted cattle had a yield of 60.1% and 48% of the cattle graded choice or better. The overall gain for the implanted cattle was 3.3 lb/day.

The organic cattle grazed corn for 137 days and had an ADG of 0.7 lb/day. In the feedlot, the organic cattle were fed 114 days with an ADG of 3.7. The organic cattle were marketed at 1,422 lb, had 61.3% yield, an overall ADG of 2.0 lb/day, and 100% graded choice or better.

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- The organic cattle performed well on grass and in the feedlot – about 84 to 89% the growth rate of the implanted cattle. However, because of the low gains while grazing standing corn, the organic cattle had an overall growth rate that was 60.6% of the growth rate of the implanted cattle.
- Grazing the cattle, either on grass or corn, increased their frame and thus they needed to be fed to a heavier weight to reach choice grade.
- If costs were calculated, the organic cattle would have had higher cost of gain because they gained so much slower.

Table 1. Performance of implanted and organic cattle in grazing and feedlot.

	Treatment Group	
	<u>Implanted</u>	<u>Organic</u>
Cattle, head	25	14
Avg wt on grass, lbs	728	732
Avg wt off grass, lbs	895	885
Time on grass, days	89	89
ADG on grass, 16/day	1.9	1.7
Avg wt on cornfield, lbs	--	921
Avg wt off cornfield, lbs	--	1,013
Time on cornfield, days		137
ADG on cornfield, lb/day		0.7
Avg wt in feedlot, lbs	857	1,000
Avg wt out feedlot, lbs	1,295	1,422
Time in feedlot, days	96	114
ADG in feedlot	4.6	3.7
Overall		
Gain, lbs	605	667
Time, days	185	340
ADG, lb/day	3.3	2.0
Avg carcass wt, lbs	778	871
Dressing %	60.1	61.3
Choice grade or better, %	48	100