

Bottelberghe Farms Miniature Zebu Steer Project

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As average homestead and farm sizes decrease annually and genetically engineered food increases there becomes a greater demand for homegrown beef. It takes a toll on a limited amount of pasture to raise a full sized commercial beef steer to over 1000lbs and 2 years of age. On average an animal will consume roughly 2.5% of its body weight a day in dry matter. For a 1000lb steer that is 25 pounds of dry matter not including the moisture the grass contains. Most of this intake will go towards sustaining that animal and anything extra will go toward growth and conditioning. A miniature zebu steer weighing 400lbs will consume 10 lbs. of dry matter a day.

Miniature Zebu have many great attributes that make them well suited for the production of homegrown natural beef. Miniature Zebu are a smaller framed animal therefore requiring less pasture and sustenance to survive. With these reduced requirements it allows Miniature Zebu to be raised on smaller acreages. They also carry many attributes such as a higher disease and parasite resistance and ability to tolerate heat and drought conditions much better than most other cattle breeds. Miniature Zebu are also browsers in addition to grazers. Zebu have a much stronger and more diverse forage drive and will in turn make use of much more available forage than other breeds of cattle therefore maximizing the efficiency of their environment.

Bottelberghe Farms raised 3 zebu steers on primarily pasture. The steers were vaccinated but were not supplemented with any hormones or steroids and the animals were raised in a non-certified organic all-natural environment. We utilized a diatomaceous earth/loose mineral mix (1:10 ratio) for parasite control. From this small select group we can begin to conclude that Miniature Zebu is a great source of home grown beef on smaller acreage. With very little investment into supplemental feeding and minimal damage to pasture (like in larger framed cattle) these steers produced wonderful results. They are more economical as they require less supplemental feeding to grow and maintain than a larger framed commercial animal and require less forage and thus less pasture area.

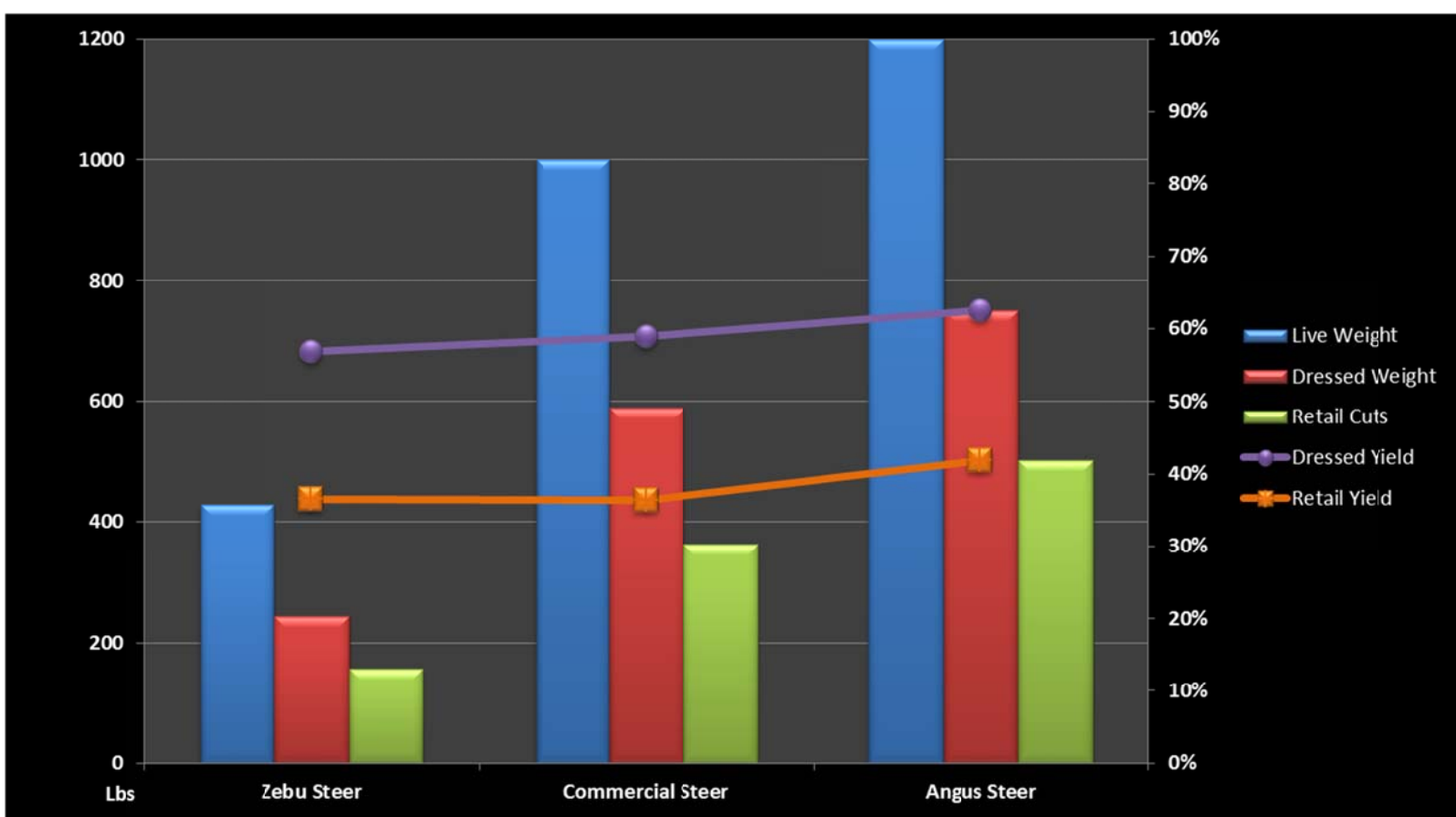
The selected animals were castrated before a year of age before any large amounts of testosterone we made and this enabled the steers to be ran with the regular herd and grow in the pasture. There were no special accommodations made to improve conditioning of the steers or "fatten them up" as many producers put it. They were primarily grass/hay fed throughout the year on pasture and hay. In winter months when forage was of lesser quality they were given free choice on an all-natural protein supplement.

When the steers all reached at least 18 months of age they were removed from the herd pasture. At this time the steers were placed on a separate pasture where they still had access to quality free choice hay and grass. At this point the steers started to receive supplemental feeding to improve overall conditioning for slaughter. The steers were fed approximately 3% of their body weight daily in a finishing ration. The finishing ration's nutritional breakdown was Crude protein- 12%, Crude fat- 4.5%, Crude Fiber -18%. They were fed on this regimen for 100 days prior to slaughter.

The steers' average age was 679 days old or 23 months old at time of slaughter. The steers averaged 428 lbs. each compared to a commercial steer at 1000lbs. After dressing the steers their yielded weight was 243 lbs. each compared to a commercial steer at 590 lbs. After all cuts were processed and trimmed to retail quality the steers on average yielded 157 lbs. of retail cuts of beef compared to a commercial steers yield of 363 lbs. or retail cuts. To put this into a size comparison the Miniature Zebu steers yield was approximately 4 cubic feet while the commercial steer averaged 10 cubic feet of yield. * More data can be found in the chart below*

In closing we were able to establish that the Miniature Zebu steers yield comparably with the commercial data available. The biggest benefit to the zebu steer is of course acreage required and feed intake daily. A Miniature Zebu will consume less to maintain and sustain than a larger framed commercial animal. They also have a lesser impact on pasture due to less surface area, waste, and equipment requirements. There were also benefits noted for the all-natural aspect. Miniature Zebu are more heat tolerant than most commercial breed cattle. Miniature Zebu are also more disease and parasite resistant and are better suited for an all-natural environment.

Comparison of Yields



*You may note that a zebu steer yielded as much in a percentage of live weight as a commercial steer.

1 Zebu Steer 1 calved- 1/12/11

- Weaned 8-1-11 201 days old
- Castrated 3-1-12 414 days old
- Pasture raised with production herd on maintenance diet of forage and minimal supplemental protein till 10-5-12 632 days old
- Left on quality forage pasture with protein supplement and also fed a grain based finishing ration of 12% protein 4.5% fat at a rate of 12% of body weight per day.
- Processed on 1/17/13 736 days old *** 730 days is 2 years old.
- Weighed 417lbs. live weight
- Dressed/hanging weight 251lbs or 60% of total body weight.
- Yielded 161lbs of quality beef or 39% of total body weight.
- 4 cu ft. of beef

2 Zebu Steer 2 calved- 3/2/11

- Weaned 8-1-11 152 days old
- Castrated 3-1-12 365 days old
- Pasture raised with production herd on maintenance diet of forage and minimal supplemental protein till 10-5-12 583 days old
- Left on quality forage pasture with protein supplement and also fed a grain based finishing ration of 12% protein 4.5% fat at a rate of 12% of body weight per day.
- Processed on 1/17/13 687 days old * **730 days is 2 years old.
- Weighed 552lbs. live weight
- Dressed/hanging weight 309lbs or 56% of total body weight.
- Yielded 197lbs of quality beef or 36% of total body weight
- 4.4 cu ft. of beef

3 Zebu Steer 3 calved- 5/14/11

- Weaned 10/1/11 140 days old
- Castrated 3-1-12 292 days old
- Pasture raised with production herd on maintenance diet of forage and minimal supplemental protein till 10-5-12 510 days old
- Left on quality forage pasture with protein supplement and also fed a grain based finishing ration of 12% protein 4.5% fat at a rate of 12% of body weight per day.
- Processed on 1/17/13 614 days old *** 730 days is 2 years old.
- Weighed 317lbs. live weight
- Dressed/hanging weight 171lbs or 54% of total body weight.
- Yielded 112lbs of quality beef or 36% of total body weight
- 3 cu. ft. of beef

4 Reference Commercial Steer

- Weighed 1000lbs. live weight
- Dressed/hanging weight 590lbs or 59% of total body weight.
- Yielded 363lbs of beef or 36% of total body weight
- 12 cu. ft. of beef

5 Reference Angus Steer (American Angus Association)

- Weighed 1200lbs. live weight
- Dressed/hanging weight 750lbs or 62% of total body weight
- Yielded 502lbs of quality beef or 42% of total body weight
- 15 cu ft. of beef