

Small Acreage Homestead Beef

By Josh Bottelberghe | Bottelberghe Farms Miniature Zebu

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 1000 pounds and two years of age. On average an animal will consume roughly 2.5% of its body weight a day in dry matter. For a 1000 pound 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 400 pounds will consume ten pounds 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.

Bottepounderghes Farms raised three 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 pounds each compared to a commercial steer at 1000 pounds. After dressing the steers their yielded weight was 243 pounds, each compared to a commercial steer at 590 pounds. After all cuts were processed and trimmed to retail quality, the steers on average yielded 157 pounds of retail cuts of beef compared to a commercial steers yield of 363 pounds or retail cuts. To put this into a size comparison the miniature Zebu steers yield was approximately four 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 bred cattle. Miniature Zebu are also more disease and parasite resistant and are better suited for an all-natural environment.

** Zebu steer were pasture raised with production herd on maintenance diet of forage and minimal supplemental protein till approx. 18-20 months old.

***90 days prior to slaughter 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*

1 Zebu Steer 1 calved - 1/12/11

- Weaned 8-1-11
201 days old
- Castrated 3-1-12
414 days old
- Processed on 1/17/13
736 days old (2 years old)
- Weighed 417 pounds live weight
- Dressed/hanging weight 251 pounds or 60% of total body weight.

- Yielded 161 pounds 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
- Processed on 1/17/13
687 days old
- Weighed 552 pounds live weight
- Dressed/hanging weight 309 pounds or 56% of total body weight.

- Yielded 197 pounds 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
- Processed on 1/17/13
614 days old

- Weighed 317 pounds live weight
- Dressed/hanging weight 171 pounds or 54% of total body weight.
- Yielded 112 pounds of quality beef or 36% of total body weight
- 3 cu. ft. of beef

4 Reference Commercial Steer

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

5 Reference Angus Steer (American Angus Association)

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

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