



Raising Pasture Finished Beef

Revised 10/7/05

Introduction

New York has an abundance of forage, where livestock can take advantage of hillsides and poor soils. With news media stories highlighting BSE and food born illness in our meat supply, more consumers are turning to local products including pasture finished, free roaming beef. Interest has also grown due to news reports promoting the benefits of conjugated linoleic acids (CLAs) in “grass fed” beef.

To date, there is not a USDA definition of “grass fed” or “pasture finished” beef. Production criteria come from the marketing organization that purchases the meat. As a general rule, pasture finished animals are not given any grain for the life of the animal and all antibiotics and additional hormones (implants) are banned.

Before a beef product can be labeled with terms that denote uniqueness or superiority of some kind the producer must file an “Animal Production Claim” with the Labeling Review Branch of the USDA. This involves submitting a label application, a prepared (manufactured) label including the claim in question, and an Operational Protocol (OP). An OP must be in the producer’s own words and must state in detail how the animals are raised, including ration formulations, sick animal protocol, herd health management, and other facts relating to the proposed claim (e.g. “no antibiotics,” “natural,” “grass finished”). For more information: www.usda.gov/agency/fsis

Managed intensive grazing is needed to achieve rates of gain that will produce a finished animal at 18-22 months of age. Harvested carcasses

are often “aged” for as long as three weeks to improve tenderness.

Breeds

The breeds best suited for pasture finishing are early maturing, moderate in frame size with good appetites. Most of the British breeds fit this category including the Angus, Hereford, Red Angus and Shorthorn. Heritage breeds have also grown in popularity for this market though, in general, the Heritage breeds take longer to reach maturity. These breeds include the Devon, Belted Galloway, Highland and Murray Gray.



Devon cow



Angus x Hereford

Feed Requirements

Summer feed requirements include high quality pasture usually provided using intensive grazing management principles. Pastures should be immature, without seed heads, and 6-10 inches in height for optimum nutrition.

Animals may need to be moved daily to a new grazing area for acceptable rates of gain. Stocking rate will depend on animal size, rainfall, forage species and soil type. Grazing plans can be developed with assistance from your local Extension, Soil & Water District or Natural Resource Conservation Service (NRCS).

Winter feed should consist of high quality grass-legume hay or hay crop silage. Weaned calves will consume 2.5-3.0% (on an air-dry basis) of their body weight daily of high quality forage. For example: a 550 pound steer eating 3.0% will need 16.5 pounds of dry hay. Poorer quality forages will limit intake due to high indigestible factors in the hay, making it impossible for the animal to consume enough feed to meet their daily requirements. Forage analysis will allow producers to evaluate their feed stores and balance a ration that best fits the animals' needs. Contact the local extension office for testing kits.

Facilities

Existing cow/calf facilities can be used or old dairy barns can be modified for feeding calves in the winter months. Cattle can be fed outdoors all winter provided they have a windbreak or access to shelter during inclement weather. A handling facility will be needed for vaccinations, health treatments and moving animals off farm. Contact your local extension service for help in designing a corral and handling system.

Perimeter fences should be substantial to contain young calves, such as a three wire high tensile electrified fence. Electric fencing also works well for moving cattle from paddock to paddock. Interior fencing can be permanent high-tensile or temporary poly wire, which allows flexibility in the configuration of grazing paddocks during the pasture season.

Ensure adequate water is available at all times. Ponds and creeks should only be used if animal access is limited to reduce bank erosion and

control the amount of manure that enters the water source. For summer grazing, often black plastic pipe laid on top of the ground works well and is inexpensive to install.

Handling and Labor Requirements

I. Health

The most common illness in weaned calves is a complex of diseases collectively known as Bovine Respiratory Disease (BRD). Symptoms include nasal discharge, reduced feed intake, fever, trouble breathing and overall dull appearance. Left untreated, respiratory illness can cause death.

The best defense against BRD is low stress weaning and a comprehensive vaccination program. Low stress weaning involves providing a balanced ration, adequate housing space, protection from the wind and rain and proper ventilation. The best facility for weaning is often an outside paddock with access to a windbreak.

Antibiotics are the most effective treatment for BRD. Which antibiotics to use and the treatment protocol should be designed in consultation with your veterinarian.

A comprehensive vaccination program would include vaccinating calves for: IBR, BVD, PI3, BRSV, *Clostridium spp.*, *Pasteurella* and *Haemophilus somnus*. Many vaccine products contain multiple diseases in one product so that only two or three injections are required. Plans should also be made to control internal and external parasites. For information about the **NYS Beef Quality Assurance Program** that outlines proper vaccination procedures, handling, and records contact: Mike Baker, Cornell Beef Extension Specialist, 607-255-5923, mjb28@cornell.edu.

II. Management

The gestation of cattle is between 275 and 290 days. Cattle can calve year round with most producers choosing to have cows calving in the spring of the year.

New York State soils are selenium deficient, making forages low in selenium for the cattle herd. Therefore newborn calves are routinely given a selenium injection at birth. Calves should also be identified at this time for record keeping purposes. Newborn calves are most susceptible to diarrhea (scours) and should be watched closely for the first month.

Castration should be performed on all bull calves not being kept as future herd sires. Castration can be done by using an elastrator (heavy rubber rings) on the scrotum, by using a Burdizzo clamp above the testicles, or by manual removal of testicles with a disinfected sharp knife. See your veterinarian or attend an extension field day to learn these management procedures.

Calves are generally weaned at 5 to 7 months of age and then raised separately from the cow herd.

Cornell Beef Specialist

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Reproductive Statistics for Cattle		
FEMALE		
Age of puberty	9 to 12 months	
Breeding weight	65% of adult weight	
Estrous cycle		
	Length	18 to 22 days
	Duration	10 to 24 hours
	Signs	Mounting or standing to be mounted; restlessness, bawling,
Ovulation		20 to 36 hrs from onset of standing heat
Gestation length		Approx 283 days
Breeding season		Year round
MALE		
Breeding age		12 to 15 months
Breeding season		All year
Breeding ratio		1 bull : 20 to 30 cows

Level of Skill

Pros:

- Growing demand for product
- Ability to use existing facilities
- Premium price compared to the commodity market
- Breeding stock easy to obtain
- Flexible labor requirements

Cons:

- Greater skill is required to produce beef of acceptable quality grade and carcass weight
- Niche markets takes more effort to maintain
- More attention and skill are needed for grazing management
- Cattle are on forages for longer finishing period

Animal Source

List of NY cattle producers can be obtained:
New York Beef Producers Association
 Connie Kelley, Executive Secretary
 3 Second Street
 Camden, NY 13316
 315-245-3386 or nybpa1@twcnny.rr.com

Market Availability

Markets available include freezer trade, local meat outlets or farmers markets where products are sold directly to the consumer.

Other marketing efforts are continually striving to set up cooperative systems to aid producers in selling forage finished beef.

Cash Budget

Income amount

General estimate

Your estimate

Finished animal

- ❖ 1100 live @ 55% dressing percentage
= 605 lbs hanging weight x \$1.80/lb

\$1089

Expenses

- ❖ Weaned calf (500 lbs x \$1.10 lb)
- ❖ Winter Hay (3240 lbs x \$100/ton)
- ❖ Summer pasture (\$1.00/dy)
- ❖ Salt and minerals, 90 lbs
- ❖ Veterinary medications
- ❖ Buildings and fences
- ❖ Hauling

\$550

\$162

\$180

\$24

\$20

\$50

\$35

Operating cost

\$1021

Net income / animal

\$68

For More Information

Small Farms Program
135c Plant Science Building
Cornell University, Ithaca, NY 14853
www.smallfarms.cornell.edu

Cornell Beef Program
www.ansci.cornell.edu/beef/

ATTRA
Appropriate Technology Transfer for Rural Areas, P.O.
Box 3657, Fayetteville, AR 72702
<http://www.attra.org/livestock.html>

American Grassfed Association
PO Box 400
Kiowa, CO 80117
877-774-7277
www.americangrassfed.org

American Forage and Grassland Council
PO Box 94
Georgetown, TX 78627
800-944-2342
www.afgc.org

US GrassFed Society
1270 County Rd 256
Fort Payne, AL 35967
256-845-3009
<http://usgrassfed.com>

Forage Livestock Systems at Cornell
<http://www.css.cornell.edu/forage/forage.html>

Cornell Forage Selection Tool
<http://www.forages.org/>

Maryland Small Ruminant Page
www.sheepandgoat.com

Eat Wild Web site
www.eatwild.com

Heritage Breeds Conservancy, Inc.
Phone: (413) 528-2817 • Fax: (413) 528-2857
Mail: HBC, 244 Main St. Suite 2
Great Barrington, MA 01230
email: contact@NEHBC.org

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