Meat Goat Production

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Outline
- Opportunities
- Risks
- Health Management
- Infrastructure Needs
- Feeding
- Protection
- Sales

Opportunities
- Market prices generally high
- High demand currently unmet
- Extensive production on unused acres
  - Brush is food vs wasteland

Forage Preferences in WI Oak Savanna

Scottish Highland Cattle
- Grasses: 23%
- Woody Sap: 31%
- Poa: 35%
- Mono: 5%

(Mearrison and Kitt, 2009)

Meat Goats
- Grasses: 25%
- Woody Sap: 68%
- Poa: 7%
- Mono: 0%

(Nolden et al., unpublished data, 2018)

Risks
- Non-conventional food for most Americans
  - Direct marketing limitation
  - Value-added limitation
  - No organic premium
- Learning curve to successful production
- Quality at marketing time is key
  - Goat structure, muscling
  - Body condition
  - Size
Health Management

- Parasites
- Infectious diseases
- Nutrition
- Behavior
- Shelter design
- Feeding design
- Predator management
- Genetic selection

Pasture Parasite Levels

- Browsing Begins
- Kid Browsing Begins
- Potential contamination from kids
- Potential contamination from does
- Contamination from previous year

Nutrition

- Forage
  - Dry hay
  - Baleage
  - Pasture/brush
  - DMI by class
- Supplements
  - Energy (grains)
  - Protein

Copper Deficiency

- Forage
  - Dry hay
  - Baleage
  - Pasture/brush
  - DMI by class
- Supplements
  - Energy (grains)
  - Protein
**Feeding**
- Amount
- Vegetation
- Temperature
- Lactating
- Supplement

**Water**
- Amount
  - Vegetation
  - Temperature
  - Lactating
  - Supplement

**Diseases and Injuries**
- Diseases
  - Bacterial: hoof rot, Johne's, CL, pinkeye
  - Viral: CAE, soremouth, respiratory
  - Fungal: ringworm
  - Prion: scrapie
  - Parasites: GiN, mites, lice, flukes, MW
- Injuries
  - Caught in fence
  - Broken bones, horns
  - Goring
  - Cuts, torn udder
  - Bloat

**Height**
- Quality
  - ACV
  - Wood ashes
  - Barley
  - Minerals (Fe, S, Ca, NO2)

**Guardians**
- Dog
- Donkey
- Llama
- Cow

- Photo by Cherrie Nolden
- Photo by Ken Brunson
- Photo by Cherrie Nolden
- Photo by Katie Baumann
Goat Behavior
• Herd-oriented, smart, curious
• Social hierarchy, jealousy
  • Injury
  • Learning
• Training
  • Electric fences
  • Bucket
  • Come to call
  • Trailering
  • Medical treatments
  • Do unto others
• Impatient
  • New paddock setup
  • Low forage availability
• Eat high

Body condition score (BCS) ratings
• BCS 1.0 = The goat is visually emaciated and weak. The backbone is highly visible and forms a continuous ridge. The flanks are hollow and ribs are clearly visible. There is no fat cover and fingers can easily penetrate into the intercostal spaces.
• BCS 2.0 = The goat’s backbone is still visible with a continuous ridge. Some ribs can be seen and there is a small amount of fat cover. Ribs are still felt and intercostal spaces are smooth, but can still be penetrated.
• BCS 3.0 = The backbone is not prominent, ribs are barely discernible and an even layer of fat covers the ribs. Intercostal spaces are felt using pressure.
• BCS 4.0 = The backbone and ribs cannot be seen. The side of the animal is sleek in appearance.
• BCS 5.0 = The backbone is buried in fat and the ribs are not visible. The rib cage is covered with excessive fat.

Shelter
• Wet, windy
• Brush
• 16 ft²

Fencing: Keeping Goats In
• Fence training
  • Electric inside permanent fence
  • >4 kV for 1 week
• Preventing escapes
  • Keep fence HOT, all the time
  • Lead goat must respect fence
  • Remove escape artists immediately, retrain
  • Socialize goats to humans
  • Introduce new goats in permanent fence
  • One-side only
  • Keep bucks and does well separated
  • Don’t lay/lift fence for goat passage
**Portable e-Net Fencing**

- Hot Fence: 1.5 kV min; 3 kV good; 7 kV great
- Grounding
- Battery
- Energizer
- Uneven Terrain
- Lush Vegetation
- Rock/Ice
- Sand

**Fence Set-Up**

- 7 Fence System
  - 40-50 goats/paddock
  - 2-5 days to defoliate
  - 1-2 hours set-up

- 5 Fence System
  - 10-12 goats/paddock
  - 2-5 days to defoliate
  - 0.5-1 hour set-up

**Hermaphrodite**

**Stocking Rate/Density, AUE**

- Stocking Rate: # goats/area/whole season
  - YLWA 2011, 2012: 6.8 goats/ac 12.34 ac
  - YLWA 2013: 8.9 goats/ac 12.34 ac
  - BAAP 2012: 4.6 goats/ac 29 ac
  - WV 1986: 8-10 goats/ac
  - OK 1996 (State et al., 1996): 2 goat/ac/5% brush cover

- Stocking Density: # goats/area, instantaneous
  - YLWA 2011, 2012: 70 goats/ac 3.3d 5.18 AUE/ac
  - YLWA 2013: 91.7 goats/ac 3.3d 5.18 AUE/ac
  - BAAP 2012a: 48 goats/ac 5 d 2.71 AUE/ac
  - BAAP 2012b: 24.2 goats/ac 10 d 1.37 AUE/ac

- Animal Unit Equivalents (AUE)
  - Standardizes grazing pressure across goat sizes and classes
    - AUE = # goats metabolically equivalent to 1 Animal Unit (AU)
    - 1 AU = a 1000 lb cow @ 2.6% daily DMI
    - DMI by goat class (adapted from Nut. Req. Sm. Ruminants, 2007)
      - Open Does = 1.95%
      - Lactating Does = 3.19%
      - Bucks = 1.6%
      - Kids = 3.63%

- Fast AUE Calculation:
  - Open Does = 1.95%
  - Lactating Does = 3.19%
  - Bucks = 1.6%
  - Kids = 3.63%

- 91.7 goats = 5.18 AUE

*Stoll et al., unpublished data, YLWA, WI DNR, Blanchardville, WI*
Sales

Browsing Goat Supplies
- Necessary ($1,700.00)
  - Energizer, 3 Joule
  - Ground rods
  - Marine batteries
  - Battery recharger
  - Fences
  - Hand saw
  - Wiring harnesses
  - Fence tester
  - Battery tester
  - Extra posts
  - Water tank & jugs
  - Mineral feeder
  - Anemia chart
  - Treats & bucket

- Nice to Have
  - Guard animal
  - Trailer
  - Water hauling tank
  - Water pump & hoses
  - Solar panel
  - Catch pen panels
  - Handling equipment
  - Portable vet supply kit
  - Cordless drill
  - Chainsaw
  - Weed whip

Sourcing Goats
- My Ideal Type of Goat:
  - Parasite resistant, seller only deworms individuals needing deworming (5 Point Check)
  - Many generations of no or minimal grain feeding (adapted to a forage-based diet)
  - Not high strung, will respect electronet
  - Sound structure (feet, legs, udders, teeth); horns/disbudded equally good
  - Good mothers, no birthing assistance needed
  - Source herd looks healthy if not tested negative for diseases (no CL lumps, no big knees, no skinny goats, no rough hair coats, no limping, no manured butts, tails up)
  - Females pay for themselves by producing offspring for sale each year, whereas wethers just eat and are maintained over winter
  - Bottle babies are friendly, but often are bottle babies due to something being wrong with their mother; more likely to be bad mothers when older
  - Fall is the best time of year to buy (lowest prices, people selling before winter feeding is needed)
  - Starting with older does is easier to learn how to manage goats than starting with kids
  - Growing the herd slowly from a few individuals initially will ensure that one learning/management mistake doesn’t eliminate a large capital outlay (many goats at once)
  - After a few years of raising a few goats well, more can easily be purchased by the trailer load with an FSA micro loan, and the browsing business will pay off that loan fast
  - I’ve had best luck with goats sourced from large herds in the central USA (ND, SD, NE, KS, OK). Those goats don’t get babied and have rough winters like ours.
  - Breed is far less important than the way the sellers have managed and applied selection pressure to the goats in their herd. That being said, Kiko and Spanish goats fit the above description better than other breeds out there. Boers tend to be very susceptible to parasites and often receive a lot of grain, dairy breeds generally don’t maintain condition well without grain/energy supplements. Cross‐breds can be just as good as purebreds, again with quality based on the seller’s management system and selection criteria.
  - Auction barns in the Upper Midwest are full of 4x4 goats or ready‐to‐slaughter goats. Buy from a breeder that allows you to see their whole herd and addresses all the points above for you. Central US auctions in late fall are a good place to pick up quality goats at good prices.
WI Contract Goat Browsing Fees

- April 15 to November 1
- Hourly rate $25-60
- Delivery charge $100-200/trip
- Head/Day charge $2-3.00

- Contractor provides:
  - Fences/Energizer/Battery
  - Goats
  - Water tank
  - Mineral feeder & mineral
  - Labor

- Example
  - 15 ac woodland
  - 1 week (7 d)
  - 200 goats ($2.00)
  - 8 deliveries ($150)
  - Labor for 5 ac paddocks (3 moves)
    - 5 hr setup, 3 hr move x 2 ($35)

$3,895 charged/wk
$506.35 income/goat/year

Mites

Liver Fluke
CL & Hoof Rot

Johne's

CAE