MANAGING DOES AND BUCKS FOR SUCCESSFUL BREEDINGS

by Rene' DeLeeuw
redeleeuw@gmail.com

MANAGEMENT GOALS

- Nutrition
- Reproduction and Out of Season Breeding
- Bio-security
- Preg Check Methods
- Breeding Soundness Exams
- How to decide what to select for?
- Linear Appraisal
- DHIA "Cow Page"
- Record Keeping
- Sources of breeding information

Nutrition -

Use a qualified nutritionist to balance an adequate ration based on NRC requirements, milk production, stage of lactation, and body condition scores.

Where can you find nutrition help?

Nutrition-Feeds-Concentrates

Coarse Mix - 18- 22% Protein

Pellet – 18-22% Protein

Roasted Soybean

Nutrition – Feeds - Forages

Good Quality Forages!

Baleage can work for larger farms that can use it before it spoils.

- Quality tends to be higher
- Requires more management
- Better in cold weather

Good quality dry hay

- Second cut when possible
- Stored carefully
- Fed correctly

Get a feed analysis done!

Total Mixed Ration (TMR)

- Each goat consumes the required amount of nutrients in each bite
- Includes forages, grains, proteins, vitamins and minerals
- Allows for different milk production groups and dry goats
- Maximizes dry matter intake
- Most suitable for large farms

Nutrition-Clean and fresh water!!!

Body Score	Nutrition – Body Condition Scoring
1	No flesh covering ribs, sharpness to vertebrae and pin bones
2	Very little flesh covering ribs and heart girth/part of shoulder area, vertebrae easy to delineate along back
3	Adequate amount of flesh over ribs and heart girth/part of shoulder area, vertebrae can be delineated along back
3.5	Somewhat more fleshed out than 3
4	More flesh over ribs, with some extra flesh in heart girth/part of shoulder area, little to no delineation of vertebrae along back
5	Considerable fleshing over ribs, “handful” in heart girth/part of shoulder area, no delineation of vertebrae along back – is rounded
6	Obese, excess fleshing all over body frame, handfuls visible in heart girth/part of shoulder area, topline is completely blended with sides and abdomen, candidate for fat goat syndrome

Some examples of
Body Condition Scores

1

2

3

4+

Reproduction

The days get shorter, the nights cooler, the bucks more odiferous, and the does are flagging!!

Signs of heat:

- Tail wagging/flagging
- Lots of activity – sparring, hopping around
- Vocalizing

Goats and sheep tend to be photosensitive →
Come in heat when days are shortening

Fall Equinox	**Sept 21 or 22**
Winter Solstice	**Dec 20 or 21**
Spring Equinox	**Mar 20 or 21**
Summer Solstice	**June 20 or 21**

- Fall Equinox - Sun crosses directly over the equator and day and night are equal lengths
- Winter Solstice – Shortest day of the year, days start to lengthen immediately after it
- Spring Equinox – Sun crosses directly over the equator and day and night are equal lengths
- Summer Solstice – Longest day of the year

Anestrous Period – "Out of Season"

Is the season of the year when does and ewes are less likely to come into heat → when the days are lengthening,

- after the Winter Solstice (Dec 21 or 22), less chance of goats cycling
- between Spring Equinox and Summer Solstice, even less chance

Ease of getting does bred	Dates
Prime Breeding Season	Sept 23 - Dec 21
Intermediate	Dec 22 - Mar 20
Anestrous Season – most breeds of goats do not come in heat naturally during this season	Mar 21 – June 20
Intermediate	June 21 – Sept 22

Reproduction Methods

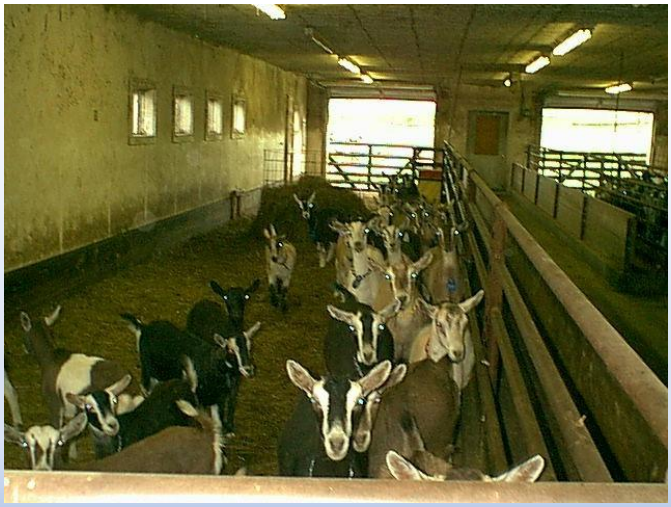
- Estrus Synchronization
  - In breeding season
    - Surprise them, introduce bucks that have been physically separated from does!!!
  - Out of season breeding and advancement/extension of breeding season
    - Lights
    - Hormonal

Reproduction-Out of season breeding

- Photoperiod control
  - Materials
    - Enclosed but ventilated barn or space
    - Intense light, fluorescent or LED, 200 lux at doe eye level
  - Procedure
    - 16-20 hour light day for 45-60 days
    - Reduced/ambient light 35 days
    - Expose bucks and does separately
  - Results
    - Early bred groups (Feb-Mar-Apr) 91%
    - Early to mid out of season bred groups + May 87%
    - All out of season groups (Feb-June) 78%

Reproduction

Out of Season Breeding - Lights



Reproduction

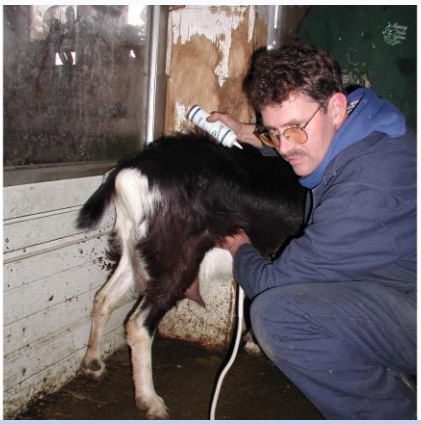
Estrus Synchronization - Hormonal

Biosecurity

- Agents of concern
  - Bacteria
  - Viruses
  - Parasites
- Know your herd
- Know from who you are buying
  - Ask questions, be observant
- Work with your veterinarian
- Use preventative measures

Reproduction -

Pregnancy Determination
Ultrasound
Milk Test from Dairy One



Breeding Soundness Exam Bucks and Does

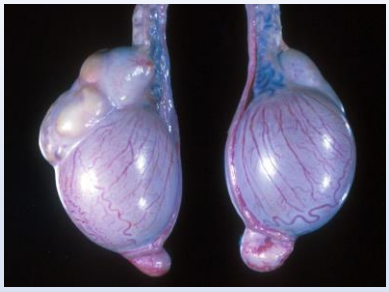
- Before each breeding season
- Body condition score or weight
- Teeth, feet, eyes
- Check for foot rot
- Mucous membranes, even fecal egg count
- Semen evaluation-bucks
- Have record of previous breeding soundness exams

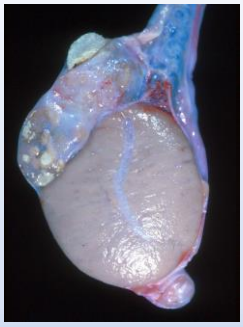
Breeding soundness exam-Bucks

- examine penis and prepuce
- shearing injuries
- balanoposthitis = pizzle rot from high protein diets
- urinary calculi-maintain 2.5:1 ratio, calcium to phosphorus

Breeding Soundness Exam-Bucks

- Palpation of scrotum for epididymitis in rams, sperm granulomas in (polled) bucks





Measuring scrotal circumference

ling Soundness Examination of Rams and Bucks — AS-599-W

Table 2: Reference Chart for Rams

Class	Scrotal Circumference (<14 months)	Scrotal Circumference (>14 months)	Motility	Morphology	Debris
Excellent	> 33 cm	> 35 cm	> 50 %	> 90%	no white blood cells
Satisfactory	> 30 cm	> 33 cm	> 30 %	> 70 %	no white blood cells
Questionable	< 30 cm	< 33 cm	< 30 %	< 70 %	may have white blood cells

Table 3: Reference Chart for Bucks

Class	Scrotal Circumference (<14 months)	Scrotal Circumference (>14 months)	Motility	Morphology	Debris
Excellent		> 25 cm	> 50 %	> 90%	no white blood cells
Satisfactory	(Information not	available)	> 30 %	> 70 %	no white blood cells
Questionable			< 30 %	< 70 %	may have white blood cells

Preparation of Bucks before collecting or breeding service:

- If collecting, follow collector guidelines, information
- Clean - Brush, wash, shave prepuce area, trim hooves, verify buck ID
- Use to breed a few does a week prior, then rest separate from other bucks and does
- Don't transport with does in the trailer
- Good nutrition including minerals
- No Antibiotics in last six weeks (fever and timing of sperm)
- Mature enough to breed (close to a year)
- Used to handling/people while breeding

Selection is a Continuous Breeding Decision Making Process

The greatest impact on progress is from the selection of ELITE bucks

Milk Production-Dam of buck

DHIA Testing and Production Performance

130 - Cow Page DHI-203

21105454

COACH FARM

Date of Test 5/7/02

Barn Name J255 | Index No. 96255

Cow

Index No.	96255
Barn Name	J255
Breed	A
DHI ID	21CDJ0255
Farm ID	
Date of Birth	9/23/96
PTA Milk	+497
PTA $	+62
PTA % Fat	
Rel.	
PTA Fat	+16
PTA Prot	+16
Pctile(NM)	

Sire

DHI ID	180851795
Name or number	
Breed	A
PTA Milk	+286
PTA % Fat	
PTA Fat	+10
PTA Prot	+9
PTA $	+39
Rel.	
Pctile(NM)	0

Dam

DHI ID	21WPH0165
Name or number	B176
Breed	A
PTA Milk	+0
PTA % Fat	
PTA Fat	+0
PTA Prot	+0
PTA $	+0
Rel.	
Pctile(NM)	

Lactation Production Summary

Calving Date	Age at Calving Yr - Mo	Days Dry Before Calving	Rate	Days 3X Cond. Aff. Record	305 Day Lactation Milk	% Fat	Fat	% Prot	Prot	Complete Lactation Days in Milk	Milk	Fat	Prot	Value Product	Income Ovr Feed Cost	Type of Record
4/1/98	1 - 6	0	A	0	3063	3.4	105	3.3	101	324	3195	110	106			DHIR
4/11/99	2 - 6	51	A	0	3493	3.2	111	3.2	112	486	4905	161	161			DHIR
9/29/00	4 - 0	51	A	0	3805	3.6	136	3.1	117	365	4156	148	129			DHIR
11/23/01	5 - 2	55	C	0						166	1754	62	56			DHIR

Status Change	Last Test			Lifetime Production			Milk per Day Since 24 Mos of Age	Yield Deviation			Estimated Relative Producing Ability		
Calved	Milk	% Fat	% Prot	Milk	Fat	Protein		Milk	Fat	Protein	Milk	Fat	Protein
11/23/01	9.4	3.5	2.6	14010	481	452	11	+1340	+44	+43	+1041	+35	+35

Genetic Selection and parameters for increased productivity

- ETA (Estimated Transmitting Ability)
  - An estimate of a buck's potential genetic abilities based on ancestors.
  - Uses available pedigree information from dam and sire for both production and type
  - Have a high probability of being genetically superior

ALPINE USDA-DHIA GENETIC EVALUATIONS FOR TOP 15% OF BUCKS WITH RECENT DAUGHTERS FOR JULY 2001 1

REGISTRATION NUMBER	NAME	HERDS	DAUS	LACTS	REL	----PREDICTED TRANSMITTING ABILITIES----- MILK	FAT	FAT %	PROT	PROT %	PCTILE
					(%)	(LB)	(LB)	(%)	(LB)	(%)	
A180974412	COACH-FARMS LENOX	2	28	73	58	376	12.4	-0.05	9.4	-0.08	99
A000851796	COACH-FARMS TUFF STUFF	3	86	200	62	304	12.5	0.05	9.4	0.00	99
A181103549	COACH-FARMS LINCOLN	1	24	24	48	338	10.9	-0.06	9.4	-0.04	98
A180974405	COACH-FARMS BUCKEYE	2	57	118	61	314	11.9	0.01	7.0	-0.10	98
A181031303	COACH-FARMS BEAUXSUN	1	36	60	57	318	9.1	-0.10	8.5	-0.05	98
A000720150	POPLAR HILL SUN CHARIOTEER	2	118	356	77	279	10.1	0.00	7.6	-0.04	97
A000782547	COACH FARMS FLEETWOOD	2	38	123	56	303	9.5	-0.06	6.9	-0.09	97
A181031301	COACH-FARMS BECKHERUE	2	14	24	53	290	9.2	-0.05	7.1	-0.07	97
A000974406	COACH-FARMS KALTHIUS	2	55	111	59	266	8.0	-0.07	7.7	-0.02	96
A180957615	MT-ZION CHA FAVORITE CHILD	3	17	26	57	259	8.3	-0.05	7.0	-0.04	96
A180920015	COACH-FARMS ZACHARY	2	96	248	63	300	8.8	-0.08	6.2	-0.11	95
A181049959	COACH-FARMS LINX	1	37	46	51	289	5.4	-0.19	7.9	-0.04	96
A181097115	COACH-FARMS WEMBLY	1	12	12	44	253	8.9	-0.01	6.2	-0.06	95
A000919627	NODAWAY MD AYLA'S ARIES	5	58	118	57	182	7.1	0.02	7.0	0.05	94
A180965345	LEAP'N-LEABO HAILLY'S BRAMBLE	2	8	9	45	242	7.9	-0.04	6.6	-0.04	95

Linear Appraisal

- The ADGA linear appraisal system evaluates individual type traits that affect structural and functional durability in order to take full advantage of the potential for genetic improvement through selection. ADGA's linear system:
- Evaluates each animal & trait individually
- Evaluates each trait from one observed biological extreme to the other
- Includes traits that have economic importance and are at a minimum, moderately heritable
- Applied uniformly
- The linear appraisal system includes 13 primary traits, one secondary trait, a research trait as well as structural categories scored by the appraiser to evaluate functional conformation on mature does and bucks. An optional young stock program is also available.
- Producers have the information to make a more accurate selection of breeding stock than ever before. Because of this, the responsibility and the opportunity for breed improvement are directly upon breeders.
- The seedstock breeder, hobbyist & the commercial producer can all benefit from selecting stock based on fact; not just guesswork as the "eye" sees it.

Genetic Selection and Parameters for increased productivity

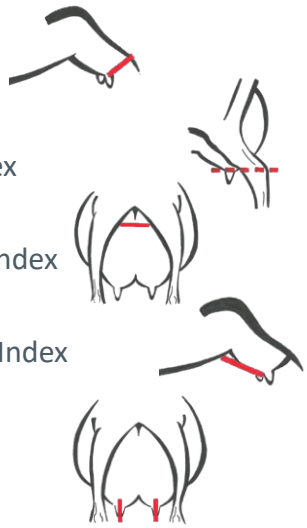
Linear Appraisal Scores

- Form
  - Stature
  - Strength
  - Dairyness
- Structure
  - Rump Angle
  - Rump Width
  - Rear legs, side view
- Mammary
  - Fore udder attachment
  - Rear udder height
  - Rear udder arch
  - Medial Suspensory Ligament
  - Udder depth
  - Teat Placement, Rear view
  - Teat diameter
  - Rear udder, side view

Which genetic index?

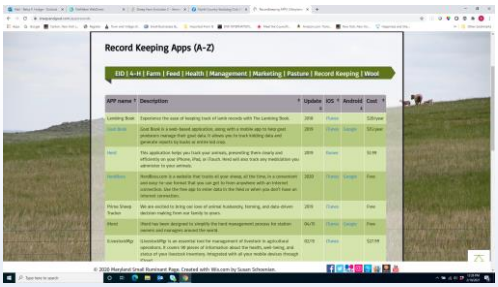
5 basics morphologic index based on a score of 100:

- Udder Profile Index
- Udder Floor Position Index
- Rear Udder Attachment Index
- Front Udder Attachment Index
- Teat Orientation Index



Synthetic index : IMC
udder profile + udder floor position + rear udder attachment + teats orientation + udder front

Records/Information Management



Use what works for your Farm -

Computer Programs
- Commercial – program or subscription
- Spreadsheets
- Databases

Phone Apps

Cards, Notebooks, Clipboards,Calendars

All of the above!

Production records, pedigree records, health records, kidding records and more

CDCB Council of Dairy Cattle Breeding

https://queries.uscdcb.com/CF-queries/old_qs.cfm

- Queries provide display of:
  - pedigree information
  - yield records
  - herd test characteristics
  - genetic evaluations of does & bucks
    - yield
    - Type
- Access information using:
  - ID number
  - animal name
  - herd code

American Dairy Goat Association

adgagenetics.org

- Pedigrees
- Planning
- PTI/Eta
- Production
- Type

Culling, a necessary management tool

Herd and production records will give you ideas what you should be selecting for.

- Reasons for culling
  - Production
  - Conformation
  - Health
  - Mastitis
  - Disposition

Contact Information

For more information contact:

Rene' DeLeeuw
redeleeuw@gmail.com