

REPRODUCTIVE MANAGEMENT OF SHEEP AND GOATS

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Important Reproductive Traits

- Percent of females conceived early in the breeding season
- Lambing and Kidding percentages
- Percent of females able to give birth unassisted

Genetic Quality

Heritability Estimates for Reproductive Traits in Sheep

Trait	Heritability (Percent)
Ewe Fertility	5
Prolificacy (a)	10
Scrotal Circumference	35
Age at Puberty	25
Lamb Survival	5
Ewe Productivity (b)	20

(a) Lambs born per ewe lambing
(b) Pounds of lamb weaned per ewe exposed
Source: Sheep Production Handbook 2002, Vol. 7

Environmental Influences

- Age
- Weather
- Season
- Nutrition

Age

- Puberty = Time of first sexual activity
 - Breed and potential mature size create considerable variations in the onset of puberty.
 - A function of both Age and Body Weight
 - Nutrition

Weather

- High Ambient Temperature
 - Decreased fertility
 - Decreased embryo survival
 - Decreased fetal development
- High Humidity
 - Increased risk of heat stress at any temperature

Weather

- If a ewe or doe can't maintain normal body temperature
 - Ovulation and conception rates decrease
 - Embryo is less likely to survive if conception does occur
 - 21 – 30 days after breeding is most critical time for conception and embryo survival

Nutrition

- Most important factor influencing reproduction
- Body Condition strongly influences
 - The onset of puberty
 - The conception rate at first estrus
 - Length of postpartum interval (PPI)
 - Health and vigor of newborn lambs and kids

Nutrition

- Ewe lambs and doelings will reach puberty by 5 to 8 months if they have gained sufficient weight.
- Recommended target weights are 50 to 70 percent of adult weight.
 - However, they should weigh at least 60 percent of her mature weight when bred for the first time.
- Ewes and does that lamb and kid early breed back earlier in the next breeding season.

Minimum Weight to Breed Ewe Lambs

Avg. mature wgt. of ewes in flock	Min. wgt. to breed ewe lamb
Lb.	Lb.
90	63
100	70
120	84
140	98
160	112
180	126
200	140
220	154
240	168

Nutrition

- Body Condition Exam Before Lambing and Kidding

Breeding Season

- Estrus or "heat"
 - Sexually receptive to ram or buck
- Sheep and goats
 - Seasonally polyestrous and "short-day" breeders



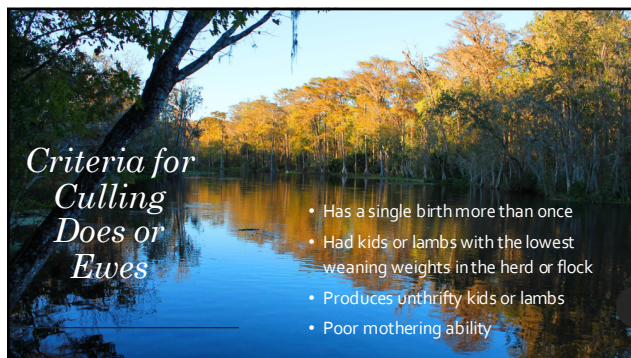
*How long can
I breed my
ewe/doe?*

"I have had a sheep that produced well until her 12th year, then she got retired. I have a Suffolk that still has teeth that will be 10 years old this fall, and if in good enough body condition she will get another go. We plan that all our 7 year olds and older will be culled. Sometimes they get another go, sometimes they don't. It depends on their teeth, their constitution, and the quality of the lambs that they make."



*Responsible
Culling*

- Improves productivity and efficiency
- Preg. check and cull "open" females early
- Also evaluate
 - Eyes
 - Mouth
 - Feet
 - Legs
 - Udder



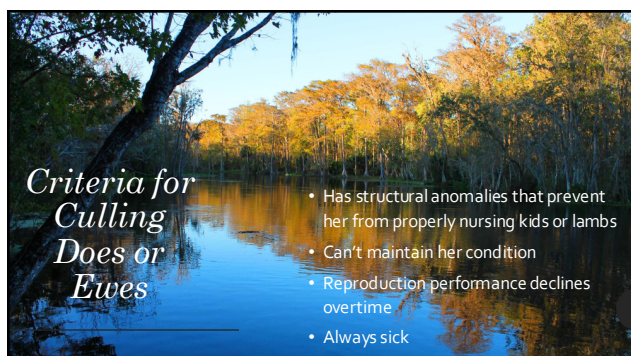
*Criteria for
Culling
Does or
Ewes*

- Has a single birth more than once
- Had kids or lambs with the lowest weaning weights in the herd or flock
- Produces unthrifty kids or lambs
- Poor mothering ability



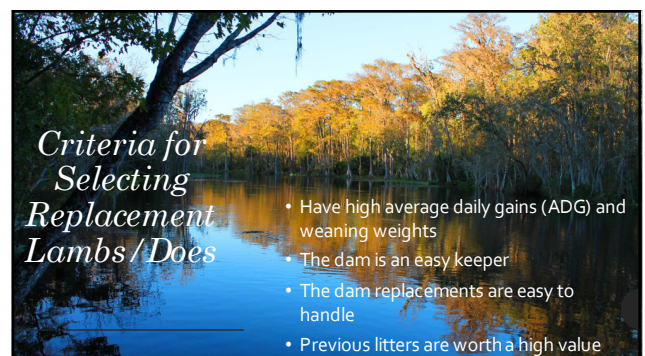
*Criteria for
Culling
Does or
Ewes*

- Produces kids or lambs with birth defects
- Doesn't produce enough milk to wean her kids or lambs
- Recurring health problems
- Gets pregnant late in the breeding season




*Criteria for
Culling
Does or
Ewes*

- Has structural anomalies that prevent her from properly nursing kids or lambs
- Can't maintain her condition
- Reproduction performance declines overtime
- Always sick



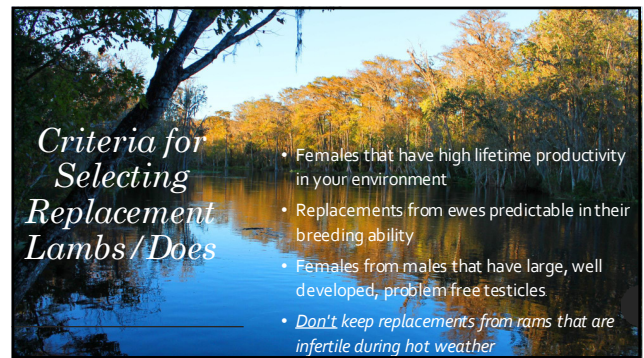
*Criteria for
Selecting
Replacement
Lambs/Does*

- Have high average daily gains (ADG) and weaning weights
- The dam is an easy keeper
- The dam replacements are easy to handle
- Previous litters are worth a high value



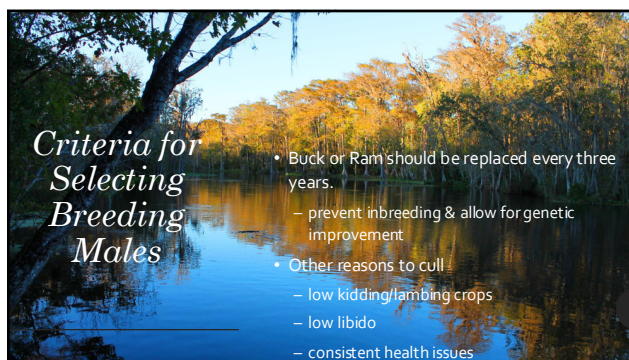
Criteria for Selecting Replacement Lambs/Does

- Litter weight is 100% of the dam's body weight
- Structurally sound
- No serious or persistent health problems
- Born from multiple births early in the lambing/kidding season
- Triplet ewe lambs once into production will usually have twins



Criteria for Selecting Replacement Lambs/Does

- Females that have high lifetime productivity in your environment
- Replacements from ewes predictable in their breeding ability
- Females from males that have large, well developed, problem free testicles
- *Don't keep replacements from rams that are infertile during hot weather*



Criteria for Selecting Breeding Males

- Buck or Ram should be replaced every three years.
 - prevent inbreeding & allow for genetic improvement
- Other reasons to cull
 - low kidding/lambing crops
 - low libido
 - consistent health issues



Select Breeding Bucks or Rams

- born from twins
- reproductively sound (BSE)
- structurally sound
- with a large scrotal circumference
 - (daughters have higher fertility rates)
- with high ADG & weaning weights
- that are not difficult to manage



QUESTIONS?

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