Sheep Facts

NC STATE EXTENSION

Animal Science Facts

Sheep is a term for selective grazing animals that may be domesticated (tamed) or wild. This material will primarily focus on domesticated sheep. Behaviorally, sheep are gregarious, precocial, defenseless creatures. But what does that mean? Gregarious means that they flock together or like to be with a group. It is rare to see a sheep by itself because of their gregarious nature. Precocial means that they have a high degree of independence at birth. This means that they can stand on their feet shortly after birth. Sheep are defenseless for the most part against predators like coyotes and wild dogs. Sheep are also very selective in their grazing habits. Sheep have a split in their upper lip, with this they are able to pick the preferred leaves off of the plant.

At one time all sheep were wild. Around 10,000 BC sheep were domesticated by the humans. Most of the wool breeds of sheep were developed from Moulfan sheep. Most of the hair breeds are similar to the Urial sheep of ancient times. Prior to domesticating sheep, the dog and reindeer were domesticated.

As the animals were raised under tamed conditions, they went through several changes. On the outside the sheep began to develop more wool and less hair. The color of the wool and hair changed from brown and shades of brown to whites and blacks. Their ears became more of a lop ear than an erect ear. The horns that the wild sheep possessed were weakened and disappeared from many breeds. On the inside the sheep changed as well. These internal changes happened at both ends. The tails had less vertebrates, or bones than the sheep do now. Today's sheep also have a smaller brain than the sheep 12,000 years ago.

Sheep were tamed for several uses that still apply today. The sheep were first used for meat, skins, milk and wool. Sheep are still used for these basic purposes plus many more. Sheep by-products are in many items that we use everyday.

Sheep Facts

Animal Profile		
Classification	**Scientific Name**	**Common Term**
Kingdom	Animalia	animal
Phylum	Cordata	vertebrates
Class	Mammalia	suckle young
Order	Ungulata	hoofed mammals
Sub-Order	Artiodactyla	even toed Ungulata
Section	Pecora	typical ruminants
Family	Bovidae	hollow horned ruminants
Subfamily	Caprinac	sheep and goats
Genus	Ovis	sheep
Species	Ovis Aries	domesticated sheep

Sheep Terms	
Ram	male of breeding age
Wether	castrated male
Ram lamb	immature male
Ewe lamb	immature female
Lamb	newborn
Flock	group (3 or more)
Tupping	act of breeding
Lambing	act of parturition (giving birth)
Birth weight	5 - 8 lb.
Average number born	1.1 - 1.4 lambs/year
Weaning age	2 - 3 months
Pasture carrying capacity	5- 6 ewes and lambs/acre

Types of Sheep (body covering)	
Fine wool	Merino (100%)
Medium wool	$\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$ blood
Long wool	coarse, strong, luster, 12"/year (English breeds)
Carpet wool	lowest quality
Hair	straight, non elastic and glossy

Biological Traits			
	Temperature (°F)	**Respiration rate**	**Pulse rate**
Maximum	104.0	20	80
Average	102.5	16	75
Minimum	102.0	10	70

Life span: 6 -11 years

Chromosome number: 54

Digestive System	
Ruminant	multiple-compartment stomach containing microbes (bugs) that are able to digest forages
Daily consumption levels	Food: 2 - 4.5 lbs Water: 0.5 - 1.5 quarts
Daily waste volume	Fecal: 2 - 6.5 lbs Urine: 10 - 40 ml per kg of body weight

Reproductive Traits	
Ewes	
Mature weight	90 - 300 lbs
Breeding season	early fall to late winter (some are poly-estrous year round, ex. Dorset)
Estrous cycle	14-19 days seasonally poly-estrous
Duration of estrous	24 - 26 hours (standing heat)
Time of ovulation	24-30 hours from beginning of estrous
Gestation period	145 - 155 days
Breeding/year	1 - 2/year
Artificial insemination	Yes, cervical or vaginal method Intrauterine method
Ewe lambs	
Puberty	5 - 8 months (80-100 lbs)
Minimum breeding age	8 - 10 months
Rams	
Puberty	6 - 8 months
Mature weight	150 - 450 lbs
Serviceability	1 ram: 30 - 35 ewes (60 day breeding season)
Ejaculate volume	0.8 - 1.2 ml
Sperm concentration	2,000 - 3,000 million/ml
Motile sperm	60 - 80 %
Semen freezable	yes

Under the Hide (Carcass Information)			
	High	**Average**	**Low**
Age at slaughter	8 months	6 months	4 months
Live weight	160 lbs	125 lbs	85 lbs
Dressing percentage (%)	57%	52%	45%
Fat thickness	.50 in	.25 in	.05 in
Kidney, pelvic, and heart fat (% KPH)	6.0%	3.0%	1.5%

Yield Grades

1, 2, 3, 4 & 5, based on the backfat thickness at the 12th rib

yield grade formula = 0.4 + (10 x adjusted back fat thickness, inches)

Quality Grades

Based on a composite evaluation of conformation, maturity, and quality of the lean flesh

- US Prime
- US Choice
- US Good
- US Utility

Degrees of flank fat streaking - used to predict marbling, since lamb carcasses are not ribbed to expose ribeye muscle marbling

- Devoid
- Practically devoid
- Traces
- Slight
- Small
- Modest

- Moderate

- Slightly abundant

- Moderately abundant

- Abundant

Maturity (physiological) - Chronological age of the live lamb is determined by assessing the physiological age of the bone and muscle. Maturity grades are A and B.

Break joint (young lambs) - the rigid surface of the joint is quite red, moist, and porous
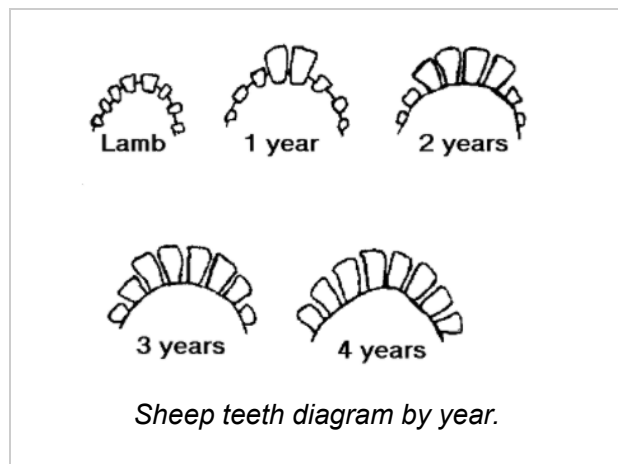
Spool joint (older sheep) - the joints become drier and harder

Color of lean - red to dark red

Sheep Teeth

- 20 temporary teeth

- 32 permanent teeth at maturity

- 4 pairs of incisor teeth on lower jaw

- upper incisors missing

- cartilaginous (hard) dental pad on upper jaw

- split upper lip with mobile lips

Age of Sheep (teeth)	
Lamb	4 pair of incisors
1 year	middle pair of incisors
2 years	2nd pair of permanent incisors
3 years	3rd pair of permanent incisors
4 years	4th pair of permanent incisors
5 years	all permanent incisors close together
6 years	incisors begin spreading apart
7-8 years	some incisors broken
10-12 years	all incisors missing

Sheep teeth diagram by year.

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