

Educational Resource



Youth Livestock Program • Kansas State University
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Contributions

Special thanks to these people and organizations for their contributions to the Junior Sheep Producer Day program and this educational resource.

Animal ID, Inc.

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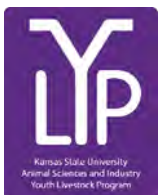
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Dr. Emily Reppert

Youth for the Quality Care of Animals (YQCA)

Thank you to our sponsors!



Selecting Your Lamb Project

2022 KSU Junior Sheep Day



Payton Dahmer



So, you want to show sheep?

- Market vs. Breeding
- Where are you going to show?
 - County fair, state fair, national
- How well do you want to do?
 - Goals, goals, goals!



S	M	A	R	T
Specific	Measurable	Attainable	Realistic	Time-bound
Do: Set real numbers with real deadlines. Don't: Say, "I want more visitors."	Do: Make sure your goal is trackable. Don't: Hide behind buzzwords like, "brand engagement," or, "social influence."	Do: Work towards a goal that is challenging, but possible. Don't: Try to take over the world in one night.	Do: Be honest with yourself- you know what you and your team are capable of. Don't: Forget any hurdles you may have to overcome.	Do: Give yourself a deadline. Don't: Keep pushing towards a goal you might hit, "some day."



Things to Consider

- Ownership requirements
- Age
 - When is your ‘target show’

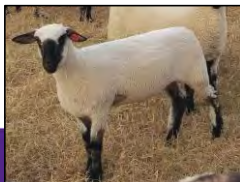
<u>Target Show Date</u>	<u>Ideal Age of Lamb to Select</u>
July-August (most Kansas county fairs fall in this time frame)	Typically, lambs born in January or early February work best
September-November (this time frame encompasses shows like the Kansas State Fair, Kansas Junior Livestock Show, and most national livestock shows)	Lambs born in February to early March are ideal



Things to Consider

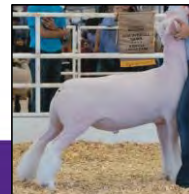
- Breeds
 - Market: Black-faced most common
 - Breeding: Wool breed, meat breed, black-faced or white-faced

Hampshire



Southdown

Dorset

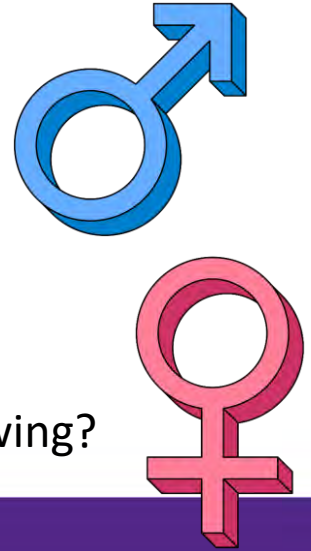


Rambouillet



Market vs. Breeding Sheep

- Market
 - Typically wethers (can be ewes)
 - Terminal events (meat production)
- Breeding
 - Ewes (sometimes rams)
 - What to do with the animal after showing?



Use Your Resources

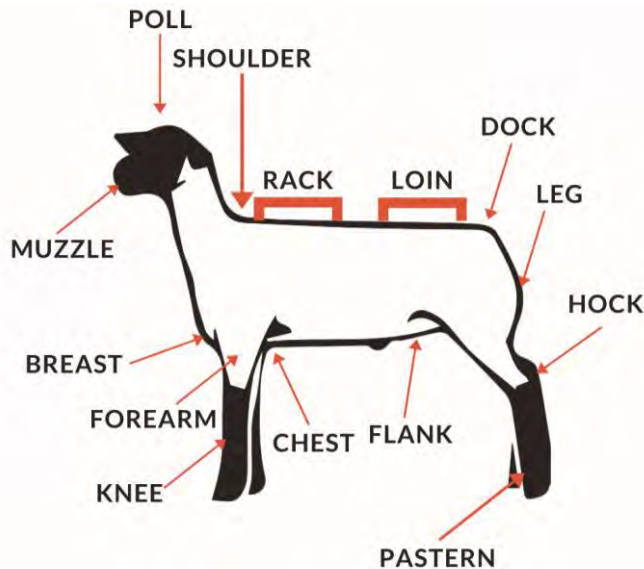
- Breeders, 4-H/FFA leaders, extension agents can help you find the right project
- Don't be afraid to ask questions!

Breeder Directories

www.championdrive.com
www.clublambpage.com



Evaluating Sheep



Criteria for Selecting Your Project

- Muscle
- Structural correctness
- Balance/Quality
 - Secondary, but important to be competitive

These are the essentials for success!
Interchangeable depending on market or breeding

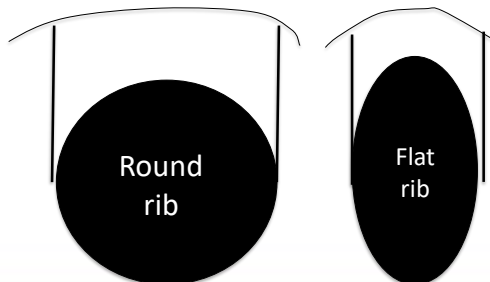
Muscle

- Skeletal width lays foundation for muscle
 - Width of chest
 - Width from hock to ground
- Top priority in market, second priority in breeding



Muscle

- Look at:
 - **Body shape**
 - Top shape
 - Hip/rump



Structural Correctness



Research and Extension



Structural Correctness

- Feet and legs are critical!
 - Shape of foot
 - Pasterns

FRONT VIEW



Correct



Splay-footed



Pigeon-toed



Knock-kneed



Correct



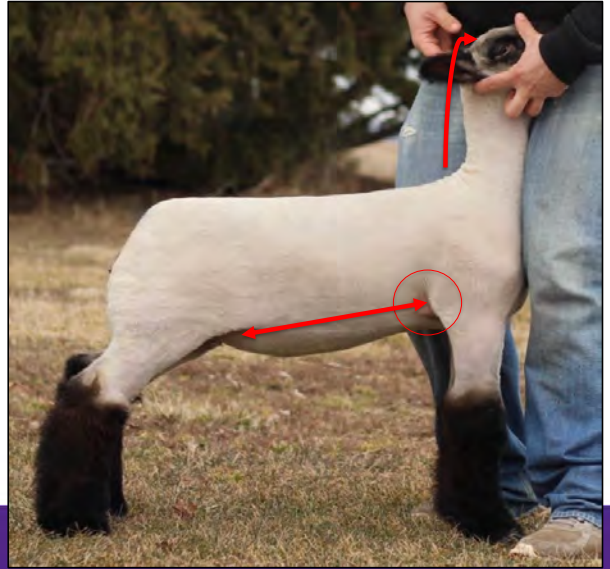
Too much angle



Too straight

Balance and Quality

- Proportionality
 - Topline and underline
- Neck attachment
 - High and tidy
- Structure and balance are directly related



Keys to Success

1. Selecting a good project
2. Proper daily care/facilities
3. Proper nutrition
4. Proper showmanship

KSU Show Lamb Guide

<https://bookstore.ksre.ksu.edu/Category.aspx?id=561&catId=583&Page=1>



Educational Resources



The following list of resources can be helpful links to assist you with a variety of questions you may encounter with your show lamb project.

Kansas Youth Livestock Program
<https://www.asi.k-state.edu/research-and-extension/youth-programs/>

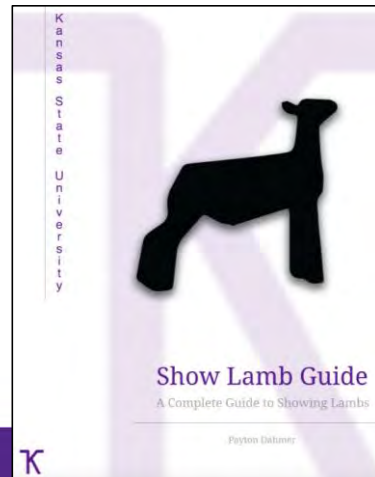
Kansas State University Sheep and Meat Goat Extension
<https://www.asi.k-state.edu/research-and-extension/sheep-and-goats/>

Sure Champ Educational Blog
<https://surechamp.com/blog/2018/05/07/how-to-get-lambs-ready-for-the-show-ring/>

Purina Educational Video Series
<https://www.purinamills.com/show-feed/education/detail/controlling-show-lamb-weight-gain>
<https://www.purinamills.com/show-feed/education/detail/tips-for-successful-lamb-exercise-programs>
<https://www.youtube.com/watch?v=vSu67BCROXk>

Maryland Small Ruminant Page
<https://www.sheepandgoat.com>

American Consortium for Small Ruminant Parasite Control
<https://www.wormx.info>



Questions

Check out the KSU
Sheep and Goat Center
website!

<https://www.asi.k-state.edu/about/facilities/Sheep-Meat-Goat-Center.html>

Animal Sciences and Industry

- About
- Undergraduate
- Graduate
- Research & Extension
- Events

Sheep & Meat Goat Center



KANSAS STATE UNIVERSITY
Sheep & Meat Goat
CENTER



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- People
- Services
- Facilities**
 - Department Offices
 - Beef Cattle Research Center
 - Beef Stocker Unit
 - Cow-Calf Unit
 - Dairy Teaching and Research Center
 - Horse Unit
 - KABU
 - Poultry Center
 - Purebred Beef Unit
 - Sheep & Meat Goat Center**
 - Stealing Stud Center
 - Swine Teaching & Research Center
- ASI App
- Newsletters
- Job Announcements
- Department Awards



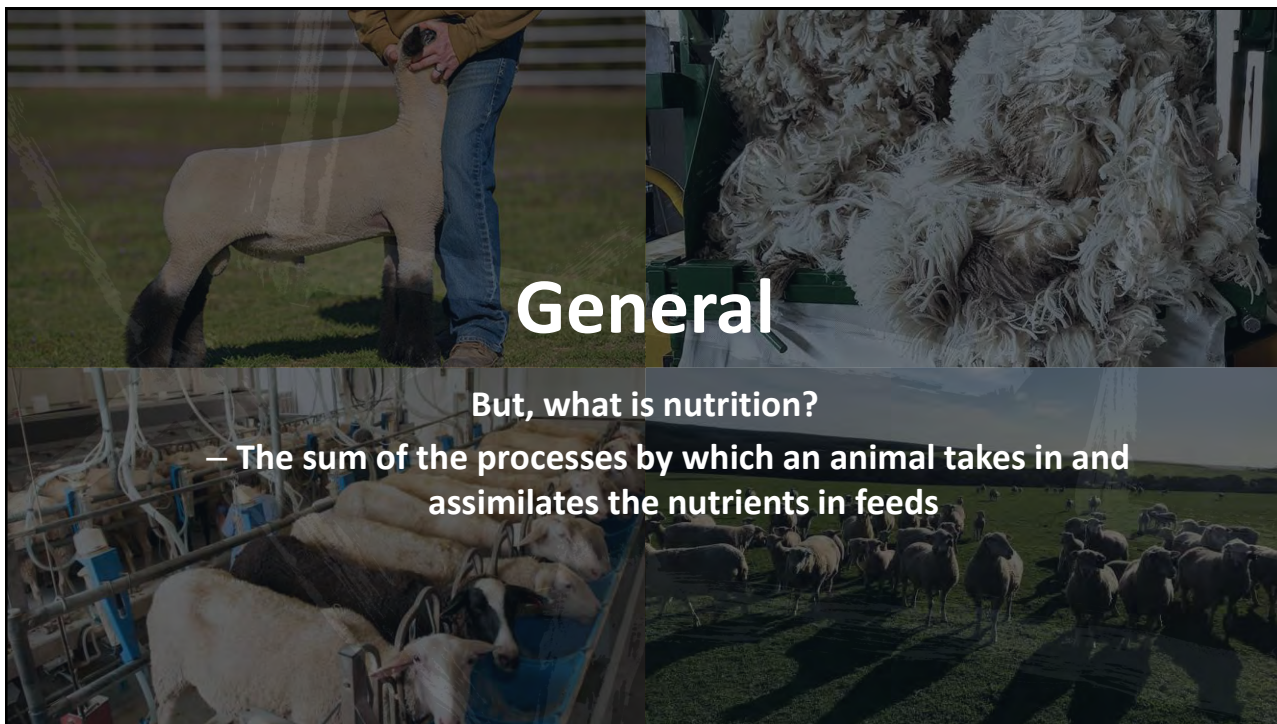
Nutrition and Daily Feeding

Dr. Alison Crane
KSU Sheep and Meat Goat Extension Specialist
Junior Sheep Producer's Day

*Knowledge
for Life*

General

- Faulty nutrition plays one of the largest roles in lack of growth and production
- Sheep production is:
 - The efficiency of converting feed resources (pasture, forage, or grain) into products of economical value (meat, fiber, or milk)
- Feed is the largest cost associated with livestock production



General

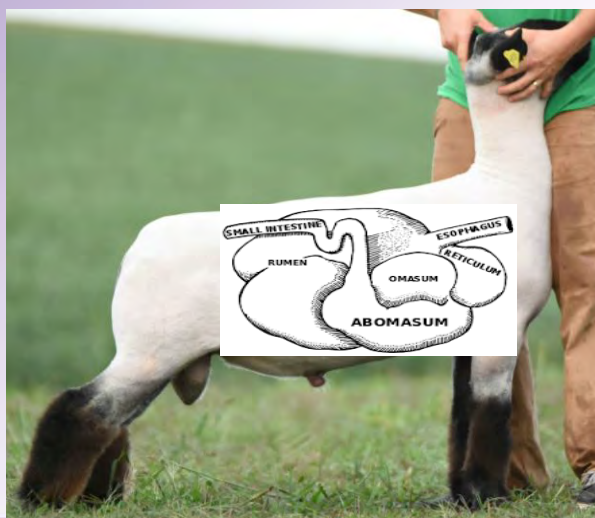
But, what is nutrition?

- The sum of the processes by which an animal takes in and assimilates the nutrients in feeds

*Knowledge
for Life*

Digestive System

Rumen capacity:
5- 10 gallons in mature
sheep



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What about Sheep?






- Sheep prefer forbs, then grazing
 - Forbs, shrubs
- Nutrient requirements are determined by:
 - Age, weight, sex, Body size
 - Breed, production stage, and type
- What are we meeting requirements of?
 - WATER
 - Energy, Protein, Minerals, and Vitamins

Knowledge
for Life

How do we know if we are meeting/exceeding requirements?

Body Condition Scoring

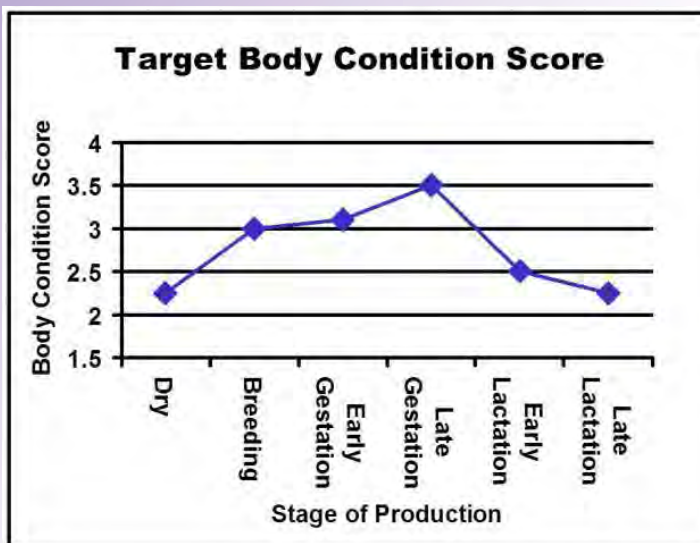
Palpate Lumbar Region

	Backbone The bones form a sharp narrow ridge. Each vertebra can be easily felt as a bone under the skin. There is only a very small eye muscle. The sheep is quite thin (virtually unsaleable).	Short Ribs The ends of the short ribs are very obvious. It is easy to feel the squishy shape of the ends. Using fingers spread 1cm apart, it feels like the fingernail under the skin with practically no covering.
	Backbone The bones form a narrow ridge but the points are rounded with muscle. It is easy to press between each bone. There is a reasonable eye muscle. Store condition-ideal for wethers and lean meat.	Short Ribs The ends of the short ribs are rounded but it is easy to press between them. Using fingers spread 0.5cms apart, the ends feel rounded like finger ends. They are covered with flesh but it is easy to press under and between them.
	Backbone The vertebrae are only slightly elevated above a full eye muscle. It is possible to feel each rounded bone but not to pass between them. (Forward store condition ideal for most lamb markets now. No excess fat).	Short Ribs The ends of short ribs are well rounded and filled in with muscle. Using 4 fingers pressed tightly together, it is possible to feel the rounded ends but not between them. They are well covered and filled in with muscle.
	Backbone It is possible to feel most vertebrae with pressure. The back bone is a smooth slightly raised ridge above all eye muscles and the skin floats over it.	Short Ribs It is only possible to feel or sense one or two short ribs and only possible to press under them with difficulty. It feels like the side of the palm, where maybe one end can just be sensed.
	Backbone The spine may only be felt (or at all) by pressing down firmly between the fat covered eye muscles. A bustle of fat may appear over the tail (wasteful and uneconomic).	Short Ribs It is virtually impossible to feel under the ends as the triangle formed by the long ribs and hip bone is filled with meat and fat. The short rib ends cannot be felt.

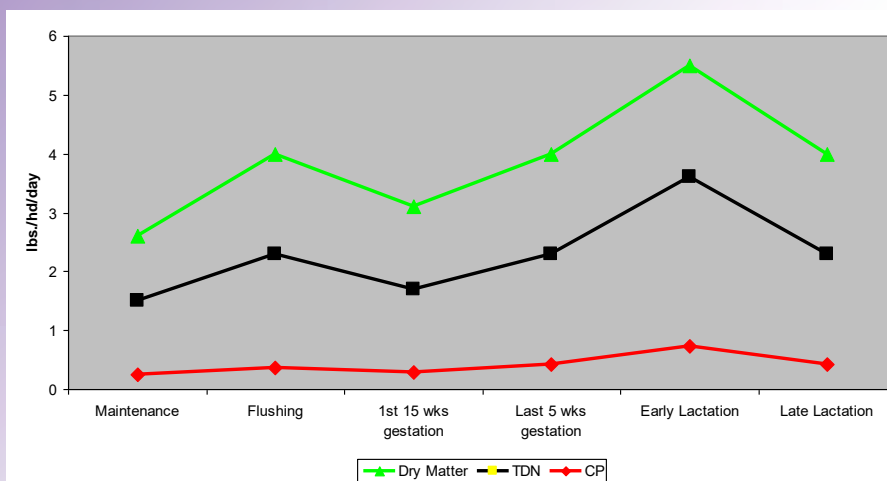


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Target BCS



Ewe Diets, Production Stage



Feeding a Sheep

- Typically sheep do not depend on an intensive feeding system
 - Unless:
 - Growing, pregnant, lactating or winter
- Daily Feed Intake:
 - 3-4% of body weight; dry matter/head/day
 - Can be influenced by:
 - Body weight, %DM in the feeds consumed (12-35% forages, 86-92% hays/concentrates), palatability, and physiological stage (growth, pregnancy, lactation)

Nutrients: Energy

Carbohydrates: Sugars, starches (Grains) and Fiber (Cellulose)

- Converted to VFAs (Energy)
- Fresh pastures and young plants are more highly digestible, and provide more energy (%TDN)
- Most sheep need about half of ration in form of forages
 - If we are providing something different, they need to be adapted to those diets over time
 - Maintain at least 12% crude fiber in the diet

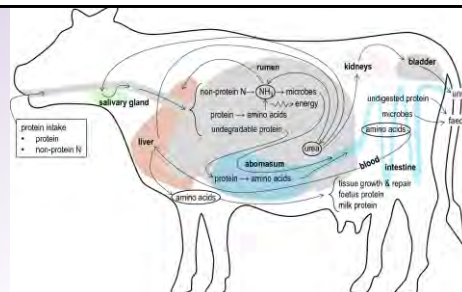
Energy

- Energy requirements change depending on physiological stage and pregnancy status
- High energy rations should be fed:
 - Breeding
 - Late gestation
 - Lactation

Fats

- Can be source of energy
- Cost effectiveness depends on source
 - So does palatability
- Excess energy is stored as fat in the body and can be utilized in times of high energy needs

Protein



- Proteins are broken down into amino acids

Dietary protein → ruminal microbes

→ microbial protein → amino acids

- Eventually absorbed in small intestine
 - Building blocks for muscle
- Sources: forages, hays, alfalfa pellets, barley, peas, corn, oats, distilled grains/meals (soybean, canola, corn, cottonseed)

Protein

- Protein requirements are higher during growth (lambs)
- May need to supplement protein throughout the year
 - Late fall/winter
- Want to be cost-effective: proteins are expensive
- If hay is about 12-13% CP, provide about ½ protein in form of corn, soybean meal, etc.
- If average quality, can add 1 lb of supplement

Nutrient Requirements, Maintenance

BW	DMI, lbs.	DMI, %	TDN, lbs.	CP, lbs.	Ca, lbs.	P, lbs.
125	2.3	1.7	1.26	0.22	0.0051	0.0051
150	2.6	1.7	1.45	0.25	0.0057	0.0053
175	2.9	1.7	1.62	0.28	0.0064	0.0059
200	3.2	1.6	1.79	0.31	0.0070	0.0066
225	3.5	1.6	1.96	0.33	0.0077	0.0070

Source: Nutrient Requirements of Sheep, 6th revised Edition, 1985.

Nutrient Requirements, 4- to 7-month-old lambs

BW	DMI, lbs.	DMI, %	TDN, lbs.	CP, lbs.	Ca, lbs.	P, lbs.
66	2.9	4.4	2.10	0.42	0.0146	0.0106
88	3.5	4.0	2.70	0.41	0.0146	0.0071
110	3.5	3.2	2.70	0.35	0.0123	0.066

Source: Nutrient Requirements of Sheep, 6th revised Edition, 1985.

Vitamins and Minerals

- Most vitamins(A,D, and E) are provided through forage & feeds
 - If indoors or on concentrate diets, be sure to provide mineral and vitamins
- Calcium: Phosphorus (2:1)
- Salt (Add 0.5% to total diet)
- Copper (7-11 ppm, ≥ 25 ppm toxic)
- Selenium (0.1-0.2 ppm, ≥ 2 ppm toxic)

Grazing

- 1 mature sheep/2-5 acres (Extensive grazing)
 - Can vary greatly
 - Depending on system and location
- 2-3 mature sheep/acre/grazing season (Intensive grazing)
- 5-7 days grazing duration; 10-50 sheep per acre

All dependent on grasses, regeneration, and season

Ewe Management

***Hitting target BCS at breeding and lambing can make
our ewes and lambs healthier***

- Prevent common health issues
 - Toxemia
 - Hypocalcemia
 - Dystocia

Pregnancy Toxemia

- Ketosis/Pregnancy disease/Lambing sickness/twin-lamb disease
- Principal: low blood sugar (glucose), (-) energy
- Onset: triggered by stress
 - Nutritional
 - Inclement weather
- Most prevalent:
 - When carrying 2+ lambs
 - Ewes that are extremely fat or excessively thin
 - 1-3 wks prepartum

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Preg Tox

- Prevention
 - BCS of 3 at breeding; Aim for BCS 3-3.5 at parturition
 - Plan for 3-4# good quality hay (>10% CP) and 1.5# grain/hd daily in late gestation
 - Fetal Counts (feed)
 - Do not allow free-choice feeding in first 4 mos of pregnancy
 - Supplement concentrates in last 2-4 wks of gestation or access to lush pasture
 - If severe weather, may increase to 2-3# grain/hd/d divided into 2 feedings
 - Parasite management

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Preg Tox Treatment

- Glucose drench
 - 60-100 mL/d for 3 days
 - Can add CA, insulin, and potassium
 - Can also had electrolyte solutions
- Offer good quality hay & oats
- Sometimes induction necessary
 - Dexamethasone (20 mg, IV or IM)
 - Occurs within 24 to 72 hrs (36 hrs)

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Hypocalcemia or Milk Fever

- Cause: decreased calcium intake when requirements increase
- Timing: Late gestation, early lactation
 - 6 wks prior to 10 wks post-parturition
 - Commonly: 1-3 wks prepartum
- Target: Ewes carrying multiples
- Can be concurrent with preg tox
- Nutrition and mobilization
- <5% of flock, up to 30%

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HC or Milk Fever

- Treatment:
 - Ca Borogluconate IV (50-150 mL of 23% solution)
 - Oral or SQ administration to prevent relapse
 - Can cause arrhythmias
 - Can mix
 - Above with:
 - With 1 L of a 5% dextrose solution
 - Administer over 10 min period

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Newborn Lamb Management

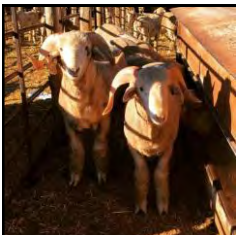


- Three main causes of death:
 - Starvation/Hypothermia
 - Pneumonia
 - Difficult Birth

Maternal Genetics, Nutrition, some not manageable
- Pneumonia:
 - Some management: barns, draft, ventilation
 - Can lead to chronic pneumonia

Lamb Management

- Colostrum: milk produced up to 18 hrs after birth
- Newborn lambs susceptible to hypothermia:
 - Relatively low energy reserves
 - Large body surface area: body weight
- Colostrum within 30 to 60 minutes after birth
- Need 10-20% of body weight



Lambs At Birth

- Normal: 102-103 F
- Hypothermic: <100 F
 - Tubing
 - Colostrum
 - Milk Replacer
- Best Option:
 - Milk from ewe, Others in flock, frozen/fresh reserves



Tubing Lambs

- Lamb's head in a natural position
 - Insert the tube in the side of the mouth, following the roof of the mouth down into the throat
- Don't force the tube down
 - Allow the lamb to swallow as tube goes down the esophagus
 - Tube can be felt on the outside of the neck as it is inserted down into the stomach
 - About 12 inches
- Although it is difficult to get the tube down the trachea (windpipe), the tube can be checked to see if air is being expelled (listen or moisten end of tube to see if bubble forms)

https://www.youtube.com/watch?v=iUuNsVo_mYA

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Tubing Lambs

- After inserting of the tube, give the colostrum slowly
- Lambs should receive 20 cc colostrum per pound of body weight
 - 30 cc equals approximately 1 ounce
 - A 10-pound lamb should receive 200 cc or about 7 ounces of colostrum in the first 30 minutes after birth
 - After the initial tube feeding, many lambs will respond and begin to nurse on their own
 - If not, the lamb may need to be tube fed every two to three hours after the initial feeding

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Creep Feeding

- Increases weight gain and health
- Introduce at < 10 d old
- 14-18% CP, no urea
- Soybean meal or cracked corn, mix
 - Mineral
- Once chewing cud, gradually change to a mix
- Cracked/whole corn and a protein pellet
- Include Bovatec or Deccox and ammonium chloride
- Clostridial vaccination...



Ration Balancing Software

- **Free Ration Software:**
 - <https://msusheepration.montana.edu/>

Resources

- Genetic information: [Nsip.org](https://www.nsip.org)
- Purchase feeds on nutrient costs (APP)
 - <https://www.igrowlivestocktools.org/#!/calculators/feed-cost>
- WYO Ranch Tools: <https://uwyoextension.org/ranchtools/>
- KSU: <https://www.agmanager.info/decision-tools>
- Parasites: <https://www.wormx.info/>
- Targeted Grazing: <https://targetedgrazing.org/>

THANK YOU!

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Facilities and Equipment

2022 KSU Junior Sheep Day

Payton Dahmer



Prior to Getting Your Lamb

There are A LOT of
questions to ask, and ALL
of them are important!!



Important Things to Consider

- Your facility **does not** have to be elaborate!
- However, it does need:
 - Shelter from the elements
 - Dry bedding
 - Appropriate fencing
 - Access to feed/water

Barn Requirements

- Minimum of 20 square feet per animal
- Can be penned individually, or as a group
- Fences should be at least 42" tall
 - Vertical bars ideal



Barn Requirements

- Temperature
 - Draft-free when its cold (avoid sickness)
 - Heat lamps, if necessary
 - Well-ventilated when its hot (feed intake)
 - Fans and/or proper shade

Barn Requirements

- Bedding
 - Straw
 - Wood shavings
 - Mulch (cypress or cedar)
- A clean pen is **critical** to animal performance



Barn Requirements

- Feeders
 - Clip-on, hanging, etc.
 - Shoulder height



Feeders

- If group penning, try to feed separately
 - Allows accurate monitoring of feed intake



What **NOT** to do with feeders!



Barn Requirements - Water

- **WATER IS THE SINGLE MOST IMPORTANT THING FOR YOUR SHOW LAMBS**
- “If you wouldn’t drink it, then don’t expect them to!”



Barn Set-Up



Equipment – For the Beginning

- Halters
 - Breaking your lamb to the halter



Equipment – For the Beginning

- Shears
 - Taking off the “baby wool”
- Blankets
 - Protect your lamb from flies and keep hide moist



Other Equipment



Other Equipment





KSU Junior Sheep Producer Day

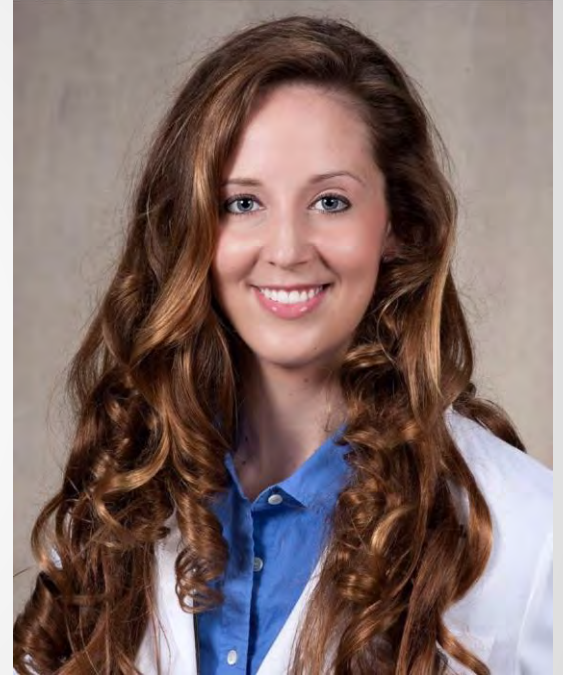
With the ReproLogix™ team



Gessica Johannsen, PhD



Kale Johnson, DVM



Elizabeth Ford - Johnson, DVM

About ReproLogix

Headquarters located in Fort Scott, KS



Satellite Locations

BOVINE & SMALL RUMINANT



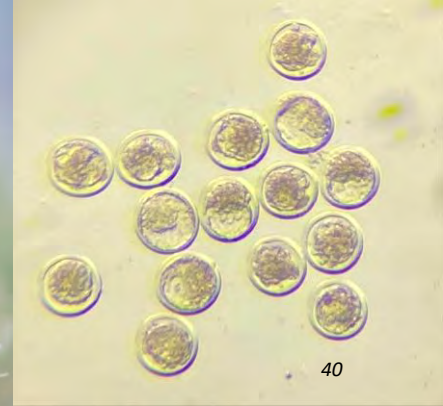
- Satellite Facilities across USA
- Offer small ruminant, exotic hoofstock, and bovine reproductive services
 - Artificial Insemination, Embryo Flushing, Oocyte Pickup/In Vitro Fertilization, Embryo Transfer, and Fetal Sexing (bovine only)





What Are We Covering Today?

- Brief overview of sheep reproductive anatomy and physiology
 - Discuss the structures involved in creating a healthy, new baby
- Different reproductive technologies available
- How to prepare your animal to achieve reproductive success
- Q&A



Sheep Reproductive Physiology



- **Seasonally Polyestrous**
 - Typically “short day” breeders with exceptions (Dorpers, Dorset, Rambouillet, Merino, etc.)
 - Will cycle multiple times during fall/winter (September- Early December highest percentage cycling)
 - Melatonin increases with reduced daylight hours leading to increased production of reproductive hormones (estrogen, LH, FSH, progesterone)





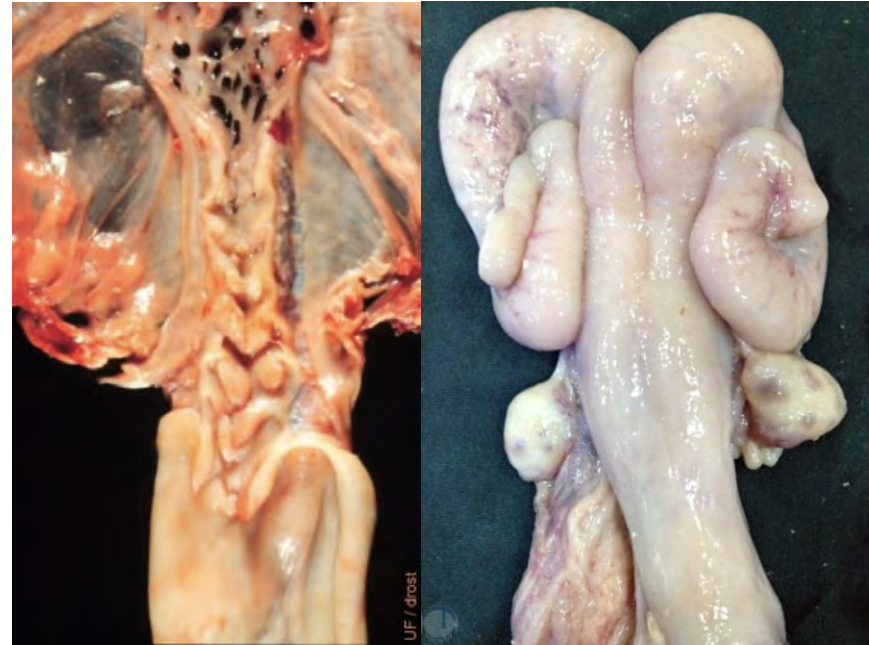
Sheep Reproductive Physiology

- Estrous cycle- approximately 17 days between “heats” (range of 14-19 days)
- Estrus (heat)- approximately 32 hours
 - Ovulation occurs during this time
- Gestation length- approximately 150 days from fertilization to lambing



Sheep Reproductive Anatomy

- Cervix-Tortuous with multiple “rings”
- Uterine Body
- Uterine Horns

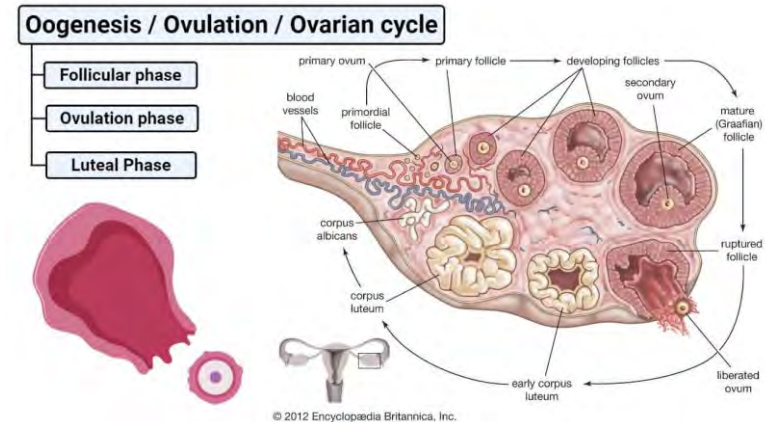




Sheep Reproductive Anatomy

Ovaries

- Structures associated with ovaries
 - i. Follicle-fluid filled structures where oocyte is located
 - ii. Corpus Hemorrhagicum-structure on ovary after follicle ovulates
 - iii. Corpus Luteum (CL-not to be confused with Caseous Lymphadenitis)- produces progesterone and maintains pregnancy until estrous cycle restarts
- Corpus Albicans- corpus luteum remnant

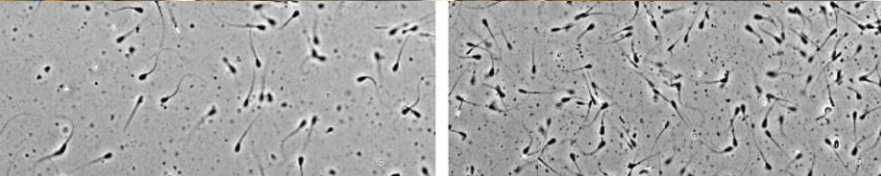


Conventional Breeding



Ram to Ewe Ratio

- Extremely variable (sexual maturity, nutrition,



Advantages

- Very effective if ram is sexually mature and reproductively sound (Breeding Soundness Exam/ BSE)
- Can be relatively low input/cost

Disadvantages

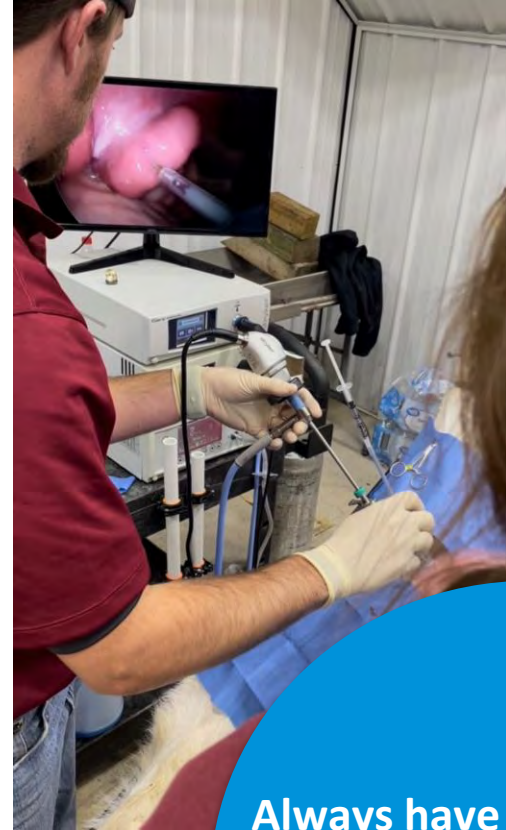
- Possibility of reproductive diseases brought in
- Longer lambing season than other reproductive options
- Limited by local access to ram
- If ram goes bad during season with no backup can lose entire lamb crop



Laparoscopic/Transcervical Insemination

Differences between the two

- **Transcervical**- extremely difficult in sheep due to cervix; lower pregnancy rate compared to laparoscopic
- **Laparoscopic**- semen deposited directly into uterine horn (closer to site of fertilization)



**Always have a backup plan
come breeding day!**

Laparoscopic/Transcervical Insemination



- **Advantages**

- Usage of sire genetics from around the world
- More females can be bred by one sire
- Shortened lambing season

- **Disadvantages**

- Not all semen is equal as far as quality
- Can lose a significant amount of investment if liquid nitrogen tank malfunctions
- More intensive than conventional breeding (programming ewes, timing insemination, need for a reproductive technician)

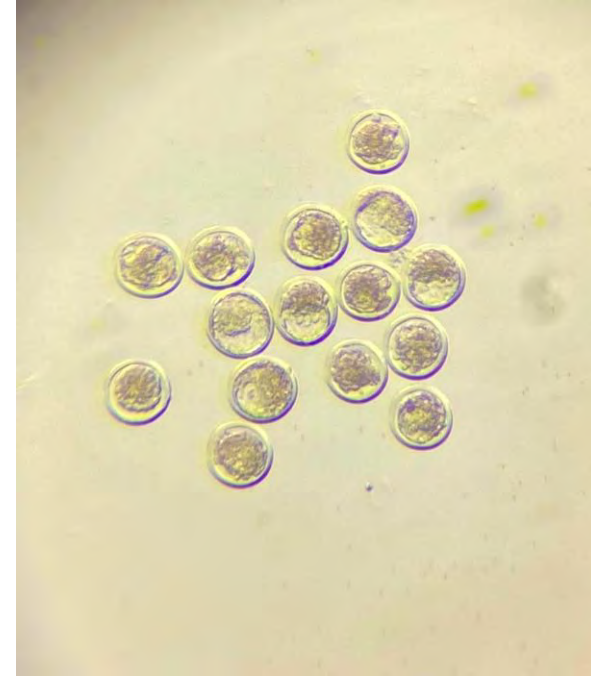
**Always have a backup plan
come breeding day!**

Embryo Flushing



Two main Types:

- **Surgical (commonly known as conventional flushing)**- requires anesthesia and abdominal surgery to harvest embryos six days after insemination.
- **Non-surgical**- embryos are harvested while under light sedation with a catheter six days after insemination
 - Some animals cannot be done this way due to convoluted cervix
 - Not offered by Reprologix



Embryo Flushing



Advantages

- Prospectively more live offspring from a specific donor in a shorter period time compared to conventional breeding or AI
 - Repeat flushes within the breeding season
- Gain a larger sample size in a shorter period to find out if sought after phenotypic characteristics are produced in offspring
- Donor doesn't have to carry the pregnancy- recipients
- Can freeze some embryos for future use

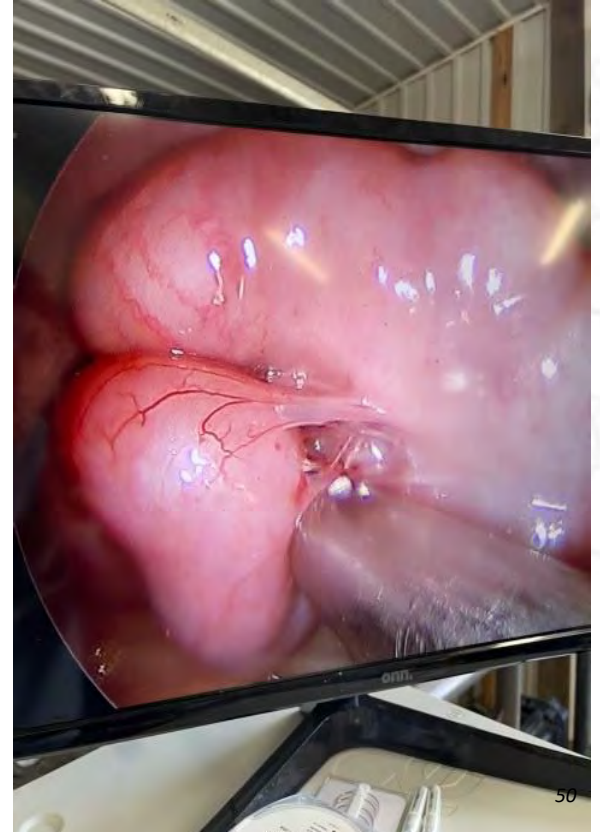


Embryo Flushing



Disadvantages

- Requires sedation/anesthesia depending on the technique
- With surgical flushing abdominal surgery is required so risks are present such as: adhesions, hernias, and rarely death
- Can be affected by weather, donor health, previous reproductive procedures, and drugs used
- Variable recovery time for donor



Oocyte Pickup (OPU) and In Vitro Fertilization

Terminology

- **Oocyte**- precursor to embryo produced by the dam before fertilization
- **Embryo**- fertilized structure undergoing multiple divisions before organ development, etc.

Oocyte Pickup (OPU) and In Vitro Fertilization



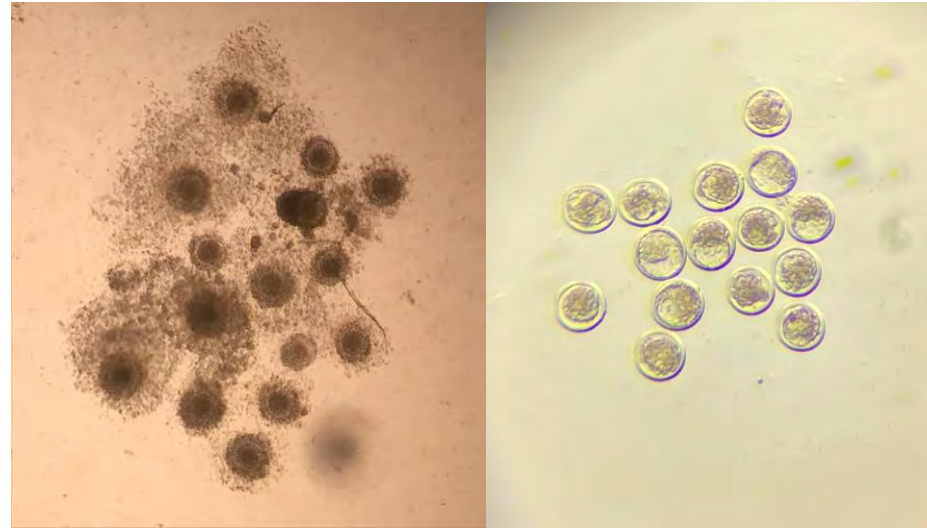
Oocyte Pickup

- In small ruminants, the donor is “superovulated” to increase the development of multiple oocytes as opposed to 1-3 dominant oocytes in small ruminants.
- The oocytes are harvested before the ovulation period of the donor.
- These oocytes are washed, evaluated, and graded before being transported to the lab for maturation and fertilization.

****Gloves are worn during all procedures at ReproLogix.**

Oocyte Pickup (OPU) and In Vitro Fertilization

- In Vitro Fertilization
 - These oocytes are kept in dishes to allow for maturation, fertilization of oocytes, and eventual conversion to embryos.
 - These embryos are grown in dish for approximately 6 days after collection and then transferred to recipients or frozen.
- Trying to replicate the ewe's natural environment within the reproductive tract



Oocyte Pickup (OPU) and In Vitro Fertilization

Advantages

- Less semen is required per donor in comparison to conventional flushing or AI.
- Reverse sorted semen may be used to select for male only or female only progeny.
- Multiple sires may be used on each collection.
- The procedure can be performed on pregnant donors up to approximately 50-60 days gestation.
- The procedure can be performed on donors as young as 4 months of age.
- Donors may be utilized outside their normal breeding season.
- The procedure can be performed with shorter intervals (approx. 3-4 weeks) between collections when compared to conventional flush

Oocyte Pickup (OPU) and In Vitro Fertilization



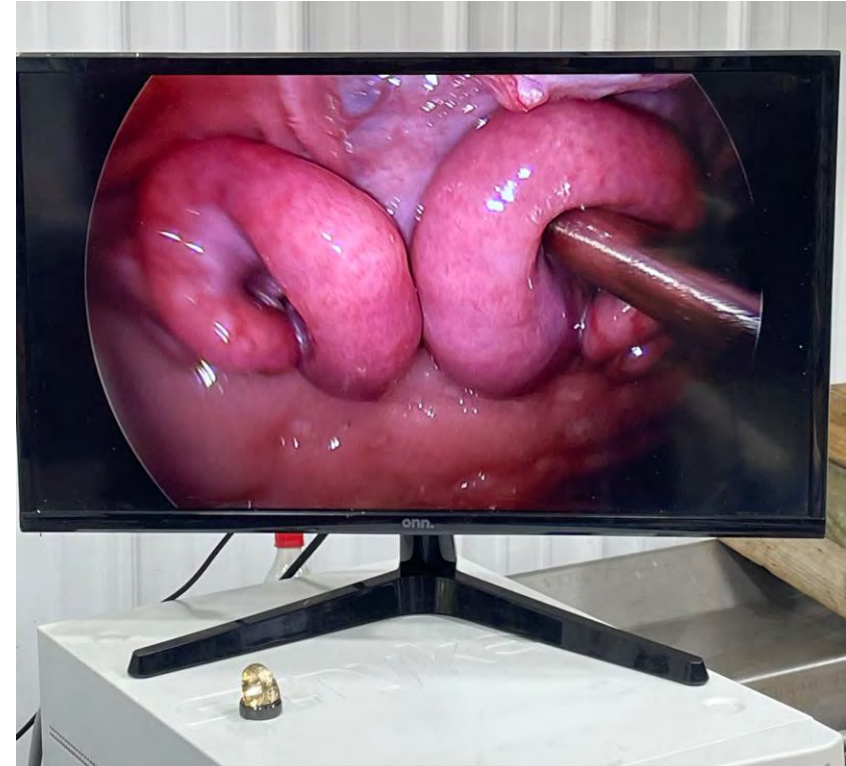
Disadvantages

- In vitro replication is not as efficient as replication within the actual female.
- On average more viable embryos are produced per surgical flush.
- Semen quality influences success a considerable amount.
- IVF pregnancy rates are relatively lower on average than surgical flush embryos.



Embryo Transfer

- Can be done with fresh or frozen embryos (IVF or flush)
- Can be done with embryos produced by your donor or purchased from another producer
- A certain number of recipient (surrogate) sheep are programmed using hormones to match the reproductive cycle timing of your donor/ embryo.





Embryo Transfer



- Recipient sheep are anesthetized and evaluated for overall appearance of the uterus and uterine horns. Ovaries are evaluated for the presence of a corpus luteum (produces progesterone) which maintains the pregnancy.
- If a proper CL is seen, then the embryo(s) are transferred into the horn of the uterus on the same side as the CL. The embryo(s) are placed as close as possible to where the embryo would be naturally if the recipient produced it herself.

I'm wanting to AI, flush, or IVF my donor!

What's next?



- Start from the ground up! Utilization of ewes from reproductively sound dams and sires is crucial. Genetics are important but not perfect in determining success.
- Focus on nutrition and development of your animal while they are growing and maturing.
 - Animals “pushed” too hard can have permanent deficits related to reproduction, soundness, longevity, etc.
 - Animals without access to minerals, vitamins, and proper base nutrients will fall behind during periods of rapid growth and maturity.
 - Not every supplement out there is beneficial.



I'm wanting to AI, flush, or IVF my donor!

What's next?



- Keep your donor as healthy as possible.
 - Consult with your veterinarian and extension agents about parasite control, herd health, vaccinations, etc.
- Develop a game plan and weigh the pros and cons of each technology as it relates to your donors and your program.



Thank you

Sincerely from the ReproLogix™ team



Questions?

Health Management of Sheep

Emily J Reppert DVM,MS,DACVIM
Associate Professor, Livestock Services
Veterinary Health Center
Kansas State University

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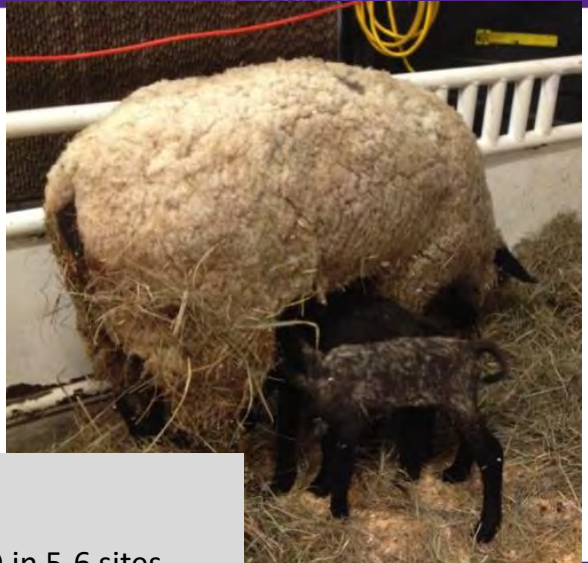




Lambing



- **Clip** – 1.5" from abdomen
- **Dip** – 2% iodine (dairy teat dips)
- **Strip** – each teat



- Keep warm
- Warming boxes
- 20-40 cc dextrose SQ in 5-6 sites
- Lamb sweaters

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ENTROPION:
Rolling in of the eyelid

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<http://www.fai farms.com/wp-content/uploads/2016/03/Entropion-in-lambs.pdf>



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Sore Mouth



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Urolithiasis



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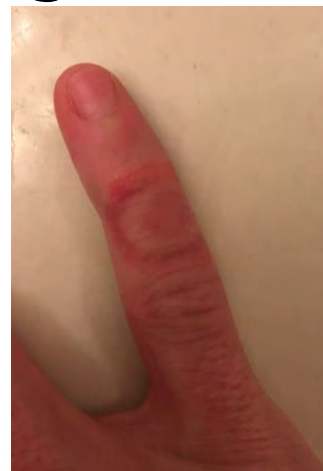
Club Lamb Fungus

Highly contagious fungus

- Direct or indirect contact with fungus

Risk factors:

- Excessive rinsing
- Nicks, cuts from shearing/clipping
- Stress associated with showing/travel



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Caseous Lymphadenitis



Western Livestock Journal Feb 14, 2018

https://www.wlj.net/top_headlines/biosecurity-advice-for-sheep-shearers/article_02dfe0fe-11a7-11e8-8a36-1b4ac27a79e0.html

Castrating & Tail Docking

- **Band Castration**
 - Neonates (7 days of age ideal)
 - NOT for use in lambs > 1 month of age
 - ALWAYS make sure two testicles present
 - Vaccine status of dam unknown =
Tetanus antitoxin (500 IU)+ tetanus toxoid, +/- penicillin
- **Surgical Castration**
 - Preferred option for older lambs

CD&T Vaccination Recommendations

Age of Animal	Timing of CD & T Vaccination
Adult ewe	2-3 weeks prior to lambing
Primiparous Ewe (1 st timer)	6 weeks prior to lambing & 3 weeks prior to lambing
Lambs from <u>vaccinated</u> dams	6 weeks of age & 10 weeks of age
Lambs from <u>unvaccinated</u> dams	3-4 weeks of age & 6-8 weeks of age
Rams, wethers	Annual booster

Tail Docking

- **AVMA (American Veterinary Medical Association)**
 - Does not support ultrashort tail docking
 - https://www.youtube.com/watch?v=4k07s8Br7Pk&feature=c4-overview&list=UUauLlb5_U_3zKOFUpVBR3nQ
 - Negative side effects: rectal and vaginal prolapse
- Ideal location is distal end of caudal tail fold



Image: Dr. Crane

QUESTIONS?



General Principles of Parasite Control

Abomasal worm “Barber pole worm”



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General Principles of Parasite Control

- Strategic Deworming
- FAMACHA

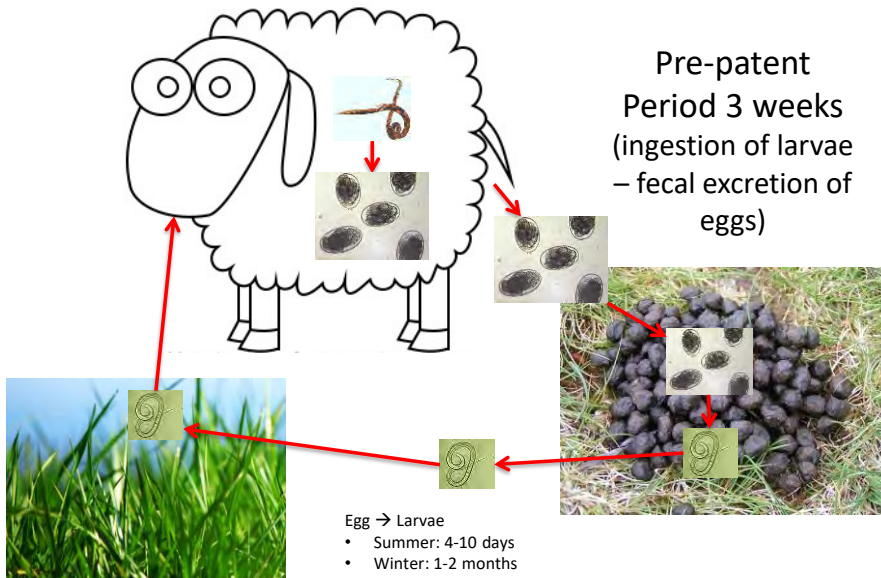
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Four Types of Dewormers



Conventional strategy one of major factors to the development of widespread anthelmintic resistance

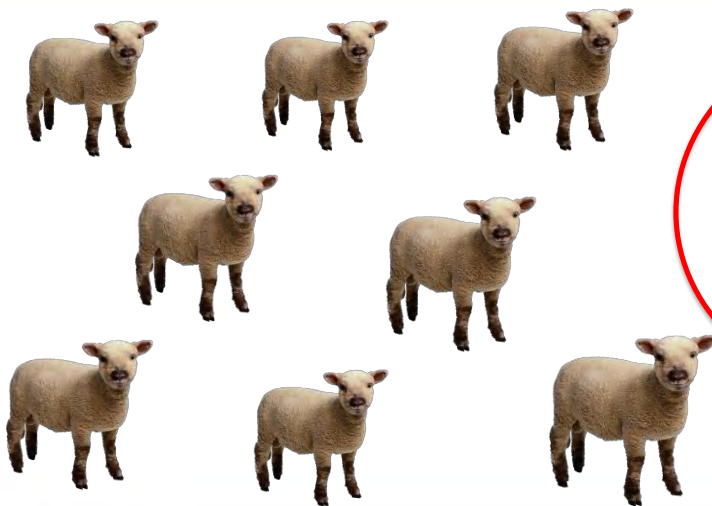
Life Cycle



H. contortus – Clinical Signs



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20-30% of animals
harbor 80% of
worms!

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FAMACHA System

- System of identifying anemic animals, scoring the anemia and treating based on severity of disease
- More pallor = greater worm burden

NOTE:

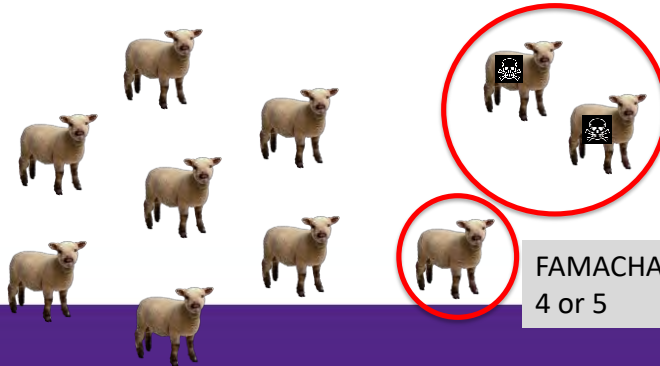
- Only appropriate for adult animals
- Significantly increases amount of labor
- Effective for identification of *H. contortus*
- Does not account for other causes of anemia



FAMACHA

- Important factor affecting RATE of resistance within a herd:
 - # of Treated worms:# of Un-treated worms

Untreated
No selection
pressure
Source of REFUGIA



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Anthelmintic Resistance - Detection

Fecal egg count reduction test (FECRT)

- 10-15 animals at the same time
- Collect fecal sample at deworming and 10-14 days after
- Calculate difference in egg #
- Animals must have min of 150-200 epg before treatment
- Use oral form of dewormers



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Alternative Treatments

- Copper particles
- Parasite inhibiting plants
 - Condensed tannins
(*sericea lespedeza*)
- Nematophagus fungi
 - (*Duddingtonia flagrans*)
- Pasture management
- Alternate species
- Mow and mulch
- Good nutrition
- Genetic improvement



Copper Oxide Wire Particles (COWP)

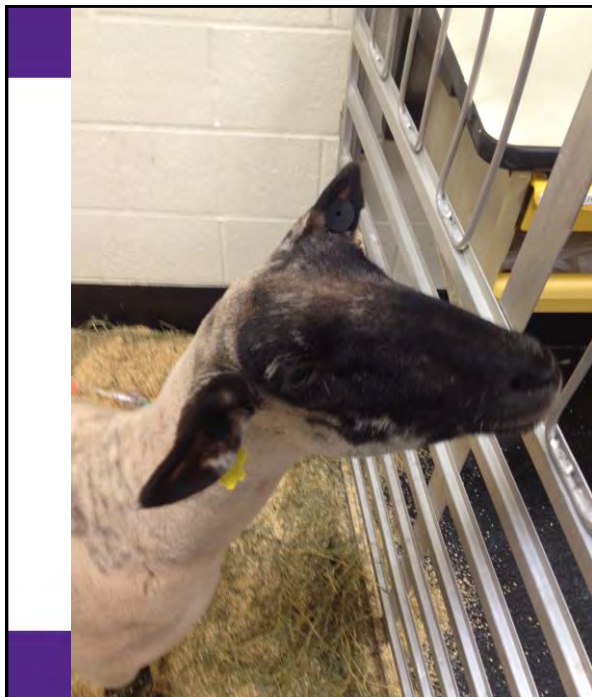
Mechanism of action-

- Lodge within abomasum
- Insoluble at pH >3.2
- Cause cuticle defect in adult worms
- Effect occurs within 12 hrs post administration
- Duration of effect = 21 days



https://docs.wixstatic.com/ugd/aded98_e173a9632aa742aa8241ea5d1f3694a2.pdf

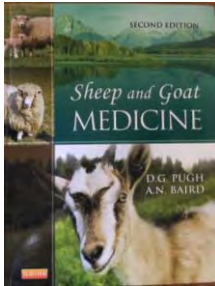
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References

Sheep and Goat Medicine 2nd Edition

-Disease information



American Consortium for Parasite Control

<https://www.wormx.info>

- Deworming charts
- Up-to-date literature regarding ALL parasites

American Veterinary Medical Association

<https://www.avma.org/KB/Resources/LiteratureReviews/Pages/Welfare-Implications-of-Tail-Docking-of-Lambs.aspx>

- Tail docking info

Maryland Small Ruminant Page

www.sheepandgoat.com

Biosecurity is another way of saying “infectious disease control.” Biosecurity is a combination of management practices designed to prevent the introduction and transmission of diseases into and throughout a herd. Infectious diseases can be transmitted by animals, people, equipment and vehicles. Livestock exhibitions are events where animals have an increased risk of getting infectious diseases due to the commingling of animals from different sources. Taking some simple precautions can help reduce that risk and keep your animals healthy. Below are some biosecurity recommendations for ensuring the health of your show sheep.



Before the Show

- Read all guidelines for each show to be sure your animals meet all entry and exhibition requirements.
- Evaluate your sheep's health prior to going to the show. Never take an unhealthy animal to a show. Signs of illness can include decreased appetite; fever; lameness; abscesses; circular, crusting skin lesions; or blisters on the mouth, teats, and/or hooves. If you see any of these signs, please contact your veterinarian.
- Be particularly vigilant for signs of sore mouth (orf) or club lamb fungus (ringworm) as these can be easily passed to humans.
- Take only clean and disinfected equipment to the show to prevent any potential disease transfer from your sheep to others.

During the Show

- Monitor your sheep daily for signs of illness. If you suspect your animal is sick, notify a show official right away.
- Avoid personal contact with animals other than your own.
- Do not share feed, feed/water tubs, grooming supplies, or other equipment with other exhibitors at the show.
- Keep your area and equipment clean of manure contamination.
- Wash your hands frequently with warm soapy water after contact with animals or equipment.

After the Show

- Isolate the sheep you took to the show from the rest of your flock when you return home.
- The show sheep should be as far from the other animals as possible, but they need to be at least far enough away to prevent nose-to-nose contact. Your veterinarian can help you establish a good location.
- Modify your chore routine to care for the show sheep last each day. Do not share equipment between show sheep and any other animals at home.
- Monitor the show sheep daily for signs of illness, including those signs listed in the “Before the Show” section. Contact your veterinarian if any animal shows signs of illness.
- Clean and disinfect all equipment, shoes, vehicles and trailers you took to the show. Allow them to dry completely.
- Talk to your veterinarian to determine the best biosecurity practices for your sheep.

Wool Education & Judging

Dr. Alison Crane

KSU Sheep and Meat Goat Extension
Specialist, Wool Judging Coach

Junior Sheep Producer's Day



Why care about wool?

- One of the most diverse natural fibers
 - Natural, biodegradable, long-lasting, versatile
- In the past 5 years, we have seen:
 - 30 yr record high in prices
 - Increased domestic infrastructure
 - Consumer shift
- Why not get an extra paycheck?



Breeds Considered

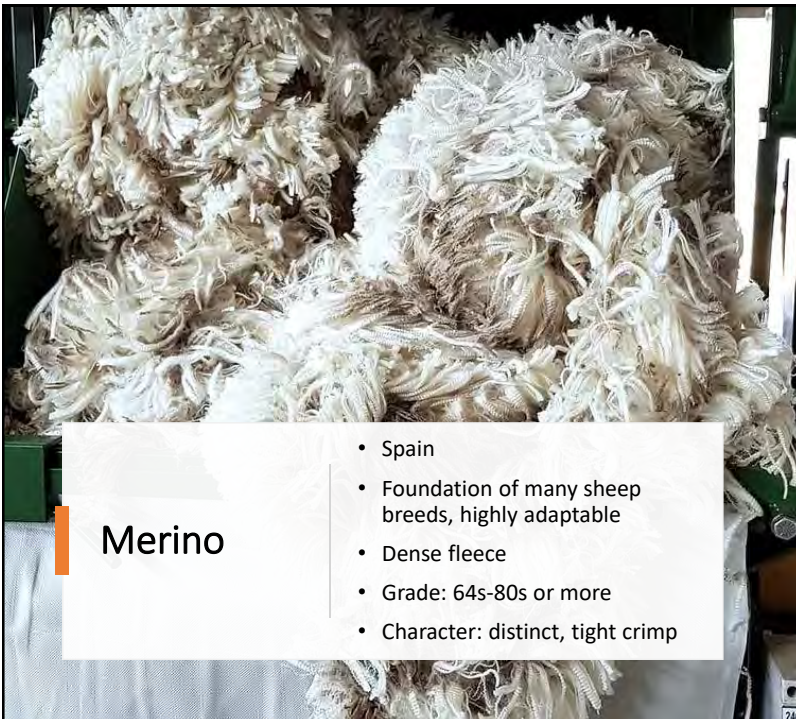
Merino

Rambouillet

Targhee

Columbia

Corriedale



Merino

- Spain
- Foundation of many sheep breeds, highly adaptable
- Dense fleece
- Grade: 64s-80s or more
- Character: distinct, tight crimp



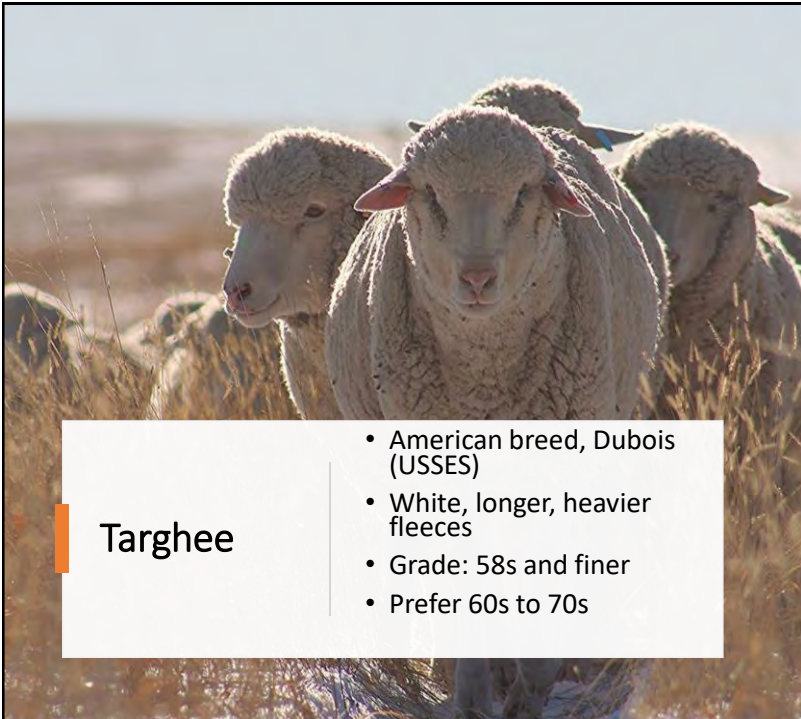
Rambouillet

- France- LONG STORY, basically Spanish Merino mut
- Mostly in America, western range, fine wool
- Dense fleeces, not as distinct in crimp
- Smaller fleeces, color
- Grade: 60s and finer



Targhee

- American breed, Dubois (USSES)
- White, longer, heavier fleeces
- Grade: 58s and finer
- Prefer 60s to 70s



Columbia

- American breed, USSES (1912)
- Larger frames range (Dual)
- Blocky staple, less distinct
- Grade: 46s to 60s, preferred 56s to 60s



Corriedale

- New Zealand and Australia (1800s)
- Merino x Lincoln/Leicester
- Long and large locked staples
- Very high yielding
- Grade: 46s to 60s, preferred 56s to 58s



Judging Criteria

- Weight and Yield
- Grade (Fiber Diameter)
- Fiber length (Staple)
- Fiber Strength
- Character and Uniformity



Weight and Yield

- Learn how to estimate the weight of a fleece from handle
 - Very different from estimating the weight of an animal
- Yield
 - The amount of clean wool leftover after being cleaned
 - Grease, dirt/sand, vegetable matter removed
 - Coarser fleeces tend to yield higher than finer fleeces
 - High yielding wool is worth more
 - More wool for your \$\$\$





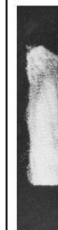
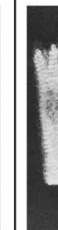


1lb raw wool



-.5lb grease

=.5lb clean wool

50% yield

FINE	1/2 BLOOD	3/8 BLOOD	1/4 BLOOD	LOW 1/4 BLOOD	COMMON/BRAID
20 MU	24 MU	27 MU	31 MU	34 MU	40 MU
C.P.I. = 20	C.P.I. = 14	C.P.I. = 12	C.P.I. = 10	C.P.I. = 8	C.P.I. = 4
					

Spin Count	Fiber Diameter (micron)
64s, 70s, 80s	≤ 22.04
60s & 62s	22.05-24.94
56s & 58s	24.95-27.84
50s & 54s	27.85-30.99
48s & lower	≥ 31.00

Grade or Fiber Diameter

- Measure of how fine or coarse individual fibers are
 - Wool judging uses spin count
 - Industry uses micron
- We learn to grade spin count by feel and sight
 - Also other indicators

Wool Quality Grades			Staple Lengths		
Blood Grade	Spin Count Grade	Fiber Diameter (microns)	Staple Lengths	French Combing	Clothing
Fine	64s, 70s, 80s	≤ 22.04	$> 3.00''$	2.00"-3.00"	$< 2.00''$
Half	60s and 62s	22.05-24.94	$> 3.25''$	2.25"-3.25"	$< 2.25''$
3/8	56s and 58s	24.95-27.84	$> 3.50''$	-	$< 3.50''$
1/4	50s and 54s	27.85-30.99	$> 4.00''$	-	$< 4.00''$
Low 1/4	48s and lower	≥ 31.00	$> 4.00''$	-	$< 4.00''$



Staple Length

- Three Categories
 - 1. Staple
 - 2. French Combing
 - 3. Clothing
- Why does fiber length matter?
 - Waste in processing, \$\$

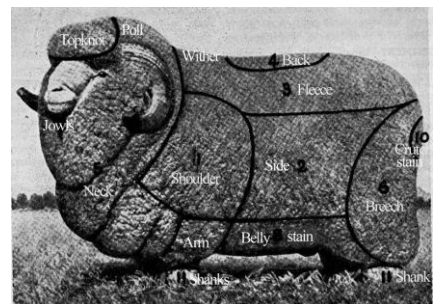
Fiber Strength

- How strong are the fibers throughout the fleece?
 - Skin to tip
 - Shoulder to Britch
- Why does this matter?
 - If wool is tender, can break down in processing
 - If broken, leads to waste in processing
- What causes wool to be broken or tender?
 - Environmental



Character and Uniformity

- Refers to the “handle” and overall appearance of the fleece
- What are we judging?
 - Color: yellow, stain, contamination, bright white, lustrous
 - Crimp: bold, distinct, undefined, tight
 - Condition: grease, dirt penetration, moisture
- Categories: Good, Average, or Poor



Character

Poor

Average


Good



What does a contest look like?

- 6 classes of four fleeces
 - Typically, 3 breed classes and 3 commercial classes
- Grading Rail of 15 fleeces
 - Grade
 - Staple Length
 - Estimated Yield
 - Purity
 - Character (Color, Crimp, and Condition)
- Three sets of oral reasons





Thank you, Questions?

Contact at: 205-743-8704 or arcrane@ksu.edu

Social Media: Facebook [@ksusheepandgoatextension](#)

Snapchat, TikTok [@ksusheepandgoat](#)





South African Sheep Industry

Albert Nortje
KSU graduate student

Albert Nortje

- ◆ Grew up on the Nortje family ranch
- ◆ Marlow agricultural high school
- ◆ University of the Free State, Bachelors in Animal Science
- ◆ Worked at CMW/OVK , Cradock South Africa. I handled ~ 500 000 kilograms of wool and mohair per year.
- ◆ Angelo State University, Masters Degree in Ag
- ◆ AFGRI animal feed
- ◆ 2021 Kansas State University

South Africa

Africa

www.mapsnworld.com

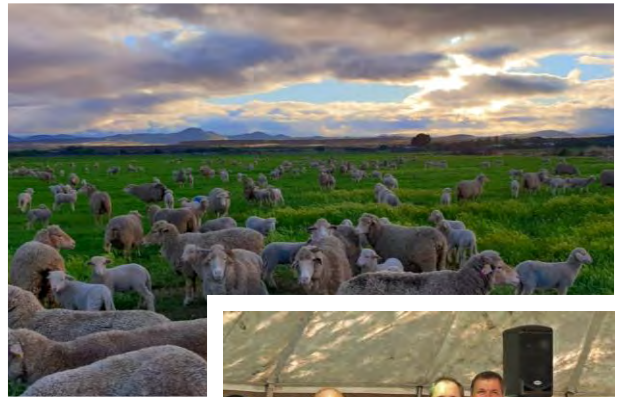


South Africa overview and comparison

- ◆ ~ 30 million sheep in SA (5.2 million USA)
- ◆ ~ 40 to 45 million kilograms of wool per year (~ 8 Million kilograms)
- ◆ Lamb consumption per capita: ~4 kilograms per year. (USA less than pound a year)
- ◆ Population ~60 million people (USA ~334 million people)
- ◆ SA Lamb price \$1.4 per pound live weight ~70 lb. lamb
- ◆ USA Lamb price \$3.3 per pound live weight ~70 lb. lamb. (Producers San Angelo TX, 15 March 2022 report)

Major sheep breeds of South Africa

- The South African Merino is by far the biggest breed in SA.
- Known for its world class wool
- Dual purpose breed.
- 30% to 40% wool income
- 70% to 60% meat income



Merino History

- ◇ 1789
- ◇ The Merino were initially the property of the King of Spain, who had the sole right to export Merinos. The King sent a number of sheep from his famous Escorial Merino Stud as a gift to the House of Orange, Netherlands.
- ◇ The sheep could not adjust to the high rainfall in the Netherlands. Dutch Government donated two Spanish Merino Rams and four Spanish Merino Ewes to Col. Jacob Gordon, the military commander at the Cape at that time. They Merino flourished in the drier South African climate.
- ◇ South Africa was the 1st country outside of Europe to have Merinos.

Dohne merino



- Developed at Dohne Research Institute, Stutterheim.
- Cross between German Mutton Merino rams and Merino ewes in 1939 were used to develop the breed by means of strict scientific selection procedures to its current status of an internationally commended dual-purpose breed.
- The Breed Society was formed with a small population of approximately only 2500 ewes in 1966

South African meat merino (SAMM)

- ◊ 1932 imported German mutton merinos
- ◊ Dual purpose
- ◊ Known to produce heavy lamb carcasses



Dorper

- ◆ 1930
- ◆ Dorset Horn with the black headed Persian sheep
- ◆ Purely meat production

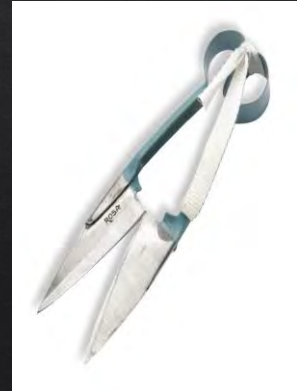


Other breeds



Shearing

- ◆ Most of the shearing is done by contractors
- ◆ Machines or Hand Blade
- ◆ Historically once a year
- ◆ 6 months to 12 months



Wool Marketing

- ◆ The wool is sorted according to NWGA standards
- ◆ Only Nylon wool packs (Bales) are used
- ◆ All the bales are shipped to Port Elizabeth
- ◆ We have 2 major wool brokering companies, BKB and OVK.
- ◆ Most of the wool clip is sold through live auction
- ◆ Buyers from all over the world can buy our wool





Livestock Marketing

- ◊ Many different marketing options
- ◊ BKB, Vleis sentraal, OVK, Hobson and CO
- ◊ Sales, Traditional and on-line
- ◊ Agents
- ◊ Directly to abattoirs
- ◊ Directly to consumers



Our biggest Challenges

- ◊ Droughts
- ◊ South Africa's average rainfall is 495 mm per year. (~20 Inches)



Predators



Stock Theft

- ◇ 2020 ~218 000 farm animals stolen
- ◇ 2015 ~ 180 000 farm animals stolen



Questions??





Showmanship

Payton Dahmer



Showmanship is essential when showing sheep. Of all the livestock species, showing sheep requires the most physical contact with the animal. The showman and lamb must have a good working relationship and practice is required prior to the show in order to be prepared. You must be able to exhibit your animal in a manner that will promote your lambs' strengths and disguise its weaknesses.

At Home

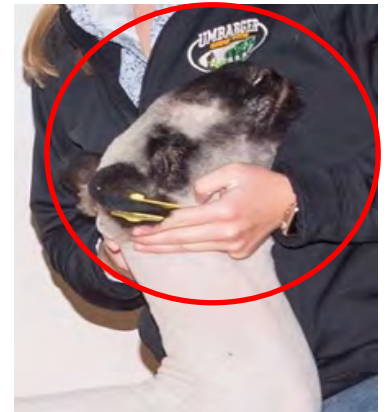
It is essential to work with your lamb at home and practice as frequently as possible if you wish to have success in the show ring.

- As soon as you get your lamb, you need to start spending time with it
 - Lambs are often nervous when you first get them, so you need to develop a relationship with them to build trust
 - The easiest way to do this is to find a bucket and just sit in their pen – eventually they will warm up to you and you can start touching them so they can get used to human contact
- Once your lamb has calmed down, you can begin training them. It's best to start by training them to walk on a halter
 - While they will likely fight you at first, patience is key
 - More information about halter breaking can be found in the KSU Show Lamb Guide: *General Care* section (insert page number here for reference)
- Another important thing to teach your lamb is to brace
 - The term "bracing" refers to your lamb pushing into you in order to enhance the appearance of their muscles – similar to "flexing" your muscles
 - The judge will approach to handle your lamb, so training them to properly brace is important
 - To properly brace your lamb, you must know how to properly position yourself – this is covered in the following sections

Proper Technique

While teaching your lamb how to cooperate is important, knowing what to do yourself is equally as critical to get the most out of your lamb (best performance/appearance?)

- When setting up a lamb you have to properly position your own body. Your hands should be cupped around the base of their ears, with your hands flat against the lamb's' head
 - Figure 1 (to the right) shows proper hand placement on the lambs' head



- When positioning your legs, your left leg should be the one bracing against the lamb. Your left leg should be pointed directly at them, pushing diagonally across their chest. Your right leg should be slightly behind you, giving you something to brace yourself with
 - Figure 2 (to the right) shows the correct position when bracing your lamb

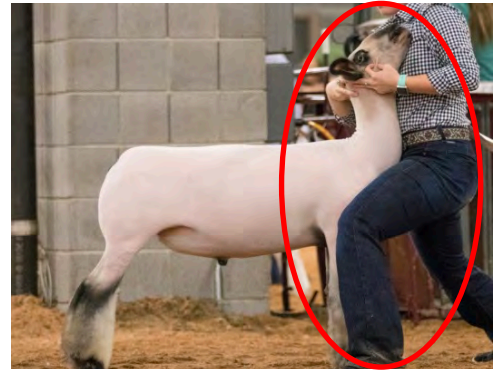


Figure 2.

Feet/Leg Placement

Now that you know how you should be positioned, it's time to focus on the position of your lamb

- Your lambs' legs should be set square and to all four corners so that its' weight is evenly distributed
 - Figure 3 (to the right) shows the correct way to set your lambs' feet
- You want to be sure that your lamb is not too stretched out nor too scrunched together from the side



Figure 3.

Walking

In the *General Care and Management* section, you will find information about halter breaking your lamb. Once halter broken, the next important thing is teaching them to walk by hand. Sheep are shown without a halter (unless a younger exhibitor is unable to keep hold of the animal).

- Your lamb should walk alongside you, with its head slightly in front of you
- If possible, try to follow another exhibitor in the ring; lambs more easily follow one another, but often times struggle to lead
- **PRACTICE** is the only way your lamb will properly walk on show day
 - Sheep will not take to this quickly, therefore patience and practice at home is crucial!

Show Ring Attire

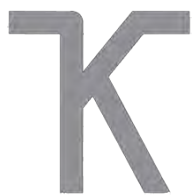
You have put in the hard work to prepare for the show, so it is just as important for you to look the part when in the ring! Here are some things to consider when deciding how to dress for the show:

- Be professional – nice jeans with no holes/rips, a collared shirt or nice blouse, nice boots/durable shoes
- While looking nice is important, flashier is not better – avoid clothes that are distracting or unpractical

Other Tips

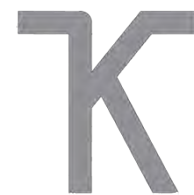
After you have the basics down, there are some smaller details that can help take your showmanship game to the next level.

- Be sure to always have your lamb straight in line and leave ample space between you and the other exhibitors around you
- Always be courteous – be mindful of the judge and other exhibitors at all times
- While it may seem basic, be sure that your lamb is clean and presented well



K-State Junior Sheep Producer Day

Ally Leslie

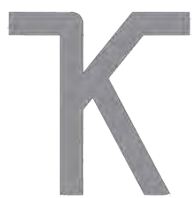


Shearing/Fitting

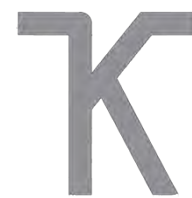
Below is some great information regarding shearing, fitting, and caring for show lambs.

Bringing your lamb(s) home...

- Shear your lamb(s) ASAP; ↓ Body Temperature and ↑ Feed Intake
 - 13 Tooth Clipper blade works great for a homecoming shear
 - Surgical blades can be used 3-4 days before a show
 - Fine/Mediums blades can be used 1-2 days before a show
 - Blocking blades can be used to 'fit' the leg wool
- Replenish the protective barrier of the hide after shearing; ↓ Fungal Infection Risk
 - Option 1: Dilute cornhuskers lotion with water and place in a spray bottle to condition the hide at home or at shows
 - Option 2: Dilute soft soap (The hand soap brand) with water and use a soft bristle brush to brush the mixture onto the hide
 - Option 3: Premade hide/skin conditioners made by companies like Sullivan Supply, Weaver, and some small businesses
- Use breathable blankets on your sheep; ↓ Sunburn Risk; ↓ Scrapes/Cuts from objects in pen; helps maintain body temperature in extreme temperatures
 - Judy's Western Wares
 - Weaver Livestock
 - Sullivan Supply
- Keep leg wool clean; optimizes leg wool growth
 - First: Wash legs with a shampoo
 - 1-2x/week maximum
 - Cowboy Magic Rosewater Shampoo, Rejuvenate Shampoo (Sullivan Supply), Vita Hair Volumizer (Sullivan Supply), Mane and Tail Shampoo
 - Second: Condition legs, allow to sit for 5-10 minutes and rinse
 - Can be done more frequent than shampooing if desired
 - Cowboy Magic Rosewater Shampoo, Hydrator Nourishing Shampoo (Sullivan Supply), Mane and Tail Conditioner
 - Third: Dry leg wool COMPLETELY, no water left behind
 - Investing in a blower will allow you to dry your sheep more efficiently and last years which can be sold when the 4-Her/FFA Member is done showing.
 - New blowers can be found on the Sullivan Supply Website
 - Used blowers can often be found on Facebook or a high velocity dog grooming blowers may do the trick if you only plan to show one or two lambs.



K-State Junior Sheep Producer Day Shearing/Fitting



- Fourth: Use product
 - Getting leg wool to grow can be difficult without good genetics but some measure can be done to grow the leg wool to its fullest potential just keep in mind genetics will determine the lamb's potential.
 - Most products should be applied to DRY leg wool and MUST air dry for the best results
 - Wool Grower (Sullivan Supply), Leg Pop (Weaver Livestock), Sure Coat Max (Sullivan Supply), Sure Shine (Rule Supplements)
- Fifth: Wrap legs
 - Wrapping leg wool not only helps the wool grow, but keeps it protected against dirt and grime, while preventing bored sheep from picking the wool off.
 - Wrap tight enough so the wraps cannot unravel, but loose enough so the wool can breathe.
 - Start wrapping at the base of the hoof and work your way up above the hock (or knee on front legs) making sure you don't have any folds.
 - Use electrical tape to secure the wrap, also for a backup for the Velcro straps.
 - Wraps should be checked every 3-4 days or whenever your conditioning schedule is to allow the legs to breath and ensure there is no rubbing or fungal issues
 - Rule Supplements, Sullivan Supply, Weaver Livestock, and many more.
 - Good idea to buy multiples in case one rips, or you need to wash a pair.
- Keep your equipment clean and taken care of
 - Clipper blades can be shipped to Valley Vet to be sharpened and cleaned
 - Always use oil/lubricant for your clippers
 - Keep your clippers clean and stored correctly
 - Don't leave wool clippings on your stand
 - Make sure your blower is stored out of the elements
 - Sanitize your equipment after every show to prevent bacterial/fungal infections



REQUIREMENT!

FOR ALL KANSAS STATE FAIR GRAND DRIVE & KJLS EXHIBITORS

What is it?

Youth for the Quality Care of Animals (YQCA) is a national, multi-species youth livestock quality assurance program that covers food safety, animal well-being, and character development through age-appropriate educational curriculum.

Who needs to get certified?

Any youth 7 years of age and older who will be exhibiting a market or breeding animal in the Kansas State Fair Grand Drive or Kansas Junior Livestock Show (KJLS) is required to obtain certification. The requirement took effect for 7-year-olds exhibiting at KJLS beginning in 2021. They may receive certification through an instructor-led training. Those needing an online option should contact their local extension office. YQCA certification numbers will be submitted through the online nomination process for market animals, and at the time of entry for exhibitors who only have registered purebred breeding animals. All youth should complete the training by June 15, 2022.

How do youth get certified?

Annual certification is required. Youth may earn their certification in one of the following ways:

- ♦ Instructor-led training (\$3/child)
- ♦ Online course (\$12/child)
- ♦ Test-Out exam (12 & 15-year-olds only; online course only; cost varies)
- ♦ Valid Youth PQA + number in lieu of YQCA (current numbers will be honored until they expire)

Instructor-led sessions may be offered at the local level by certified instructors. Visit www.yqcaprogram.org for more details and to register for a class. All youth must pre-register through the YQCA website and pay the appropriate fee, regardless of the type of training they select, in order to obtain a certification number. The YQCA program is transitioning to a new platform on March 23, 2022. Families should download all current certificates prior to March 22! After that date, everyone will create a new account at www.yqcaprogram.org.

Where do youth find their certification number?

After completing the course, a young person's certificate will be available to download and print through their YQCA user account. Families are responsible for logging into the site after completion of the class to view a child's number and obtain their certificate.

STATE LIVESTOCK NOMINATIONS

Lexie Hayes
Youth Livestock Program Coordinator
Kansas State University
March 2022



PROCESS OVERVIEW

- Must formally nominate **market** or **commercial** animals for state shows:
 - ✓ Kansas State Fair (Grand Drive)
 - ✓ Kansas Junior Livestock Show (KJLS)
- Nominations make livestock projects ELIGIBLE
 - ✓ Multi-step process
 - ✓ Complete nomination does NOT constitute show entry
 - ✓ Families must officially enter the shows in which they would like to exhibit
- 2022 Nomination Information and Materials available via:
 - ✓ K-State Youth Livestock Program website

www.youthlivestock.ksu.edu



Nomination Information

OR



<http://bit.ly/ksunominations>



ONLINE SYSTEM

- Transitioning to an online system for 2022
 - 1) Purchase official DNA envelopes through ShoWorks to pay nomination fee
 - 2) Submit information for each animal and exhibitor(s) online via ShoWorks
 - 3) Mail completed and signed DNA envelopes, with copy of submission receipt
 - 4) Extension Agents & FFA Advisors approve nominations online
- Required to Upload Documents
 - 1) 2022 Declaration Form
 - ✓ Available on KSU YLP website and instructions on ShoWorks nomination homepage
 - ✓ Extension Agent & FFA Advisor signature has been removed
 - ✓ Housing question build into system
 - ✓ One form should represent entire family; upload same form for all children within family
 - 2) YQCA Certificate
 - ✓ Encourage early certification
 - ✓ Certificate must be valid through 10/2/2022
- Families will need to plan ahead and have all documents handy!

DEADLINES

- Order DNA Envelopes
 - ✓ One (1) week prior to nomination deadline
 - April 24 - Market Beef
 - June 8 - Small Livestock
- Submit Information Online
 - ✓ Prior to the nomination deadline - the sooner the better
 - May 1 - Market Beef
 - June 15 - Small Livestock & Commercial Heifers
- Postmark DNA Envelopes (completed & signed)
 - ✓ May 1
 - Market Steers
 - Market Heifers
 - ✓ June 15
 - Market Hogs
 - Commercial Gilts
 - Market Lambs
 - Commercial Ewes
 - Market Meat Goats
 - Breeding Does
 - Commercial Heifers

NOMINATION PROCESS

Step 1: Animals eligible for KJLS or KSF will need a Kansas 4-H EID ear tag placed in the ear of the animal **BY THE AGENT**



- ✓ Let local Extension Office know you plan to state nominate animals

Step 2: Families will submit nomination information online



- ✓ Create ShoWorks account for each exhibitor (Quick Group for families)
- ✓ Submit nomination entry for each animal, under each exhibitor within the family
- ✓ Upload completed 2022 Declaration Form & YQCA certificate
- ✓ Still need KSU Family Name and Nomination #

Step 3: Purchase official DNA envelopes through ShoWorks



- ✓ Order by deadline (**April 24** - Market Beef; **June 8** - Small Livestock & Comm. Heifers)
- ✓ Exhibitors will pull a DNA sample from the animal and place it in an official DNA envelope (DO NOT CUT THE HAIR)
- ✓ Instructions on pulling DNA are on the youth livestock website
- ✓ Instructional videos on youth livestock website (under DNA Collection Instructions)



NOMINATION PROCESS

Step 4: Exhibitors will mail their completed DNA envelopes and a copy of their nomination submission receipt to K-State by the postmark deadline.



- ✓ **May 1** - Market Beef; **June 15** - Small Livestock & Commercial Heifers
- ✓ Certified Mail is HIGHLY suggested (\$4.00-\$8.00 for peace of mind)

Step 5: Extension Agents & FFA Advisors will approve nominations online.



- ✓ 4-H members - Extension Agent; FFA members - FFA Advisor
- ✓ Approval has same implications as wet signature used previously on paperwork

Step 6: K-State will process the nominations and post weekly updates online regarding complete/incomplete nominations.




- ✓ Confirmation letter issued to family upon processing
- ✓ Exhibitor/family opportunity to verify information received by K-State
- ✓ Specific window of time to correct/report mistakes (email adhayes@ksu.edu)



MATERIALS TO MAIL

- DNA Envelopes
- Online Submission Receipt (ShoWorks)

DNA Envelopes

K-STATE Kansas Livestock Nomination DNA Hair Sample 2021-1000
 Research and Extension
 Date 6/1/2022 Species (circle one): Beef Sheep Swine Goat
 Animal ID 75087 Barcode Sticker 
 (Kansas 4-H tag number)
 Animal Breed Hampshire Animal Gender Wether Secondary ID KSS003512245
 (tear notch, scrape tag, tattoo)
 Family/Household Name Willie Wildcat Family
 Address 1424 Clafin Rd City Manhattan State KS Zip 66504
 County Riley Phone (785)532-1264 Email ksw.vlp@loud.com
 Exhibitor signature(s): Parent signature: Willie Wildcat
 Obtain at least 40 hairs with roots intact (do not cut).
 Avoid contamination with other hair and keep dry.
 Be sure the Kansas 4-H tag number is correct, then
 sign and seal envelope in the presence of exhibitor.

Receipt

Kansas State Fair
 Kansas Livestock Nomination DNA Hair Sample
 Date 6/1/2022 Species Sheep Animal ID 75087 Secondary ID KSS003512245
 Name Willie Wildcat Family Address 1424 Clafin Rd City Manhattan State KS Zip 66504
 County Riley Phone (785)532-1264 Email ksw.vlp@loud.com
 Exhibitor signature(s): Parent signature: Willie Wildcat
 Obtain at least 40 hairs with roots intact (do not cut).
 Avoid contamination with other hair and keep dry.
 Be sure the Kansas 4-H tag number is correct, then
 sign and seal envelope in the presence of exhibitor.



SECONDARY ID - TATTOOS

- Registered steers and heifers
 - ✓ Tattoo must match registration papers/breeder certificate
 - ✓ Required for breed classes
 - ✓ Optional for nominated cattle
 - Required for shows
 - Encourage families to double check



SECONDARY ID - EAR NOTCHES

- Ear notches are required for all swine nominations
 - ✓ Submit ear notch number
- Resources available:
 - ✓ Rookie Guide
 - ✓ KSU Youth Livestock Program website
 - ✓ K-State Show Pig Guide

Department: 3 - Swine
 Division: 1060 - Market Hog
 Breed: 02 Duroc
 Tag ID: 44445
 Club: Weber
 Animal Name: Chris
 Ear Notch: 3-1

Litter Notch (3)

Individual Pig Notch (1)

SECONDARY ID - SCRAPIE TAG

- FULL scrapie tag #s are required for all sheep & meat goat nominations
- Submit Flock/Premise ID AND Individual animal #
 - ✓ Example: **KSS0035 16121**
 - ✓ Farm/custom tags - look on back of tag for Flock ID



- Resources available:
 - ✓ Rookie Guide
 - ✓ KSU Youth Livestock Program website

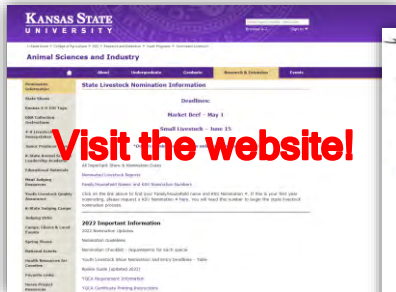


Department: 2 - Sheep
 Division: 1040 - Market Lambs
 Breed: 04 Hampshire
 Tag ID: 33334
 Club: Weber
 Scrapie Tag ID: KSS0035 16121

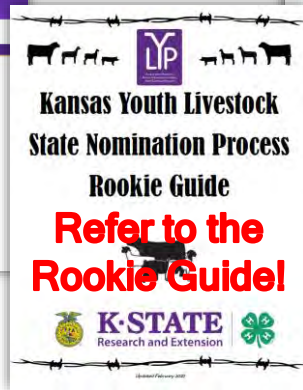
Flock ID (KSS0035)

Individual Animal # (16121)

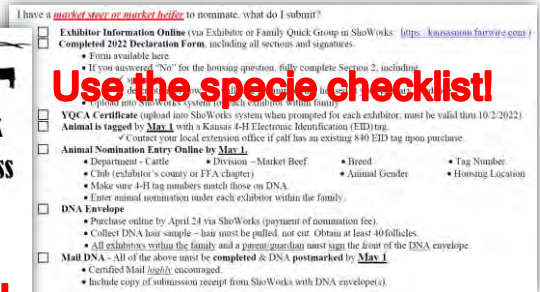
TIPS + RESOURCES



Visit the website!



Refer to the Rookie Guide!



Use the specie checklist!

Incomplete Fee:

\$20 one time/ year incomplection fee if nomination needs to be returned for any reason.



2022 UPDATES

- New Online Nomination System
- New DNA Envelopes
 - ✓ Purchased directly through ShoWorks
 - ✓ Payment of nomination fee tied to envelope
 - ✓ Cost Increase - \$12/animal
- ShoWorks Passport App
 - ✓ Manage exhibitors and entries, for multiple shows
 - ✓ Enable notifications
- Declaration Form
 - ✓ Updated
- Swine Breed Divisions Added
 - ✓ Berkshire, Poland, Spot separated from Dark AOB
- "Worksheets" Available
 - ✓ Resource to guide in organizing animal data



CONTINUING REQUIREMENTS

- YQCA certification required for all exhibitors
 - ✓ Complete training early!
 - ✓ Annual certification; must be valid through 10/2/2022 to be accepted
 - ✓ Includes 7-year-olds
 - ✓ Have certificate downloaded and handy before beginning nominations

SHOW ENTRY

- Reminder: A livestock nomination is **NOT** an entry for:
 - ✓ Kansas State Fair Grand Drive
 - ✓ Kansas Junior Livestock Show (KJLS)
- K-State processes nominations, but KSF & KJLS manage their own shows and entries.
 - ✓ 3 SEPARATE processes
 - ✓ Nomination only declares ownership and makes animals eligible
 - Account created for nominations should expedite show entry
- Exhibitors must submit an entry online through SHOWWORKS for each show, once they have successfully completed nomination process.
 - ✓ Get entry information from:
 - Extension Office
 - Show website(s)
 - Social Media
 - Nomination Confirmation Letter

KANSAS STATE FAIR

- Date: September 9-18, 2022
- Grand Drive: September 9-11, 2022
- Entries Due: July 15
- Show located in Hutchinson, KS
- www.kansasstatefair.com



KANSAS JUNIOR LIVESTOCK SHOW (KJLS)

- Date: September 30 - October 2, 2022
- Entries Due: August 15
- Show located in Hutchinson, KS
- <http://www.kjls.net/>



THANK YOU!

Lexie Hayes

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www.youthlivestock.ksu.edu



Kansas State Youth Livestock Program



2022 Youth Livestock Nomination and Entry Deadlines

Kansas State Fair Grand Drive (KSF) and Kansas Junior Livestock Show (KJLS)

AGE REQUIREMENTS: Kansas State Fair: Only Kansas 4-H & FFA members who were 9 years of age but not yet 19 years of age before January 1 of the current year are eligible to compete in this division. **KJLS:** All Kansas 4-H members that have reached the age of 7 before January 1st of the show year will be eligible to participate at the Kansas Junior Livestock Show.

Entry	Required Materials for Nomination	Cost to Nominate	Nomination Declaration*	Nomination Deadline	Show Entry Deadline	Registration Papers
Market Steers	KS 4-H EID tagged, Declaration Form*, Market Beef Online Nomination Entry*, Official DNA Envelope*, Gender, YQCA Certification, all completed & postmarked by May 1.	\$12	Required every year	May 1	KSF – July 15 KJLS – August 15	Required for breed classes.
Market Heifers**	KS 4-H EID tagged, Declaration Form*, Market Beef Online Nomination Entry*, Official DNA Envelope*, YQCA Certification, all completed & postmarked by May 1.	\$12	Required every year	May 1	KSF – July 15	N/A
Commercial (Crossbred) Heifers	KS 4-H EID tagged, Declaration Form*, Commercial Heifer Online Nomination Entry*, Official DNA Envelope*, YQCA Certification, all completed & postmarked by June 15.	\$12	Required every year	June 15	KSF – July 15 KJLS – August 15	N/A
Registered Breeding Heifers	<i>None. YQCA certificate submitted at time of show entry.</i>	N/A	N/A	N/A	KSF – July 15 KJLS – August 15	In exhibitor's name by June 15.
Market Lambs	KS 4-H EID tagged, Declaration Form*, Market Lamb Online Nomination Entry*, Official DNA Envelope*, Full Scrapie Tag #, Gender, YQCA Certification, all completed & postmarked by June 15.	\$12	Required every year	June 15	KSF – July 15 KJLS – August 15	N/A
Commercial Ewes (Wether Dams)	KS 4-H EID tagged, Declaration Form*, Commercial Ewe Online Nomination Entry*, Official DNA Envelope*, Full Scrapie Tag #, YQCA Certification, all completed & postmarked by June 15.	\$12	Required every year	June 15	KSF – July 15 KJLS – August 15	N/A
Registered Breeding Ewes	<i>None. YQCA certificate submitted at time of show entry.</i>	N/A	N/A	N/A	KSF – July 15 KJLS – August 15	In exhibitor's name by July 1.
KSF Market Hogs/ KJLS Barrows***	KS 4-H EID tagged, Declaration Form*, Market Hog Online Nomination Entry*, Official DNA Envelope*, Ear Notches, Gender, YQCA Certification, all completed & postmarked by June 15.	\$12	Required every year	June 15	KSF – July 15 KJLS – August 15	In exhibitor's name by June 15.
Purebred/Pedigreed Breeding Gilts	<i>None. YQCA certificate submitted at time of show entry.</i>	N/A	N/A	N/A	KSF – July 15 KJLS – August 15	In exhibitor's name by June 15.
Commercial Breeding Gilts	KS 4-H EID tagged, Declaration Form*, Commercial Gilt Online Nomination Entry*, Official DNA Envelope*, YQCA Certification, Ear Notches, all completed & postmarked by June 15.	\$12	Required every year	June 15	KSF – July 15 KJLS – August 15	N/A
All Meat Goats****	KS 4-H EID tagged, Declaration Form*, Meat Goat Online Nomination Entry*, Official DNA Envelope*, Full Scrapie Tag #, Gender, YQCA Certification, all postmarked by June 15.	\$12	Required every year	June 15	KSF – July 15 KJLS – August 15	N/A

* The 2022 Declaration Form is available at www.YouthLivestock.KSU.edu. Declaration Forms are uploaded at the time of nomination. Contact the local extension office to have animals tagged (for all species). **All exhibitors are required to be YPQA+ or YQCA certified.** Animal nomination entries are submitted online through ShoWorks. No paper forms accepted. Purchase official DNA envelopes through the online system at least a week prior to the nomination deadline.

** There is no market heifer show at KJLS.

*** For pedigreed market barrows, ear notches on registration papers must match the pig's ear notches to be able to show. Only steers, barrows, & wethers are eligible for the market division at KJLS.

**** Commercial doe show available at BOTH KSF & KJLS; ALL market and breeding meat goats must be nominated (no *registered* breeding doe show for either show).

***** **Health papers are only required at KSF for animals originating outside of Kansas.**

There is a one-time/year \$20.00 fee if any part of a nomination is incomplete or has to be returned; use the checklist.
Animal Nomination Entries must be submitted online for each exhibitor through ShoWorks: <https://kansasnom.fairwire.com/>. *No refunds.*

February 2022

GRAND DRIVE & KJLS IMPORTANT DATES

April 24	Last Day to Order Beef DNA Envelopes
May 1	Market Beef Nominations Due
June 8	Last Day to Order Small Livestock DNA Envelopes
June 15	Small Livestock Nominations Due -Market Swine, Commercial Gilt -Market Lamb, Commercial Ewe -ALL Meat Goat (Market & Breeding)
	Commercial Heifer Nominations Due
	Registered Breeding Heifer Papers in Exhibitor's Name
	Registered Breeding Gilt Papers in Exhibitor's Name
July 1	Registered Breeding Ewe Papers in Exhibitor's Name
July 15	Kansas State Fair Grand Drive Entry Deadline
July 25	Kansas State Fair Grand Drive Late Entry Deadline
August 15	KJLS Entry Deadline
August 25	KJLS Late Entry Deadline
Sept. 9 - 11	Kansas State Fair Grand Drive
Sept. 30 - Oct. 2	KJLS

All market animals must be nominated to be eligible for either show.

All commercial breeding females must be nominated to be eligible for either show.

Registered breeding females must be in the exhibitor's name by the appropriate date to be eligible for either show.

All meat goats, including market, commercial does, and registered breeding does must be nominated to be eligible for either show.

SHEEP & GOAT HAIR SAMPLE COLLECTION INSTRUCTIONS



1 Check the ear tag number of the animal, and record it on the hair sample envelope. Clean the sample area to remove dirt or other contaminants.

Use bent, long or needle nose pliers to collect the sample.



2 Pull a tuft of hair from the leg, just above the toes. Pull the hair directly away from the skin, NOT at an angle. This will allow the root to come out with the hair. Pull at least twice.



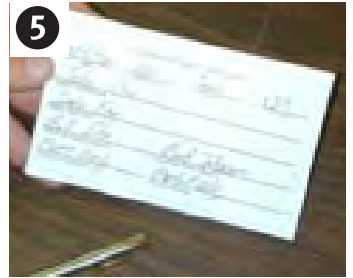
3 Inspect the hairs sample to ensure at least 30 hair follicles or roots. The roots are easy to see in goats (like human hairs with a bulb at the end), but difficult in sheep. In sheep, you may notice a color variation which indicates that the root is intact.

Note: Do NOT cut the hair from the animal. The hair MUST CONTAIN ROOTS for DNA testing. Avoid touching the roots and make sure the hair is dry

Place the sample in the hair sample envelope, and then seal the envelope in the presence of the exhibitor and parent/supervisor. Do not put hairs in a plastic bag.



Fill out the remaining information lines on the envelope, and have the witnesses sign.



REMEMBER: Cleanse hands and pliers between animal samples to ensure that hairs from different animals are not mixed.



SHEEP & GOAT SAMPLE CHECKLIST

- ✓ Select collection area - we suggest above toes
- ✓ Insert ear tag number on the envelope
- ✓ Obtain at least 30 hairs with follicles
- ✓ Take at least 2 pulls
- ✓ Inspect for follicles – do not touch follicles
- ✓ Obtain exhibitor signature & seal envelope
- ✓ Clean pliers and hands between animals

The state livestock nomination process is open to Kansas 4-H and FFA members who would like to participate in the Kansas State Fair Grand Drive and/or Kansas Junior Livestock Show (KJLS).

All market animals and commercial females must be state nominated to be eligible for the Kansas State Fair Grand Drive and/or KJLS. This includes:

- (1) Ordering official DNA envelopes in advance and paying the nomination fee through the ShoWorks system.
- (2) Submitting identifying data on each animal through this ShoWorks online system, as well as the required information for each exhibitor within the family.
- (3) Mailing an official DNA envelope for each nominated animal, which is complete, sealed, and signed by all exhibitors within the family, plus a parent/legal guardian.

*All steps must be complete for the exhibitors and animals to be ELIGIBLE for the Kansas State Fair Grand Drive and/or KJLS. Submissions must also be approved by the appropriate extension agent and/or ag teacher to be accepted and eligible for exhibition.

**A copy of the receipt for all online nomination submissions must be mailed with the DNA envelopes via certified mail to the KSU Youth Livestock Program, being postmarked by the appropriate date. Late materials will not be accepted and all animals submitted after the postmark deadline will be ineligible.

KSU Youth Livestock Program Mailing Address:

State 4-H/FFA Shows
Kansas State University
214 Weber Hall
1424 Claflin Road
Manhattan, KS 66506

Postmark Deadlines:

Market Beef – May 1
Commercial Heifers – June 15
Swine – June 15
Sheep – June 15
Meat Goats – June 15

SAVE CART and SAVE OFTEN! Saving your cart is the only way to keep user data and allows you to return later to complete your nomination submission.

Families are encouraged to use the step-by-step Specie Worksheets and Rookie Guide on the [KSU Youth Livestock Program](#) website to help guide them through the process. These documents include tips and hints for correct and complete nominations.

Guidelines:

(A) ALL nomination data must be submitted online by 5:00pm on the appropriate date listed above for each specie.

(B) DNA envelope orders will close one (1) week prior to the nomination deadline for each specie:

Market Beef - April 24

Small Livestock & Commercial Heifers - June 8

(C) Families will need to provide their official KSU Nomination # (assigned 5-digit number) and Family/Household Name in the system. Returning families may locate this number via the [Family/Household Names and KSU Number List](#) posted on the youth livestock website, or obtain it by contacting their local extension office.

Families who are nominating for the first time need to request a KSU Nomination #, by using this link: [KSU Nomination # Request](#)

These requests will be completed in the order in which they are received and may take 1-3 business days to be approved. New families will receive their official number via the email address provided in the request link (Qualtrics).

(D) All exhibitors are required to be [YQCA](#) certified prior to nomination. Certification must be valid through October 2, 2022 to be accepted. Users will upload a copy of the certificate for each exhibitor before the submissions will be accepted. Youth should complete the training as early as possible to have their 2021-2022 certificate available and ready to upload before beginning the process!

(E) Submitting this information is for state livestock nomination purposes only to officially nominate animals and make them eligible for the Kansas State Fair Grand Drive and/or KJLS.

(F) A complete state livestock nomination does **NOT** constitute show entry. Official show entries must be made separately, directly through each individual show, in order to be able to exhibit. Rules and entry details may be found on each show's respective website:

[Kansas State Fair Grand Drive](#)
[KJLS](#)

(G) A family nomination system is used in Kansas. All exhibitors within the family must have each animal submitted under their name online, as well as sign all of the DNA envelopes for their family.

(H) There is a \$20 fee for any incomplete nomination received. This includes online submission data, uploaded documents, and DNA envelope(s). All nomination submissions are final. No refunds.

(I) Declaration, Housing, & Care - Exhibitors of Kansas Youth Livestock Shows are responsible for the proper care of their animal(s) by following acceptable methods of good animal husbandry. Youth are also expected to provide the primary care and training for livestock projects for the duration of the project. Primary care is defined as the exhibitor making the decisions for and providing the care, handling, and training of their livestock project a majority of the time.

*Families will need to complete and upload the [2022 Declaration Form](#) for the exhibitors within their family. This form-fillable PDF is available by clicking the link above. It must be signed by all exhibitors within the family and a parent/legal guardian. The same completed form, representing the entire family, should be uploaded for each exhibitor.

(J) If you created a new PASSPORT account last year, your account was saved. Just log into your PASSPORT account. However, nominations will be easier to complete using a computer, which is recommended. NEW ShoWorks Passport users can create an account and it will save all of your entries from year to year, as well as for other fairs and shows!

You may also turn on notifications for the PASSPORT app, which will allow us to send you messages and alerts to stay up-to-date on your state nominations as well as the state shows!

KSU Youth Livestock Program

Website:

www.youthlivestock.ksu.edu

Facebook:

Kansas State Youth Livestock Program
@ksuylp

Snapchat:

K-State Youth Livestock Program
@ksuylp

Twitter

KSU Youth Livestock Program
@ksuylp

Instagram

KSU Youth Livestock Program
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