



# **SHEEP AND GOAT SKILLATHON**

Study Guide

# SKILLATHON CONTEST

## **Junior Contest**

- Preliminary Round: Consists of a 50-question exam and 6 identification stations (equipment, breeds, feeds, meats, health and aging), as well as a wool judging station with questions.
- Finals: Top 5 scoring contestants will advance to a finals round that includes knowledge and skill stations. No Speech.

## **Intermediate Contest**

- Preliminary Round: Consists of a 75-question exam and 6 identification stations (equipment, breeds, feeds, meats, health and aging), as well as a wool judging station with questions.
- Finals: Top 5 scoring contestants will advance to a finals round that includes knowledge and skill stations. They will also give a speech and be asked thought questions from the sheep and goat industry.

## **Senior Contest**

- Preliminary Round: Consists of a 100-question exam and 6 identification stations (equipment, breeds, feeds, meats, health and aging), as well as a wool judging station with questions.
- Finals: Top 5 scoring contestants will advance to a finals round that includes knowledge and skill stations. They will also give a speech and be asked thought questions from the sheep and goat industry.

# SHEEP BREEDS

Have a working knowledge of the origin, physical characteristics, and qualities or traits that add to the significance of the following breeds.

- Barbado
- Black Headed Persian
- Border Leicester
- California Red Face
- Cheviot
- Columbia
- Corriedale
- Cotswold
- Debouillet
- Dorper
- Dorset
- East Friesian
- Finnsheep
- Hampshire
- Jacob
- Karakul
- Lincoln
- Merino
- Polypay
- Rambouillet
- Shropshire
- Southdown
- Suffolk
- Texel

# BARBADO

- Origin: Island of Barbados (African hair sheep crossed with European wool breeds)
- Classification: Hair breed
- Color: Shades of brown, tan, or yellow. Black bellies, inside of legs, and up their chest. Black points on nose, forehead, and inside of their ears. Rams have a neckpiece of thick hair (may cover shoulders).
- Head: Medium size head. Slight tendency to a roman nose. Ears point forward from the side (should not droop). Polled breed.
- Body: Fairly deep with well-sprung ribs. Fair width of back and loin. Tail is set very low.



## Facts:

- When slaughtered have much less body fat than do other comparable breeds
- Excellent meat flavor
- Considered to be resistant to effects of internal parasites
- Resistant to most sheep diseases
- Popular to breeders that serve organic and ethnic markets



# BLACK HEADED PERSIAN

- Origin: Arid regions of East Africa (what is now Somalia) (descendant of Somalia sheep)
- Classification: Hair breed
- Color: Black head and neck (sometimes rump too). White body with clear line separating the colors.
- Head: Rams and ewes are polled. Ears are moderately long.
- Fat: Store a large amount of fat in their tail region and rump.
- Body: Fat rump, short legs, and compact conformation.



## Facts:

- Their fat gives them resilience in arid conditions
- Their fat was prized for cooking



# BORDER LEICESTER

- Origin: Northumberland, England (Cheviot or Teeswater crossed with a Dishley Leicester)
- Classification: Long-wool breed
- Color: Solid white
- Body: Large frame and long body. Well sprung ribs with well-developed chest. Wide level back and level underline. Wool covered body, but legs are covered with white hair.
- Head: Masculine head, roman nose, and wide black nostrils. Large upright ears. Polled breed.



## Facts:

- Introduced to the United States by George Washington
- Fleece weight from ewes: 8 to 12lbs. Yield: 65 to 80 percent
- Excellent maternal characteristics



# CALIFORNIA RED FACE

- Origin: Davis, California (Tunis crossed with Barbado)
- Classification: Dual-purpose breed
- Color: Red heads and legs. Body a beige or oatmeal color.
- Appearance: Medium sized. Legs and faces are free of wool. Long pendulous ears and chiseled muzzle. Polled breed.



## Facts:

- Breed was created at The University of California
- Non-seasonal breed (can be bred for 3 lamb crops in 2 years)
- Silky wool texture



# CHEVIOT

- Origin: Cheviot Hills, on the border of England and Scotland
- Classification: Dual-purpose breed
- Color: Solid white with black feet and muzzle.
- Head: Wool free head. Roman nose. Pricked ears. Polled breed.
- Appearance: Medium to large framed. Legs are covered with white hair. Broad backed that is strong. Broad and deep chest. Level out to the dock. Ribs are well sprung and deep.



## Facts:

- Easy lambing with well developed mothering instinct
- Considered to be resistant to worms
- Their hard hooves are less prone to foot rot





# COLUMBIA

- Origin: Laramie, Wyoming (Lincoln ram crossed with Rambouillet ewe)
- Classification: Medium-wool breed
- Color: Solid white
- Head: Polled breed. Moderately long ears, covered in hair or short wool.
- Appearance: Wool covered. Moderately short neck and wide shoulders, that are even with their backline. Wide and deep chest. Long, level, and wide back.



## Facts:

- Breed was developed by United States Department of Agriculture
- Originally developed for range conditions
- Superior mothering ability
- Fleece spin count: 50's to 60's



# CORRIEDALE

- Origin: New Zealand (Lincoln or Leicester ram crossed with a Merino ewe)
- Classification: Dual-purpose breed
- Color: White faces and legs, black nose, and fleece that can be pale silver, black or fawn.
- Appearance: Medium to large frame. Polled breed.



## Facts:

- Fleece from mature ewes: 10 to 17 lbs.
- Yield: 50 to 60 percent
- Suited for areas of lighter rainfall and warmer climate



# COTSWOLD

- Origin: Cotswold Hills of Southwest England
- Classification: Long-wool breed
- Color: Solid white but can have marks of tan or grey. Black hooves and spots on ears.
- Appearance: Stocky bodies. Distinctive long curly wool, with forelock that droops down over their eyes. Polled breed.



## Facts:

- Their fleeces was known as the “golden fleece”
- Staple length: 6 to 8 inches
- Wool is smooth and has a high luster



# DEBOUILLET

- Origin: Southeastern New Mexico (Rambouillets crossed with Delaine-Merinos)
- Classification: Fine-wool breed
- Color: Fully white
- Appearance: Medium framed. Small and semi-erect ears. Wool covered body with hair on face. Ewes are polled, but rams can have horns.



## Facts:

- Fleece weight: 10 to 18 lbs.
- Known for hardiness and adaptability
- Suited for the arid ranges of southwestern United States
- Produces high quality fleeces



# DORPER

- Origin: South Africa (Black Head Persian crossed with Dorset)
- Classification: Hair breed
- Color: White with black heads, can be solid white. Limited number of black spots on body.
- Head: Long head with wide spaced eyes. Most are polled, but rams can have scurs
- Body: Barrel-shaped (60:40 ratio of height to body and legs). They are long deep bodied.
- Wool: Short light covering of hair and wool on their backs.



## Facts:

- Non-seasonal breed (can be bred for 3 lamb crops in 2 years)
- Exceptional adaptability, hardiness, reproduction rates, and mothering abilities
- Can thrive under range conditions where other breeds can barely exist



# DORSET

- Origin: Southwest England (Merino crossed with Horned Sheep of Wales)
- Classification: Fine wool breed
- Color: Fully white
- Appearance: Medium sized, with long bodies, and wide faces. Pink nose and mouth. They can be horned or polled.



## Facts:

- They are prolific breeders
- Produce medium-grade wool
- Heavy milkers
- The Polled Dorset originated in North Carolina
- They do not produce black fibers



# EAST FRIESIAN

- Origin: Friesland, north of Holland and Germany
- Classification: Dairy Sheep
- Color: Fully white
- Appearance: Large frame. Pink nose and pale hooves. Heads and legs are clear of wool. Have a distinctive “rat tail”, which is free of wool and thin. Polled breed.



## Facts:

- Considered the best breed for milk yield



# FINNSHEEP

- Origin: Finland (Descendant of the Nordic short-tailed breeds)
- Classification: Medium wool breed
- Color: White is most common, but can also be black, brown, grey or fawn. White markings are also common.
- Appearance: Medium to large frame. Long bodied and long legged, with little to no wool on legs. White face and pink nose, heads may have wooly forelocks.



## Facts:

- The breed is naturally short-tailed
- Common to lamb 3 to 5 lambs at once





# HAMPSHIRE

- Origin: Hampshire, England (Descendant of crossing Southdown rams)
- Classification: Meat breed
- Color: White wool, dark brown or black face, ears and legs.
- Appearance: Large, blocky, and muscular. Ears are a moderate length with dark brown or black hair. Face is long, dark, and free of wool from the eyes down. Have a woolcap that extends from the neck to the forehead. Polled breed.



## Facts:

- Known for their early maturity, rapid growth, and meat production



# JACOB

- Origin: Unknown
- Classification: Medium wool breed
- Color: Black and whites, with black patches that fade to brown over time
- Appearance: Small to medium size. Slender triangular head that is free of wool on the cheeks and in front of the horns. Legs are free of wool from the knee down. They are polycerate (have multiple horns)



## Facts:

- They have been raised in England for over 350 years
- The ideal color ratio is 40% black and 60% white



# KARAKUL

- Origin: Central Asia
- Classification: Multi-purpose breed
- Color: Born with a black coat, but can be brown spotted, roan, white, red, gray, gold, or sur.
- Appearance: Medium size. Long narrow bodies. Long narrow heads with slight indentation between the eyes. Often have a roman nose. Ears are long and point downwards. Medium to long legs and light bonded



## Facts:

- Their wool is a mix of coarse and fine fibers (considered carpet wool)
- They are a fat-tailed breed



# LINCOLN

- Origin: England (Leicester crossed with Lincolnshire)
- Classification: Long wool breed
- Color: May be white or colored including gray, silver, charcoal, and black. They have blue skinned ears and black hooves.
- Appearance: Large, sturdy, and rectangular body shape. Deep bodied and wide. Wide head with a broad forelock, wide set nostrils, and open face. Long, wavy, and lustrous fleece that hangs from body except for a small area on the front of the legs.



## Facts:

- Have the thickest fleece of all breeds
- Known for their longevity, ability to produce heavy wool weights, and strong mothering ability
- Produce the heaviest and coarsest fleeces of the long woolled breeds



# MERINO

- Origin: Spain
- Classification: Fine wool breed
- Color: Fully white
- Appearance: Generally medium sized. Can be polled or horned. Vary in the extent of skin folds.



## Facts:

- Known for their high-quality wool
- Considered to have the finest and softest wool of any sheep



# POLYPAY

- Origin: Dubois, Idaho (Crossing of Finnsheep, Rambouillet, Targhee, and Dorset)
- Classification: Dual-purpose breed
- Color: Fully white
- Appearance: Medium sized. Smooth body with no excessive wrinkles on head or neck. Open face with little to no wool on it. Polled breed.



## Facts:

- Developed at the U.S. Sheep Experiment Station
- Large lamb crops and desirable carcass quality
- Was created to be a more productive sheep breed



# RAMBOUILLET

- Origin: France (Descendant of the Spanish Merino)
- Classification: Fine wool breed
- Color: Typically cream to white in color
- Appearance: Large, deep, and wide bodies with straight top and underline. Face covering of wool is heavy (can cause wool blindness)



## Facts:

- Their wool is warmer and more resilient than Merino wool
- Largest of the fine wool breeds
- Known for high quality wool and meat



# SHROPSHIRE

- Origin: The hills of Shropshire and North Staffordshire, England (Crossing Southdown, Leicester, and Cotswold)
- Classification: Medium wool breed
- Color: White body. Black face, ears, and legs.
- Appearance: Medium sized body. Clean face and ears. Short well set legs. Polled breed. Resembles a Hampshire but are typically smaller and finer boned.



## Facts:

- One of the heaviest wool producers of the medium wool breeds
- Can adapt to all kinds of pastureland





# SOUTHDOWN

- Origin: Sussex, England
- Classification: Medium wool breed
- Color: White wool, with a distinctive mouse-colored face and legs.
- Appearance: Medium size. Compact, stocky build. Wide full face. Deep chest and broad back. Medium length legs. Polled breed.



## Facts:

- Early maturing breed
- Smallest of the British breeds



# SUFFOLK

- Origin: Bury St. Edmunds area of Suffolk, England (Norfolk horned ewes crossed with Southdown rams)
- Classification: Medium wool breed
- Color: White wool covering body, with black face and legs.
- Appearance: Large frame with a long, level back. Long face with long drooping ears. Polled breed.



## Facts:

- Prolific, early maturing, with excellent mutton carcasses



# TEXEL

- Origin: Netherlands
- Classification: Medium wool breed
- Color: Fully white with black nose and hooves.
- Appearance: Short wide face and short ears that are held horizontally. No wool on head, with fine hair covering. Medium size rectangular body with a level back, medium bone structure, and pronounce muscling. Polled breed.



## Facts:

- Known for their ability to deposit lean muscle



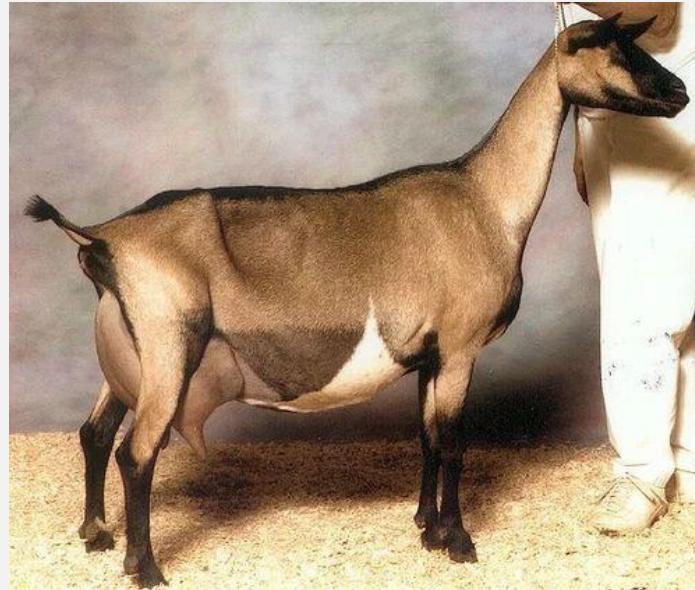
# GOAT BREEDS

Have a working knowledge of the origin, physical characteristics, and qualities or traits that add to the significance of the following breeds.

- Alpine
- Angora
- Boer
- Cashmere
- Golden Guernsey
- Kiko
- Lamancha
- Nigerian Dwarf
- Nubian
- Oberhasli
- Pygmy
- Saanen
- Spanish
- Toggenburg

# ALPINE

- Origin: French Alps
- Classification: Dairy
- Color: Come in many colors including white, fawn, gray, black, and red.
- Appearance: Medium to large size. Have erect ears. Short to medium length hair.



## Facts:

- Produce the most common type of goat milk for dairy products
- Produce 1 to 2 gallons of milk daily



# ANGORA

- Origin: Turkey
- Classification: Fiber
- Color: Solid white, but can be black, brown, or grey.
- Appearance: Small slender build. Small head with semi-lop ears. Covered in a single-coated fleece of long, fine mohair, except for their face and legs. Horned breed.



## Facts:

- Their mohair grows at a rate of about 2 to 2.5 cm per month
- Adult will produce 8 to 16 lbs. of mohair, while a kid can produce 3 to 5 lbs.



# BOER

- Origin: Southern Africa
- Classification: Meat
- Color: Typically, white with a red or brown head and neck, but can be any color.
- Appearance: Large and muscular. Long, broad, pendulous ears that hang downwards. Horned breed. Short, glossy hair.



## Facts:

- One of the most common goat breeds in the United States



# CASHMERE

- Origin: Western Himalayan region of Kashmir
- Classification: Fiber
- Appearance: Vary in build and color. Often have large ears, slender limbs, and curved horns.



## Facts:

- An adult can will yield as much as 2.5 lbs. of fleece





# GOLDEN GUERNSEY

- Origin: Channel Islands off the coast of Britain
- Classification: Dairy
- Color: Golden skin and hair, ranging from pale blonde to deep bronze. Can have small white markings on face.
- Appearance: Smaller and finer boned. Erect ears that point forward and have a slight upturn at the tip. Can have long or short goats. Most males are horned.



## Facts:

- Produce about 2 to 3 liters of milk per day



# KIKO

- Origin: New Zealand
- Classification: Meat
- Color: Generally solid white or cream but can also be black or other colors.
- Appearance: Thick muscular body. Erect ears.



## Facts:

- Stronger resistance to parasites



# LAMANCHA

- Origin: Oregon
- Classification: Dairy
- Appearance: Short fine glossy hair that can be any color combination. Straight face and distinctive ears that are either gopher ears or elf ears.



## Facts:

- Produces 1 to 2 gallons of milk per day



# NIGERIAN DWARF

- Origin: West Africa
- Classification: Dairy
- Appearance: Come in a variety of colors. Bred to have the body proportions of a dairy goat.



## Facts:

- Produce milk that is high in butterfat and protein
- Produce up to 1 to 2 quarts of milk per day



# NUBIAN

- Origin: United Kingdom
- Classification: Dairy
- Appearance: Short, fine, glossy coats that are solid or multicolored. Long droopy ears that extend an inch below their muzzles. Faces are long and oval-shaped with a white forehead and roman nose.



## Facts:

- Produce up to 4 gallons of milk per day



# OBERHASLI

- Origin: Canton of Berne in Switzerland
- Classification: Dairy
- Color: Known for their tan, brown, and black color pattern. They have two black stripes that run from the top of their head to the base of their nose. Forehead, belly, and udder are black.
- Appearance: Medium sized. Long upright ears. Straight or dished faces with no roman nose.



## Facts:

- Produce between  $\frac{1}{2}$  and 3 gallons of milk per day



# PYGMY

- Origin: Cameron Valley in West Africa
- Classification: Milk/ Meat
- Color: White, black, grey, or a combination.
- Appearance: Small and stout. Short smooth hair. Large ears, square pupils, and cloven hooves.



## Facts:

- Produce 1 to 2 quarts of milk per day
- Usually used for meat in Africa



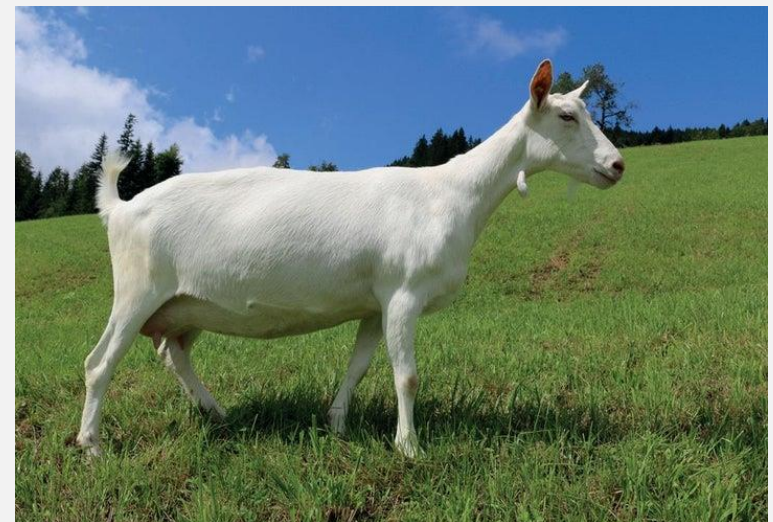
# SAANEN

- Origin: Saanen Valley of Switzerland
- Classification: Dairy
- Color: Solid white or cream, can have black spots on their ears, nose, or udder.
- Appearance: Medium size with a wedged shape body. Short fine hair. Dished or straight faced.



## Facts:

- Produce 1.5 to 3 gallons of milk per day
- Their milk yields between 35 and 4% fat





# SPANISH

- Origin: Spain
- Classification: Meat
- Appearance: Can be any color. Medium sized. Large ears that are held horizontally, a straight or concave face, and long twisted horns.



## Facts:

- Meat is lean and flavorful
- Hardy and survive in adverse conditions



# TOGGENBURG

- Origin: Toggenburg Valley of Switzerland
- Classification: Dairy
- Color: Can be brown, fawn, or chocolate. White markings on their faces, ears, legs, and tails.
- Appearance: Medium size. Short to medium length, soft fine hair. Ears are erect and point forward. Face is straight or dished.



## Facts:

- Produce about 1.5 to 2 gallons of milk per day



# AGES AND MOUTH STRUCTURES

Be able to identify different ages and mouth structures of sheep and goats.

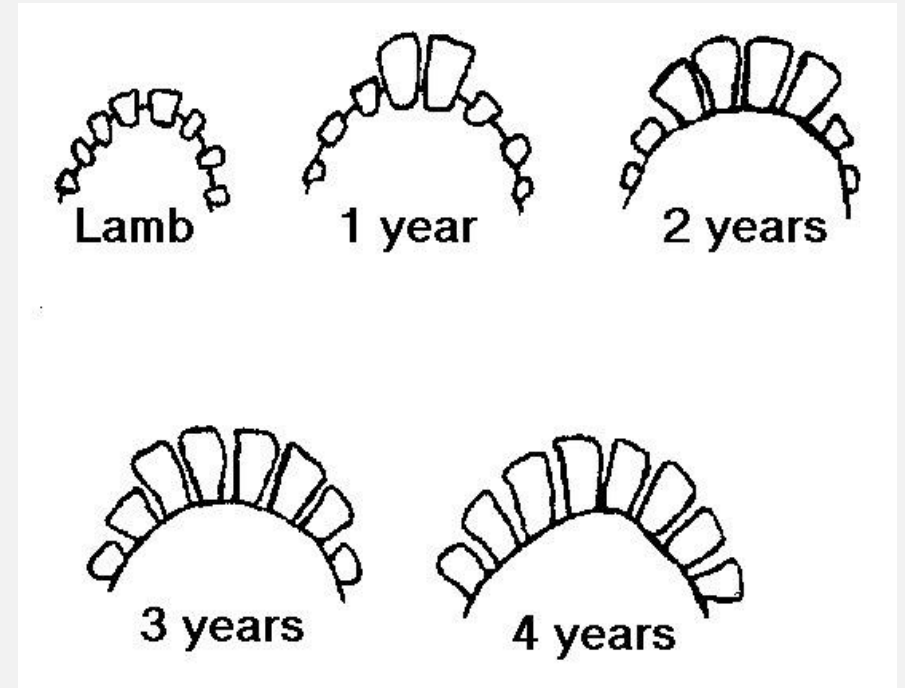
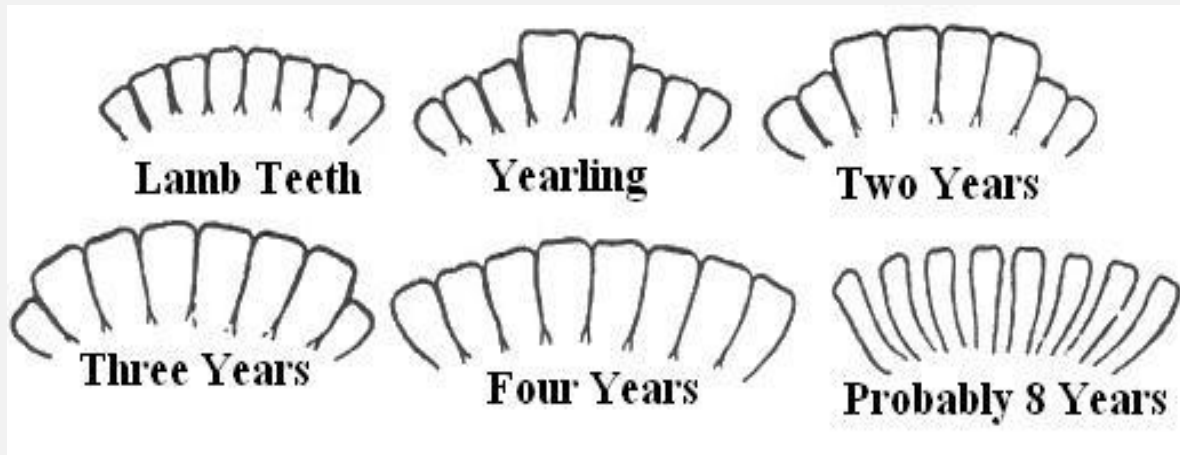
## Mouth Structures

- Parrot Mouth/ Overshot
- Monkey Mouth/ Undershot

## Ages

- Lamb
- Yearling
- 2 Years
- 3 Years
- 4 years
- Aged

# AGING



# AGING



Lamb



Yearling



2 Years

# AGING



3 Years



4 Years



Aged

# MOUTH STRUCTURES



Parrot Mouth



Monkey Mouth



# HEALTH

Be able to recognize, identify, and understand different health problems relating to sheep and goats. The following are examples:

- Acidosis
- Blue Tongue
- Body Condition Scoring
- Caseous Lymphadenitis (CL)
- Chlamydia
- Coccidiosis
- Copper Toxicity
- Dystocia
- Enterotoxemia
- Famancha Scoring
- Foot Rot
- Internal Parasites
- Keds
- Lice
- Listeriosis
- Leptospirosis
- Mastitis
- Nasal Bots
- Pinkeye
- Pneumonia
- Polioencephalomalacia
- Prolapse
- Q Fever
- Ringworm
- Salmonellosis
- Soremouth
- Tetanus
- Toxoplasmosis
- Urolithiasis
- White Muscle Disease



# ACIDOSIS

- A metabolic condition that occurs when they eat too much grain
- If a severe case, animals can die within 24 hours
- Symptoms include:
  - Depressed appearance
  - Lying down
  - Diarrhea
  - Dehydration and thirst
  - Bloating on the left side of the abdomen
  - Staggery or tender gait and “sawhorse” stance
- Treatment:
  - Provide fresh water, and quality hay
  - Give sodium bicarbonate or magnesium hydroxide
- Non-contagious



# BLUE TONGUE

- The virus is spread by an infected midge (small fly) biting an uninfected animal
- Symptoms include:
  - Swelling of lips and tongue and change of color
  - Runny nose
  - Inflammation of mouth and nose
  - Fever
  - Apathy
  - Lameness
- Treatment: No real cure, give antibiotics and anti-inflammatory drugs
- Non-contagious

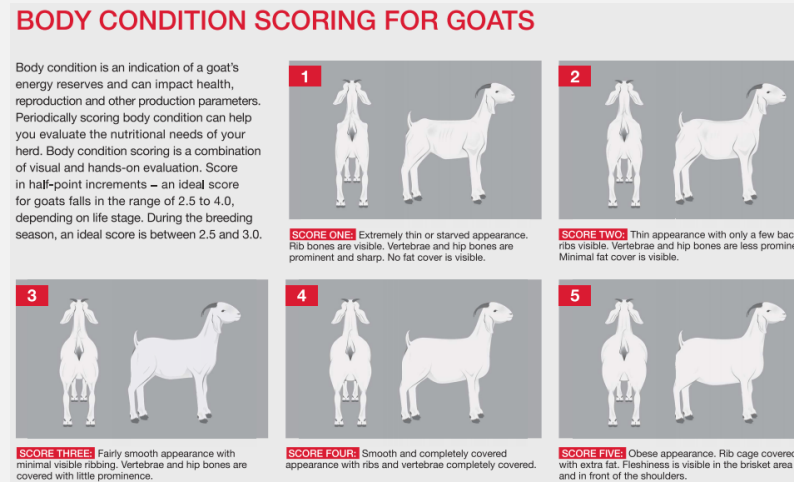


# BODY CONDITION SCORING

- A tool used to assess the animal's nutritional status and energy reserves

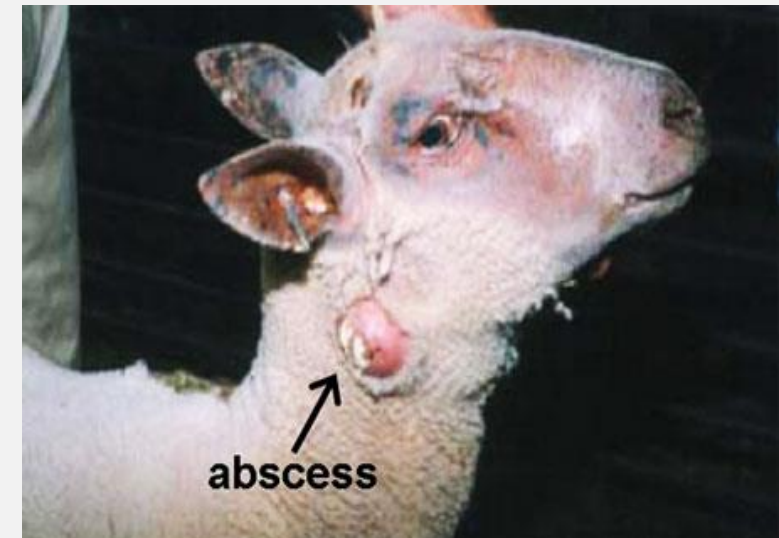
- Scorecard breakdown:

- BCS 1: extremely thin, no fat reserves, and spinous process and ribs are clearly visible
- BCS 2: The spinous process and some of the ribs are visible
- BCS 3: The spinous process is not prominent, and the ribs are difficult to see
- BCS 4: The spinous process and ribs are not visible, side of animal looks flat
- BCS 5: Ribs are not visible, and the spinous process is buried in fat



# CASEOUS LYMPHADENITIS (CL)

- A chronic bacterial disease
- Two forms: internal (more common in sheep) and external (more common in goats)
- Symptoms:
  - Abscesses in lymph nodes and other organs
  - Enlargement of external lymph nodes
  - Chronic weight loss
  - Coughing/ respiratory symptoms
- Treatment:
  - No cure, can be vaccinated against it
- Contagious



# CHLAMYDIA

- A bacterial disease caused by the bacterium Chlamydia abortus
- Symptoms include:
  - Abortions in last 2-3 weeks of pregnancy, Stillborn lambs, Inflamed placentas
  - Transient fever, Mild pneumonia, Hepatitis
  - Anorexia
  - Bloody discharge
- Treatments:
  - Vaccinate non-pregnant ewes (Enzovax, Cevac Chlamydia, Inmeva Suspension for Injection)
  - Give antibiotics
- Contagious

# COCCIDIOSIS

- A disease caused by microscopic parasites that infect the gut wall
- Symptoms include:
  - Diarrhea
  - Weight loss, loss of appetite
  - Lethargy
  - Dehydration
  - Abdominal pain
- Treatments:
  - Give coccidiostats
- Contagious



# COPPER TOXICITY

- Occurs after the sheep's liver capacity for copper storage has been exceeded
- Symptoms include:
  - Jaundice, bloody urine
  - Weakness, shallow breathing
  - Pressing head against something, aimless wandering
  - Loss of appetite
- Treatment:
  - Ammonium molybdate, sodium thiosulfate, penicillamine
  - Vitamin C
- Non-contagious



# DYSTOCIA

- Difficult birth, occurs when the birthing process is prolonged or fails to progress normally
- Symptoms include:
  - First stage of labor is delayed or doesn't progress within 30 minutes
  - Animal is restless/ weak
  - Abdominal contractions become stronger and more frequent
- Treatment:
  - Assist the ewe/doe with giving birth
- Non-contagious





# ENTEROTOXEMIA

- Bacterial infection caused by the absorption of a large amount of toxins from the intestines
- Also known as Overeating Disease
- Symptoms include:
  - Sudden death
  - Abdominal pain, loss of appetite
  - Diarrhea
  - Lethargy
  - Panting, staggering
- Treatment:
  - Analgesics, probiotics, oral electrolyte solutions, antisera
  - Vaccinate with *Clostridium perfringens* C&D antitoxin
- Non-contagious

# FAMACHA SCORING

- Matches the color of the eye to assess the level of anemia
- Helps identify animals that need to be treated for internal parasites
- Scoring
  - 1 Red: healthy
  - 5 White: severely anemic



**FAMACHA® System**

Clinical Category	Eye Lid Color	Packed Cell Volume(PCV)	Treatment recommendation
1	Red	≥ 28	No
2	Red-Pink	23-27	No
3	Pink	18-22	?
4	Pink-White	13-17	Yes
5	White	≤ 12	Yes

# FOOT ROT

- The erosion of tissue between the sole of the toe and the hard outer hoof
- Symptoms include:
  - Lameness, swelling of hooves
  - Redness
  - Separation
  - Odor
  - Higher temperature, loss of appetite
- Treatment:
  - Penicillin, Kopertox
  - Contagious



# INTERNAL PARASITES

- Common internal parasites: lung worms, stomach worms (barber pole worm), liver flukes, intestinal parasites (coccidia)
- Symptoms include:
  - Weight loss, diarrhea
  - Weakness
  - Anemia
  - Fever
  - Bottle jaw
- Treatment:
  - Give a dewormer
- Can be contagious



# KEDS

- Wingless flies that bite and feed on blood of sheep and goats
- Known as sheep ticks
- Symptoms include:
  - Irritation
  - Wool damage
  - Cockles (puncture of skin)
  - Anemia
- Treatment:
  - Use a long-acting insecticide
- Can be contagious



# LICE

- Small wingless insects that infest sheep and goats
- Symptoms include:
  - skin irritation
  - Hair loss
  - Weight loss
  - Secondary skin issues (infections, wounds)
- Treatment:
  - Use insecticides
    - Pyrethins and pyrethoids
- Can be contagious



# LISTERIOSIS

- Bacterial infection associated with silage feeding (inflammation of the brain)
- Symptoms include:
  - Loss of balance/ coordination
  - Circling
  - Dropping ears and eyelids
  - Saliva running from one side of face
  - Fever, loss of appetite
- Treatment:
  - Antibiotics, penicillin, oxytetracycline
  - Avoid feeding spoiled feeds
- Non-contagious

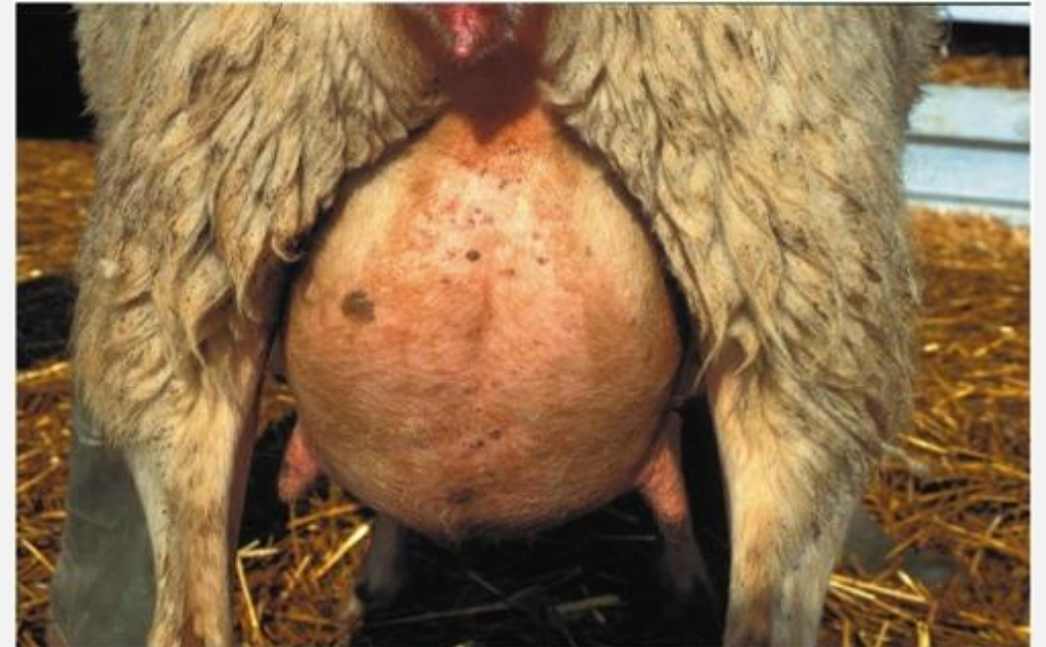
# LEPTOSPIROSIS

- Bacterial disease caused by the bacteria *Leptospira* that is spread by urine from infected animals
- Symptoms include:
  - Fever
  - Jaundice, red urine
  - Abortions, stillbirths
  - Anemia
- Treatment:
  - Antibiotics
  - Nobivac Lepto, Leptoshield
- Contagious (spreads through urine, water, and soil)



# MASTITIS

- A disease that cause inflammation of the mammary gland (udder)
- Symptoms include:
  - Udder- swollen, warm, painful, or hard
  - Milk- may contain clots, serum, or appear watery or bloody
  - Lambs affected by ewes- poor growth rates, or die from lack of milk or bacterial disease
- Treatment:
  - Intramammary infusions of antibiotics and systemic antibiotics
  - Mastitis vaccine
- Non-contagious



# NASAL BOTS

- Larvae of the sheep bot fly that develop in the nasal cavities of sheep and goats
- Symptoms include:
  - Nasal discharge, sneezing
  - Head shaking/ rubbing
  - Breathing difficulties
  - Disturbed behavior
- Treatment:
  - Macrocyclic lactone dewormer, such as ivermectin
  - Non-contagious



# PINKEYE

- Bacterial infection that causes inflammation and ulceration of the cornea (eye)
- Symptoms include:
  - Watery eyes, eye discharge
  - Swollen eyelids, squinting
  - Redness, cloudy cornea
- Treatment:
  - Topical or injectable antibiotics, anti-inflammatories, or sprays
- Contagious



# PNEUMONIA

- Occurs when infectious and non-infectious agents cause the lungs of sheep and goats to become inflamed
- Symptoms include:
  - Respiratory: coughing sneezing, nasal discharge, labored breathing
  - Fever, reduced appetite
  - Sudden death without showing signs of infection
- Treatment:
  - Antibiotics, Banamine
- Can be contagious

# POLIOENCEPHALOMALACIA

- Nutritional disease that affects the central nervous system
- Symptoms include:
  - Head pressing
  - Blindness
  - Muscle tremors, incoordination
  - Hypersalivation,
  - Dilated pupils, tearing eyes
- Treatment:
  - Thiamine
- Non-contagious



# PROLAPSE

- The protrusion of the vagina, uterus, or rectum
- Forms:
  - Uterine prolapse- shortly after lambing, uterus protrudes from vulva
  - Vaginal prolapse- mass of tissue protrudes from vulva
  - Rectal prolapse- portion of rectum protrudes from anus
- Treatment:
  - Injections, clean and push back in
  - To remove- Prolapse rings, elastrator bands
- Non-Contagious

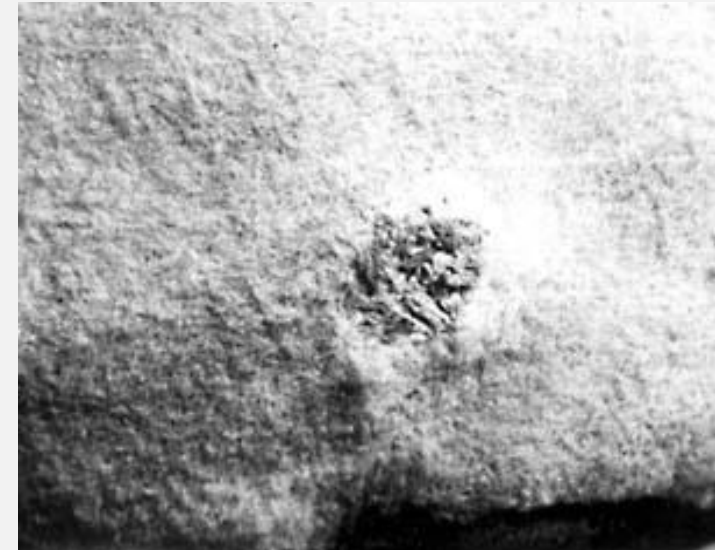


## Q FEVER

- Bacterial disease caused by *Coxiella burnetii*
- Also known as Coxiellosis
- Symptoms include:
  - Reproductive disorders- abortion, infertility, stillbirth, mastitis, and metritis
- Treatment:
  - No licensed treatments
  - Give antibiotics
- Contagious

# RINGWORM

- Fungal infection that affects the skin and hair of sheep and goats
- Symptoms include:
  - Circular lesions, thickened nodules
  - Hair loss, clumped wool
  - Redness
  - Gray-white crusts
- Treatment:
  - Topical sprays- antifungal, iodine
- Contagious





# SALOMNELLOSIS

- Bacterial disease in the digestive tract that causes illness and death
- Symptoms include:
  - Diarrhea (contain blood or mucus)
  - Fever
  - Decreased appetite, dehydration
  - Abortion
  - Teeth grinding, belly kicking, sunken eyes
- Treatment:
  - Antibiotics- sulphonamides, ampicillin, amoxicillin
- Contagious

# SOREMOUTH

- Viral disease that causes painful skin lesions around the muzzle of the affected sheep or goat
- Symptoms include:
  - Early- tiny red nodules
  - Later- blisters form, then crust over into scabs
- Treatment:
  - Topical ointments
  - Antibiotics
- Contagious



# TETANUS

- Infectious neuromuscular disease caused by the bacteria *Clostridium tetani*
- Symptoms include:
  - Stiffness, lock jaw
  - Stiff walk
  - Flared nostrils, erect ears, elevated tail
  - Inability to eat or drink
- Treatment:
  - To prevent- vaccinate with CD&T
  - Treat (may not be successful)- tetanus antitoxin, penicillin
- Non-contagious



# TOXOPLASMOSIS

- Parasitic infection causing reproductive issues
- Symptoms include:
  - Abortion
  - Birth of weak lambs/ kids
  - Fetal mummification
- Treatment:
  - Coccidiostats- Decox, Bovatec
- Contagious

# UROLITHIASIS

- The formation of stones or concretions of mucus, protein, and minerals in the urinary tract
- Symptoms include:
  - Straining when urinating
  - Blood in urine
  - Hunched back
  - Decreased appetite
  - Swelling
- Treatment:
  - Urine acidifiers- Ammonium Chloride
- Non-contagious



# WHITE MUSCLE DISEASE

- Degenerative muscle disease that is caused by a deficiency of selenium and/or vitamin E
- Symptoms include:
  - Stiffness, struggle to walk, hunched back
  - Difficult breathing, nasal discharge, fever
  - Pneumonia, death, brown urine
- Treatment:
  - Single treatment of vitamin E and/or selenium
  - BO-SE
- Non-contagious



# FEEDS

Be able to identify and recognize the feeds and the qualities relating to those specific feedstuffs, from examples below:

- Alfalfa Hay
- Alfalfa Pellets
- Ammonium Chloride
- Barley
- Beet Pulp
- Coastal Hay
- Cottonseed Hulls
- Cracked Corn
- Distillers Grain
- Fish Meal
- Milo
- Molasses
- Range Cubes
- Rolled Oats
- Soybean Meal
- Steam Flaked Corn
- Wheat
- Whole Corn
- Whole Cottonseed
- Whole Oats

# VITAMINS

- Fat Soluble Vitamins:

- A- Immune system, Reproductive health
- D- Healthy bones
- E- Reproduction, blood, brain
- K- Blood clotting, wound healing, bone health

- Water Soluble Vitamins:

- C- antioxidant that protects cells
- B1- Thiamine
- B2- Riboflavin
- B3- Niacin
- B5- Pantothenic acid
- B6- Pyridoxine
- B7- Biotin
- B9- Folate



# ALFALFA HAY

- Green, leafy legume hay (roughage)
- Good source of nutrients, high in protein and energy
- Nutritional value:
  - Protein: 12-25%
  - Fiber: 20-28%
  - Fat: 1.5%
  - Vitamins: A, D, E, riboflavin, and niacin



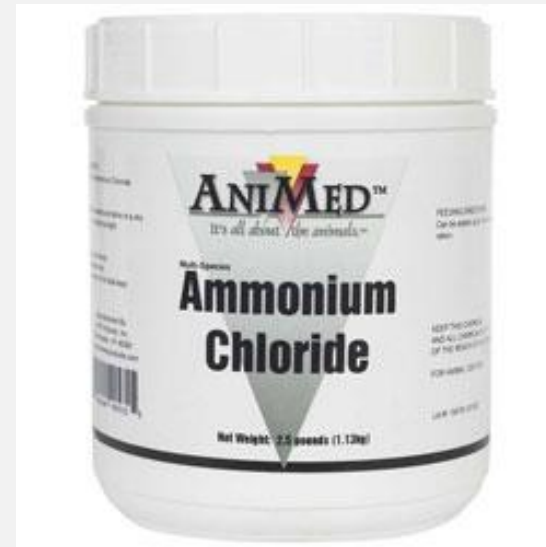
# ALFALFA PELLETS

- Feed made from dehydrated, chopped, and pressed alfalfa hay
- Nutritional Value:
  - Protein: 16-20%
  - Fiber: 22-30%
  - Fat: 2.9%
  - Vitamins: A, E, B, K, C



# AMMONIUM CHLORIDE

- White, crystalline, odorless, inorganic salt
- Urine acidifier
- Used to treat urinary calculi/ urolithiasis



# BARLEY

- A cereal grain used for feed
- Source of energy and protein
- Nutritional Value:
  - Protein: 9.9%
  - Fiber: 4.7%
  - Fat: 1.6%
  - Vitamins: A, C, B3, B6, Folate, Phosphorus



# BEET PULP

- Fibrous byproduct of sugar beet processing (roughage replacement)
- High in fiber and energy
- Nutritional Value:
  - Protein: 8-10%
  - Fiber: 15-20%
  - Fat: less than 1%
  - Vitamins: B6, B12



# COASTAL HAY

- Type of Bermuda grass hay (roughage)
- High quality source of fiber
- Nutritional Value:
  - Protein: 8-14%
  - Fiber: 28%
  - Vitamins: A, D, Calcium, Phosphorus



# COTTONSEED HULLS

- Outer covering of cotton seeds, and the by-products of the dehulling necessary for cottonseed oil extraction (roughage)
- High fiber source
- Nutritional Value:
  - Protein: 3-12%
  - Fiber: 47.8%
  - Fat: 2.8%



# CRACKED CORN

- Rolling whole corn kernels into coarse pieces that are easier for animals to digest
- High energy, protein rich, and fiber rich grain supplement
- Nutritional Value:
  - Protein: 9.5%
  - Fiber: 3%
  - Fat: 2.5%
  - Vitamins: A, B, D, E, K, iodine





# DISTILLERS GRAIN

- By-product of the ethanol production process
- Energy and protein source
- Nutritional Value:
  - Protein: 9.4%
  - Fiber: 9.5%
  - Fat: 4.2%
  - Vitamins: A, D, E



# FISH MEAL

- Coarsely ground powder made from the cooked flesh of fish
- Protein rich
- Nutritional Value:
  - Protein: 57.4-76.3%
  - Fiber: 5.3%
  - Fat: 5-13%
  - Vitamins: B1, B2, B6, B12, A, D, E, K



# MILO

- Cereal grain used for feed
- High energy
- Nutritional Value:
  - Protein: 10-11%
  - Fiber: 12%
  - Fat: 3%
  - Vitamins: A, D, C, B2, B3, B5, B6, B12



# MOLASSES

- Supplement that is commonly used to improve palatability and increase sugars, by-product of processing sugar cane or sugar beets
- Nutritional Value:
  - Fat: 0.1%
  - Vitamins: B6, K, E, Niacin



# RANGE CUBES

- Supplemental feed that provides protein, energy, minerals, and vitamin to help with nutrition when forage quality and quantity are low
- Nutritional Value:
  - Protein: 20%
  - Fiber: 10% and less
  - Fat: 2-8%
  - Vitamins: A, D, E, B12



# ROLLED OATS

- Subjecting whole oats to high-moisture steam for a short time, then rolling them to create a flat flake
- Increase grain level
- Nutritional Value:
  - Protein: 12%
  - Fiber: 11-14%
  - Fat: 2.5-7%
  - Vitamins: B1, B3, B5, B6, E



# SOYBEAN MEAL

- Made from soybeans after oil has been extracted
- Primary source of protein in animal feeds
- Nutritional Value:
  - Protein: 44-48%
  - Fiber: 3.5-7%
  - Fat: 2%
  - Vitamins: B1, B2, B9, E



# STEAM FLAKED CORN

- Processed feed made by steaming shelled corn and then rolling it into flat flakes to improve digestibility
- Nutritional Value:
  - Protein: 8.5%
  - Fiber: 2%
  - Fat: 2.0-18.0%
  - Vitamins: B1, B2, B3, B5, B6, B7, B9, A, D, E





# WHEAT

- A palatable and digestible source of nutrients for animals
- High in protein and energy, good source of fiber
- Nutritional Value:
  - Protein: 8-23%
  - Fiber: 12-15%
  - Fat: 1.5-2%
  - Vitamins: B3, B6, B9, D, Iron, Thiamine, Selenium



# WHOLE CORN

- Natural, high-energy source of feed
- Nutritional Value:
  - Protein: 7-12%
  - Fiber: 2.3%
  - Fat: 3-5.8%
  - Vitamins: C, E, B1, B6, B9



# WHOLE COTTONSEED

- Excellent supplement to poor quality grass hay
- Supplies protein, energy, and fiber
- Nutritional Value:
  - Protein: 21-23%
  - Fiber: 20-25%
  - Fat: 17%
  - Vitamins: B1, B2, B7, B9, B3, B5, B6



# WHOLE OATS

- Feed additive
- Lower in energy, higher in fiber
- Nutritional Value:
  - Protein: 11-14%
  - Fiber: 11-15%
  - Fat: 3-5%
  - Vitamins: B1, B5, B2, B9, Iron, Zinc, Phosphorus, Manganese



# EQUIPMENT

Be able to identify the equipment and its uses from the following list.

- Balling Gun
- Blow Dryer
- CIDR
- CIDR Applicator
- Comb
- Drench Gun
- Ear Tagger
- Elastrator
- Elastrator Band
- Emasculator
- Feeder
- Halter
- Hand Shears
- Heat Lamps
- Hoof Filer
- Hoof Trimmer
- Lamb/ Goat Bottle
- Lamb/ Goat Puller
- Lamb/ Goat Restrainer
- Lamb/ Goat Teat
- Lamb/ Goat Tubes
- Marking Chalk
- Marking Harness
- Muzzle
- Paint Branders
- Ram/ Buck Shield
- Sharpening Grit
- Shearing Cutter

## BALLING GUN

- Use: to orally administer pills, capsules, or boluses



# BLOW DRYER



# CIDR

- Use: to manipulate the reproductive cycles of livestock





# CIDR APPLICATOR

- Use: to insert CIDR



COMB



# DRENCH GUN

- Use: to accurately administer liquids



# EAR TAGGER

- Use: place ear tags on livestock



# ELASTRATOR

- Use: to perform a bloodless castration or dock lambs



# ELASTRATOR BAND



# EMASCULATOR

- Use: severs the spermatic cord during surgical castration

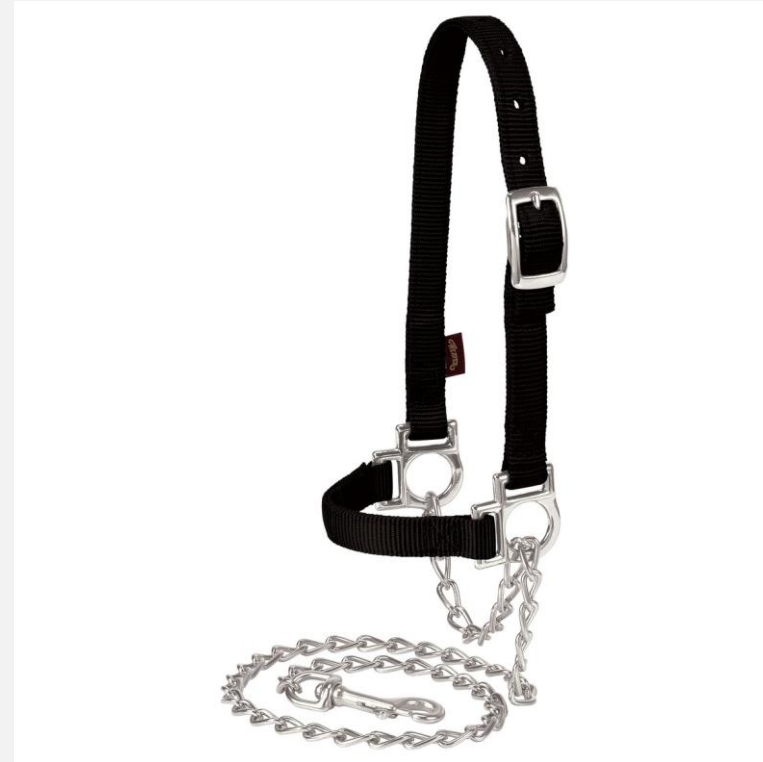


# FEEDER





# HALTER



# HAND SHEARS

- Use: to shear and groom wool sheep



# HEAT LAMPS



# HOOF FILER



# HOOF TRIMMER



# LAMB/GOAT BOTTLE



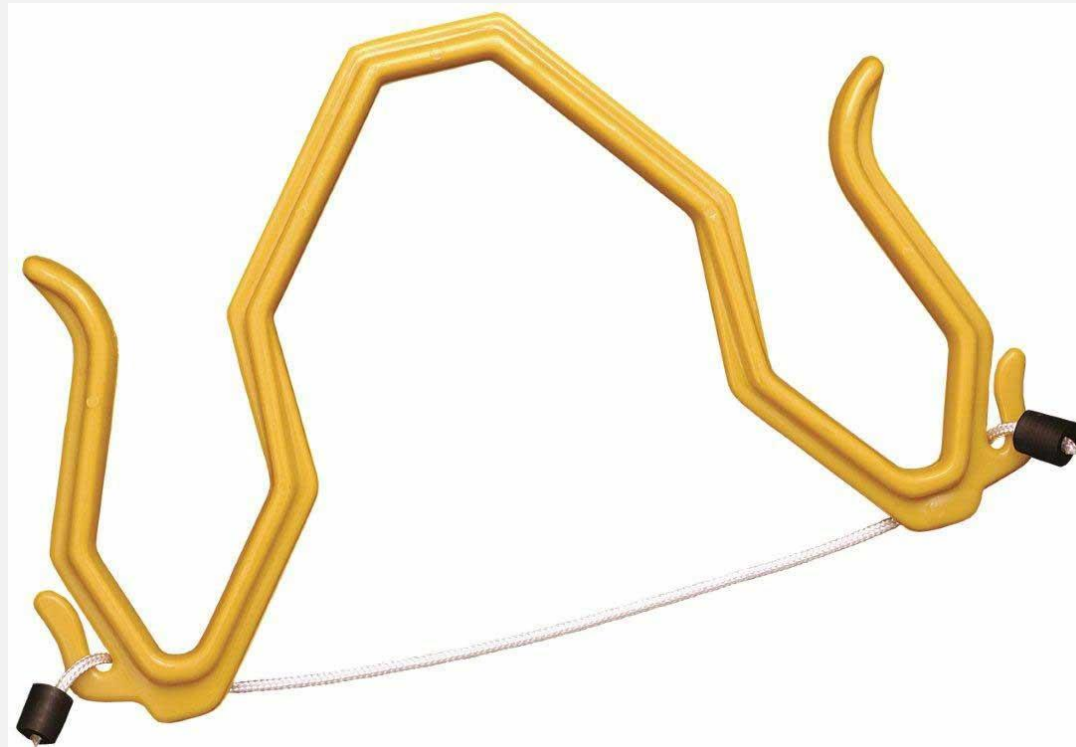
# LAMB/GOAT PULLER

- Use: assist in the birth of lambs and kids



# LAMB/GOAT RESTRAINER

- Use: humanely restrain sheep and goats





# LAMB/GOAT TEAT



## LAMB/GOAT TUBES



# MARKING CHALK

- Use: to identify which animals have been bred (used on marking harness)



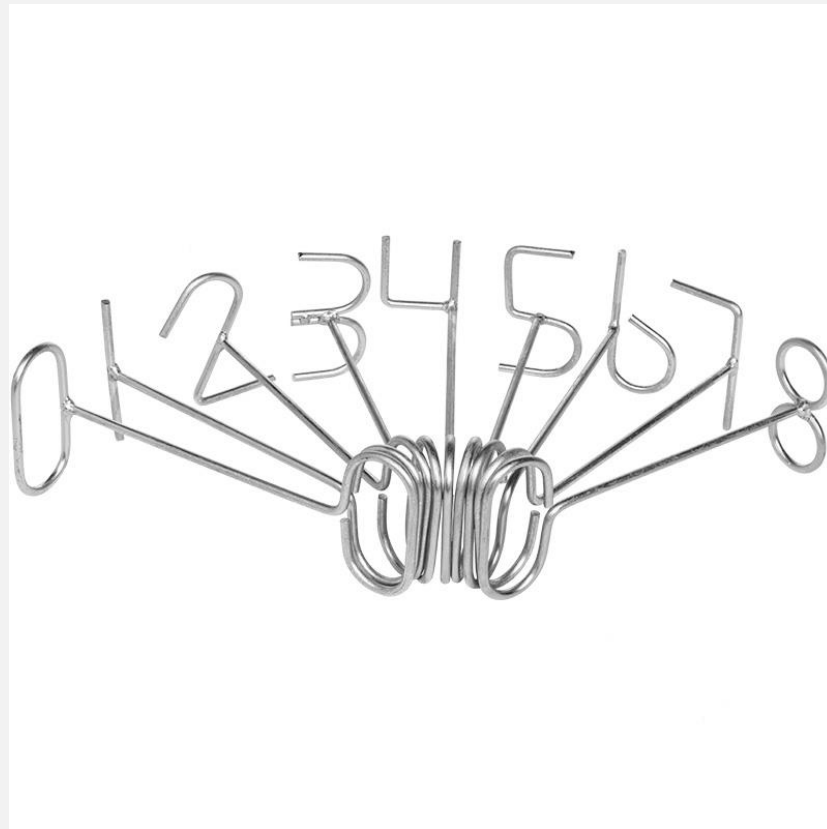
# MARKING HARNESS



# MUZZLE



# PAINT BRANDERS



## RAM/BUCK SHIELD

- Use: blocks the ram/bucks forward vision, to prevent charging



# SHARPENING GRIT

- Use: to sharpen blades





# SHEARING BLADES



# MEDICATION

Know the different conditions in which you would give specific medications. The following are examples:

- Ammonium Chloride
- B12
- B-Complex
- Blood Stop Powder
- Blue Lotion Spray
- CD&T
- Corid
- Dewormer
- Dyne
- Kopertox
- LA 200
- Lutalyse
- Nolvasan
- Nutri-Drench
- Penicillin
- Probios
- Quickbayt
- Selenium
- Soremouth Vaccine
- Thiamine
- Vetericyn

# AMMONIUM CHLORIDE

- Used for:
  - Urolithiasis



# B12





**CONTAINS:** Each mL of sterile aqueous solution contains:  
Cyanocobalamin (B12) ..... 1000 mcg  
With sodium chloride 0.22% w/v, ammonium sulfate 0.1% w/v, citric acid 0.01% w/v, sodium citrate 0.008% w/v, and benzyl alcohol 1.0% v/v (preservative).

**STORAGE:** Store at controlled room temperature between 15°C and 30°C (59°F–86°F).

**AVOID EXPOSURE TO LIGHT.**

Distributed by: MWI  
Boise, ID 83705  
www.VetOne.net

  
V-0400-04  
Rev. 01-18

  
3 13985 00909 9

**NDC 13985-400-04** **100 mL**

  
**Vitamin B-12 1000 mcg**

**Injection**

**Sterile Solution**

For animal use only.  
Keep out of reach of children.

**CAUTION:** Federal law restricts this drug to use by or on the order of a licensed veterinarian.


**V1 510218**      Net Contents: 100 mL (3.4 fl oz)

**INDICATIONS:** For use as a supplemental nutritive source of vitamin B12 in cattle, horses, swine, sheep, dogs and cats.

**DOSAGE AND ADMINISTRATION:** Inject subcutaneously or intramuscularly. May be injected intravenously at the discretion of the veterinarian.

**Cattle, Horses, Swine and Sheep:** 1 to 2 mL  
**Dogs and Cats:** 0.25 to 0.5 mL

Suggested dosage may be repeated at 1 to 2 week intervals, as indicated by condition and response.

TAKE TIME  OBSERVE LABEL DIRECTIONS

LOT NO.:      EXP. DATE:

# B-COMPLEX



## FOR USE IN ANIMALS ONLY

### INDICATIONS:

For use as a supplemental source of B Complex vitamins in cattle, swine and sheep.

### PRECAUTIONS:

Allergic-type reactions following the injection of products containing thiamine have been reported. Administer with caution and keep treated animals under close observation.

### DOSAGE AND ADMINISTRATION:

Inject intramuscularly. May be administered subcutaneously or intravenously if recommended by your veterinarian. The following are suggested dosages, depending on the condition of the animal and the desired response.

**Adult Cattle:** 1 to 2 mL per 100 pounds of body weight.

**Calves, Swine and Sheep:** 5 mL per 100 pounds of body weight.

May be repeated daily, if indicated.

Manufactured for:  
**DURVET, INC.**  
Blue Springs, Missouri 64014  
www.durvet.com



NDC 30798-332-13

**durvet**

## HIGH LEVEL Vitamin B Complex

INJECTABLE STERILE  
SOLUTION

For use as a  
supplemental source of  
B complex vitamins in  
cattle, swine and sheep.

**NET CONTENTS:  
250 mL  
(8.5 FL. OZ.)**

## KEEP OUT OF REACH OF CHILDREN

### ACTIVE INGREDIENTS:

Each mL of sterile aqueous solution contains:

Thiamine Hydrochloride (B <sub>1</sub> )	100 mg
Riboflavin (B <sub>2</sub> )	5 mg
(as Riboflavin 5'-Phosphate Sodium)	
Niacinamide	100 mg
Pyridoxine Hydrochloride (B <sub>6</sub> )	10 mg
d-Panthenol	10 mg
Cyanocobalamin (B <sub>12</sub> )	100 mcg

### INACTIVE INGREDIENTS:

Citric Acid and Benzyl Alcohol 1.5%  
v/v (preservative).

**Store at controlled room  
temperature between  
15° and 30°C (59°– 86°F).  
Protect from light.**

V-0606-05

REV 04-18

Lot No.:

EXP. DATE:



7

# BLOOD STOP POWDER

- Used for:
  - Control minor bleeding
  - Cuts, wounds, dehorning



# BLUE LOTION SPRAY

- Used for:
  - Treat wounds and skin lesions



# CD&T

Used for: protect against clostridial diseases (tetanus and overeating)



Exp. Date:  
Serial No.:

**Indications:** Recommended for the vaccination of healthy, susceptible sheep, goats and cattle against enterotoxemia and tetanus caused by the toxins of *Clostridium perfringens* Types C and D and *Clostridium tetani*. Although *Cl. perfringens* Type B is not a significant problem in the U.S.A., immunity may be provided against the beta and epsilon toxins elaborated by *Cl. perfringens* Type B. This immunity is derived from the combination of Type C (beta) and Type D (epsilon) fractions.

**Composition:** Prepared from cultures of the organisms listed. Alum precipitated.

**Dosage:**  
**Cattle:** Using aseptic technique, inject 5 mL subcutaneously. Repeat in 21 to 28 days and once annually.

**Clostridium Perfringens  
Types C & D-  
Tetanus Toxoid**

**Bar Vac® CD/T**

250 mL/50 Cattle Doses or  
125 Sheep/Goat Doses

**Sheep and Goats:** Using aseptic technique, inject 2 mL subcutaneously. Repeat in 21 to 28 days and once annually.

**Precautions:** Store out of direct sunlight at 35-45°F (2-7°C). Avoid freezing. Shake well before using. Use entire contents when first opened. Do not vaccinate within 21 days before slaughter. Anaphylactoid reactions may occur.

**Antidote:** Administer epinephrine.

**Boehringer Ingelheim Vetmedica, Inc.**  
St. Joseph, Missouri 64506 U.S.A.  
U.S. Veterinary License No. 124

Code 120-321; 20302-04



**Boehringer  
Ingelheim**



# CORID

Used for: prevention and treatment of coccidiosis



## CORID<sup>®</sup>

(amprolium)

9.6% Oral Solution  
Coccidiostat

Product # 66970

Net Contents: 16 oz (473 mL)

Active Ingredient: amprolium.....9.6%

NADA 013-149, Approved by FDA

Distributed by:  
Merial Limited  
3239 Satellite Blvd.  
Duluth, GA 30096-4640, U.S.A.



**INDICATIONS:** An aid in the treatment and prevention of coccidiosis caused by *Eimeria bovis* and *E. zurnii* in calves. For a satisfactory diagnosis a microscopic examination of the feces should be done before treatment. When treating outbreaks, drug should be administered promptly after diagnosis is determined.

**DOSAGE AND ADMINISTRATION:**  
**5-Day Treatment Protocol**

Daily Dosage: 10 mg amprolium/kg  
(10 mg per 2.2 lb body weight)

**21-Day Prevention Protocol**

Daily Dosage: 5 mg amprolium/kg  
(5 mg per 2.2 lb body weight)

**USE DIRECTIONS:** There are **96 mg** of amprolium in every **1 mL** of CORID 9.6% Solution.

1 fl oz = 29.57 mL    8 fl oz = 1/2 pint (236.56 mL)  
1 fl oz = 2 measuring tablespoons    16 fl oz = 1 pint (473.12 mL)

**IN DRINKING WATER**

Mix CORID daily with fresh drinking water.

**5-DAY TREATMENT:** Add CORID 9.6% Oral Solution to drinking water at the rate of 16 fl oz/100 gal. At the usual rate of water consumption this will provide an intake of approximately 10 mg amprolium/kg (2.2 lb) body weight. Offer this solution as the only source of water for 5 days. Use on a herd basis only; when one or more calves show signs of coccidiosis, it is likely that the rest of the group has been exposed, and all calves in the group should be treated.

**21-DAY PREVENTION:** During periods of exposure or when experience indicates that coccidiosis is likely to be a hazard, add CORID 9.6% Oral Solution to drinking water at the rate of 8 fl oz/100 gal. At usual rates of water consumption this will provide an intake of approximately 5 mg amprolium/kg (2.2 lb) body weight. Offer this solution as the only source of water for 21 days.

® CORID and the CATTLE HEAD logo are registered trademarks of Merial Limited.  
1022-2220-02  
Rev. 02-2008

Lot No & Exp Date ▼

Unvarnished area  
1.5" x .5"

**AS A DRENCH**

CORID drench solutions may be stored in a clean, closed, labeled container for up to 3 days.

**5-DAY TREATMENT:** Add 3 fl oz CORID 9.6% Oral Solution to 1 pt of water and, with a dose syringe, give 1 fl oz of this drench solution for each 100 lb (45 kg) body weight. This will provide a dose of approximately 10 mg amprolium/kg (2.2 lb) body weight. Give daily for 5 days. Use on a herd basis only; when one or more calves show signs of coccidiosis, it is likely that the rest of the group has been exposed, and all calves in the group should be treated.

**21-DAY PREVENTION:** During periods of exposure or when experience indicates that coccidiosis is likely to be a hazard, add 1 1/2 fl oz of CORID 9.6% Oral Solution to 1 pt of water and, with a dose syringe, give 1 fl oz of this drench solution for each 100 lb (45 kg) body weight. This will provide a dose of approximately 5 mg amprolium/kg (2.2 lb) body weight. Give daily for 21 days.

**RESIDUE WARNINGS:** Withdraw 24 hours before slaughter. A withdrawal period has not been established for this product in pre-ruminating calves. Do not use in calves to be processed for veal.

**WARNING: NOT FOR HUMAN USE. Keep this and all drugs out of the reach of children.** The Material Safety Data Sheet (MSDS) contains more detailed occupational safety information. To report adverse reactions in users, to obtain more information, or to obtain a MSDS, contact Merial at 1-888-637-4251.

**PRECAUTIONS: FOR ORAL USE IN ANIMALS ONLY. MAY CAUSE EYE IRRITATION.** For irritation, flush with plenty of water; get medical attention. Restricted Drug (California) - Use only as directed.

**STORAGE:** Store between 5° - 25° C (41° - 77° F) with brief excursions to 40° C.

Benzoic acid 0.1% added as preservative

Technical Assistance: 1-888-637-4251  
www.corid.com



# DEWORMER



# DYNE

- Used for:
  - High calorie liquid supplement



# KOPERTO<sup>®</sup>X

- Used for:
  - Animal foot care
  - Foot rot



**KOPERTO<sup>®</sup>X**  
WATER-RESISTANT PROTECTION  
WITHOUT BANDAGING

---

**RECOMMENDED**  
as an aid in treating horses and ponies with thrush due to organisms susceptible to copper naphthenate.

Do not use in horses intended for human consumption.

**CAUTION: COMBUSTIBLE MIXTURE**

**Ingredients**  
Copper Naphthenate ..... 37.5% w/w  
Inert Ingredients..... 62.5% w/w  
Total..... 100.0%

**FOR EXTERNAL USE ONLY**  
For Animal Use Only.  
Keep Out of Reach of Children.

**473 mL (16 oz)**

ANADA 200-304, Approved by FDA

Manufactured by:  
First Priority, Inc.  
Elgin, IL 60123

**zoetis**  
Distributed by:  
Zoetis Inc.  
Kalamazoo, MI 49007

**KOPERTO<sup>®</sup>X**  
Indicated in the treatment of thrush in horses and ponies

**CAUTION:** Do not use in horses intended for human consumption.

**CAUTION: COMBUSTIBLE MIXTURE**  
Use in a well-ventilated place. Avoid fire, flame, sparks or heaters.

If swallowed, do not induce vomiting, call physician immediately. Avoid breathing vapor. Avoid contact with skin and eyes.

**Keep out of reach of children and pets.**

**GENERAL DIRECTIONS:** Clean the hoof thoroughly, removing debris and necrotic material prior to application of KOPERTO<sup>®</sup>X. Apply daily to affected hoofs with a narrow paint brush (about 1") until fully healed. Caution: Do not allow runoff of excess KOPERTO<sup>®</sup>X onto hair since contact with KOPERTO<sup>®</sup>X may cause some hair loss. Do not contaminate feed.

Store at controlled room temperature 15° to 30°C (59° to 86°F). Keep container tightly closed when not in use.

**NOTE:** KOPERTO<sup>®</sup>X is easily removed from hands, clothing and surfaces with light grade fuel oil or any type of lighter fluid.

**CONTAINS FOIL SEAL – REMOVE BEFORE USE**  
**SHAKE WELL BEFORE USE**

To report suspected adverse reactions or to obtain technical assistance, call 1-888-963-8471.

Rev. 02-14  
0755J  
30175500

Lot No:      Exp. Date:

TAKE TIME      OBSERVE LABEL DIRECTIONS

# LA 200

- Used for:
  - Treats bacterial pneumonia



# LUTALYSE

Used for: control the timing of estrus and ovulation



See package insert for complete product information.

**Warnings:** Not for human use. Keep out of reach of children. Pregnant women, asthmatics, or persons with bronchial and other respiratory problems should avoid contact with dinoprost tromethamine.

**Note:** Spills of LUTALYSE Injection on the skin should immediately be washed off with soap and water.

Store at controlled room temperature 20° to 25° C (68° to 77° F). Use contents within 12 weeks of first vial puncture. No vial stopper should be entered more than 20 times. Protect from freezing.

**Each mL contains:** dinoprost tromethamine equivalent to 5 mg dinoprost; benzyl alcohol, 16.5mg added as preservative and water for injection.

When necessary, pH was adjusted with sodium hydroxide and/or hydrochloric acid.

Distributed by:  
Zoetis Inc.  
Kalamazoo, MI 49007  
Made in Spain

100 mL  
**Lutalyse® Injection**  
(dinoprost tromethamine injection)  
Equivalent to  
**5 mg per mL**  
dinoprost

**For intramuscular use in cattle only**  
**For Use in Animals Only**

**Caution:** Federal (USA) law restricts this drug to use by or on the order of a licensed veterinarian.

NADA #108-901, Approved by FDA



3 0009-0327-34 7



LOT:  
40015417

EXP:

# NOLVASAN

- Used for:
  - Disinfectant



# NUTRI-DRENCH



#### GUARANTEED ANALYSIS:

Calcium (Min) ..... 0.4 %  
Calcium (Max) ..... 0.7 %  
Selenium (Min) ..... 0.1 mg/fl oz  
Vitamin A (Min) ...23,700 IU/fl oz...790 IU/mL  
Vitamin D (Min) .....5,910 IU/fl oz...197 IU/mL  
Vitamin E (Min) .....90 IU/fl oz.....3 IU/mL

**INGREDIENTS:** molasses products, propylene glycol, calcium carbonate, choline chloride, DL-methionine, L-lysine, Vitamin E supplement, Vitamin A supplement, Vitamin D-3 supplement, thiamine mononitrate, niacin, zinc sulfate, ethylenediamine dihydroiodide, magnesium sulfate, manganese sulfate, iron sulfate, sodium selenite, cobalt sulfate.

Manufactured under 2 U. S. Patents

**BOVIDR LABORATORIES, INC.**

Scottsbluff, Nebraska 69361

Comments & Questions

1-800-658-4016

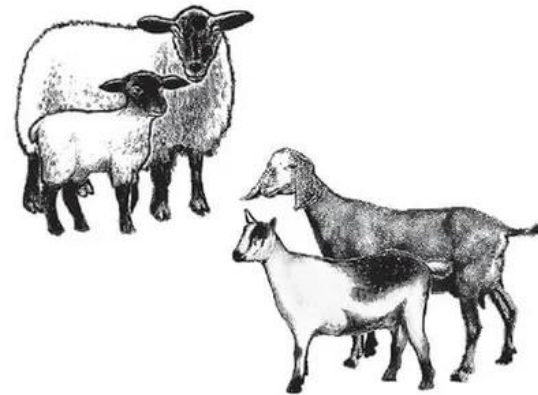
www.bovidr.com



## GOAT & SHEEP

# NUTRI-DRENCH®

*The Nutritional Advantage!*



**Rapid, Rich Nutrition Supplement  
For All Classes Of Goat & Sheep**

1 GALLON (128 FL OZ) 3.8 L, NET WT 9.5 LBS (4.32 kg)

**NUTRI-DRENCH®** is a premium, nutrient rich supplement formulated to rapidly deliver energy and essential nutrients. The patented process delivers unmatched speed in assimilation and nutrition. Give **NUTRI-DRENCH** to all newborns for a good start. Keep on hand for animals off feed and other emergencies. **No withholding.**

#### DIRECTIONS:

**SHAKE WELL.** Feed directly in mouth.

**Newborns:** 4mL (cc) = 2 pumps as soon as possible after birth.

**Goats & Sheep:** 30 mL (cc) per 100 lbs. body weight.

1 fl oz = 30 mL (cc)

Maximum of once every 8 hours, as needed.

**Medication:** Administer Nutri-Drench 15 minutes prior to giving any medications.

**Show:** Administer 30-45 minutes prior to competition.

**Long Term Maintenance Dose:** As soon as improvement is seen, adjust to 1/2 dose for 2 days per week. May be added to food or water. Store at room temperature.

**FOR ANIMAL USE ONLY  
KEEP OUT OF REACH OF CHILDREN**





# PENICILLIN



158

NDC 30798-236-17

**durvet**

**PENICILLIN  
INJECTABLE**



Sterile Penicillin G Procaine.  
Injectable Suspension U.S.P.

Injectable antibiotic in aqueous  
suspension 300,000 units/mL.

**ANTIBIOTIC**  
FOR INTRAMUSCULAR INJECTION ONLY

NADA 065-010, APPROVED BY FDA

**NET CONTENTS:  
500 mL**

**Residue Warnings:**  
Exceeding the daily dosage of 3,000 units per pound of body weight, administering for more than four consecutive days, or exceeding the maximum injection site volume per injection site may result in antibiotic residues beyond the withdrawal time. Milk taken from treated dairy animals within 48 hours after the last treatment must not be used for food. Discontinue use of this drug for the following time period before treated animals are slaughtered for food:  
Cattle – 14 days, Sheep – 9 days, Swine – 7 days.  
A withdrawal period has not been established for this product in pre-ruminating calves. Do not use in calves to be processed for veal.

**Warning:**  
Do not use in horses intended for human consumption. Not for use in humans. Keep out of reach of children.

**TAKE TIME  
OBSERVE LABEL  
DIRECTIONS**

Read package insert for complete product information before using the drug.

**INDICATIONS**  
Penicillin Injectable is indicated for treatment of bacterial pneumonia (shipping fever) caused by *Pasteurella multocida* in cattle and sheep, erysipelas caused by *Erysipelothrix rhusiopathiae* in swine, and strangles caused by *Streptococcus equi* in horses.

**DESCRIPTION**  
Each mL contains 300,000 units Penicillin G Potassium\*, 139.0 mg Procaine Hydrochloride\*, 2.0% Procaine Hydrochloride, 3.0 mg Potassium Phosphate Monobasic, 6.0 mg Potassium Phosphate Dibasic, 0.4% Sodium Formaldehyde Sulfoxylate, 0.4 mg Polysorbate 80, 2.0 mg Lecithin, 0.1% Methyl Paraben, 0.01% Propyl Paraben, 0.15% Sodium Carboxymethylcellulose, q.s. Water for Injection. \* Penicillin G Potassium and Procaine Hydrochloride react to form penicillin G procaine.

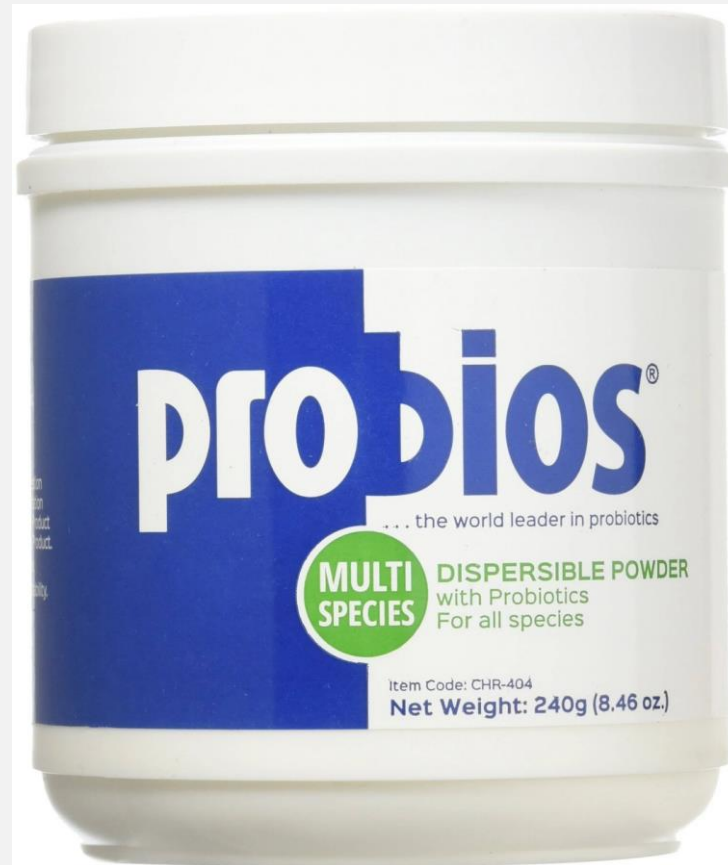
**DOSAGE**  
Penicillin Injectable should be administered by the intramuscular route. The product is ready for injection after warming the vial to room temperature and shaking to ensure a uniform suspension. The recommended daily dosage of penicillin is 3,000 units per pound of bodyweight (one mL per 100 lbs bodyweight). Continue daily treatment until recovery is apparent and for at least one day after symptoms disappear, usually in two to three days. Treatment should not exceed four consecutive days. No more than 10 mL should be injected at any one site in adult livestock; rotate injection sites for each succeeding treatment.

**Restricted Drug - California. Use Only as Directed.**  
Store at 2-8°C (36-46°F). SHAKE WELL BEFORE USING.

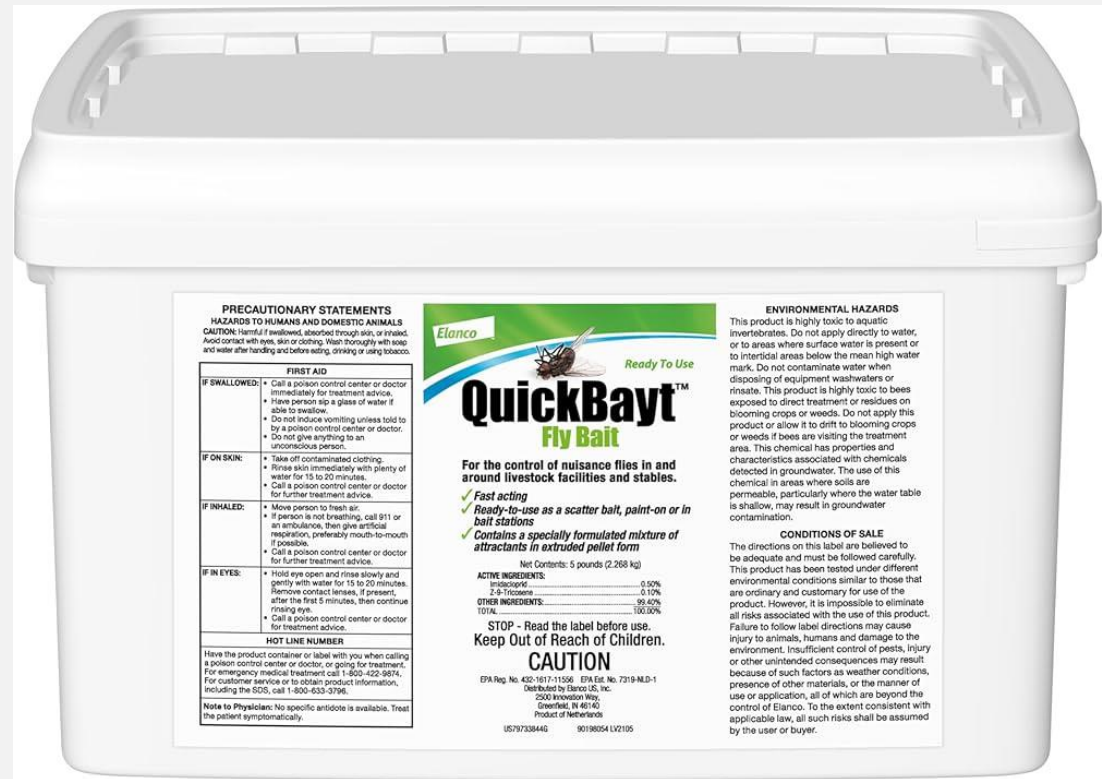
Made in the UK.  
Norbrook Laboratories Limited  
Newry, Northern Ireland

# PROBIOS

- Used for:
  - Promotes healthy digestive system



# QUICKBAYT



# SELENIUM

- Used for:
  - Prevent White Muscle Disease



# SORE MOUTH VACCINE



# THIAMINE

- Used for:
  - Thiamine deficiency



# VETERICYN



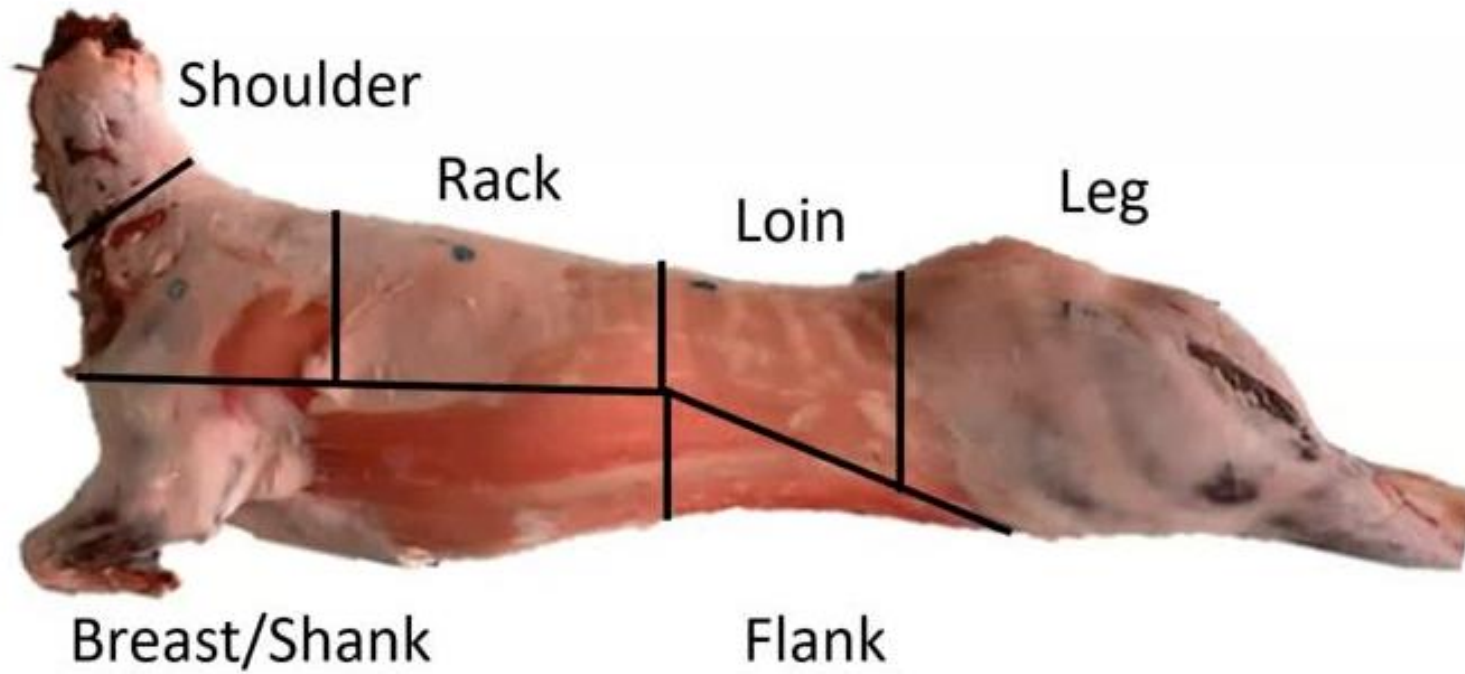
# CUTS OF MEAT

Be able to identify and locate where different cuts of meat come from. The following list are examples:

- American Style Roast
- Arm Chop
- Blade Chop
- Center Slice
- Frenched Style Roast
- Leg Roast
- Loin Chop
- Loin Roast
- Ribs (Denver Style)
- Rib Chop
- Rib Chop (Frenched)
- Rib Roast
- Rib Roast (Frenched)
- Sirloin Chops
- Sirloin Half
- Square Cut Shoulder



# CUTS OF MEAT DIAGRAM



# AMERICAN STYLE ROAST

Location: Leg



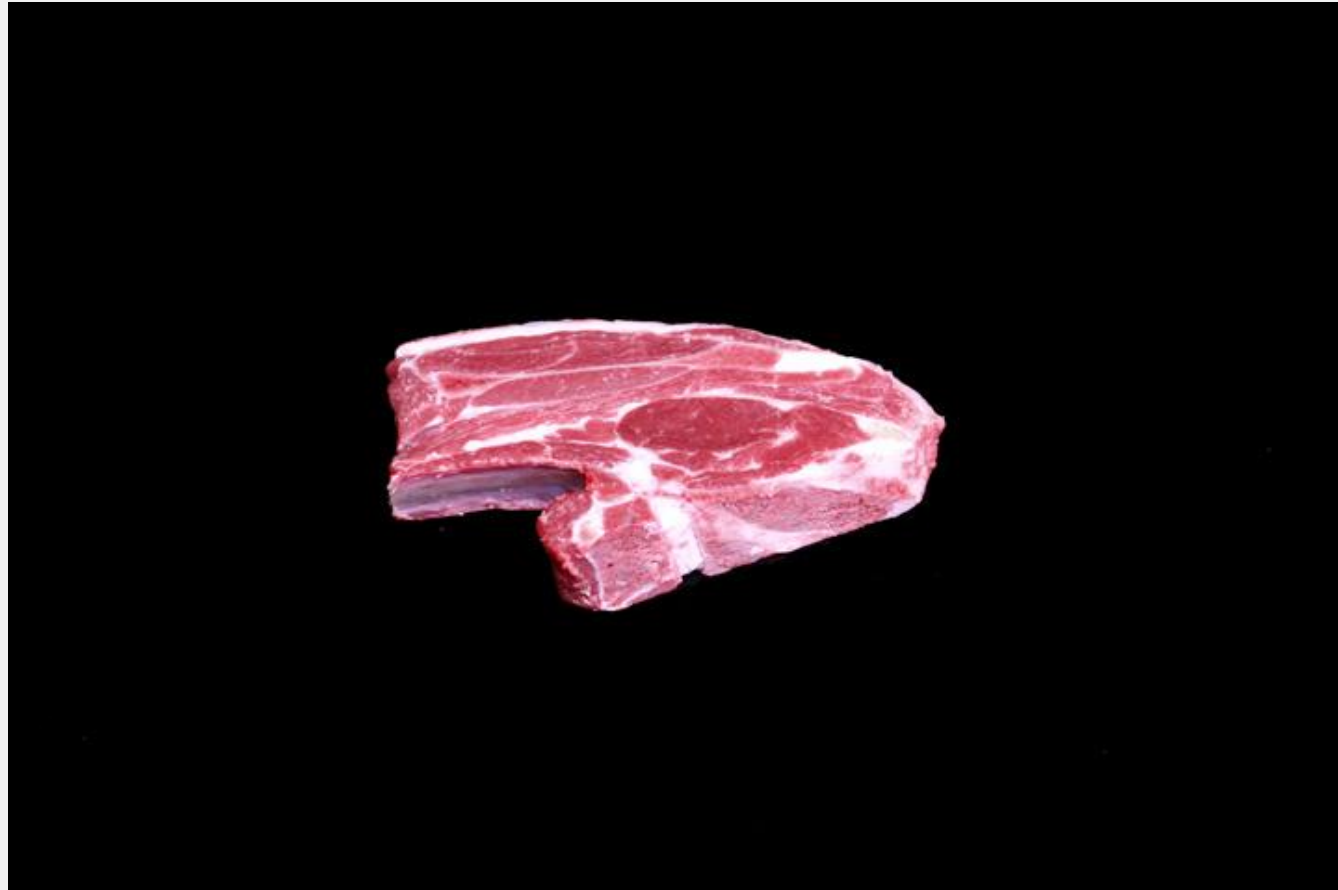
# ARM CHOP

Location: Shoulder



# BLADE CHOP

Location: Shoulder



## CENTER SLICE

Location: Leg



# FRENCHED STYLE ROAST

Location: Leg



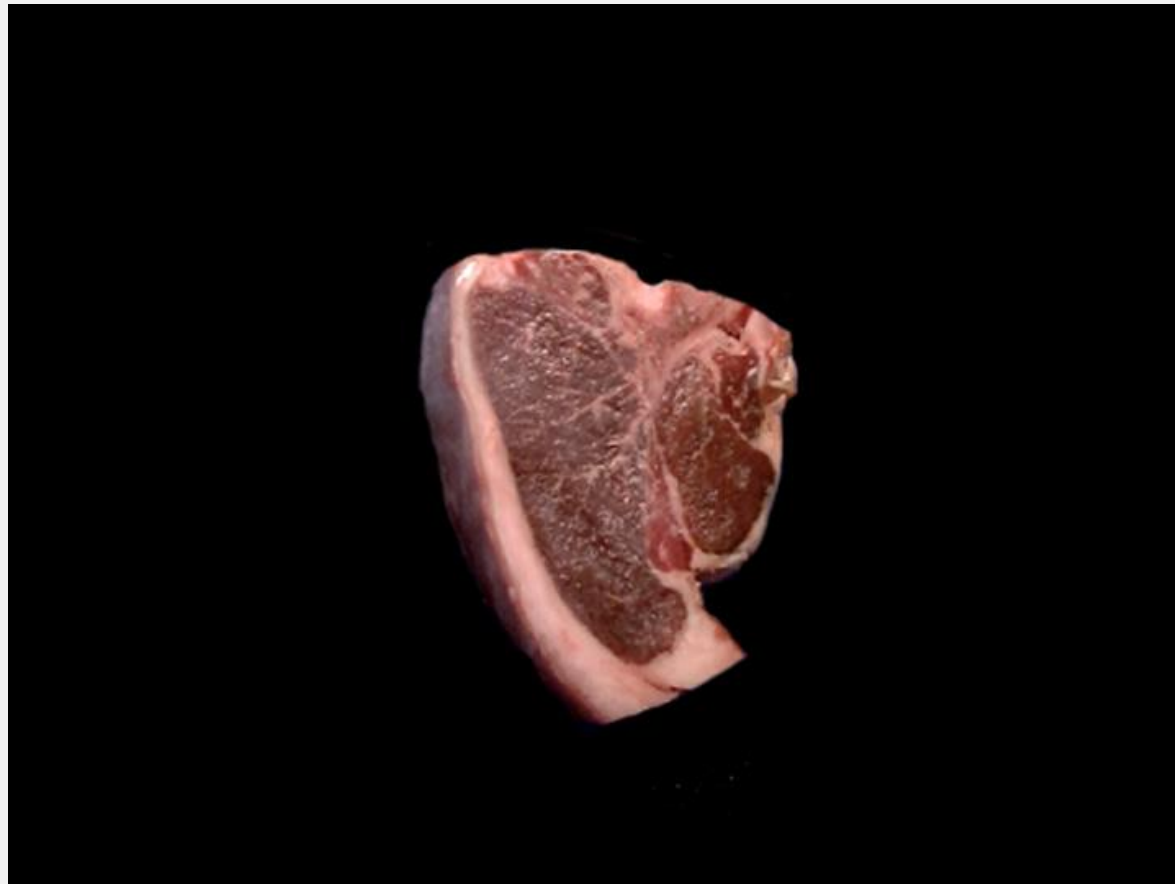
# LEG ROAST

Location: Leg



# LOIN CHOP

Location: Loin





# LOIN ROAST

Location: Loin



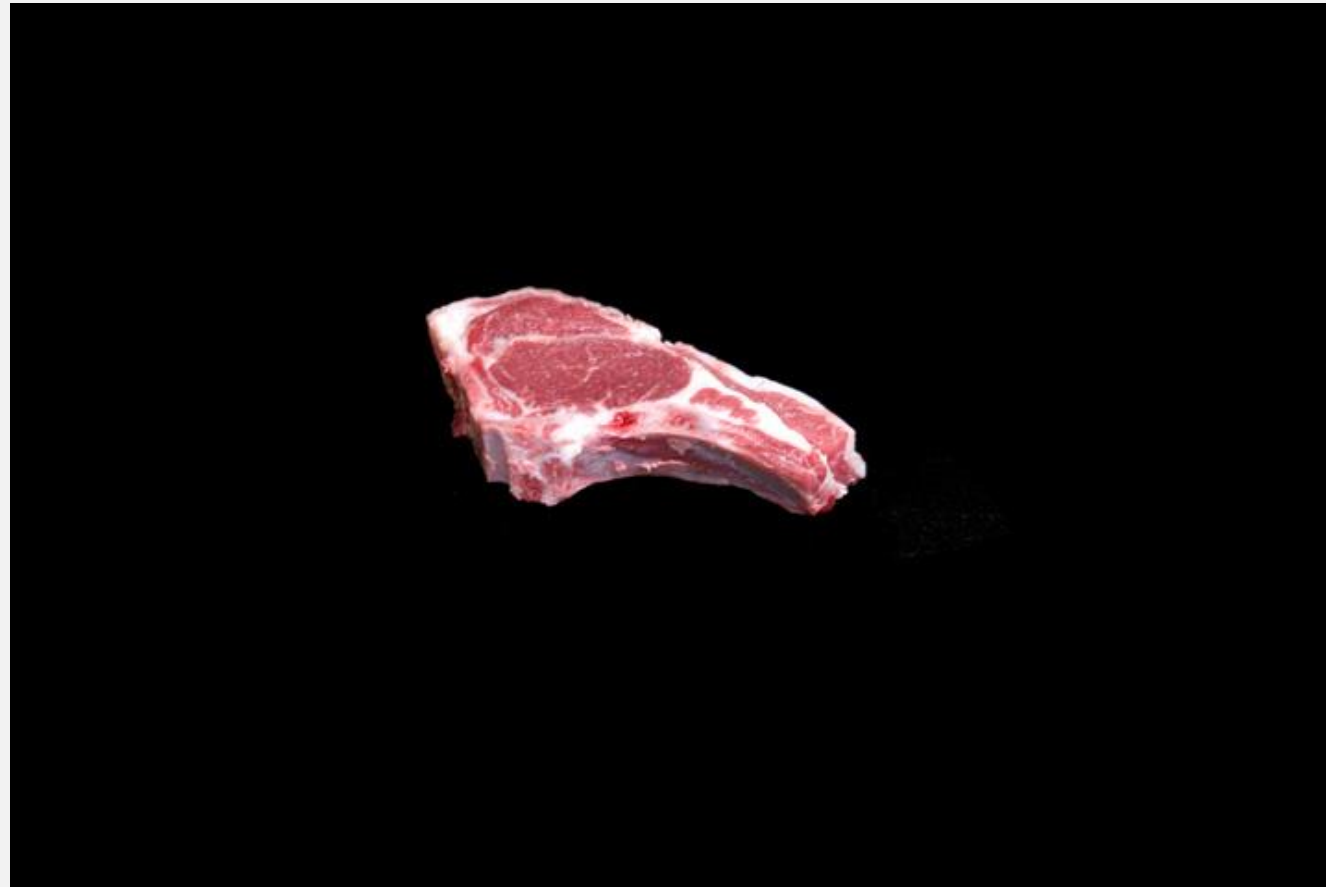
## RIBS (DENVER STYLE)

Location: Breast



# RIB CHOP

Location: Rib



# RIB CHOP (FRENCHED)

Location: Rib



# RIB ROAST

Location: Rib



# RIB ROAST (FRENCHED)

Location: Rib



# SIRLOIN CHOPS

Location: Leg



# SIRLOIN HALF

Location: Leg





# SQUARE CUT SHOULDER

Location: Shoulder

