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1. HISTORY AND BACKGROUND
List four members of the South American Camelid family and explain in detail the differences in each:

1. Alpaca - smaller - used for production of fine wool
2. Llama - largest - domesticated - originally bred for packing
3. Vicuna - smallest - wild - recently removed from endangered species list. It is believed that the alpaca is descended from the wild Vicuna.
4. Guanaco - larger - wild - believed the llama is descended from the Guanaco.

List three countries in South America where alpacas come from:
1. Peru
2. Chile
3. Bolivia

What is the genus for the South American Camelids?
Genus: Lama
Lama glama - Llama
Lama pacos - Alpaca

Why are alpacas and llamas classified in the camelid family?
There is some debate on classification of these animals. Different texts give conflicting information. However, Dr. Jane Wheeler argues effectively that the alpaca is more closely linked with the vicuna than to either guanacos or llamas. (See “The Alpaca Book” chapter 1, page 15).

Describe the South American climate in which alpacas live.
The climate is tierra fría which means cold at the top of the Andes; tierra templada which means mild on the plateau area of the middle of the Andes, and tierra caliente which means warm on the low lands.

Look at the map of the Western Hemisphere and identify the following information about where alpacas originate.
A. The continent
B. The countries
C. The mountain ranges in those countries

Locate where you live. Color the entire map.
2. THE ALPACA AND HIS BEHAVIOR
The average horse weighs around 1,000 pounds. How many average size alpacas would it take to equal a horse’s weight?
It would take approximately 7 alpacas with an average weight of 150 pounds.

What is the size comparison between alpacas and llamas?
Alpacas are approximately one-half to one-third the size of a llama.

List three other cloven-footed animals.
1. Cow
2. Pig
3. Goat

Why are alpacas less destructive to terrain than horses?
Because of the pad on the bottom of the foot.
Why is an alpaca’s upper lip called prehensile?
Because it is structured to seize or grasp grasses when eating.
What is the term for an animal with 3 or 4 compartments in its stomach?
Ruminant - but also because it ruminates (i.e. chews, swallows, & regurgitates).
List four different ruminants including one which occurs in the wild throughout the United States.
1. Deer - wild
2. Sheep - domesticated
3. Cow - domesticated
4. Goat - domesticated
An alpaca may live as long as 15 - 25 years.
An alpaca may have cria for their entire adult life.

Define the function of the following parts of an alpaca:
Lungs: Bring oxygen into the body to send it through the system; and to oxygenate blood.
Heart: The heart pumps blood throughout the entire body to deliver oxygen and nutrients and remove by-products so that the body can function.
Liver: The liver works in the formation of blood, secretes bile, metabolizes carbohydrates, fats, proteins, minerals and vitamins.
Kidneys: A pair of organs that function to maintain proper water balance, regulate acid base concentration and excrete wastes as urine.
Cud/Stomach: Food regurgitated from the first stomach to the mouth to be chewed again. The stomach is where food is first broken down so that the nutrients can be used by the body.

List two other types of animals that naturally live in herds.
Elephants, Antelope, many others
List two reasons why an alpaca might spit:
   1. If they are pregnant and introduced to an intact male alpaca
   2. Arguing over food; the alpaca’s way to say “bug off”

Explain the process that enables an alpaca to spit.
Being ruminants they are naturally able to bring up or regurgitate a bit of stomach contents (a bolus or cud) which they can then project out of their mouths.

3. TYPES OF ALPACAS
Describe the outward appearance of the Huacaya alpaca:
Their fleece is full and stands out from the body giving them a rounded or “spongy” appearance.

Describe the outward appearance of the Suri alpaca:
Their fleece hangs down toward the ground from the top line and hangs in long locks, has luster, but no crimp.

4. CONFORMATION AND CORRECTNESS
List three conformation points to observe in a correct alpaca:
Front legs that are straight
Back legs that are straight (when viewed from the rear)
Head held high
Neck length that is approximately 2/3 the length of the back
Ears that are correct; i.e. spear shaped
Etc.

5. TEMPERMMENT
Explain Aberrant Male Behavior:
If an alpaca is bottle fed, it may imprint upon humans. When it grows up it will treat people the same way it treats other alpacas, i.e. jumping on them or bumping them. This can be annoying in an alpaca, but due to their small size, it is not as serious a problem as if a larger animal like a llama behaves this way. There have only been a few incidents of this in the United States. It would always be important to ask the breeder if a particular alpaca was bottle fed, prior to purchasing.

6. PURCHASING AN ALPACA
List the main organization from which someone could gain information concerning alpacas.
The Alpaca Owners and Breeders Association. (See Resources section, page 20, for address and phone number).
7. SHELTER
What is the minimum height of a perimeter fence suitable to contain alpacas? 5 feet; 4 feet may be acceptable on an interior fence.

8. DIET
An alpaca consumes approximately 2.0% of its total body weight of dry food per day.
How much feed does your alpaca require per day?

List a mineral that should be provided for all alpacas at all times:
Salt. A loose mineral salt formulated to go with your area and type of feed is a good choice.

9. GENERAL HEALTH AND MAINTENANCE
What is the best way to detect if an alpaca is not healthy? Careful observation.
How might "stoic" apply to an alpaca?
Stoic means an animal does not show outward signs when sick or upset. Alpacas often do not show any signs of being ill until they are very sick.

List four types of preventative medicine an alpaca owner should use to help keep an alpaca healthy:
1. Vaccinations
2. Cut fighting teeth from males
3. Provide minerals/salt
4. Provide proper food
5. Provide fresh clean water
6. Trim toenails
7. Clean pens/stalls/barns
8. Body Condition/Scoring/Weighing

A. VACCINATIONS
What are three things alpacas and llamas need to be vaccinated for?
To prevent tetanus, Clostridium, C & D

B. PARASITES
Describe how best to control parasites for your area:
Check with your local veterinarian.

What deadly parasite might a white tail deer pass on to an alpaca?
Meningeal worm

List some reasons why an alpaca might lose its fleece:
Alpacas do not shed. Reasons for loss might be ill health, bad nutrition, fever, ectoparasites, skin disease, or standing in water for long periods of time.
C. TEETH AND FEET
How can an alpaca owner tell if his alpaca needs its toenails trimmed?
Look at its feet regularly - they should be trimmed before they start to curl.

How old are alpacas when their fighting teeth appear?
Approximately 2-1/2 - 3 years of age.

How many fighting teeth do male alpacas grow and where are they?
Six fighting teeth. Normally two on top and one on the bottom on each side.

D. HEAT STRESS AND COLD WEATHER
What is the normal temperature of an adult alpaca and how do you check it?
99 degrees - under 102 degrees. With a rectal thermometer.

How does an alpaca owner prevent heat stress?
Provide plenty of fresh water at all times and provide shady shelter. Avoid stressful handling when temperature is high, especially in high humidity.

What are three signs of heat stress?
Extreme laziness, open-mouth panting, loss of coordination.

List three ways to help an alpaca experiencing heat stress.
Spray the alpaca’s wool-free areas of legs and underbelly with cool water and use a fan to circulate air, wading pools and shade.

What should be done to prevent problems when changing an alpaca’s diet?
Changes made slowly, combining old and new for a period of time so that their system can adjust.

List six ways to decrease stress on an alpaca while showing the animal:
Practice
Talk softly
Stroke alpaca
Hold firmly

Interpret alpaca body language
Be patient
Anticipate alpaca’s actions
Be consistent

10. ALPACA TRAINING
A. PROCEDURE
In your opinion, what are the two most important parts on an alpaca to desensitize? Head and legs.

List four steps in desensitizing the back legs:
1. Let the alpaca get used to you standing at its side
2. Brush down the back and front of legs with your hand (or a wand)
3. Use a brush or wand to gently stroke the legs in a downward motion
4. Then run your hand down the legs, finally picking up the feet
A good alpaca trainer can anticipate his/her alpaca’s actions by first recognizing and interpreting the alpaca’s movements.

Explain how you would try to correct behavior such as kicking or spitting: Move slowly and work easily using a lot of repetition.

B. EQUIPMENT

Why is it important to put a halter on and off continually when training an alpaca? To gain trust.

List three things an alpaca trainer might do to help an untrained alpaca follow on a lead rope: Say “walk,” tug sideways, have the alpaca walk with a buddy, have a human friend walk behind the alpaca.

List three ways to gain an alpaca’s trust: Talk, feed and stroke gently.

How can an alpaca trainer use “Mom” while training babies and weanlings to lead? Lead the Mom in front of baby and it will probably follow.

What is the tug and release technique? To pull and release giving them a choice instead of forcing them to move.

List the two most important things to remember when desensitizing an alpaca: Move slowly and be patient. Reward the alpaca with verbal praise, and some of his favorite food.

11. FIBER
List the 9 traits by which Huacaya alpaca fleece is judged:
Character including crimp
Luster
Density
Fineness
Hand
Uniformity of density, fineness, and crimp throughout the blanket
Condition and quality of fiber throughout the fleece and lock
Abundance (fiber coverage on legs)
Absence of guard hair in the blanket
For Suri fleece:
The same except - character without crimp
Describe the following fiber terms: (use glossary in The Alpaca Book)
Crimp
Scale
Grading
Grease
Handle
Lock
Medulla
Picking
Prime Fleece
Skirting
Sorting
Seconds
Second Cuts
Staple

Essay questions:
Describe the current process of harvesting and selling alpaca fiber in the United States. Discuss the market, prices and creative ideas for reaching the market in your area.

Describe the entire process which alpaca growers in Peru must go through to bring their product to market. Discuss the market, prices, total exports in tons, and the role of intermediaries in the sales.

What suggestions would you make to enable the United States Alpaca fiber producers to graduate from the cottage industry market to an international export market?
Identify the following body parts on the external Alpaca diagram

__________  Pastern Joint  __________  Abdomen (belly)
__________  Poll  __________  Back
__________  Tail  __________  Knees (Carpus)
__________  Withers  __________  Cheek
__________  Fetlock Joint  __________  Elbow Joint
__________  Neck  __________  Toenail
__________  Chestnut  __________  Ear
__________  Croup  __________  Fetlock Joint
__________  Nostril  __________  Pad
__________  Hock Joint  __________  Stifle Joint
__________  Chin  __________  Jaw
__________  Throat  __________  Hip
__________  Chest  __________  Shoulder
__________  Thigh  __________  Foot

Identify the following bones on the internal alpaca diagram

LEGEND FOR DIAGRAM OF SKELETON OF AN ALPACA

A. Eye socket, B. upper jaw (maxilla), C. lower jaw (mandible), D. neck vertebrae (cervical vertebrae), E. withers, F. shoulder blade, G. shoulder joint, H. ribs, I. breast bone (sternum), J. arm (humerus), K. elbow joint, L. forearm (radius), M. knee joint (carpus), N. canon bone (metacarpus), O. ankle (fetlock joint), P. pastern, Q. foot, R. back (thoracic vertebrae), S. loin (lumbar vertebrae), T. tail (coccygeal vertebrae), U. pelvis, V. hip joint, W. thigh bone (femur), X. knee cap (patella), Y. stifle joint, Z. leg bone (tibia), AA. point of the hock, BB. hock joint

Diagram courtesy Dr. Murray E Fowler, University of California, Davis.