BEHAVIOR

Knowing your Sheep and Goats: It is important to observe and assess the behavior patterns of sheep and goats to determine the presence of good health, stress or pain.

When observing sheep and goats individually and as a flock/herd, illness, injury and stress can be noticed quickly and proper care should be taken to create a healthier, more productive flock/herd. Whenever illness, injury or stress is observed the standard operating procedure at Shone Farm will be to identify the causal agent(s) and determine how to eliminate or reduce future incidences.

Sheep are prey animals, therefore, they are flee animals – not fight. When faced with danger, their strategy is to use avoidance and rapid flight to avoid being eaten as opposed to standing their ground and fighting. Sheep will reform their group and turn to look at the predator after fleeing – using their natural instinct to band together for safety.

Goats are prey animals, therefore, they are flee animals – not fight. They are agile and flighty and will scatter and face the enemy, rather than flock, like sheep do.

Sheep never walk a straight line but rather move in such a way where they can see their backside first with one eye and then the next – in doing so, they can spot perceived forms of danger from 1,200 – 1,500 yards away.

Sheep would be vulnerable to predators if they showed pain or appeared weak or injured. Fortunately, they have evolved with a high tolerance for pain which can reduce this vulnerability, however may cause signs of injury or illness to be masked. By contrast, Goats scream in terror and pain and are very dramatic in stressful situations.

Ethologists (Animal Behaviorists) have considered that the time sheep spend ruminating is an indication of the basic nature of sheep. Because ruminating can take several hours and it requires that an animal be comfortable and relaxed, sudden stresses will cause rumination to abruptly cease. During rumination, ruminants are usually in groups, may engage in self-grooming behavior and exhibit sleepy and pensive expressions. Aggression is reduced with little or no stressful isolation of individuals (under normal conditions). Rumination and accompanying behavioral activities are theorized to be important to the strong flock instinct of sheep. Rumination is also speculated to be an “anti-boredom” activity.

Handling stress lowers conception rates and reduces both immune and rumen function, therefore, recognizing and understanding typical and atypical behavior in sheep & goats in general, as well as in the individual flock/herd is of paramount importance. Contrary to common belief, sheep are not stupid – ranking just below the pig and equal in intelligence to cattle among farm animals. They simply react to changes in their environment based
on instincts that have developed over centuries. By using these instincts to our advantage, stress can be avoided by both the animal and handlers.

Goats are intelligent animals and quite often prefer to do things their own way. They act on a whim and are often viewed by handlers as impulsive and unpredictable. Goats are very curious animals and nimble – a combination that gets them into trouble and a reason to have proper fencing.

Sheep are “gregarious” and stick together in a large unit made up of smaller units based on their own preferences – banding together out of instinct for protection. Sheep like to maintain a safe distance (or zone) and a flight distance that is defined as the space between them and other people or animals the sheep will tolerate before moving.

Goats tend to spread out in the pasture and eat where they prefer on their own, however, when in a large pen as a group, they will stay somewhat together. There is a clear hierarchy in goats so the lead goat (Queen) will eat first and sleep where she wants to. The rest of the herd will settle as hierarchy dictates.

In handling and moving sheep and goats properly, being a leader is key. They will willingly go where you want them to go and will move quietly and naturally when properly guided because it is in their nature to depend on a lead sheep or goat in their flock/herd. The oldest ewe is usually the leader in wild flocks whereas, the older and more aggressive ewe and oldest or wisest doe (Queen) is the leader in farm and range flocks. If we can control the leaders, we can control the flock. They can be trained to come when called and will readily follow a handler if they know there is a positive outcome in the end.
BEHAVIOR cont.

*Sheep Behavior as it relates to Handling & Movement:*

- Sheep naturally move into larger areas - they do not like to be tightly enclosed
- Sheep move away from handlers and dogs
- Sheep move toward other sheep
- Sheep prefer to move over flat areas rather than incline, and up an incline rather than down it
- Sheep prefer to move toward light as opposed to dark or uneven lighting
- Sheep will move more efficiently toward what they feel is an opening as opposed to a dead end
- Sheep will move faster through long, narrow chutes than through a square pen
- Sheep move better through chutes (race) if they cannot see the handler/s
- Sheep will balk and/or stop forward momentum when they see other sheep moving in other directions
- Sheep are motivated to move when other sheep move (usually away)
- Sheep move better through facilities if the same paths and flow directions are used every time
- Sheep react negatively (like all livestock) to loud noises
- Young sheep and lambs move through facilities more efficiently when first moved with mature, experienced and well-trained sheep
- Sheep have very good long-term memory especially with negative experiences
- Young lambs who become separated from their dams will feel compelled to return to the location where they were first separated.
BEHAVIOR cont.

Goat Behavior as it relates to Handling & Movement:

- Goats naturally move into larger areas - they do not like to be tightly enclosed
- Goats move away from handlers and dogs and scatter
- Goats prefer to move up an incline rather than down it
- Goats will move readily into the wind rather than downwind
- Goats prefer to move toward light as opposed to dark or uneven lighting
- Goats will move more efficiently toward what they feel is an opening as opposed to a dead end
- Goats dislike and will resist proceeding through narrow openings
- Goats move better through chutes (race) if they cannot see the handler/s
- Goats are motivated to move when others do (usually to follow unless startled)
- Goats move better through facilities if the same paths and flow directions are used every time
- Goats react negatively (like all livestock) to loud noises and sudden movements
- Startled or upset goats often lie down in avoidance of handling or being driven
- Young goats and kids move through facilities more efficiently when first moved with mature, experienced and well-trained goats
- Goats have very good long-term memory especially with negative experiences
- Young kids who become separated from their dams will feel compelled to return to the location where they were first separated.
BEHAVIOR cont.
The following are the senses that sheep and goats rely on in order to respond to their environment and that impacts their behavior. Handlers should use these senses to their advantage in order to obtain positive handling results:

*Senses:* Originally prey animals, sheep and goats rely on *sight* and *smell* to detect predators and usually respond with fleeing. “Fight or Flight” is a deeply ingrained instinctual response when they fear something strange or new that they don’t understand. How they perceive their environment governs their response to it.

Sheep and goats have wide-angle *vision* (the rectangular shape of the pupil provides a wide-angle lens) and unlimited peripheral vision of 320°, have relatively poor depth perception, limited vertical vision (they may not be able to easily see objects above them such as predators in a tree or their lambs held too high in front of them) and can distinguish between most colors. Although they do have color vision, it is unlikely that the color acuity is equal to other species, such as humans. Sheep and goats have excellent *hearing*. It has been documented by a researcher that, in response to sudden loud noises, an increased release of stress-related hormones occurs. Elevated stress hormones cause the animals to become nervous and difficult to handle, therefore loud and shrill noises should be avoided when handling sheep and goats.

The Ovine *auditory* system can process sound into a directional signal because sound arrives at each ear at slightly different times – with a small difference in amplitude. Refinement of this is accomplished by movement of the ears, head and body. This skill is extremely important in keeping the sheep alive.

The *olfactory* sense in sheep and goats is used completely in their interaction with their environment and is used in many different ways. They use their sense of smell to identify other sheep/goats (especially their lambs/kids), to detect estrus (rams/bucks) and a ram/buck’s presence in the flock/herd (ewes/does) due to the release of androgen-derived pheromones by the males.

Water location and differences between pastures and feeds are detected by sense of smell as well as areas contaminated by manure (sheep & goats prefer to avoid grazing where others have defecated). This behavioral response can have a significant affect in grazing patterns. Sheep and goats will select fresh feed over spoiled, clean over moldy and may eat feeds that humans find objectionable (silage).
**BEHAVIOR cont.**

The sense of **taste** doesn’t appear to be as important as smell to sheep. It can be difficult to differentiate which behavioral response is due to taste or smell. Taste may play a role in differentiating feedstuffs and they will select certain types of foods over others. When grazing on pastures with other species present, sheep will select and consume different types of forage than goats or cattle.

Goats are classified between course-feed eaters and tender-feed-selecting animals and they can adapt to the available food supply. While goats prefer the leaves of bushes, trees and weed plants to grass, they like to eat a mixture and don’t reject grass altogether – they can be accustomed to all-grass pastures. The Queen chooses what the rest of the herd will eat and can be very dramatic in her dislikes of certain plants.

Experiments have been conducted to determine if sheep have “nutritional wisdom” because they appear to attempt to eat feeds that provide them with the nutrition that they require. Most often, sheep do not balance their ration when offered a variety of feeds, but rather, they consume more food than necessary to provide essential nutrients. For instance, when offered salt, they may consume many times the amount needed to meet requirements - luckily there is no evidence that over-consuming salt will cause health problems as long as there is plenty of water available.

The sense of touch is important in animal interaction: lambs and kids seek bodily contact with their dams and in turn, dams nuzzle their lambs/kids and in response to their young’s initial nursing contact (among other physiological occurrences), milk letdown takes place. Even though most of the sheep/goat’s body is covered in wool or hair, the skin underneath is sensitive. The nose, mouth, lips, ears and foot pads easily feel tactile stimulation.

**Types of Behaviors:** Learned Behaviors: behaviors that are learned by experience in their environment. This is derived from memory and experiences such as looking for hay upon hearing a tractor or coming to the sound of a human voice after having been rewarded with food when called. Instinctive (Innate) Behaviors: behaviors that are “hard-wired” where an animal responds to stimuli without conscious thought or decision. Examples are breeding and maternal instincts and a lamb/kid’s initial nursing behavior.
BEHAVIOR cont.
Sheep and goats have a natural tendency to follow and this becomes evident when a herd is threatened or the leader is taking them to food. Moving sheep in small groups or pairs is favorable and less stressful than trying to move only one animal at a time.

Flock Interactions: As in human society, sheep and goats form strong family, social and racial groups that normally resist integration. This flocking instinct is the key to many behavior characteristics and is highly developed in some breeds and less in others. When confining small groups of sheep or goats for an extended period of time, they tend to form strong social attachments and when put in with a larger group, they remain in that group within the larger flock for an extended period of time - twins will stay close to each other throughout their lives.

When introducing new animals into the flock/herd, there may or may not be displayed aggression. Normally, if a new sheep or goat displays submissiveness or avoidance when introduced, other animals leave it alone. If, however, a new sheep or goat is aggressive toward others, they will fight until the new animal finds its place of hierarchy in the flock/herd.

Rams/bucks are often housed together both in pastures and pens. Introducing rams & bucks is a much different process and, due to their unpredictable and aggressive nature, should be handled with great caution and should only be done by trained staff.

A dominance hierarchy will develop when using two breeding rams or bucks in one flock and in some instances, this can cause serious management challenges. If the dominant male is genetically inferior or sub-fertile, a decrease in lambing/kidding percentage and/or inferior lambs/kids can result. Larger rams & bucks usually dominate over smaller rams/bucks and mature rams/bucks over yearlings, however, sometimes smaller males are more aggressive and breed more ewes/does. When turning out more than one ram/buck with the ewe/doe flock for breeding, they usually engage in fighting behavior. This may result in exhaustion and/or injury – especially if they are evenly matched and fight longer. Turning out three rams/bucks instead of two might result in fewer problems. Due to the small number of animals at Shone Farm we are more likely to have one breeding male at a time or to separate two males with their own group of females.

Vocalization: Vocalization may be triggered by frustration, pain, stress, separated dam/lamb/kid, realization of food being brought to them, or to warn the flock/herd of an intruder.

Daily Behavior Pattern: Sheep and goats adhere to daily cycles of resting, grazing and ruminating that may depend on daylight/darkness cycles, diet needs, age, environment, temperature and
anything else that may affect them on a daily basis. Most grazing and browsing occurs just after
dawn and just before dusk and exploration of their environment occurs throughout the day.
Exploration, using their senses in conjunction with locomotion skills, may be triggered by instinctual
responses to certain stimuli depending on age, weight, sex and nutritional or physical needs.