

Assuring Quality Care for Animals

Youth Food Animal Quality Assurance Curriculum Guide

2019

GPPs #7, #8, and #9

GPP #9

Provide Proper Animal Handling and Care

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Introduction

Assuring Quality Care for Animals is a complement to the *Youth Food Animal Quality Assurance Curriculum Guide* reflecting the changes in the Good Production Practices. PowerPoint presentations complement each section to assist with instruction.

Using information in this resource should help youth understand how to provide a safe, wholesome food animal product preferred by consumers.

Note – this curriculum alone does NOT certify youth for state-mandated quality assurance training. A County Coordinator or Assistant Instructor must certify youth.

Additional resources and templates referenced in this document may be found at:
<https://www.pork.org/pgq-plus-certification/>

GPP #9

Provide Proper Animal Handling and Care

Providing proper quality care of your animals can help reduce production costs, increase performance, improve product quality, and improve safety to humans and animals. Animals have three basic needs – water, food, and shelter. Furthermore, animals must be handled in a kind and humane way at all times, including in preparation by youth exhibitors for a show. When youth are handling their animals, they must consider if they would want the consumer to see what they are doing. Would consumers find the practice acceptable? Would exhibitors want to be treated the way they treat their animals?

Many factors within an animal's environment influence its overall well-being. Good Production Practice (GPP) #9 will explain these factors and provide strategies on how to implement each one.

Lesson Objectives

Upon completing this lesson youth should be able to

1. Understand the role of daily observation and animal evaluation.
2. Provide feed, water, and the environment (this includes shelter) that promotes animal well-being.
3. Provide proper care, handling and transportation for animals.
4. Protect animal health and provide appropriate treatment when necessary.
5. Understand why intentional acts of neglect or abuse are unacceptable.
6. Understand the importance of euthanasia in a timely manner of sick or injured animals that fail to respond to treatment.

Key Terms

Recordkeeping

Euthanasia

Daily observation record

Treatment pen

Emergency action plan

Emergency detection system

Emergency backup system

Ventilation

Temperature control

Body condition score (BCS)

Average daily gain

Mortality rate

Lameness

Skin lesions

Abscesses

Wounds

Flight Zone

Point of balance

Willful acts of abuse

Animal movement

Every caretaker (youth exhibitor, parent/guardian, producer, etc.) has the ethical responsibility to protect and promote the well-being of the animals in his or her care by:

1. Providing feed, water, and an environment that promotes the well-being of his/her animals.
2. Providing proper care, handling and transportation for animals at each stage of their lives.
3. Protecting animal health and providing appropriate treatment, including veterinary care when needed.
4. Using approved practices to euthanize, in a timely manner, those sick or injured animals that fail to respond to care and treatment, and to properly dispose of the carcass.

Recordkeeping

Veterinarian/Client/Patient Relationship (VCPR)

A VCPR requires that the caretaker and veterinarian work together to ensure the health and well-being of the animals on that farm or in the youth's possession. Recordkeeping includes documentation of the VCPR, medication and treatment records, and caretaker training records.

Medication and Treatment Records

Medication and treatment records provide the health history of each individual animal and help to ensure food safety.

The Food and Drug Administration (FDA) expects producers to maintain medication records that will indicate:

1. The animal(s) that were treated
2. The date(s) of treatment, including last day of administration
3. The drug(s) administered
4. The route of administration
5. The person who administered each drug
6. The amount of each drug administered
7. The withdrawal time prior to harvest

Documented Caretaker Training Program

Animal caretaker training can be as simple as you showing each individual what to do and writing this down in a notebook. However, it can be much more extensive. Producers may use

training manuals, CDs, DVDs, videos and/or intensive on-the-job training. Training is essential for worker safety as well as for assurance that animals are being handled and cared for properly. You want to ensure your animals are being cared for in a manner that will not decrease the quality of the final meat product or compromise animal well-being.

Training helps to increase productivity and efficiency among caretakers. Caretakers who are trained have a greater understanding of project goals and are often more willing to help meet those goals.

As technology changes, it is important to realize these changes and teach caretakers about them. There is an increasing number of new products, equipment and techniques for caretakers to learn and understand. Technology in the various animal industries is changing, just like it is in the rest of the world. Whenever you implement something new on your farm, you should teach your animals' caretakers about it. For example, if you purchase a different brand of feed that you intend to mix medication with, it is important for you to train anyone who may feed your animal on how to properly mix and feed the new products.

One of the most important factors in animal well-being is the skill of the people caring for the animals. The people caring for your animals are the people that ensure your animals' well-being. Three common areas in which producers train animal caretakers are:

1. Euthanasia – Every operation will at some time have a sick or injured animal that does not respond to care and treatment. Therefore, it is important to have a written action plan ready if animals with conditions of concern are found. Your plan should be as simple as calling your veterinarian when euthanasia is needed. Your veterinarian can help you make euthanasia and treatment decisions.
2. Handling – Animal handling includes caretakers being aware of the flight zone, point of balance, environment, types and sizes of animal, group sizes, and the equipment used.
3. Husbandry – Husbandry is traditionally understood as a blend of the producer's self-interest and his/her duties of humane treatment for the animals in his/her care.

Daily Observation

Daily observation and animal care are key factors to addressing animal health and well-being and facility or management issues. Daily observation can also help to assess the effectiveness of health and nutrition programs, the suitability of facilities, and the quality of caretakers. One way to document that someone has observed the animals every day is by keeping a log or record. An example of this might be recording the daily temperature or amount of feed given on a calendar posted inside the door.

Daily observation helps ensure that sick animals do not go unnoticed and that animal caretakers are doing their job.

The best way to fully assess the animals' environment and health is to walk the pens daily. Recording such information as water intake or high/low temperatures within the barn can be a useful management tool. For example, a decrease in water intake can be an early indicator of

illness in the herd, flock, or individual animal. Large difference in high/low temperatures can be an indicator the ventilation system is not functioning properly. Recording animal, facility or management concerns as you walk through the facilities also will promote corrective actions.

Recording Daily Observations

Recording daily observations can be as simple as posting a calendar, paper or poster inside the door of the facility or room where the caretaker can initial and date the document daily.

Water Availability

Water is the most important nutrient requirement and is necessary for normal body function, growth and reproduction. The quality and quantity of water an animal receives is important and should be monitored regularly. Poor water quality can reduce consumption rates and negatively impact the health of the animal. Waterers should be designed so animals can drink freely and have flow rates that easily meet their water intake requirements. It is important to:

1. Provide clean, fresh, and cool water daily.
2. Ensure the supply of water is sufficient for the number of animals.
3. Clean watering devices on a regular basis.
4. Know the water requirements for the animal(s).
5. Know that water requirements change depending on weather, maturity of the animal, feed consumption, and stage of production (lactation, egg laying).

Refer to the *Water Requirements for Livestock* included in this document.

Feed Availability

Feed systems must be checked daily to prevent the occurrence of out-of-feed events. Bins should be checked to make sure they have adequate feed supply and there is no bridging (blocking the flow) of feed. Feeders should be checked daily to assure they are in good working order and that feed delivery is not blocked. Out-of-feed events can negatively impact the animals' well-being by increasing aggression, decreasing average daily gain and average daily feed intake. It is important to:

1. Know the nutrient needs of your animal(s) and feed them appropriately.
2. Feed the proper amount to the animal daily.
3. Avoid restricting feed to maintain a weight or lose weight for a show.
4. Refer to GPP #5 to learn about following proper feed processing protocols.

Seriously Ill, Non-Ambulatory or Dead Animals

Caretakers should consult their veterinarian if they observe an ill or disadvantaged animal. An animal should be considered non-ambulatory if it refuses to stand up or if it can stand without support but refuses to bear weight on two of its legs. Animals that have no prospect for recovery after two days of intensive care should be humanely euthanized.

Treatment Pen

Caretakers should have a plan for how an animal could be isolated from the rest of the herd or flock for treatment or recovery when needed. Once an animal has been identified as ill or injured, it may need to be moved to a treatment area if its health and well-being are compromised by its fellow pen mates or if treatment of the animal is affected by remaining with the group.

Properly managed treatment pens can aid recovery and provide easier follow-up treatment. The treatment pen might be a temporary or permanent separate pen or enclosure or it might be an individual stall. An important consideration is providing adequate treatment and supportive care for the animal. This includes easy access to feed and water.

Caretakers must have a method for tracking animals that enter a treatment pen to know what treatments have been administered and how long the animal has been receiving treatment. This information will help caretakers evaluate the effectiveness of the treatment, and if necessary, make good decisions about timely euthanasia. Remember, when an animal in a treatment pen has shown no improvement or has no prospect for improvement after two days of intensive care, the animal should be euthanized.

Emergency Support

Written Action Plan – In case of an emergency, quick communication is important. A written action plan can provide directions on what to do in case of an emergency. The plan may consist of a list of phone numbers of people to contact should an emergency occur. You may include a phone number for the fire department, your veterinarian, the facility owner and equipment suppliers.

Emergency Detection System – Many commercial operations have an emergency detection system that will warn them of power failures, temperature changes, and other emergencies.

You should consider how you can detect an emergency in your operation. Action should be taken immediately when an emergency occurs. If your house is located near the facility where your animals are and you can visually see when the power is off or if a fire occurs this would count as a detection plan.

Emergency Backup System – If your buildings use a mechanical ventilation system, you should also have a manual or automatic system in place in the event that ventilation is interrupted due to a power outage or other situation. These may be curtain drops, a backup generator or another device, plan or system.

Shelter (The Animal's Environment)

Shelter is needed to provide animals an escape from harsh environments. Animals at different ages and stages of production require different amounts of space.

1. Provide sufficient space for the animal based on the animal's weight at the end of the project or to a mature weight.

Ventilation

Both air temperature control and air quality can impact the well-being of your animals. These two factors can be controlled through proper ventilation management. Housing systems must provide conditions that are conducive to good health, growth and performance at all stages of an animal's life.

Temperature Control

Thermoregulation is the ability to control body temperature, even when surrounding temperature is different. Animals have the ability to thermoregulate in their environment provided the temperatures are not too extreme. Provisions for heating and/or cooling should be present and in working order during extremes in the weather. The facility should provide moderate temperature to prevent the animals from displaying extreme temperature behaviors. Animals perform these behaviors in an effort to regulate their body temperature. Behaviors such as huddling together and shivering indicate the temperature is too cold. If the temperature is too hot, animals will avoid contact with each other and have increased respiration rates.

Temperature is impacted by:

- Air flow (ventilation)
- Density of animals
- Humidity
- Season
- Supplemental heat or cooling sources

An animal's body loses heat in four ways:

1. Evaporative – moisture lost from the animal's skin or lung surface
2. Conductive – transfer of heat from one object to another. If the animal is in touch with the floor, the floor material can conduct heat away from the animal if it is made of good conducting material.
3. Radiant – radiation of heat from one surface to another surface not in contact
4. Convective – transferred along a temperature gradient between the surface temperature of the animal and the air temperature a short distance away. A draft in a barn will cause body heat to be lost more readily than if there is no air movement.

Upper and lower critical temperatures define the thermal comfort zone (or the range of temperature the animal is comfortable) where the animal does not have to huddle, shiver, or pant or sweat to regulate its body temperature. Keeping animals above or below their critical temperature can negatively influence thermal comfort, feed intake, growth, feed efficiency and health. Different species and ages of animals have different comfort zones. Know at what temperature your animals can become heat or cold stressed, and the range of temperature where your animals are comfortable.

An animal's comfort zone can be influenced by the following:

- Species
 - Age
 - Body weight
 - Type and amount of feed fed
 - Level of activity
 - Stage of production
 - Hair coat length or density
 - Body condition
1. Bedding, supplemental heat or other environmental modification is recommended when air temperatures approach the lower critical limit. Clean and dry bedding is an excellent insulating material and provides the animal with comfort and protection from the cold.
 2. Except for brief periods above an animal's upper critical thermal air temperatures, some form of cooling should be provided when temperatures approach upper critical limits.

Refer to the *Comfort Zones* table in this document.

Sanitation

Several microorganisms live inside and outside the animal and facilities. They expose animals to possible diseases and parasites. Removing wastes promptly is a good sanitation practice. Cleaning the housing areas between moving animals in and out is important to prevent disease transmission. Keeping facilities clean can also reduce fly problems and odors.

Air Quality

Air quality can be controlled with a ventilation system that is in working order and that can operate without interruption. This is true whether the ventilation system uses a natural flow of air or mechanical assistance. There are several contaminants, such as dust and various gasses that contribute to the quality of air within the animal's environment. Some animals may experience watery and matted eyes, and difficulty breathing, if they are exposed to poor air quality. In case of a power failure, make sure windows are open.

Ammonia is a common air contaminate that can directly impact the well-being of an animal through irritation of the respiratory tract. Proper ventilation and sanitation are critical to keep the ammonia concentration in the air at low enough levels to keep your animals healthy.

Facilities

The state of repair of the animals' facilities can directly impact their well-being. Facilities are defined as barn structural components – pens, feeders, waterers, floors, chutes, and alleyways.

Pens, Floors, and Alleyway Maintenance

The condition of the pens, floors, and alleyways can affect other indicators of your animals' well-being. Sharp protruding objects could affect the number and type of skin lesions found on your animals. Pens with broken slats and uneven flooring could contribute to lameness or other

leg injuries. Floors should be rough enough to minimize slips and falls, but not so rough as to injure the pad or sole of the hoof or foot. Non-slip flooring is essential in areas where animals are handled, such as loading ramps, scales, or restraint chutes.

Chute Maintenance

Chutes should be in a good state of repair and not cause injury to an animal. Before leading or unloading animals, inspect the chute for damage.

- Sharp, protruding or otherwise injurious items should be removed or repaired.
- Broken or missing cleats should be repaired or replaced.
- Moving parts such as cables, pulleys and hinges should be inspected regularly and maintained as necessary.
- Ramps and chutes should be kept free of potential distractions.

Feeder Maintenance

There are a wide variety of feeders and feeding equipment available today. Feeders should be in a good state of repair to allow unobstructed feed delivery to the animals, and not cause injury to the animals. Regularly inspect individual, group, or automatic feeders for cracks, sharp edges, plugged openings, etc. The number of feeding spaces and their size should allow your animals to consume their daily ration without unnecessary fighting and competition. Feeders should be cleaned on a regular basis.

Waterer Maintenance

Several types of waterers and waterer designs are available for use for different species of animals. Whatever type is used in your operation, waterers must be in a good state of repair to allow water delivery to the animals and not cause them injury. Waterers should be designed and positioned so animals can drink freely and have flow rates that easily meet the animals' water intake requirements. Enough waterers should be available within the pen to decrease competition for water.

Waterers need to be cleaned and maintained on a regular basis. Certain individual and group waterers may need to be cleaned daily depending on the environmental conditions. Also, in areas where water may freeze, consider using heated waterers. When doing so be sure to follow the manufacturers' instructions.

Body Condition Score (BCS)

Body Condition Scoring (BCS) is a tool producers can use to visually evaluate the effectiveness of the nutritional and animal health management programs of their animals. Decisions can be made on how to adjust feeding and health management practices as a result of visual body condition scores. For beef cattle, BCS ranges from 1 to 9, with a score of 1 being emaciated (extremely thin) and 9 being very obese. Areas such as the back, tail head, pins, hooks, ribs, and brisket of beef cattle can be used to determine BCS. An ideal body condition score for beef cattle ranges from 5 to 7 across many stages of production.

Dairy cattle, sheep, swine, and goats (dairy and meat) are scored on a 5-point scale, with 3 being the average or ideal body condition score for each species. The United States does not recognize a body condition scoring system for rabbits and poultry. However, use visual appraisal and handle these animals to determine if they are over or underweight for their species and breed.

Two animals with the same BCS can vary greatly in weight. Also, two animals that weigh the same can vary in body condition score. The BCS can change depending upon the breed within each species, how much feed the animal has consumed prior to scoring (fill), or the stage of the production cycle.

While a low body condition score (emaciated or thin) is a potential indicator of an animal's well-being showing it needs immediate attention, a high body condition score showing the animal is obese also has increased health risks. Investigate animals with low or high body condition scores to find the cause. Consult with an adult or veterinarian to determine whether their condition is related to management practices or the animal's health, or both.

Body Space

It is important for your animal to be comfortable. Your animal must have the proper amount of space to continue to grow and perform. Your animals must have enough space to:

- Stand, lie down, eat, drink, defecate, and urinate comfortably.
- Easily lie down fully on its side without having to lie on another animal, and be able to easily stand back up from a laying position.
- Lie down with head and limbs not touching a feeder, fence, or stall/pen/coop sides.
- Spread wings comfortably within coop or pen.
- Move around and get away from each other if necessary.

Refer to your species Resource Handbooks for space requirements of each respective species.

Refer to the Ohio Livestock Care Standards for additional housing requirements for livestock at <http://www.agri.ohio.gov/LivestockCareStandards/>.

Animal Evaluation

Animal evaluation will help verify that other aspects of the well-being program have been successfully extended to the animals themselves.

Production Performance

The production performance of an animal can often be an indicator of the animal's well-being. When the well-being of an animal is compromised, the production performance of that animal may also be compromised. Some production performance measures to track include average daily gain, feed efficiency, and mortality rates.

Average Daily Gain – The average amount of weight an animal gains each day over a period of time. If this is an extremely low number it may mean that your animal is not getting proper nutrition or an adequate amount of feed. This could be due to the type of feed, the caretaker, or other factors.

Feed Efficiency – Calculated as pounds of weight gained per pound of feed consumed. Feed efficiency is usually the primary driver of profitability for meat-producing animals. If your animal eats a large quantity of feed and does not gain a lot of weight, it may have an illness that prevents it from gaining weight, or it may be eating feed that is not providing sufficient nutrition.

Mortality Rates – Death rates. When calculating these rates, be sure to include animals that die naturally and those euthanized.

Lameness

A lame animal is one that cannot bear full weight on one or more limbs. There are several factors that can contribute to lameness including (1) bacterial infections; (2) heredity; (3) foot and leg structure; (4) injury or trauma; or (5) nutrition. To detect lameness, animals should be observed while they are standing or walking on a flat surface. Animals diagnosed as lame should be treated, culled or humanely euthanized depending on the cause and degree of lameness.

Skin Lesions

If skin abscesses or wounds are present, count how often they occur and note their location. These factors provide important clues about their sources and ways to prevent them. Look for and note skin lesions on these areas:

- Main part of the body (shoulder, belly, back, flank and limbs (both front and back legs))
- Hooves or feet
- Head and ears (includes the cheek, ears, snout/nose, mouth, chin)
- Tail and genital areas

Abscesses

Abscesses are fluid-filled pockets in or under the skin that may cause the skin to be raised. They can be observed after a deep bruise, a penetrating injury, or an injection. Pay attention to how many animals have abscesses and if one location is more common than others.

Wounds

Wounds are defined as breaks that completely penetrate the skin, such as bites or other lesions that penetrate through the skin. Note the wounds and their location, such as on the shoulder, leg, vulva or other parts of the body, and work to identify the likely cause of the wounds.

Shoulder Sores

Shoulder sores are caused by pressure compressing the blood vessels supplying the skin and tissues covering the shoulder blade. This pressure interrupts the blood flow causing tissue

damage and the formation of lesions. Should sores and lesions should be kept clean and treated according to veterinary advice.

Rectal Prolapses

Rectal prolapses are the turning inside-out of the rectal lining. Common causes in pigs are coughing or piling to stay warm. Docking tails too close to the body or the animals' genetics also may contribute to the occurrence of rectal prolapses. It is important to isolate or treat animals as quickly as possible to prevent further injury and to enhance the chance of full recovery. Consult your veterinarian for a treatment plan; however it is also very important to find and address the contributing cause.

In poultry, a prolapsed oviduct is a condition where the lower part of a hen's oviduct turns inside out and protrudes through the vent. This happens most often when a hen starts laying at too young an age, lays unusually large eggs, or is too fat. It may also be due to a nutritional deficiency of calcium and phosphorus. If left untreated, other chickens may pick at her vent. This may eventually result in pulling out the oviduct and intestines causing the hen to die from hemorrhaging and shock. Hens with prolapsed oviducts that have been reversed may never be good egg layers, and may be prone to more prolapses.

Hernias

Hernias, or ruptures, are the protrusion of the intestines through the muscles of the abdomen or groin. In pigs, those with large hernias that touch the ground or cause difficulty walking should be euthanized.

Tail Biting

Tail biting in pigs is a behavior that negatively impacts the well-being of other pigs. Tail biting can result in open wounds, bleeding, infection and even death. Several factors may contribute to tail biting behavior including (1) nutritional deficiencies, (2) inadequate access to feed and water, (3) high ammonia concentrations, (4) excessive noise, (5) uncomfortable temperatures, or (6) overcrowding. When an outbreak of tail biting behavior occurs, it is important to identify and correct the cause of the behavior, though this can be difficult to accomplish due to the multiple causes of tail biting. Injured animals should be treated, and the biter(s) should be identified if possible and housed separately.

Feather Pecking

Mild feather pecking is normal in poultry flocks, and is an establishment of a social hierarchy referred to as pecking order. Feather pecking occurs when one bird pecks or pulls at the feathers of another. This can damage plumage and injure a bird's skin, and sometimes this behavior leads to cannibalism.

Feather pecking can occur in any production system, including free-range systems. Feather pecking is more common among floor-raised chickens in commercial facilities and among chickens in large free-range systems.

Animal Behavior

Animal behavior can also give you an indication of the care your animal is receiving. If your animals are repeatedly exposed to unpleasant handling or abuse they may show signs of fear in the presence of humans. Animals that have been repeatedly exposed to pleasant handling are generally relaxed around people and will typically be easier to move, and as a result, have better meat quality.

Euthanasia

Euthanasia is defined as humane death occurring with minimal pain or distress. Animals that are not responding to care or unlikely to recover must be euthanized humanely. Timely euthanasia, as well as using the appropriate methods and equipment, is critical to the well-being of these animals.

Timely Euthanasia

The definition of “timely” is:

- Animals showing no improvement or prospect for improvement after two days of intensive care should be humanely euthanized.
- Severely injured or non-ambulatory animals with the inability to recover are euthanized immediately.
- Any animal that is immobilized with a body condition score of 1 should be euthanized immediately.
- Pigs with large hernias that touch the ground or cause difficulty walking should be euthanized.

Events that call for timely euthanasia can happen any day of the week. Personnel trained in euthanasia should always be available to respond if called, including nights, weekends, and holidays.

Functional Equipment

Any equipment used for the euthanasia of animals must be kept in proper repair and must be functional. Caretakers trained in euthanasia must have access to this equipment.

Refer to the Ohio Livestock Care Standards to review acceptable methods of euthanasia by species at <http://www.agri.ohio.gov/LivestockCareStandards/>.

Safe Animal Handling

Using best animal handling and movement practices will contribute to the good well-being of the animal and a safer work environment for the handler. When animals are improperly handled they become distressed, which can lead to physical injury to the animal, injury to the handler, increases in the incidence of non-ambulatory animals, increased time to load and unload animals, and reduced growth rates and performance. Additionally, improper handling also significantly contributes to carcass shrink, trim loss and poor meat quality.

Proper handling is best achieved by first understanding some general behaviors normally exhibited by that respective species of animal, as well as that species' physical characteristics such as how they can see, hear, smell, learn and remember experiences. Two instinctive behaviors of animals that a handler should understand, and use to his or her advantage when possible, are (1) Flight Zone and Point of Balance and (2) Following/Herding (Flocking) Instinct.

Flight Zone

The flight zone is an imaginary circle around an animal that it considers its individual space. This principle also applies to working the collective flight zone of a group of animals. When a handler enters the flight zone, the animal(s) may become tense and want to react. An animal's two main instincts are fight or flight.

- The size of the flight zone is determined by the animal's familiarity with humans and will vary from animal to animal within the same species.
- A completely tame animal has no flight zone. A handler can walk directly up to the animal and touch it. Leading is the most effective way to move very tame animals.
- Handlers should work with an animal from the edge of its flight zone.
- When a handler enters an animal's flight zone, the animal will move away. If the animal does not see an escape route, it may attempt to turn around and run past the handler.
- Handlers on farms can reduce the size of the flight zone by spending time walking through the herd or flock.

Refer to the *Flight Zone* diagram in this document.

Point of Balance

The point of balance is located behind the animal's shoulders. The animals respond to a handler's approach relative to the point of balance. If a handler enters an animal's flight zone, the animal will move:

- Forward if the handler approaches from behind the point of balance.
- Backward if the handler approaches from in front of the point of balance.

Because the eyes of pigs, sheep, cattle, and goats are on the side of their head, their vision is approximately 310 degrees, leaving a blind spot directly behind them. The blind spot means that a handler cannot rely on a visual reaction to get the animal to move when standing directly behind it. Ideally to move the animal forward, enter the point of balance from the rear, just inside the animal's flight zone. Moving in and out of the flight zone and behind the point of balance allows the animals to remain calm and move in an orderly fashion.

Following/Herding

Animals instinctively group together to be in visual or physical contact with each other. This instinctive behavior also causes animals to follow each other in order to maintain that contact. The caretaker can take advantage of this behavior when moving animals at any age or size. Examples where this is effective when a handler is moving animals include:

- Up or down a ramp or chute
- Through hallways or alleyways

- Into or out of a pen or room

When these concepts are not used or are used incorrectly, animals can be injured when trying to escape, either through contact with other animals or through contact with an object in their environment such as a gate, feeder or chute. Visual gaps between pens, alleys, ramps, gates, chutes or other places can appear to be an escape route to an animal, and can result in injuries to the animal and/or cause them to pull back. This also puts the handler and other people in the area at risk for injury.

For more information refer to *Understanding Flight Zone and Point of Balance for Low Stress Handling of Cattle, Sheep, and Pigs*, by Dr. Temple Grandin, revised August 2015, at <http://www.grandin.com/behaviour/principles/flight.zone.html>.

Environment

During movement, an animal may come across unfamiliar or distracting elements within its environment. Animals typically slow, stop or change direction when they encounter something new or unfamiliar such as changes in:

- Floor surface (i.e. transition from concrete alley to a wooden chute)
- Footing/traction (i.e. wet, slippery chute or loose cleats)
- Temperature (i.e. moving from a warm building to an outdoor chute/ramp on a cold day)
- Lighting (animals move best from dark areas to lighter areas)
- People, equipment, trash, other animals or objects in their path or peripheral vision area
- Drafts or wind
- Doorways that may change the width of the alley

It is important to understand the potential effects human interactions have on animals and their behavior. A person's intentions are not always understood by the animal, creating fear and/or a negative reaction to a handler. Additionally, animals that have had regular, positive interactions with people will typically be less fearful and easier to handle.

Walking animals slowly on a daily basis will help them become used to positive interactions with people. If an animal has had a bad handling experience in the past, it may be more difficult to handle the next time.

Act calmly and avoid sudden movement, loud noises and other actions that may frighten or excite an animal. This includes shouting to other handlers when working as a team to move animals. Calm animals are easier to handle than excited, agitated animals. Frightened animals bunch together and will be harder to sort and move. Animals should be moved at their normal walking pace. Aggressive handling must be avoided as it can lead to animals becoming non-ambulatory due to injury, stress or fatigue.

Aggressive handling includes:

- Overuse, or improper use, of electric prods – the use of electrical prods is very stressful for the animal and should be avoided
- Loud noises and yelling
- Grabbing and pulling ears and tails
- Grabbing wings and/or feathers
- Moving animals too fast
- Moving too many animals per group
- Overcrowding animals in chutes, ramps, and alleyways
- Rough physical contact

Willful acts of neglect or abuse are unacceptable. Willful neglect and abuse are defined as acts outside of normally accepted production practices that intentionally cause pain and suffering. Animal movement is a leading area where willful abuse can occur. Anyone knowledgeable of possible animal abuse or neglect should report these actions immediately to the proper responsible persons.

Animal Movement

Proper handling and movement of animals is also an element of proper animal care. The handling and movement of animals involves many unfamiliar, stressful experiences for those animals. Handle and move animals in a manner that causes the least possible amount of stress. Handlers should be quiet and calm during animal movement. Take measures daily to get your animals accustomed to human contact. This will help make movement and loading easier on the animals and handlers. Animals do not understand why they are being moved.

Eliminate visual distractions, such as people and other animals, from the path of animal movement. This helps your animals to move more freely. Additionally, moving fewer animals at a time will help allow you to have more control and provide your animal more room to move.

Each person handling your animals should be trained in proper handling techniques for that species prior to any animal movement. Handlers should use the most effective tools for movement for that species. For example, for pigs one of the most effective tools is a sorting board or panel. Use of electric prods is very stressful for pigs and should be avoided. If using a prod, never do so in sensitive areas such as the eyes, nose, anus, testicles, etc.

If an animal appears aggressive or agitated, it may be safer for the handler to move out of the way than to risk a potential injury.

Use proper equipment when loading and transporting animals. Always load animals in a calm, careful manner to help prevent stressing the animals. Electric prods, buzzers and slappers should be avoided. Treat animals humanely at all times.

Stress

It is important for handlers and caretakers to recognize stress in an animal. Knowing what an animal's "normal" behavior is through daily observation will help you know when they become stressed. Stressed animals will have reduced performance, are more susceptible to diseases, and have a higher mortality rate.

Reduce stress in show animals by:

- Handling and training an animal regularly to reduce excitement of the show
- Keeping animals on a regular feeding and exercise schedule
- Getting animals accustomed to strange or flavored water
- Trying not to mix animals at shows to avoid fighting
- Avoiding changing feed at the show

Stress indicators may include:

- Lack of appetite
- Abnormal posture
- Slower than normal growth
- Rapid breathing
- Restlessness
- Lameness or alteration of gait
- Dull or depressed attitude
- Unusual vocalizations
- Self-isolation from pen mates
- Blotched skin

Types of Stress

- *Thermal* – factors that lead to thermal stress include temperature (heat or cold), humidity, wind, and solar radiation
 - Results of air temperature, speed of air movement, humidity, insulating effects of facilities
 - Extreme heat/humidity and cold
- *Physical* – caused by the physical component of an animal's environment. This includes objects that could cause the animal injury.
 - Lack of food and water
 - Lack of shelter
 - Facilities that can cause injury to the animal
- *Disease* – results from the onset and spread of disease
- *Behavioral* – factors that affect normal behavior of the animal
 - Being moved to a new area
 - Being placed in a new group of animals
 - Exposed to new environments or people (i.e., at the fair)

Is all stress bad? There are acceptable management practices for all food animal species that cause short-term stress and may also be painful (i.e., castration, vaccination, dehorning, beak trimming, weaning, etc.)

- Make sure these practices are done at the correct stage of production or age
- Make sure these practices are performed in a humane and proper manner

Group Sizes

Many changes occur in an animal's surroundings from home to when they reach the fair and/or show ring. Show animals are generally raised in a somewhat quiet, subdued environment with little stress. Loading and transporting can be stressful to the animal, particularly if handlers become frustrated. Animals that are mixed together may instinctively fight to determine a pecking order. Upon arriving at a show, the new sights, smells and sounds can affect an animal's behavior. To minimize stress, animals can be loaded and unloaded onto a trailer to get used to the practice before going to the fair or show.

Non-Ambulatory Animals

An animal that cannot get up or walk on its own is called non-ambulatory. An animal may become non-ambulatory due to injury, illness or fatigue. Determining the specific cause will help handlers identify the appropriate way to care for the animal.

Medical treatment is an option for an animal that is non-ambulatory due to injury or illness. When the likelihood of recovery is high, the animal should be moved to a pen where competition for feed and water is reduced and where the animal can be monitored and treated regularly. When animals become non-ambulatory due to illness or injury and the likelihood of recovery is low, even with treatment, the animal should be humanely euthanized.

In the case of animals becoming non-ambulatory due to fatigue, quietly and humanely move the animal to a pen and allow it to recover before attempting to move it again. Most animals recover after a few hours of rest. The best way to prevent the occurrence of fatigued animals is to minimize stress by using good animal handling practices.

Handling Equipment

There are different types of handling and sorting equipment on the market available to help sort or move animals in a safe, humane and efficient manner. Learn what equipment is the most versatile, least stressful, and most humane for your species of animal.

Proper animal handling is also important during transportation, as transportation can be stressful for animals.

- Move animals when it is not too hot or too cold.
- If you do need to transport animals when it is hot, ensure they are shaded and there is good air movement throughout the trailer. Keeping the trailer moving will help increase air flow and aid in keeping the animals cool.
- If you have to transport animals when it is cold outside, make sure there is some bedding or straw on the trailer flooring, and that any holes are plugged up or vents in the trailer are closed to help stop drafts.

Use proper equipment for loading your animals. Always load your animals in a calm, careful manner to help prevent stressing the animals. Animals should be treated humanely at all times.

Willful Acts of Abuse

Willful acts of neglect or abuse are unacceptable and are not tolerable! Willful abuse and neglect are defined as acts outside accepted practices that purposely cause pain and suffering including, but not limited to:

- Purposely applying prods to sensitive parts of the animal such as eyes, ears, nose, genitals or anus.
- Hitting or beating an animal
- Failure to provide minimal food, water, shelter, and care that results in significant harm or death to animals.

All handlers, caretakers, youth exhibitors, parent/guardians, etc. should be familiar with what is considered willful acts of abuse and know that these are unacceptable and not tolerable. If a willful act of abuse is observed, immediately try to stop the situation if safely possible. If a young person does not feel safe in stopping the situation, he/she should immediately find a responsible person to intervene.

Refer to Ohio's Livestock Care Standards for additional informational about animal care and well-being at <http://www.agri.ohio.gov/LivestockCareStandards/>.

Summary

Record any key events that contribute to a good animal well-being. These include:

- Establishment of a veterinary client/patient relationship.
- Administration of medication and treatments.
- Documenting caretaker training events.
- Daily observations.

Plan for different types of emergencies by developing a written emergency action plan and having emergency backup equipment in place for the site.

Provide feed, water, and an environment that promotes animal well-being:

- Manage facility ventilation to achieve desired air temperature and good air quality.
- Evaluate pens, flooring, chutes, and alleyways to ensure they are in a good state of repair and not causing injury to the animals.
- Evaluate feeders and waterers to ensure they are in a good state of repair and allow for adequate feed and water delivery.
- Assess body condition scores and manage nutrition and health care to maintain good body condition.
- Provide adequate space for the animal's size.
- Evaluate animals for signs of how well they are interacting within their environment.

Use approved practices to euthanize, in a timely manner, those sick or injured animals that fail to respond to care and treatment.

Apply basic animal handling concepts, including animal instincts/behavior, the flight zone, point of balance, acceptable tools and handling aides, when handling and transporting animals of various sizes/types.

Recognize and report any incident of willful abuse or neglect.

**Provide Proper Animal Handling and Care
Study Questions**

1. Name four ways by which every caretaker has an ethical responsibility to protect and promote his/her animal's well-being.
2. What is timely euthanasia?
3. Describe five of the main components of animal evaluation.
4. Describe how to promote animal well-being in the following areas: Feed, Water, and Environment
5. What are five ways to reduce your animal's stress?
6. Your animal's space is considered adequate when the animal is able to _____. (List)
7. Describe how proper ventilation is important to an animal's well-being.
8. Define and describe body condition scoring for your species of animal.
9. Why is proper facility maintenance important to your animal's well-being?
10. A willful act of abuse could include, but is not limited to:
 - (a) _____
 - (b) _____
 - (c) _____

Sources:

Jacob, J. 2015. *Feather Pecking and Cannibalism in Small and Backyard Poultry Flocks*. University of Kentucky. <http://www.extension.org/pages/66088/feather-pecking-and-cannibalism-in-small-and-backyard-poultry-flocks#.VjfSCyvzxD4>

Kuber, et. al. 2005. *Youth Food Animal Quality Assurance Curriculum Guide*. Ohio State University Extension, Columbus, OH.

National Pork Board. 2014. *Youth Pork Quality Assurance Plus Handbook*. Des Moines, IA.

Nickles, R., Reed, V. 2012. *Body Condition Scoring of Beef Cattle for Youth Producers*. Ohio State University Extension, Columbus, OH.

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