Each team will consist of three members. **Team members must be registered Virginia 4-H or FFA members who are at least 14 years of age by September 30, 2019 and must not have had their 19th birthday before January 1, 2019. Team members must be Beef Quality Assurance (BQA) Certified in order to compete.**

Teams may represent county 4-H programs or FFA chapters. Additionally, teams might be sponsored by local feeder cattle associations or area cattlemen's groups. Teams must be entered on an official entry form which will include each team member's parent's signature indicating their permission for their child to participate.

Each site has the right to cap the number of teams it accepts into the competition based upon limitations of the individual contest. If a site caps the number of teams allowed to compete and a greater number of teams enter at that site, the following protocol for determining which teams will compete will be put into place: 1) The club/chapters with the greatest number of entries will be asked to choose one team that is entered that will not compete at that site; 2) For instances in which two Units/Schools have the same number of teams entered, the team that sent in their entries first will be given priority; 3) All teams that do not compete at that specific site due to the capping rule are allowed to travel to another site and compete if there is open slot at the other site.

Each team will be required to work three head of feeder cattle through a holding pen into a chute and properly catch each animal's neck in a head gate.

Before the cattle processing begins, each team will be given the products to be used along with a cattle processing plan map and form. Team members will be required to complete the cattle processing plan form in **30 minutes.** Information included on the processing plan includes products to be used, route of administration, location on animal for application, dosage, and pre-slaughter withdrawal time. The cattle processing plan will account for 20% of the team's score. **All maps will be scored (and corrected if needed) and returned to each team as their turn arrives to compete at the chute.**

Each team will be responsible for the preparation and administration of each animal health product which can include the following:

a. Growth implant
b. Vaccines
   1. 7-way clostridial
   2. Respiratory complex (intranasal or subcutaneous)
c. Ear tags (visual or EID tags)
d. Dewormer (pour-on, injectable or drench)
e. Other products as deemed appropriate

The correct procedure for administering each product will be explained to contestants. Failure to apply a product or improper administration will result in point deductions. Products should be applied in accordance with the team's approved cattle processing plan. Proper technique will account for 50% of the team's score.

Teams will be evaluated on the way in which they handle the cattle and use the handling equipment. Unnecessary rough or harsh handling of the cattle will result in point deductions. Only equipment provided by the contest will be allowed. The use of any other driving sticks, canes, or other devices is prohibited. Handling will account for 10% of the possible score.

The safety of the competitors will be emphasized. The cattle should be handled as safely as possible to minimize any potential for injury to team members. If the judges feel that a potentially dangerous situation exists, processing will be stopped. Safety will account for 10% of the score.

The actual cattle working will be timed. Timing will begin after the cattle processing plan is approved by the judges. Speed will account for 10% of the score.
There is a total possible score of 100 points. Any ties will be broken with the score from cattle processing plan category. If a tie still exists, the following will be used to break the tie in the order they appear: actual working time; safety; handling; implants; clostridial vaccine; respiratory vaccine; tags; and deworming.

**GUIDELINES FOR SCORING YOUTH CATTLE WORKING CONTEST**

Points are awarded in 3 separate categories within the Youth Cattle Working Contest. One of these for the Cattle Processing Plan; the second area is for each product administered, as well as the safety and handling of cattle; the third area is for time.

I. **The Cattle Processing Plan** provides information about the products that are used, how they are used, and where they are administered. This document becomes a permanent health record for this group of cattle. If the cattle are sold this document would accompany the cattle, so the new owner is aware of the details surrounding health products administered to the cattle. Every cell on the plan should have something written in it for each product used, do not leave information blank.

The Cattle Processing Plan is worth a total of 20 points. In the Cattle Processing Plan, the following information is requested, and guidelines for answering these items are provided:

A. Product Name - Complete name of product as it appears on the label. Subtract 1 point if incorrect.

B. Route of Administration - The footnote of the Processing Plan provides the following possible responses - Subcutaneous (SQ), Intramuscular (IM), Topical (T), Oral (O), Intradermal (ID), Intranasal (IN) and Ear Tag (ET). Proper administration is found on the label. Do not include where the product is administered here, that information is dealt with separately. When the choice of SQ or IM is given, the proper response is always SQ. Subtract 1 point if incorrect.

C. Location of Administration - Location is to be noted on the animal illustrations which appear at the top of the Cattle Processing Plan by writing the number of the product on the designated space. Injectable products can be given only in the neck. Note that there is a right side and a left side depiction provided. Do not give 2 different injectable products in the same location. Subtract 1 point if incorrect.

For pour-on dewormers, draw a line with a beginning and ending point to indicate the entire region of the top line where the product is to be poured. Subtract 1/2 point if incompletely depicted.

D. Dose - Dosing information is found on the product label. Dose provided needs to be practical based upon the instrument used to measure the dose. In other words, if a dewormer is calculated to be given at the rate of 26.4 ml, and the dosing instrument is scaled in multiples of 5 ml, then the dose given should be listed as 30 ml. You can't accurately measure the 26.4 ml dose with the instrument used, and under dosing of dewormer is a bad technique, so you would round up. Subtract 1 point if the dosage is incorrect.

The weights on the cattle will have to be estimated prior to calculating the proper dosage. There will be a 1 point deduction per 100 lbs. if the improper weight is estimated. The proper weight will be given prior to actual administration of product.

Likewise, insecticide impregnated ear tags are often stated to be put in each ear. Thus, the proper way to indicate this dose is "2 - (1 in each ear)". Subtract 1/2 point if this information is not provided in the plan.

E. Pre-slaughter Withdrawal - Should be recorded in days. This information is found on the product label. If there is no withdrawal required, then record a '0' in the space for that product. For ear tags it may be stated that they are to be removed before slaughter, and if so that information should be put on the Processing Plan. Subtract 1 point if the cell is left blank, or information provided is incorrect. Subtract 1/2 point if the statement about ear tag removal is not included.
II. **The Judges Score Sheet** provides specific information about each product. The judge's job is to evaluate the proper use of the instrument, proper handling of the product, safe and effective delivery of the product to the cattle, and to determine if the product is given in the way described on the Cattle Processing Plan. The judge is to closely observe these factors for each calf worked by the team. Ten (10) points are available for each product.

Specific guidelines for evaluation and scoring for each type of product follow.

A. **Implants** - All implant products are to be given on the back of the ear, under the skin, with the implant deposited out on the ear and not in the softer tissue at the base of the ear. After correct administration, it should be easily palpated by gently squeezing the site between thumb and finger. If the implant product consists of multiple individual pellets, these should be deposited in a line as they appear in the product cartridge rather than in a cluster.

Implants may be applied to either ear. They must be administered before any insecticide tag is applied, if applicable. However, the "rib" of the ear where the ear tag is applied and where the implant is applied should differ. Points will be deducted if the ear tag button and the implant are in contact with each other. The needle of the implant gun should be disinfected after each calf, using a disinfectant dispenser, sponge wipe, or other technique. However, immersing the needle in disinfectant is not to be done, as this may lead to dissolving implant pellets.

The full 10 points would be awarded to a team that does all of these implant techniques correctly the first time attempted. Subtract 2 points each time the following occurs - implant deposited in a cluster, needle run through the ear and implant falling to the ground, implant not palpable on the back of the ear in a SQ location. Subtract 1 point each time the following occurs - implant is in contact with button of ear tag, failure to disinfect implant gun between calves.

Point deductions are at the discretion of the judge. Additional points may be deducted if the judge deems necessary.

B. **Dewormer** - In contrast to implants which are all administered in the same way, there are several different ways in which dewormers are designed to be administered, based upon the product. These include oral liquids administered with a drench gun, oral pastes administered with a specific gun-type device, topical liquids designed to be poured on the back, and injectible forms. In the case of all but the injectibles, the measurement of a specific dose is somewhat imprecise due to both the volume of product included in a single dose, and also to the accuracy of measurement with the application device. Consequently, the dose applied should be rounded up to the next higher amount that can be measured with the device, rather than some "in-between" quantity.

Orally administered products (liquid or paste) must be given in such a fashion that the calf does not spit it out. Proper technique involves getting the applicator over the top of the tongue before depressing the trigger. The best way to do this is by entering the side of the mouth with the instrument and gently forcing it between the molars and over the tongue. Putting your hands in the mouth is both awkward and dangerous. With boluses the hand is inserted in the side of the mouth opposite where the worker stands and pressure on the roof of the mouth results in the calf opening his mouth so that the balling gun can be inserted over the root of the tongue.

Proper use of the applicator involves setting it to the proper dose based on weight of the cattle and also on the dose described on the label. The applicator needs to be positioned in such a way that product flows into the gun when it is supposed to "reload". Failure to do this means an incomplete dose is brought into the applicator.

Topically applied products (also known as pour-on) are normally applied in a line down the back of the animal from withers to tailhead. Pouring these products in a pool in a single spot is bad technique, resulting in improper absorption of the product. These products often have a safe handling warning on
the label, the result being that they should not be handled with bare hands. To avoid splashing product on a team mate, the injections should be completed before the topical dewormer is applied.

Applicators can be gun-type devices with adjustable dosing capability that pump product out of a large container or reservoir. There is also a direct applicator bottle whereby a single dose is squeezed from one location of the bottle into another region of the bottle, and this in turn is poured directly onto the calf. The cap of the bottle must be loosened to allow the product to flow from one portion of the bottle into the other.

The full 10 points would be awarded to a team that does all of these techniques correctly the first time. Subtract 2 points each time the following occurs - improperly measuring the dose on a squeeze-bottle applicator, calf spitting out a dose of orally-administered product, failure to re-administer product if the calf spits it back out, handling products labeled as hazardous without gloves. Subtract 1 point each time the following occurs - failure to apply the topical product from withers to tailhead, failure to insert the applicator of an orally-administered product sufficiently far into the mouth, failing to wait for teammates to complete injections before applying a topical product.

Judge should point out errors that pose a safety risk (not wearing gloves) or that result in improper dose being applied (gun not set properly). If team fails to adjust their technique then deduct an additional point and do not allow them to proceed without fixing the error.

Point deductions are at the discretion of the judge. Additional points may be deducted if the judge deems necessary.

C. Vaccination injections. These should all be given in front of the shoulder and according to label directions and the processing map. Watch carefully to be sure that SQ shots are being administered under the skin. Deduct one point each time if SQ injects are given too deep so that an IM injection is erroneously given. Either the one handed technique (needle goes in at a very steep angle) or two-handed tenting technique are acceptable. Deduct 2 points for each injection given behind the neck, too high, too low, or too far forward (outside of the “triangle”).

IM injections should be given in the triangle in front of the scapula, above the neck vertebrae (tendency is to give the injection too far down where neck bones are), and at least 2 inches down from the top of the neck to stay out of the ligamentum nuchae. All IM injections should be given deep enough to be sure they are in the muscle (depth of a 1” needle). Aspiration to be sure that the needle is not in a vessel is required. Subtract 2 points if the shot was given IM instead of SQ. Deduct 1 point for each wrong placement, not deep enough or failure to draw back.

Intranasal products require administration in both nostrils. The IN cannula must be used and replaced for each calf. Deduct 2 points for failure to change cannulas between calves. Deduct 2 points for improper administration (putting all of the product in one nostril, not properly administering product in nostril, etc.) Additional points may be deducted if the judge deems necessary.

Vaccine hydration is often required. If vaccine is not properly hydrated or mixed deduct 2 points.

One needle should be put in the vaccine bottle and a separate needle used to give the vaccine so that a needle that has been used to give an injection is never put into the vaccine bottle. Deduct 2 points if this protocol is not used.

If a needle is dropped or bent it should be replaced. Deduct one point for use of dirty or bent needles.

Point deductions are at the discretion of the judge. Additional points may be deducted if the judge deems necessary.

D. Tags. Tags should be placed according to label directions in terms of number: 1 or 2 per animal. Deduct one point for each missed tag. All tag instructions call for handling with gloves. Deduct 2 points if gloves are not used.
Tag placement is in the center of the ear, between the two cartilage ribs in the ear. Putting them through the cartilage rib predisposes to infection. Placement too close to the end of the ear increases tear out. Deduct one point for each tag incorrectly placed.

Point deductions are at the discretion of the judge. Additional points may be deducted if the judge deems necessary.

E. **Cattle handling:** Scoring for this is somewhat subjective. Nice, smooth, quiet handling is being sought. Points may be deducted for noisy or rough handling and errors in catching heads, moving cattle, etc.

   - **Common errors:**
     - Missed head
     - Failure to use or release squeeze
     - Failure to use or remove bar behind calves
     - Excessive roughness in moving cattle.
     - Failure to use or latch crowd gate.

It may be necessary to reach into a chute to move cattle. If this is done correctly it should not result in deductions for safety. The reach must come from high enough in the chute to be above where calves would usually pass to cause arm injury. Cattle may be encouraged to move forward in the chute by walking past them from front to back, by gentle pokes with a working stick or by twisting a tail. Points should be deducted for excessive poking with a stick or outright hitting cattle.

Deductions should not be made for cattle turning around in the chute or alley if this is beyond the control of the handlers. How the handlers deal with such an event is a subjective way to assess the team’s handling ability.

Point deductions are at the discretion of the judge. Additional points may be deducted if the judge deems necessary.

F. **Safety:** Any action that seems to put the handlers or cattle at risk may result in a deduction for safety. No deduction should be made for putting an arm through the chute if it is done appropriately and high enough in the chute so a calf cannot injure the arm.

   - **Common errors:**
     - Handler’s head too close to the calf’s head during tagging or implanting so the calf can swing their head up and strike the handler.
     - Dropping the tail gate on the calf
     - Attempting to inject in the neck in front of the head catch.

Point deductions are at the discretion of the judge. Additional points may be deducted if the judge deems necessary.

III. **Time:** Time limits will be at the discretion of each regional site coordinator and state contest officials. All contest officials have the discretion to intervene in situations when deemed necessary. Any time over 8 minutes will receive a 1 point deduction each 30 seconds over time.

Maximum time limits are at the discretion of the contest officials. Maximum time limits should be announced at the beginning of the contest. It is the responsibility of the teams to know the maximum time limit before the contest starts.