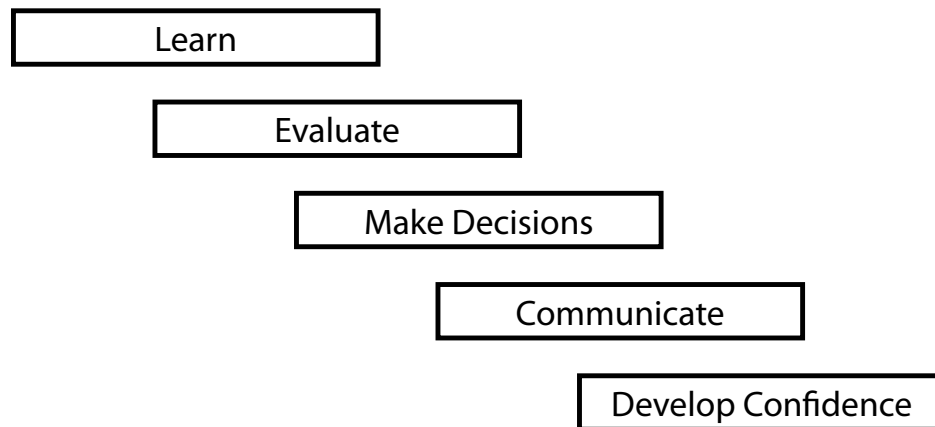


Let's Judge

Judging is an activity that many 4-H clubs do. If you take the time to learn a few basic steps judging can be an enjoyable and challenging activity.

Why do we judge in 4-H?

There is so much more to judging than simply putting animals or items in the same order as the official judge. Judging in 4-H helps us to:



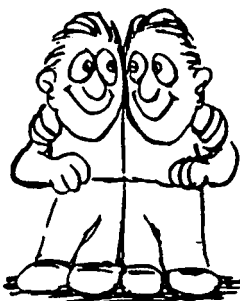
How do you judge?

There are some specific steps that you can follow to make your judging easier. It doesn't matter whether you are judging in a judging competition, a show ring or a pasture, the steps are the same. Becoming familiar with these nine steps and working through them in order every time you judge will help to make judging easier.

1. Picture the ideal item or animal.

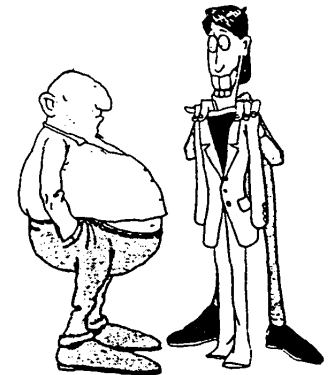
Before you start judging any class, picture the ideal in your mind. What does the perfect market steer look like? What about the perfect loaf of bread? In your mind, or even on a sheet of paper, list the qualities that you feel are important in a perfect item. Rank them in order of importance.

2. Prepare to compare.



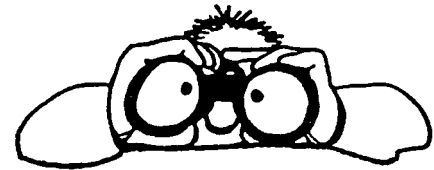
Judging is determining the advantages an animal or item has over the next. Force yourself to think comparatively. Think about comparative terms you might use in your reasons. These terms are words ending in "er" and phrases with more or less in them. Your comparative terms should be positive.

Now you are ready to look at the class.



3. View from a distance.

Stand back and compare the animals. If you are judging livestock, stand about 6 to 7 meters away and analyze the animals. Compare and contrast them in size, structure and overall appearance. Watch how they move.



4. View from the front and the rear.

Move to the front, still looking from a distance, and view the class. Move to the back and view some more.



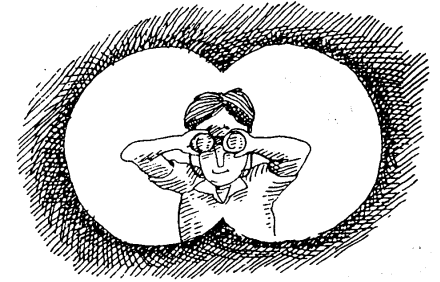
5. Move in for a closer examination.

Now you are ready to examine the animal up close. Move in close and give each one a thorough examination. Inspect each one individually, continuing to compare it to all of the others in the class. If you are judging small items, feel them, pick them up and look at them from all angles.



6. View again from a distance.

By now, you should be almost ready to make your final decision on the placing of the class. Once you have finished your close examination, move back and view again from a distance.

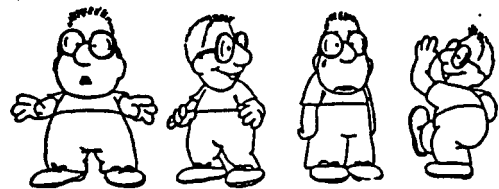


7. Build a picture.

Take time to close your eyes, and build a picture in your mind of the class as it stands in front of you. Try to choose one thing about each animal or item that will bring a picture of it back to your mind. This will help you when you are preparing and presenting your reasons.

8. Make your decision.

By now you should have made your final decision on the placing of the class in order from most desirable to least desirable. If you have any doubts, go back to step 4 or 5 and confirm your decision.



9. Mark your cards.

Mark your placings on your card. Prepare your reasons. Make sure the placing on your card is the same as the one you are using in your reasons. Hand in your card to the official.



The judge at your achievement day, or any show follows these same steps when he places your market steer or dairy heifer. Watch the judge at a show and you will see.

Hints for easier judging:

- Select the easiest placings first
- Do your own judging
- Your first impression is usually correct
- Keep comparing
- Remember - reasons are important



How to Manage Your Time

All of this, from the time you start judging the class, to the time you complete the preparation of your reasons will take no longer than 20 minutes.

Because each class in a judging competition has a time limit, you may want to find a way to manage your time. Here is one suggestion for a way to divide your time in each class:

Time (Minutes)	Activity
2 – 3	Stand back and look at the class as a whole.
1 each (total of 4 for 4 items or animals)	Move in for a close inspection.
3 – 4	Decide how each article compares to the others and make your final decision.
Balance of Time	Finish your notes, prepare your reasons.

How can YOU become a more successful judge?

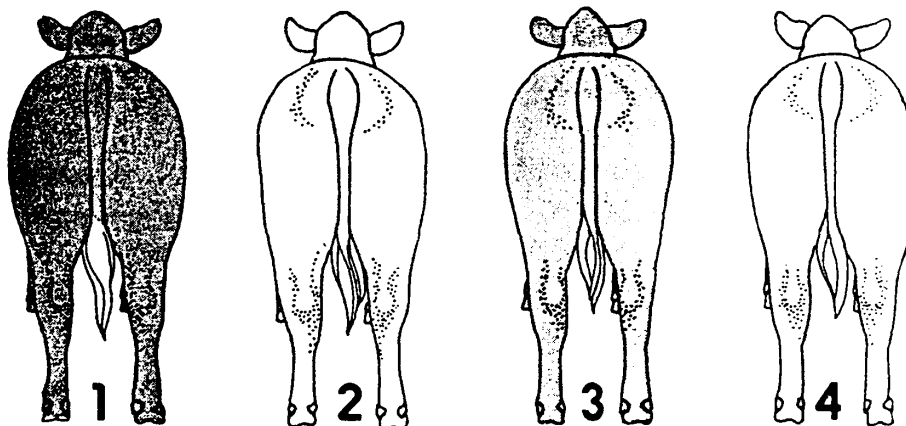
Anyone can become successful at judging any item or species. There are two things you need to do:

1. Think Whenever you are judging, think about what you are doing. Be organized and follow a system.
2. Practice No one becomes a good judge by judging only a few classes. You must practice, practice and practice some more to become a better judge.

Top judges across the country have judged hundreds of classes. In addition they have looked at thousands and thousands of animals or items. They became successful judges by thinking about what they were doing and with many hours of practice.

How is the class numbered?

Any class of four animals is always numbered 1 through 4 from left to right viewing from the rear of the class.



Reasons: Level 1

Reasons give you a chance to justify your placings. By practicing judging and reasons regularly, you will soon develop a good system for judging, and be able to justify your placings with your reasons.

Structure

Good reasons have a specific structure. Whether you are presenting written or oral reasons, you should follow the same format. Reasons should have three parts, an introduction, a body and a conclusion. Let's look at each of these.

The Introduction

The introduction to your reasons should be a simple statement telling the listener two things:

- the class you judged
- your placing of the class

An example of an acceptable introductory statement is:

"I placed this class of 2 year old Holstein Cows 3 1 2 4."

or

"I placed this class of 1st cut Alfalfa Hay 2 4 3 1."

Notice that the classes are not called cows or hay, but "2 year old Holstein Cows" and "1st cut Alfalfa Hay". Both of these statements identify the class completely and correctly, and state your placings of the class.

You may vary the statement slightly as you become a more experienced judge. Just remember to identify the class you judged and include how you placed the class.

The Conclusion

The conclusion of your reasons should be a simple statement summarizing the information from your introductory statement. Again, give a complete and correct identification of the class on which you are giving reasons and your placing of the class.

An example of an acceptable concluding statement is:

"For these reasons, I placed this class of 2 year old Holstein Cows 3 1 2 4."

or

"These are my reasons for placing this class of 1st cut Alfalfa Hay 2 4 3 1."



Again, once you become more experienced, you may wish to vary your concluding statement slightly. This is acceptable as long as you provide complete identification and placings. In advanced competitions, you may eliminate this concluding statement.

The Body

The body will be the most detailed part of your reasons. Therefore, you should spend the most time preparing this section. Here are some hints to help make the preparation of your reasons a little easier:

- Do your analysis in pairs. There are three pairs in your reasons - a top, middle and bottom pair.
- Be comparative. It is not acceptable that you simply describe the animals or items in the class. You must use comparative terms. Words ending with “-er” and phrases beginning with “more” are ways to make your reasons comparative.
- Make sure that all the information you provide in your reasons is true and accurate for the class. You will lose marks for wrong information.
- State your most important points first, then go on to your less important points.
- Follow a logical pattern on each animal or item. Head to tail, top to bottom, most important to least important points.
- Be thorough in your reasons. Make sure you mention all of the points that you consider to be important.
- There are words you should never use in your reasons. They include “good”, “better”, “best” and “nice”. These words are not specific enough about what you appreciate about that entry.
- Use the correct terms for the items or animals you are judging. Know the meaning of the terms you are using.
- Be positive. State the advantages one animal has over the other animal rather than pointing out the weak points of the lower placed animal. Avoid being negative.
- Grant when the lower animal of the pair has an advantage over the upper animal of the pair. Keep your grants short and simple.
- Be organized. If you can show the judge that you are organized in your judging and your reasons, you will appear more knowledgeable.
- If a placing is close, say so.
- Be concise. If possible, get your point across in a few words rather than many words. For example, 4 is wider from pin to pin.
- Avoid using “he”, “she” or “it”. Refer to the animals or items by their number without saying “number 4”. Refer to the entry as 4.

In review, your reasons should have a basic structure like this:

I placed this class of..... 3 1 2 4.

I placed 3 over 1 because.....

-
-
-

I placed 1 over 2 because.....

-
-
-

I placed 2 over 4 because.....

-
-
-

For these reasons, I placed this class of..... 3 1 2 4.

As you become more experienced, you will begin to add to this general structure. Beginner judges can start with one point per pair and as you become more experienced you will add more points to each pair.

The general rules for written and oral reasons are the same. In both, you must provide a good presentation. It is your method of presentation, which differs. Let's look closely at the presentation of reasons.

Preparing Your Oral Reasons

One of the reasons that so many members find oral reasons so difficult is that they do not know how to prepare good notes.

The note taking system outlined on the next page will help you to become more organized. Make sure you use small note cards or notepads, not large pieces of paper. Use a note taking system and always keep a picture of the class in your mind, and you will soon be able to give reasons without notes!

Class: Market LambsPlacing: 1 - 3 - 4 - 2

Official: _____

Class Splits: _____

Memory	For	Grant
1/3 black face	<ul style="list-style-type: none"> • fuller saddle • carries down leg 	X
3/4 all white	<ul style="list-style-type: none"> • finish more desirable • longer loin 	<ul style="list-style-type: none"> • thicker leg
4/2 brown	<ul style="list-style-type: none"> • less waste • wider through hind saddle 	<ul style="list-style-type: none"> • stronger pasterns

2 - over finished _____

As an experienced judge, you will be required to give oral reasons without any notes. To do this, you must keep a picture of the class in your mind at all times. For beginning judges, use of notes is acceptable.

Your reasons should also become more specific as you gain experience. You may also begin to use grants.

This is one format that you can use for making your notes. You may find another one that works well for you. Before a competition you can write the format you want to use for your notes on the paper. Remember to have a space to write the type of class you are judging and your placings.

Once you have determined your placing of the class, you can start making your notes. Your notes should be positive and comparative.

Presenting Your Oral Reasons

Follow these rules when presenting your oral reasons:

- Speak clearly and loud enough to be easily heard.
- Be pleasant.
- Convince the judge that your reasons are right.
- Be confident in your reasons.
- Emphasize your most important points.
- Avoid reading your notes.
- Have a picture of the class in your mind.
- Look your judge in the eye.
- Stand straight - don't fidget.
- Relax and have fun!

If you can combine quality content with good presentation in your reasons, then you will be sure to get a good score.



Guidelines for Marking Oral Reasons

Possible
Score

Presentation 10

- loud, clear, easy to hear
- speech well-paced, not too fast
- maintains eye-contact
- avoids reading (glancing at notes is acceptable for younger members)
- stands comfortably
- speaks confidently and convincingly
- uses correct grammar, phrasing and sentence structure
- avoids repetition
- uses proper pronunciation and enunciation
- avoids unacceptable words such as “good”, “better”, “best”, “nice”

Format 10

- introductory statement
- concluding statement
- identifies the class completely and correctly
- compares the 3 pairs
- logical and easily followed

Content Score 30

Top pair 10

Middle pair 10

Bottom pair 10

Must be:

- accurate
- comparative
- specific
- thorough
- complete

Total 50

Guidelines for the Oral Reasons Judge

- Make sure the member feels comfortable.
- Show the member that you are interested in what he/she is saying.
- Listen actively - don't slouch or look bored.
- Avoid any gestures or movements that may throw the member off.
- Make sure you listen to the reasons in a place where other members won't overhear.
- Make sure you listen to reasons in a place where you won't be interrupted by noises or other members.
- If you are interrupted or the member stumbles, let him/her start again.
- Don't interrupt while he/she is speaking - save it for when he/she is finished.
- Ask questions at the end of the presentation. Then you will know that he/she actually "saw" the class.
- Be consistent. The absolute mark that you give the reasons is not nearly as important as being consistent across all of the members you mark.
- Remember - you are there to find out why he/she placed the class that way, not to tell the member his/her placing is wrong.
- Remember - this is difficult and new to many members. Make it as easy for them as you can -we want them to try this again next time!

Remember:

You are NOT judging the member on how they placed the class; that has already been done in the placings score. You are judging the member on WHY he/she placed the class this way.

Preparing Written Reasons

Presenting written reasons is simply putting them down on paper. Follow these rules when presenting your written reasons:

- Be neat.
- Use correct spelling.
- Use correct grammar.

Remember: This is not a neatness, spelling or grammar test, but what the marker cannot read or understand, cannot be marked.

Guidelines for Marking Written Reasons

Possible
Score

Presentation 15

- logical, easy to follow
- comparative throughout - uses comparative terms – “more”, words ending in “er”
- introduction and conclusion
- class is identified completely and correctly
- uses proper expressions - grant, advantage, etc
- this is not a spelling test - just as long as you can tell what the member is trying to say

Content 35

Reward points for:

- accurate information
- thorough - covers all the points the judge mentions
- “seeing” the animals in the class
- uses the appropriate terms for the item or animal
- uses the terms for parts accurately
- specific

Deduct points for:

- inaccurate information
- “canned” reasons
- wrong use of terms

Total 50

Guidelines for the Written Reasons Judge

- This is not a spelling or neatness test - just as long as you can read and understand what is written. You will have to penalize the member if you cannot decide what the words are saying.
- Concentrate on the task at hand - take this seriously.
- Attempt to visualize the class as you read the card. This will make it easier for you to decide if what the member is saying is right or wrong.
- Mark your comments directly on the card.
- You may find it easier if you set yourself a range of marks that you will assign. Decide on a high mark and a low mark, then start working on the cards. If you find an exceptional card, you can expand your range.
- Be consistent. The absolute mark that you give the reasons is not nearly as important as being consistent across all the cards you mark.
- Be prepared for members who will come back to you with questions about why you marked their card the way you did.
- Remember - this is difficult and new to many members.
- Encourage the members - we want them to continue judging.

Reasons: Level 2

As you get comfortable with your reasons, you may want to try to do a few things differently. Making some basic changes to the format of your reasons will make them easier to listen to and will make you sound more professional.

Organize the body of your reasons in a way that makes sense. You can start at the head and work to the tail, go from top to bottom, or if you are judging something where there is a standard scorecard, you can start with the section of the scorecard that has the most weight.

The object of making changes to your reasons is to make them easier to follow for the person marking them. Your reasons should flow from point to point. Try to avoid repeating words or phrases.

Here are a few possibilities for changes you may want to make to your reasons:

Openings

Add something to your opening to make it a more complete description of the class.

Start with,

"I placed this class of _____ 3 4 2 1."

or

"3 4 2 1 is my placing for this class of _____."

Then you could add a combination statement that sums up the priority used to judge the class or to describe the class winner.

Examples are:

"I started the class with the heifer that exhibits the most muscling and balance."

or

"I appreciate that all of the ewes in today's class possess superior quality."

or

"I found that this class split itself into two pairs. A top pair that showed more balance and muscle, and a bottom pair."

Body of Your Reasons

As you begin talking about each of the pairs that make up the body of your reasons, try starting each paragraph with something other than “I placed 2 over 3”. These statements are lead-in statements.

Some example ways to start your paragraphs include:

“Drawing your attention to my initial pair, I preferred 3 over 4.”

or

“In reference to my middle pair, I selected 4 over 2.”

or

“In the final pair, I chose 2 over 1.”

Other phrases you may want to include when you start paragraphs include:

Proceeding to

Moving to

Concerning

After closely analyzing the

If there are some similarities to the pairs, say so. Here are some ideas of ways to do that:

“In my initial pair of more dairy heifers, I preferred ...”

or

“Proceeding to the two larger framed gilts in the middle pair, I selected ...”

or

Drawing your attention to the taller, larger framed heifers, I chose ...”

If an animal has an obvious distinguishing characteristic, such as colour, you may want to refer to it by that colour. For example, if you have a class with three black heifers and one red one, you may want to say something like “Giving the advantage to the red heifer as she.....”

Grants

There may be times when you want to give credit to an animal you have placed lower. This is referred to as “Granting”. You can say things like “I grant that 2 is wider from pin to pin”. Other terms you may want to use in place of grant are:

- Admit
- Giving the advantage to
- I realize that
- I concede that
- I credit
- However, 4 is clearly
- I appreciate the of 4,

Transitions

In each paragraph, you may move from a positive point to a grant and back to a positive point, include some transition statements such as "Just as importantly", "On the other hand", "At the same time", "However", "Nevertheless".

Indicating Close or Obvious Placings

When you are judging classes you may find that some placings are very close. If they are, say so. Conversely, if the placing is an easy placing, say so too. Some ways you may want to state that a placing is close are:

- In a close placing, 1 goes over 2 because
- In a close pair, I chose 1 over 2
- 2 gets the edge because she is
- 2 has a slight advantage
- 2 has slightly more

If a placing is obvious, you may want to use one of these phrases:

- A logical winner in the class
- An easy winner in the class
- A clear cut winner
- 1 has a decided advantage
- 4 has a definite advantage
- 3 has a distinct advantage
- 2 has much more
- An outstanding in the class.

Words and Phrases to Avoid in Reasons

- Nice, Good, Better, Best – these words are weak, they are not comparative and explain nothing.
- Animal or Individual – Say what the animal is (barrow, gilt, gelding, heifer, etc.).
- Lacks or Lacking – non-descriptive; instead of saying a gilt “is lacking width”, say the one above her “is wider” and then say where this is most noticeable.
- Words ending with “ing” – These words tend to be weak: placing, criticizing, faulting. Instead say “I placed”, “I fault”, “I criticized”, etc. Words ending in “ed” make you sound more sure of your placing.
- Number - don’t say “number 1” say “1”.
- Avoid excessive use of “he”, or “she”. Be more specific; use an ID. For example, “The black heifer”, “The roan gelding”.
- “For being” or “kind of” – For example “I placed 3 last for being light muscled.” Instead say “I placed 3 last because he is light muscled.” Again, you sound more sure of your reasons.
- “It” – every animal has a gender. Use either “he” or “she” – whichever is appropriate.
- “That” – For example “that rump”, that top”, instead say “squarer rumped” or “leveler-topped”.

Adding Depth

Beginning judges may use statements like: “I placed 2 over 3 because 2 has more correct legs.” As you become more experienced, you should add some depth to that statement. Your reasons should have some specifics about what was more correct. You now should say something like, “2 has more correct legs with a more desirable set and a cleaner hock.”

Work toward adding specific points to the general comparisons you make.

Presenting Your Oral Reasons

As you become more experienced with judging, you may want to improve the presentation of your reasons. Here are a few hints that you can use to improve your oral reasons:

- Stand about as far from the judge as you are tall
- Speak clearly
- Speak so that the judge can hear you
- Stand still, don't fidget
- Don't chew gum
- Don't wear a hat
- Dress neatly and professionally - you are the judge!
- Smile!
- Say "Good Afternoon" or "Good Morning", whatever is appropriate
- Use eye contact
- Clasp your hands either behind or in front of you - this will help you avoid using gestures
- Avoid using notes - if possible don't even have them in your hand
- Make sure the placings in your reasons match the placings on your card
- Pause when giving your placings, say "4, 3, 1, 2"
- Pause briefly between paragraphs
- Speak for between a minute and a half and two minutes
- Keep a picture of the class in your mind
- Know the appropriate terms for each species
- Use comparative terms
- Don't memorize the reasons, but think of the class as you are speaking
- Don't learn one or two sets of reasons and apply them to every class
- Be prepared to answer questions
- Practice giving reasons to other people
- Practice giving reasons in front of the mirror
- Practice giving reasons into a tape recorder or video camera and critique yourself or have someone else critique you

Here is a scorecard that you may want to use to evaluate the structure and presentation of your reasons:

Item	Needs Work	Okay	You Nailed It!
Appearance			
Neat, Well Groomed			
Stood Still with Correct Posture			
Confident & Poised			
Voice			
Easily Heard, Used Vocal Variation			
Pause Between Paragraphs			
Overall Impression			
Reasons Well Organized			
Proper Grammar & Pronunciation			
Spoke with Conviction			
Did Not Use Notes			
Opening Statement			
Class Named Correctly and Completely			
Placings Match Card			
Combination Statement			
Sums up priority used to judge OR Description of Class Winner			
Pairs	T	M	B
Lead In Statement			
Identification Points			
Used Proper Terms			
Used Comparisons			
Was Positive			
Used Grants			
Concluding Statement			
Class Named Correctly and Completely			

Note - T M B indicates Top Pair, Middle Pair, Bottom Pair.

This comment sheet is only for the presentation of your oral reasons. Your reasons must be relevant and accurate for you to score well.

Written Reasons

The format of written reasons is the same as that for oral reasons. You can apply all of the pointers in this section to your written reasons.

You may want to evaluate your written reasons. Following is a form that you can use:

Guidelines for Marking Your Own Written Reasons

Format	Possible Points
Introduction	1
<p>Do you have a statement such as "I placed this class of Simmental replacement yearling heifers 2 4 3 1.?"</p> <p>Make sure you have named the class correctly and completely.</p> <p>Make sure your placings here agree with those above and below.</p>	
Body	3
<p>Do you have three paragraphs, one comparing each of the top pair, the middle pair, and the bottom pair?</p> <p>Give yourself a point for each paragraph in the body of your reasons.</p>	
Conclusion	1
<p>Do you have a summary statement such as "I placed this class of 1st cut alfalfa hay 3 1 4 2.?"</p> <p>Again, make sure you named the class correctly and completely.</p> <p>Make sure your placings agree with those above.</p>	
Total for Format	5

Presentation

Use comparative terms to state your reasons.

Words ending in “er”, such as longer, thicker, taller.

Phrases beginning with “more”, such as more feminine, more finish.

Give yourself one point for each positive comparison made. You should have at least three comparisons for each of the three pairs.

Deduct:

- 2 points each time you use one of the following words: “good”, “better”, “best”, “nice”.
- 1 point each time you make reference to an entry as “he”, “she”, or “it”. Always refer to an entry by the number given.
- 2 points for each negative comment. Make your comments positive. State the advantages of an entry and not the weak points of another by comparison. “I placed 2 over 3 because 3 has a weak topline.” is incorrect. “I placed 2 over 3 because 2 has a stronger topline.” is correct.

Total for Presentation 10

Content

Thoroughness 8

- Do your reasons for placing one entry over another reflect those of the official judge?
- Your placings do not need to be the same as the official judge, but you should recognize the same strengths and weaknesses of each entry with relation to another entry.

Correct Information.....27

- The reasons and terms that you use must be true and accurate for the class as specified by the official judge.

Deduct 3 points for each invalid statement about a pair

Total for Content..... 35

Grand Total..... 50

REMEMBER - When evaluating your card, you must score the points on your reasons only. You have already been scored on how you placed the class in placings. Be sure to score yourself on WHY you placed the class as you did.

Form and Function

One of the most difficult things for many beginning multi species judges to develop is an appreciation and an eye for species other than the one they are most familiar with.

When looking at different species of animals, there are a couple of points to remember:

- All animals have the same bones in their skeleton and they are attached to the same muscles.
- What is the function of that animal? Is it for meat? for riding? for milk production? for pulling something?

If you keep these points in mind, then you can work through what to look for in each species of animal.

Because structural correctness is important in all species, it is important to develop an appreciation for it. To be able to understand structural correctness, you need to have knowledge of the skeleton of animals and the correct angulations of joints.

Structural correctness is important in both market and breeding animals, although generally more emphasis is placed on the structural correctness of breeding animals. Market animals that are not structurally correct will not perform as well, as they may have difficulty moving and will require more days on feed to finish. Breeding animals that are not structurally correct may not have the longevity of more structurally correct animals.

When evaluating structural correctness, you need to look at the angles in a skeleton. This evident in a number of places, including:

- Shoulder
- Hoof
- Pastern
- Hock

When moving from judging one species to another, it is important to remember what the purpose of that species is and how that will effect it's function. For example, market animals (beef, sheep and swine) all need to have adequate muscling. This muscling should be most prominent in the areas where the higher priced cuts of meat are. Those higher priced cuts are most often in the loin and hindquarter.

Dairy animals need to have some evidence of dairyness. This is shown through angularity and sharpness – pretty much the opposite of market animals. The roundness of animals is due to fat and muscling. Neither one of those components is important to a dairy animal. In fact, if they are using their feed to build fat and muscle on their back they are not using that feed energy to produce milk. Another important factor in judging dairy animals is their udder. The udder is where the milk is produced and stored and if

it is not well attached and balanced there can be a variety of problems that may develop which can lead to culling that animal.

Horses are a bit different again, as they are used for either riding or draft purposes. In either case balance is an important factor, as are feet and legs.

Remember, when you are faced with a class that you are unfamiliar with, think about the function of the item or animal and then you can begin your judging.

It is important to know the correct terminology for the species and type of animal you are judging. For example, while market hogs, sheep and beef have finish, breeding animals, horses and dairy cattle have condition.

Thinking through these points can make it easier for you to judge a species you are unfamiliar with.

Expected Progeny Differences (EPD)

The information which follows is a general overview of EPDs, including what they mean, how they are used, and why they are beneficial. This is basic information that will help you use EPDs when evaluating animals in a judging competition. For more in depth information on EPDs, refer to most animal breeding textbooks or search for “expected progeny differences” on the internet.

Expected progeny differences are used to predict the performance of an animal’s offspring, or progeny.

Background

One of the main goals of today’s livestock producers is to make a profit. Generally, that profit comes from selling the product of an animal, whether it is milk, meat, or fleece. In order to obtain the highest possible profit, a livestock producer favours animals with superior performance of these profitable traits. Animals that demonstrate superior performance are often selected to be a sire or dam in order to pass on their genetics to their progeny. By continually selecting top quality animals for sires and dams, a livestock producer will tend to have progeny that are also top quality.

In a judging competition, you are evaluating the animals based on how close they are to the “ideal”. Ideal animals not only possess all the best qualities, but they are also able to pass these qualities on to their progeny. Animals that are able to produce superior performing progeny are of great value to a livestock producer. But how can a livestock producer predict whether or not an animal will produce superior progeny?

What are EPDs?

A livestock producer can predict the performance of an animal’s progeny based on the animal’s EPD, or expected progeny difference. An EPD is a number, either positive or negative, that predicts how the animal’s progeny will perform compared to the average of all other progeny, for a specific trait. An EPD is a prediction of the difference, not an absolute measurement.

For example:

- A bull with a “birth weight” EPD of +5 lbs will be expected to produce progeny that are, on average, 5 lbs heavier than the average of all other progeny.
- A mare with a “time to trot 1 mile” EPD of –1.0 seconds will be expected to produce progeny that trot 1 mile, on average, 1.0 second faster than the average of all other progeny.
- A dam with a “milk yield” EPD of +250 kg/year will be expected to produce progeny that have a milk yield, on average, 250 kg/year higher than the average of all other progeny.

Knowing an animal's EPD can help a livestock producer make decisions about which animals will produce superior performing progeny.

EPDs are Trait Specific

Livestock producers have the ability to measure a vast number of traits. Dairy producers may measure milk yield, milk fat percentage and calving interval. Beef producers may measure calving ease, yearling weight, and feed conversion. Poultry producers may measure egg weight, mature body weight, and hatchability. Sheep producers may measure birth weight, loin eye area, and grease fleece weight. EPDs for these traits are generally expressed in plus or minus variations of the actual units of measurement. Keep in mind that a positive EPD for some traits is desirable, while in other traits is undesirable. The same is also true for a negative EPD.

For example:

Desirable

- a positive EPD for milk yield (milk yield will be higher)
- a negative EPD for fleece grade (wool will be finer)

Undesirable

- a positive EPD for time to trot 1 mile (time will be slower)
- a negative EPD for weaning weight (animals will wean lighter)

Accuracy





An EPD may be accompanied by a measurement of accuracy, which is an expression of reliability of the EPD and may range from 0 to 1. Accuracy measurements fall into three categories:

- Low – 0.0 to 0.25
- Medium – 0.25 to 0.50
- High – 0.50 to 1.0

Animals with favorable EPD values and corresponding high accuracy values can be used with confidence that they will contribute favorably to the genetic improvement of the herd.

Using EPDs to Compare Animals

The following example will illustrate the use of EPDs when comparing two bulls:

BULL A Birth weight EPD+5.0 lbs	BULL B Birth weight EPD-1.5 lbs
	
Both are bred to identical groups of cows in terms of genetic makeup and management conditions.	
	
CALVES A An average of 5.0 lbs heavier than all other calves	CALVES B An average of 1.5 lbs lighter than all other calves
Therefore, the Average Birth Weight difference between the groups of calves is 6.5 lbs. $5.0 \text{ lbs} - (-1.5 \text{ lbs}) = 6.5 \text{ lbs}$	

Information Sources:

- Understanding Animal Breeding by Richard M. Bourdon
- Using EPDs by the University of Kentucky College of Agriculture
- South Devon Sire Summary by the North American South Devon Association VB/2003

Important EPDs for Sheep

EPD Abbreviation	EPD	Unit of Change	Impact
NLB	Number of lambs born	Lambs	More lambs = more lamb production per ewe
MM	Maternal Milk	Pounds (lbs)	More pounds = heavier lambs at weaning
60-DW	60 day weight	Pounds (lbs)	More pounds = more ewe milk production More pounds = heavier lamb at weaning
90-DW	90 day weight	Pounds (lbs)	More pounds = faster lamb growth
CFW	Clean Fleece Weight	Pounds (lbs)	More pounds = more wool per ewe
REA	Ribeye Area	Inches ² (in ²)	More in ² = heavier muscled lambs

Important EPDs for Swine

EPD Abbreviation	EPD	Unit of Change	Impact
NBA	Number of pigs born alive	Piglets	More pigs = more piglet production per sow
21-DLW	21-day litter weight	Pounds (lbs)	More pounds = more sow milk production More pounds = heavier pig weaning weight
DAYS	Days to 260 pounds	Days	Fewer days = faster pig growth Fewer days = fewer days to market
BF	Backfat	Inches (in)	Few inches = less fat in carcass
LEA	Loin eye area	Inches ² (in ²)	More in ² = heavier muscled pig

Important EPDs for Beef

EPD Abbreviation	EPD	Unit of Change	Impact
BW	Birth Weight	Pounds (lbs)	Fewer pounds = fewer calving problems
WW	Weaning Weight (adjusted to 205 days)	Pounds (lbs)	More pounds = faster calf growth More pounds = heavier feeder calves
MILK	Milk – maternal	Pounds (lbs)	More pounds = more cow milk production
YW	Yearling Weight (adjusted to 365 days)	Pounds (lbs)	More pounds = faster steer growth More pounds = reach market faster More pounds = greater mature size
REA	Rib Eye Area	Inches ² (in ²)	More inches ² = heavier muscled calves
MARB	Marbling	Percent (%)	Higher percent = more intramuscular fat Higher percent = higher quality grade

Adapted from: Georgia Agricultural Education – <http://www.aged.ces.uga.edu>
Mississippi 4-H Livestock Judging Guide

Using EPD Scenarios in Judging Classes

At some competitions, EPD information is given to the members. Often a scenario or situation is presented that animals will be placed in once the selection process is complete.

Generally, scenarios contain information on three factors:

- Production Environment - “Will the selected animal(s) need to perform in a high stress or low stress environment?” Some examples of things that might be mentioned in this portion of the scenario are information about the availability and quality of feed, climate conditions, housing conditions, assistance at birth.
- Performance Needs – “What type of performance does the breeder need from the selected animal?” Performance needs break themselves down into maternal and paternal needs. Maternal needs are those associated with milking ability, fleshing ability, early sexual maturity and moderate maintenance needs. Paternal traits include rapid growth, muscle production, acceptable birth weights and lean composition.

- Marketing Goals – “Will the breeder sell seedstock (or use as a replacement for a seedstock program where “genetic pieces” are sold)? Will the selected individual produce offspring for commercial production (i.e. feeder calf, pig or lamb sales)? Or, will the selected individual need to produce offspring that excel in carcass merit due to the marketing program?”

When given this information, take a look at the scenario and look for some priorities. Generally, these should describe what function the animals must serve – growth, leanness, muscle, etc.

Once you have determined the priorities, take a look at the performance data given and rank the animals based on the performance data presented.

You should also rank the animals on conformation after giving them a visual appraisal.

Once you have done both of the evaluations (performance data and visual appraisal), compare them and make your final decision on the class. If the placings are similar, your decisions are easy. If there are differences in your placings, you must use your skills of compromise and logic to make a final decision. Your final placing must combine both the placings on the performance data and the visual appraisal. If you are having difficulties making a final decision, go back to the priorities for the class and that should help you make a final decision.

If you have been given performance data for a class, you should refer to the performance data in your reasons.

At the beginning of your reasons, you may indicate what the priorities for the class were. This may be done in a statement such as:

“I placed this class of Yorkshire gilts with performance data 1 3 2 4. Emphasis was placed on growth, soundness and maternal excellence in my selection.”

or

“Based on the scenario given for the Yorkshire gilts, which emphasized growth, soundness and maternal excellence, I placed them 1 3 2 4.”

As you work through your pairs, you should also refer to the performance data as it was used to make your placings.