



2019 State 4-H Livestock Judging Contest

Illinois 4-H Livestock (Beef, Sheep, Swine & Meat Goats) Judging Contest

Coordinators: Dan Jennings, State Livestock Educator 4-H

There will be a **\$10** entry fee for all senior participants this year to cover lunch for them.

The Illinois 4-H Livestock Judging Contest will take place at the Stock Pavilion **1402 West Pennsylvania Avenue Urbana IL. Monday, June 17, 2019. Registration 8:30 am, Contest Starts at 10 a.m., participants must be there and checked in by 9:30 am. There is limited Street parking in front of the Stock Pavilion and it is all metered parking so if you wish to park close please bring quarters! Bagged meters are for officials only!**

General Rules

1. All contestants must be 4-H members and a record of their enrollment must be on file in the respective University of Illinois Extension Office.
2. Contestants need not be enrolled in a project pertaining to the field in which they participate; however, state judging events should be used to support the county/club 4-H livestock curriculum.
3. Registration is to be made on the day of the contest at the site of the contest. Fill out completely a registration card for each team in each contest. Turn in the card at the contest.
4. Members of past county 4-H judging teams who have represented Illinois at the American Royal Invitational Livestock Judging Contest are eligible for the State 4-H Livestock Judging Contest and are in addition to the team of four members.
5. Individuals who have completed a year of college are not eligible to judge at the American Royal contest. If you have a contestant that has completed a year of college, please enter that person as an individual in addition to your senior team.
6. Contestants and coaches will not be allowed near the classes to be judged before the 10:00 am starting time.
7. Each contestant must have a pencil and eraser.
8. Senior contestants will give 3 sets of oral reasons and answer 15 questions (1 swine, 1 beef, 1 sheep or goats).
9. Junior participants will answer 1 set of 15 questions (5 per specie).
10. Ten (12) minutes will be allowed for each class when no reasons are required, and fifteen (15) minutes will be allowed on the reasons classes. Two (2) minutes will be allowed to give oral reasons to the judge.
11. Water will be provided for contestants. Jackets and ties are not encouraged due to heat.
12. Errors in calculation of results, which are reported, will be corrected up to July 2nd.
13. 4-H members wishing to try out for the State Team must judge in this contest to be eligible.

Preliminary Contest Information -- June

Participation: Each county may enter a total of **three four-member teams and a unlimited number of individuals in the junior and senior contests. Those three teams can be two junior and one senior teams OR one junior and two senior teams.** The scores from the three highest scoring individuals will be totaled for the team score. All individuals will be eligible for individual honors.

Junior Eligibility: Each county may enter a maximum of two four-member teams and an unlimited number of individuals. Contestants must not have passed their 14th birthday by January 1, 2019. **All youth that are of Junior age must judge in the Junior contest and may not move up to senior division early.**

Senior Eligibility: Contestants must have passed their 14th birthday and cannot have passed their 19th birthday as of January 1, 2019. Each county may enter a maximum of two four-member teams and an unlimited number of individuals. Exceptions for additional entries are:

- Any 4-H member that has completed a year of college should be entered as an extra individual and not part of your team. If this individual has undergone training for a post secondary livestock-judging contest, he or she is not eligible for this contest.
- Any 4 H member who has competed at the American Royal 4-H Livestock Judging Contest, as a member of the county team representing Illinois, must participate as an extra individual in the June contest and not as a part of a team.

Classes: There will be three classes of beef, three classes of swine and two classes of sheep. **In addition, a class of meat goats (market or breeding class) may be substituted for any one class of the other three species.**

Production Information: Production information will be provided on one class of heifers, gilts and ewes. The production information will be similar to those outlined in the *Beef Improvement Federation Fact Sheet: Utilizing Performance Data in Judging Classes* (Publication 400-028, August 1985) and the National Swine Improvement Federation's *Utilizing Performance Data in Judging Classes* (NSIF-5) on using beef and swine performance data in judging contests.

Questions: Contestants will have one class of fifteen (15) questions, which will be worth fifty points. Contestants will answer (5) questions on one beef class, five (5) questions on one swine class, and five (5) questions on one sheep class. The questions will emphasize carcass and production characteristics.

Officials will inform contestants which classes will be used for questions prior to the contest. Contestants may take notes but notes may not be used to answer questions. All contestants will answer the questions at the same time.

Results and Awards

The summary results in the contests will be emailed within five (5) working days of the contest to the County 4-H Contact. Detailed results and ribbons will be mailed within 2 weeks of the contest. Contestants will be ranked in three groups with blue, red, and white ribbons awarded. Ribbons will not be awarded to county teams.

National Contests

Contestants in national 4-H competition events must not have participated in official post secondary (university, college, junior college or technical school) competitive events of a similar nature in the same subject area to be eligible for participation in national 4-H competitive events. Also, they cannot be a member of a post secondary team undergoing training in preparation for an event.

A 4-H member may participate in each national event one time. Therefore, a 4-H member **will not** be eligible a second time for the same national event and for the qualifying invitational workout.

UTILIZING PERFORMANCE DATA IN FUTURE LIVESTOCK JUDGING CONTESTS

Livestock judging contests have long been used to exercise the decision-making abilities of young producers. However, to better educate future producers, performance data must be included in all judging competitions.

DEFINING THE CLASS

Before one can make logical selections, it is critical to understand the selection goals. For example, how will the selected individuals be used, under what conditions will they be raised, and what are the selection priorities for the specific herd. This information should be presented in a scenario or situation statement.

EXAMPLE 1 Angus Bull Calves

Scenario: The Angus bull calves will be used on a commercial ranch. They will be used in a three breed rotational crossbreeding system, bred to 1200 lb. Polled Hereford x Limousin cows. The bulls will not be bred to heifers. All steer calves and all heifer calves, that are not retained for breeding, will be fed to slaughter by the owner and marketed on a value based grid. Feed and labor resources are adequate.

Pedigree Based E.P.D.'s

<u>No.</u>	<u>Birth Date</u>	<u>Weight</u>	<u>Weaning Weight</u>	<u>Yearling Weight</u>	<u>Maternal Weight</u>	<u>Milk</u>	<u>IMF</u>	<u>REA</u>
1	Feb 10	+6.5	+41.6	+72.5	+18	-0.05	+0.16	
2	Feb 13	+2.4	+47.4	+89.7	+19	+0.31	+0.67	
3	Feb 14	+1.8	+52.5	+87.7	+17	+0.43	+0.56	
4	Mar 1	+1.2	+44.8	+66.5	+21	+0.04	+0.21	

After studying the scenario of the Angus bulls in Example 1, it becomes apparent that the selection criteria are for maximum growth and carcass merit. Since the bulls will be used on mature cows, feed is adequate, and all cattle are retained for breeding or slaughter, the greatest emphasis should be on growth which is mostly accurately measured as yearling weight and carcass traits which are measured by IMF and REA. Because the bulls will not be used on yearling heifers we do not have to be as concerned with the higher birth weight bulls.

In example 1, all performance data is listed as E.P.D.'s (Expected Progeny Difference). Beef cattle E.P.D.'s are expressed in pounds as the expected performance of the progeny of that individual differs from the breed average. For example, we would expect the calves from bull 1 to be 4.1 pounds heavier at birth than calves sired by bull 2 and be 17.2 pounds lighter as yearlings.

When we analyze the data in Example 1, we find bulls 2 and 3 to be the highest growth bulls due to their superior yearling weight E.P.D.'s. Bull 1 has average performance, however if he was to be used on yearling heifers his high birth weight would probably place him last in class. Bull 4 has the poorest growth performance data, however if you are looking for a bull to develop a heavy milking cow herd he would be the best bull in this class.

Carcass data indicates that bulls 2 and 3 have the highest intramuscular fat (IMF) E.P.D.'s and would be expected to pass the most marbling into their offspring. Bulls 2 and 3 also have the highest ribeye area (REA) E.P.D.'s and thus should produce calves with the more muscular carcasses. Bulls with higher IMF and REA figures should capture greater premiums on a value based marketing grid.

Traditional swine breeding classes included days to 230 pounds, backfat at 230 pounds, and S.P.I. (Sow Productivity Index). These traits are still very important, however, the swine industry has recently introduced E.P.D.'s for these traits.

Example 2 shows the type of data that will be presented at future contests. It is important to carefully study the data, because it does differ from the beef cattle data. The E.P.D. for pigs born alive predicts the litter size for each individual's progeny in number of pigs. In Example 2, gilt 1's progeny would be expected to produce 0.5 live pigs per litter more than the progeny of gilt 2. The E.P.D. for litter weight is given in pounds and as you can see gilt 1 is expected to produce progeny that will produce litters that are 6.0 pounds heavier at 21 days of age when compared to gilt 3.

The best indicators of growth rate and leanness are the E.P.D.'s for days to 230 pounds and backfat respectively. It is important to note that for these two traits a negative number is more desirable than a positive number. In example 2, gilt 3 would be expected to produce the fastest growing and leanest progeny. When comparing growth, gilt 3's offspring should reach 230 pounds 7.3 days sooner than gilt 1's pigs and be .2 inches leaner.

The gilt that you select in Example 2 is dependent on the selection goals. For example, if you are looking for a gilt to produce terminal sire boars and you are only interested in growth and leanness you would select gilt 3. However, if you are looking for a gilt to produce maternal line gilts you would select gilt 1. On the other hand, gilt 2 would probably be your selection if you are looking for a balance of traits such as in a three breed rotational cross.

EXAMPLE 2 E.P.D.'s

<u>Gilt No.</u>	<u>Pigs Born Alive</u>	<u>21 Day Weight</u>	<u>Days to 230</u>	<u>Backfat Thickness</u>	<u>SPI</u>
1	1.0	4.7	3.2	.1	108.1
2	0.5	2.5	0.4	.0	104.2
3	0.1	-1.3	-4.1	-1	101.0

Flock Expected Progeny Differences (F.E.P.D.) will be given on breeding ewe classes in the future. Table 1 is an example that was used in the 1989 National 4-H Livestock Judging Contest.

TABLE 1 F.E.P.D.'s

<u>Ewe No.</u>	<u>Birth Date</u>	<u>90 Day Weight</u>	<u>Maternal Lambs Born</u>	<u>Maternal Pounds Weaned</u>	<u>Grease Fleece Weight</u>
1	2/10	+2.7	+.03	.4	+.5
2	2/10	+6.1	+.18	.9	-.1
3	2/14	+6.0	+.11	.7	+.5
4	2/16	-4.2	+.26	-.7	+.5

How you use this data depends on the goals of the farm. For example, if the breeder is in the business of producing seed stock for a terminal crossbreeding program, then selection would emphasize growth traits such as 90-day weight. In this case, ewes 2 and 3 would be selected and 4 would be last in class. On the other hand, if we are trying to increase multiple births, then 4 has the best data because she has the highest F.E.P.D. for Maternal Lambs Born. If wool sales contribute significantly to the profitability of the operation, then you place the number 2 ewe lower in class.

Often the given scenario (farm goals) emphasizes a balance of traits. In this example, 2 and 3 ewes have very similar data, with the 3 ewe having an advantage in pounds of wool. Therefore, unless wool production is emphasized, ewes 2 and 3 would start the class and be placed on visual traits.

Performance data should be used in judging contests at all contest levels (county, state, and national). However, use of the data is of little value if the judges are not given the goals of the operation.

SUMMARY

At one time, livestock was selected by visual appraisal alone because nothing better was available. Fortunately, evaluation techniques have improved, and so visual appraisal can now be used as an aid to the more accurate performance selection. Difference in composition, frame size, muscle expression, structure, and abnormalities can be determined visually, after the main decisions have been made on performance data.

Remember that there are no clear guidelines on placing classes, even though performance records are included. In fact, including weights and breeding values can create more ways to justify alternate decisions. The records may even be contradictory to the results of visual appraisal alone. However, these contradictions can provide a marvelous opportunity to discuss various producer goals and how alternative selection practices can be used to reach them.

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