

2013 Nebraska State FFA – Livestock Selection Exam

You will have 20 minutes to complete this exam. There are 25 questions.

You must use a #2 pencil to complete the scantron used in association with this contest.

Use the scantron form titled “TEST”

Completely bubble in your response to each question on your scantron.

When complete, this form will be turned in to your group leader.

Questions 1-5 are associated with the following set of data.

Boar No.	Expected Progeny Differences				
	Number Born Alive	21-day Litter Weight	Days to 250 lbs	Backfat	Maternal Line Index
A	0.6	5.0	-1.6	0.00	118
B	0.3	3.1	-3.5	-0.05	112
C	0.5	4.8	-2.7	+0.01	117
D	0.1	2.0	+1.5	-0.04	106

- Which boar should produce the fastest gaining market hogs to 250 lbs, on average?
- True (A) or False (B): Female offspring of Boar A should wean litters that are 3 lbs heavier than those of Sire D, on average.
- Based upon data provided, which boar would you expect to have the greatest terminal sire index value?
- Theoretically, which boar has an “AVERAGE” backfat EPD value?
- True (A) or False (B): Progeny of Sire b should will reach 250 lbs 5 days sooner than progeny of Sire D, on average.

Questions 6-10 are associated with the following set of data.

Bull No.								
	Birth Weight	Weaning Weight	Yearling Weight	Maternal Milk	Stayability	Marbling	Ribeye Area	Yield Grade
A	3.5	63	106	25	22	0.12	0.81	-0.38
B	2.0	72	89	20	28	0.07	0.59	-0.24
C	2.9	67	95	15	24	-0.01	0.68	-0.35
D	4.4	68	99	22	20	0.31	0.72	-0.29
Breed Avg	2.3	63	91	23	22	0.09	0.60	-0.17

- True (A) or False (B): Daughters of Sire A should produce 5 lbs more milk per day than daughters of Sire B, on average.
- Daughters of which sire have the greatest probability of remaining in the herd for at least 6 years?
- True (A) or False (B): Market-bound progeny of Sire A should have a more desirable yield grade than those of Sire B, on average.
- How many of these bulls are below average for marbling? (A = 1; B = 2; C = 3; D = 4)
- Which sire should produce market-bound progeny who most likely receive premiums when sold on a quality-based grid?

The next 5 questions (11-15) are unrelated to any data set

- Which of the following is NOT a recognized USDA Quality Grade of Beef?
A) CAB B) Choice C) Commercial D) Prime E) Select
- An average market wether in the U.S. today has approximately how much fat at the 10th rib?
A) 0.15 inches B) 0.25 inches C) 0.35 inches D) 0.45 inches
- An average sized feedlot steer will commonly produce carcasses that weigh 800 to 900 lbs. What is the average dressing

percent for a typical market-ready feedlot steer?

- A) 43% B) 53% C) 63% D) 73%

14. Which of the following best represents a typical loin eye area for market hogs in the U.S.?

- A) 4.0 in² B) 7.0 in² C) 10.0 in² D) 13.0 in²

15. Which of the following YIELD grades of beef is representative of an extremely lean, heavy-muscled animal. While there is no need to calculate the yield grade, such an animal might produce an 850 lb carcass with 0.2 in fat, an 18.0 in² ribeye and 1.5% KPH.

- A) 1 B) 5 C) Prime D) Standard

Questions 16-20 are associated with the following set of data

Boar No.	Expected Progeny Differences						
	Number Born Alive	21-day Litter Weight	Days to 250 lbs	Backfat	Sow Productivity Index	Maternal Line Index	Terminal Sire Index
A	-0.30	-2.2	-4.5	-0.08	87	98	114
B	+0.20	+2.3	-1.7	-0.02	108	109	110
C	+0.90	+4.7	+1.3	+0.04	122	120	94
D	+0.20	+2.3	-3.5	+0.02	108	113	112

16. Which boar appears to be genetically most suited for the production of replacement breeding gilts?
 17. Which boar appears to be most suited for the production of lean, fast-growing show pigs and market hogs?
 18. True (A) / False (B): Given the data, there are NO potential littermates in this class.
 19. Which boar has a terminal sire index that is below average?
 20. Which boar's female offspring would be expected to produce the largest litters, on average?

Questions 21-25 are associated with the following set of data

Bull No.	Expected Progeny Differences										
	Actual BW	BW EPD	WW EPD	YW EPD	MM EPD	Actual SC	SC EPD	Marb EPD	REA EPD	\$ Feedlot	\$ Grid
A	82	-0.7	39	98	27	25 cm	+0.34	+0.22	+0.30	+45.35	+33.60
B	92	+6.2	48	100	24	39 cm	+0.27	-0.03	+0.52	+42.55	+19.54
C	77	+3.8	34	82	18	36 cm	+0.37	+0.27	+0.27	+27.30	+35.87
D	110	+4.1	48	108	32	42 cm	+0.52	-0.08	-0.04	+45.62	+18.58
Breed Avg	-----	+2.4	+38	+76	+18	-----	+0.32	+0.08	+0.12	+34.44	+24.70

BW = Birth Weight, WW = Weaning Weight, YW = Yearling Weight, MM = Maternal Milk, SC = Scrotal Circumference, Marb = Marbling, REA = Ribeye Area

21. Which bull is most suitable for usage on heifers as it should be the easiest calving sire, on average?
 22. Which bull is most likely to fail a breeding soundness examination, today?
 23. Of the two bulls projected to enhance quality grades compared to the average bull, whose offspring should have greater post-weaning growth performance potential?
 24. Which bull would you expect to produce the heaviest muscled offspring?
 25. Which sire would you expect to calculate with the highest \$Beef Index?