Performance and Marketing
2016 National 4-H Skillathon Contest
100 points

Scenario:

Your task is to rank the boars and their associated pen of feeder hogs in order of perceived performance at the end of the feeding period. Each pen of feeder hogs is from an individual boar and performance data indexes are listed with each set of feeder hog information and data. Using the information provided please calculate performance criteria requested for the boars and pens of feeder hogs. Additionally, you are required to defend your answer in no more than 2 minutes as a team orally as you answer the final 3 questions related to performance criteria.

Boar #	BF	Days	LBS	FE	TSI	LWT	SPI	MLI	Pigs/Herds
1	0.00	-4.55	1.75	-0.04	138.4	2.16	97.6	107.6	256/4
2	-0.02	-4.99	2.00	-0.05	141.8	-0.32	102.0	111.8	0/0
3	-0.02	-3.15	0.44	-0.01	115.4	-0.53	99.3	100.0	480/7

Choose the best answer for the following questions: (30 points possible – 3 points each)

1. Which Pen of feeder pigs has the best chance to perform at a higher rate than the expected average(s) used to calculate end weight in each scenario and why?

#1 PROVEN STUD W/ 2nd & EPD'S FOR PERFORMANCE OR #2 VIRGIN STUD WHO IF HE PERFORMS AS EXPECTED WILL HAVE HIGHEST PERFORMING HOGS

2. Which sire is a virgin stud and what does that mean? What are his performance standards based on?

#2 SOLELY ON HIS BASE CALCULATED EPD'S

3. Projected rate of gain and performance are measured, directly or in-directly, in which EPD's provided for the 3 sires?

DAYS, LBS, FE, TSI & MCI

4. Projected reproduction traits are measured, directly or in-directly, in which EPD's provided for the 3 sires?

SPI & MCI

5. Projected carcass quality and/or yield are measured, directly or in-directly, in which EPD's provided for the 3 sires?

BF, DAYS, LBS, TSI, MCI

6. Define TSI and include the measurements that go into calculating this sire index-

TERMINAL SIRE INDEX
WEIGHTS THE EPD'S FOR BF, DAYS, LBS & FEED/GAIN

7. Define Days and include the measurements that go into calculating this sire index-

DAYS TO 250
CALCULATED FROM AN ANIMALS WEIGHT & AGE

8. Define MLI and include the measurements that go into calculating this sire index-

MATERNAL LINE INDEX —
WEIGHTS EPD'S FOR TERMINAL & MATERNAL TRAITS W/ 2X EMPHASIS ON REPRODUCTION COMPARED TO POST WEANING PERFORMANCE

9. Define SPI and include the measurements that go into calculating this sire index-

SOW PRODUCTIVITY INDEX – WTS EPD'S FOR # BORN ALIVE, NUMBER RAISED & 21 day LITTER WEIGHT.

10. Define what STAGES stand for?

SWINE TESTING AND GENETIC EVALUATION SYSTEM

Progeny from boar #1: A group of 50 barrows weighing an average of 40lbs has arrived to your finishing barn at a cost of $25/hd. The producer that you purchased them from told you to expect the following performance from this group of feeder hogs which will gain 2.1lbs/day on average to reach your targeted live weight of 260lbs. Feed costs will run $270/ton and you expect these hogs will have a feed:gain of 2.3. You expect that carcass performance with these hogs will result in 0.85 in. in BF, and 8.9 Sq. in. of LEA and with a 73% dress, according to the producers information.

Pen information (All calculations must be to the nearest 100th): (4pts each)

1. What are the number of days to 260lbs live weight?
   260 − 40 = 220 (Final Wt − Int Wt = Gain) 220 / 2.1 = 104.76 Days (Gain / ADG)
2. What's the expected total lbs of feed that will be fed to the pen in order to achieve the expected weight gain average of 260?
   220 (Gain) × 2.3 (F:G) = 506 #'s of Feed/Hd × 50 Hd = 25,300 #'s of Feed/Pen
3. What is the expected total cost of feed?
   25,300 (Total #s of Feed) / 2000 (#s in T) = 12.65 T × $270/T = $3,415.50 Cost to Feed/Pen
4. Calculate the total feed cost/lb of gain ($/lb)?

   Total Feed Cost/Pen $3,415.50 / Total #s of Gain/Pen 11,000 = $0.3105 feed cost / lb Gain

Progeny from boar #2: A second group of 50 barrows weighing an average of 45lbs has arrived to your finishing barn at a cost of $32/hd. The producer that you purchased them from told you to expect the following performance from this group of feeder hogs which will gain 2.0lbs/day on average to reach your targeted live weight of 260lbs. Feed costs will run $270/ton and you expect these hogs will have a feed:gain of 2.5. You expect that carcass performance with these hogs will result in 0.95 in. in BF, and 9.2 Sq. in. of LEA and with a 71% dress according to the producer's information.

Pen information (All calculations must be to the nearest 100th): (4pts Each)

1. What are the number of days to 260lbs live weight?

260 − 45 = 215 lbs gain; 215 / 2.0 = 107.50 days

(Final wt − Int wt = Wt Gain; Gain / ADG = Days)

2. What's the expected total lbs of feed that will be fed to the pen in order to achieve the expected weight gain average of 265?

215 × 2.5 = 537.50 # of feed/hd; 537.50 × 50 = 26,875 # of feed/pen

(Gain × F:G = # of Feed/hd; # of Feed/hd × # in a pen = # of feed/pen)

3. What is the expected total cost of feed?

26,875 / 2,000 = 13.44 T × $270/Ton = $3,628.13

(# of feed/pen / # in a Ton = Tons; Tons × $/Ton = Total Feed Cost)

4. Calculate the total feed cost/lb of gain ($/lb)??

3,628.13 / 10,750 = 0.3375

(Total Feed Cost / Total lbs of Gain/pen = Feed Cost/lb of Gain)

Progeny from boar #3: A third group of 50 barrows weighing an average of 35lbs has arrived to your finishing barn at a cost of $23/hd. The producer that you purchased them from told you to expect the following performance from this group of feeder hogs which will gain 1.8lbs/day on average to reach your targeted live weight of 260lbs. Feed costs will run $270/ton and you expect these hogs will have a feed:gain of 2.5. You expect that carcass performance with these hogs will result in 0.65 in. in BF, and 9.2 Sq. in. of LEA and with a 74% dress according to the producer's information.

Pen information (All calculations must be to the nearest 100th): (4 pts each)

1. What are the number of days to 260lbs live weight?

260 − 35 = 225 (Final wt − Int wt = wt gain) 225 / 1.8 = 125 (Gain / ADG = Days)

2. What's the expected total lbs of feed that will be fed to the pen in order to achieve the expected weight gain average of 260?

225 (Gain) × 2.5 (F:G) = 562.50 (#s of feed/HD) × 50 (HD) = 28,125 #s of feed / PEN

3. What is the expected total cost of feed?

28,125 (Total #s of feed) / 2,000 (#'s in T) = 14.06 T × $270/T = $3,796.875 (Total Cost of feed)

4. Calculate the total feed cost/lb of gain ($/lb)??

Total Cost of Feed / Pen: 3,796.875 / 11,250 (Total #s of Gain / Pen) = 0.3375 feed cost / lb of gain

1. Please orally defend your reasons for the 3 questions that precede this paragraph. You will pick a boar and their off spring based on their projected performance in each scenario that best fits the question asked. You will have to give specific reasons as to why you chose the boar and their offspring that you did for each question. You may compare and contrast boars within a question to support your reasoning. Use the following questions as a basis to structure your 2 min defense. (~~3~~ points)

A. Which boars projected pen data shows his offspring will be higher performing and result in the cheapest cost of feed/lb of gain?

1

B. Which boars EPD's show that his offspring should exceed the other pens performance and is higher than his projected performance based on the producers information?

2

C. Which boar has the least promise in both actual projected performance and EPD performance? Where there any surprises once you made your calculations from the projected values?

3 but Calculated feed Cost/lb of gain was the same as Boar 2, his performance EPD Information fell short.