

Official placing/cuts for Sire Selection Problem No. 1:

2 - 1 - 3 - 4, with cuts of 3 - 4 - 6

Official placing/cuts for Sire Selection Problem No. 2:

3 - 1 - 4 - 2, with cuts of 4 - 3 - 2

Official reasons for placing sire selection classes:

PROBLEM # 1: From the scenario, it is determined that the breeder is concerned primarily with creating a son of this cows to be sampled in artificial insemination, one balanced for high production and correct type traits.

The cow to be mated is above the herd's lactation averages for fat, milk, and protein yield. According to her linear information she is above average in stature, tends to be strong in frame and is fairly deep bodied. Her rump angle shows the pins are slightly above the hips and her legs tend to be curved, but her foot angle is above average. Her fore udder attachment is average and the rear udder attachment is low and narrow with less cleft and deeper than average.

Considering the available bulls, all bulls have similar PTA's for protein yield, with a slight advantage for bull #4. In the areas of the cow's perceived weaknesses, bull #2 has the highest value for rear udder attachment very closely followed by #1. Rear udder width favors the bulls in the order of 1 though 4 while udder cleft reverses the last two. Bull #2 does have the strongest improvement in udder depth while #1 shows the least improvement. Bull #2 gives the strongest correction in rump angle while #4 would be the strongest in the other direction.

Bulls #1 and #2 are the strongest in the most type components for this mating with #2 having a slight advantage over #1. Due to some of the negative aspects of #4 he seems to be the least desirable for the mating but #1 does have an advantage over #3.

For these reasons, the best placing for this class of sires is 2-1-3-4, with cuts of 3-4-6.

PROBLEM # 2:

In the scenario, it is indicated that the dairyman is primarily concerned with the production of cheese on his farm. The market pays on cheese yield. The second goal is to put emphasis on type traits for medium sized frames, correct feet and legs with functional udders.

The cow to be mated is above average for milk, fat, and protein. According to her linear traits, the cow is below average in stature, high pinned, narrow rumped and could use improvement in strength. The cow has adequate dairy form with desirable rump characteristics and an above average udder except for the wide teat placement. Her legs are slightly curved with a steep foot angle.

When ranking the available bulls, the cheese merit \$ are very important to the success of the operation. Ranking on this criteria provides a result of, 3-1-2-4.

All bulls will help accomplish the breeder meet the goal of creating a cow with functional type. The goal is to have a medium framed cow and each bull will help to improve the slightly below average stature. #4 does have an advantage in improving stature the most and #1 the least. The only udder trait of concern is the wide teat placement and #4 is the best to improve this trait and #2 the least. Overall #2 shows the least desirable traits for udder improvement. The legs show just a slight curve and not a major concern for

correction as all bulls will help to improve this trait.

Also of concern in this mating is the low reliability of bull #2. At 76% it is considerably lower and subject to more change in the proof of any other bull for this mating.

The final ranking can be determined by combining the results of these rankings. Since cheese production is still the number one goal of the operation and the differences in type for the areas of concern are slight, it follows that the placing should be made on the cheese merit \$. However, because of the low reliability of bull #2 and some of the low rankings for his type improvement ability, he places last in this class.

Considering these points, the official placing for these sires is 3-1-4-2 with cuts of 4-3-2 .

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