AFFIRMED IS CONFIRMED

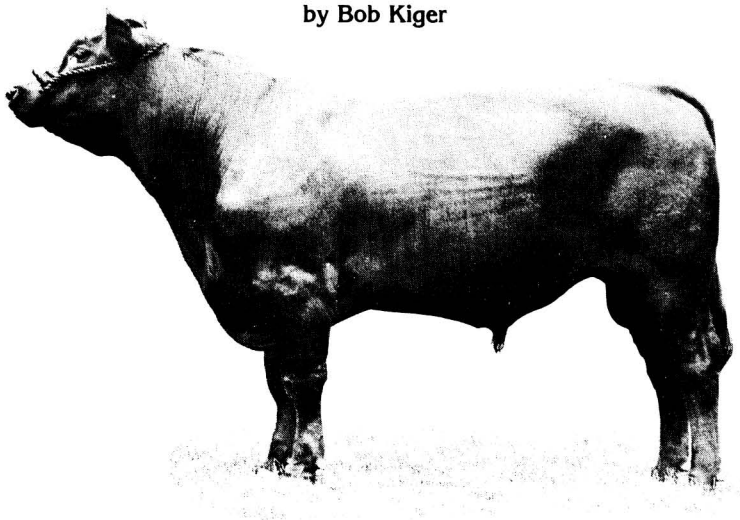
by Bob Kiger

Sir William Angus, Hillsdale, N.Y., has proven the first son of Black Marshall 482, "Sport," free of syndactyly. Sir William, conforming to the guidelines established by the American Angus Assn., mated Ellanin Affirmed 1K to different daughters of a confirmed carrier bull. The 35 required fetuses were removed by preterminal cesarean section.

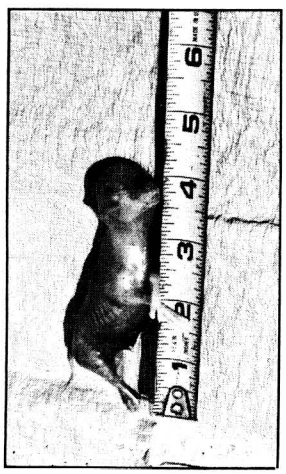
The test was completed on July 11, when the final 12 of 35 fetuses were removed and examined by Dr. H.W. Leipold, DVM, PhD, Kansas State University, and American Angus Assn. staff. The fetuses were removed at an average age of 60-70 days; but according to Dr. Leipold, an affected mulefoot embryo can be recognized as early as day 30 of gestation.

Syndactyly is a simple autosomal recessive with varying degrees of expression. Recessive defects are carried from generation to generation by normal-appearing carriers or heterozygotes.

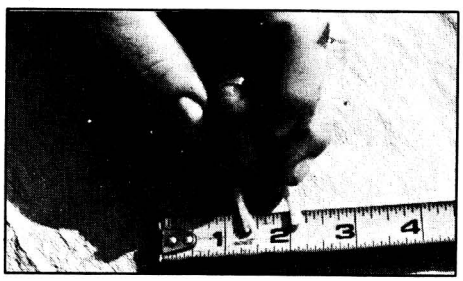
When carrier bulls are mated to carrier females, 25% of their offspring will be defective and 75% will be normal. Moreover, two of every three normal calves from such parents also will carry a hidden abnormal gene that they, too, can transmit to their offspring. The defects are exposed only when heterozygous cattle are mated to other heterozygotes and defective calves appear. This is why it is imperative that recessives be recognized and eliminated—or at least have their frequency reduced to insignificant levels.



Ellanin Affirmed 1K



At left is one of the final 12 fetuses removed and examined for syndactyly by Dr. H.W. Leipold.



At left is another of the fetuses, 35 of which were removed and examined at an average 60-70 days of age.

All well developed, each fetus was easily diagnosed.

There are four methods approved by the American Angus Assn. for the purpose of progeny testing bulls for the genetic defect syndactyly.

1. Mating to actual abnormals.
2. Mating to known carriers.
3. Mating to own different daughters.
4. Mating to different daughters of a confirmed carrier bull.

The use of super ovulation, embryo transplant and preterminal cesarean section have considerably shortened the time involved to test a bull. However, most beneficial is the use of mulefoot cows or heifers as donor animals, since the number of fetuses required is drastically reduced.

Mating to actual abnormal mulefoot cows requires only seven offspring, while mating to known carriers requires 16. Mating to own different daughters and mating to different daughters of a confirmed carrier bull both require 35 fetuses to complete a successful test. Therefore, these required number of offspring are used to insure a probability level of .01.

Progeny testing bulls for syndactyly will enable a breeder not only to eliminate the possibility of introducing a genetic defect carrier into his herd but, hopefully, gain complete confidence from his buyers. ▲