

Breeding Heifers with Sexed Semen – 2016 Update



College of Agriculture,
Food and Environment
Cooperative Extension Service

By: George Heersche, Jr.

Sperm cells which result in a heifer calf can be separated from sperm cells which result in a bull calf with 90% accuracy using a "flow cytometer" instrument. The process is relatively slow and causes some damage to sperm cells, but not as much damage as other techniques which have been used to sort x-bearing sperm from y-bearing sperm.

The two main roadblocks to the application of this technology have been fewer sperm cells from each collection are available for freezing and lower conception rates.

Conception rates with sexed semen have improved recently. Sexed semen conception rates in virgin heifers have been reported at 85% of what a herd is experiencing with conventional semen. For optimum results, sexed semen is best used on first-service, virgin heifers in good standing heat.

What are the main benefits of this technology for Kentucky dairy farmers? The first is to increase the percentage of heifer calves born which could be used to expand the herd or to sell as replacements. Homegrown heifers are the most biosecure way to expand the herd. For those who want to maintain herd size the extra heifers can be sold and provide additional income.

The second application is to increase the percentage of heifer calves born from first-calf heifers. Virgin heifers are more fertile than cows so semen placed into heifers always yields a better return on investment. Younger animals in a herd should be genetically superior to the older animals so getting more heifer calves out of heifers will speed up genetic progress. In addition, calving difficulty is lower when first-calf heifers give birth to heifer calves resulting in more live calves and a better chance of animals getting off to a good start in their first lactation.