

SEX-SORTED SEMEN: EFFICIENCY OF INSEMINATION AND OPPORTUNITIES TO INCREASE OUTCOME OF PREGNANCIES IN DAIRY AND BEEF CATTLE. A REVIEW

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Contents. Insemination with semen, separated by flow cytometry into fractions containing X- or Y-chromosome-bearing populations of sperm, allows one to skew the sex ratio of offspring up to 90% of the desired sex. The disadvantage of using sexed semen is a small insemination dose of functionally impaired sperm, exacerbated by damage during sorting and the result is reduced fertilising potential. With the commercial introduction of sexed semen, its use has been recommended for the insemination of heifers due to the higher fertility potential compared to lactating cows. The benefit and rate of genetic gain would be greater through obtaining additionally high-value offspring from superior cows using the sexed semen of elite bulls. Studies that have aimed to increase the efficiency of insemination with sexed semen have focused on the use of timed insemination programmes. This overview represents data from studies on sexed semen, factors related to pregnancy rates and opportunities favouring an increase of pregnancies in dairy and beef cattle breeds.

Keywords: cattle, sex-sorted semen, insemination, effects, timed programmes