



The Economic Value of Sexed Semen Programs for Dairy Heifers

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[http://www.uwex.edu/ces/dairymgt/
Management Tools](http://www.uwex.edu/ces/dairymgt/Management Tools)

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Instructions of Use

In order to calculate the economic value of using sexed semen for heifers you need to define some reproductive, biological and economic parameters.

For all input information you can enter information either using the provided spin buttons or writing numbers directly from your keyboard.

1. Conception rates
 - a. Conventional semen conception rate (CR; %). This is the percentage of heifers becoming pregnant after the first service with conventional semen. You can enter a low, and average and a high CR.
 - b. Sexed semen CR as a proportion of the conventional semen CR (%). This is the percentage of CR of sexed semen with respect to the conventional CR. The tool will automatically calculate the absolute value of CR when using sexed semen. Example: 80% means that the sexed semen CR is 80% of the conventional CR.
2. Expected females
 - a. Female calves with conventional semen (%). This is the percentage of male calves when conventional semen is used.
 - b. Females calves when using sexed semen (%). This is the percentage of female off-springs when sexed semen is used.
3. Semen cost
 - a. Estimated cost of conventional semen dose (\$).
 - b. Estimated cost of sexed semen dose (\$).
4. Economic parameters
 - a. Discount rate (%). Interest rate to calculate the net present value.
 - b. Female calf value (\$). Estimated market value of a female calf.
 - c. Male calf value (\$). Estimated market value of a male calf.
 - d. Raising cost (\$/day). Daily cost of maintaining a heifer between 15 and 20 months of age.



- e. Salvage value (\$/kg). Value of a heifer culled at 20 months of age assuming she weighs 1112 lb.
 - f. Replacement value of a 20-month pregnant heifer. Estimated market value of a 20-month pregnant heifer.
5. Interpret the economic value (EV; \$) of sexed semen programs compared with a conventional semen program.
 - a. Figure presented shows the difference of the NPV of sexed semen and conventional semen. Positive values ($EV > 0$) indicate that the sexed semen outperformed the conventional semen and negative values ($EV < 0$) indicate that the conventional semen outperformed the sexed semen.
 - b. In the Figure there are 3 groups of bars. Each group represents the your defined CR: low, average, high.
 - c. For your convenience a box below each group of bars indicates the absolute value of conventional CR along with the calculated sexed semen CR used in the calculations.
 - d. In each group of bars, there are 5 different colors of bars, which represent the number of sexed semen services in each program. From left to right these are 1 (green), 2 (blue), 3 (red), 4 (brown), and 5 (orange) that represent 1, 2, 3, 4, and 5 sexed semen services, respectively.
 - e. The overall EV of a defined sexed program is calculated as the average of all EV displayed in the figure.
6. Additional functionality
 - a. Open this set of instructions in a new web browser by clicking on button labeled "Instructions"
 - b. Manage scenarios that save and retrieve input data for all parameters in the tool
 - c. Print your results by clicking button labeled "Print"
 - d. Return/visit the UW-Wisconsin Dairy Management Website by clicking button labeled "DairyMGT Webpage"