







**MAIN TAB**

 Input Cells	 Conventional
 Calculating Cells	 GenChoice 90
 Results Cells	 GenChoice 75

- Number Cows** *This should be the average total number of lactating cows in the herd. Do not include dry cows. The reason is otherwise the calculator is very optimistic.*
- Number Breeding Age Heifers** *This should be the average total number of heifer bred first service in a year.*
- Annual Cull Rate** *This should be the most recent annual culling rate.*
- Percent Annual Growth (Goal)** *This is an opinion question that must be asked to producers. A herd can say 0% growth if they want to maintain current herd size. If they want enough replacements to do some voluntary culling within the lactation herd it is recommended at a least a 5% goal or more. A herd can choose a negative number here if they plan to downsize the current herd.*

*\*\*You may use the defaulted numbers for conception rate and female sex ratios for all the different semen products available. However if there is herd specific information replace it to get the most accurate Calf Math results. GenChoice90 on the cows is 3% lower due to 5,000 observations by the Genex. We do know the group observed did cherry pick so the default can be used if the herd plans to cherry pick heavily on strong heats and in lactation one cows. If they plan normal usage without cherry picking it is recommended to use then the -15% for what we expect for GenChoice90. The GenChoice75 default uses the same conception rates at this time. Once we get more data from an ongoing trial we can update the GenChoice75 conception numbers. The conventional beef semen is about 5% higher in conception for both cows and heifers because of the perception farmers have that beef semen settles better. There is no literature to support this theory, however one thing to note is that a straw of CONVENTIONAL beef semen has 3-4 more times the number of sperm cells. There is only a difference between conventional beef semen and conventional dairy semen. When semen is sorted it has the same number of sperm cells.*

	DAIRY						BEEF			
	Conventional		GenChoice 90		GenChoice 75		Conventional		GenChoice 75	
	Cows	Heifers	Cows	Heifers	Cows	Heifers	Cows	Heifers	Cows	Heifers
Conception Rate	35%	62%	32%	47%	32%	47%	40%	67%	32%	47%
Female Sex Ratio	48%	48%	90%	90%	75%	75%	48%	48%	25%	25%

*\*\*Here you must designate what percentage of each of the semen products the herd will use. Yes 0% can be used if the herd wishes not to use the product. The total then*

Cows	
Percent Dairy Conventional	80%
Percent Dairy GenChoice 90	0%
Percent Dairy GenChoice 75	10%
Percent Beef Conventional	0%
Percent Beef GenChoice 75	10%
<b>Total</b>	<b>100%</b>

Heifers	
Percent Dairy Conventional	10%
Percent Dairy GenChoice 90	50%
Percent Dairy GenChoice 75	0%
Percent Beef Conventional	40%
Percent Beef GenChoice 75	0%
<b>Total</b>	<b>100%</b>

add up to 100% or errors will be

created the program. If a herd wishes to use Calf Math to look only at the cows or heifers please use the Cows only and Heifers Only tabs.

Below in the gray boxes are calculations the program makes. The left column is for the cows and the right column is for the heifers. What is calculated is the expected overall conception rate using the new mix of products and how many services per conception on average are expected.

It also calculates an estimate of the number of semen units of each of the different products for both the cows and heifers.

Overall Conception Rate	34%	Overall Conception Rate	57%
Services per Conception	2.9	Services per Conception	1.8
Total Units	2584	Total Units	694
Dairy Conventional Units	2067	Dairy Conventional Units	69
Dairy GenChoice 90 Units	0	Dairy GenChoice 90 Units	347
Dairy GenChoice 75 Units	258	Dairy GenChoice 75 Units	0
Beef Conventional Units	0	Beef Conventional Units	277
Beef GenChoice 75 Units	258	Beef GenChoice 75 Units	0

*\*\*These inputs again have a research based default, but if you can find that individual herd's numbers, go ahead and replace them. Without these the program is very optimistic in the number of calves produced.*

Calving Interval	13.5	Age at First Calving	24.5
Percent "DNB"	2%	Heifer Death Loss (Post Preg Check)	5%
Pregnant Cows Culled	10%	Pregnancy Loss (Post Preg Check)	10%
Pregnancy Loss (Post Preg Check)	10%	Stillborn % of Male Calves	13%
Stillborn % of Male Calves	8%	Stillborn % of Female Calves	9%
Stillborn % of Female Calves	4%	Heifer Rearing Loss	10%
Heifer Rearing Loss	10%		

*This section totals the number of calves produced by the above inputs for both columns and is calculated separately for the cows and heifers*

<u>Cows</u>		<u>Heifers</u>	
Total Dairy Male Calves	290	Total Dairy Male Calves	11
Total Dairy Female Calves	281	Total Dairy Female Calves	23
Total Beef Male Calves	49	Total Beef Male Calves	156
Total Beef Female Calves	16	Total Beef Female Calves	138
Total Calves	636	Total Calves	328

*\*\* The first number below shows the number of dairy heifers needed annually to meet their growth goal keeping in mind their herd size and their annual cull rate. The second number shows them how many heifers they are projected to have annually using the new mix of semen products.*

<b>Annual Dairy Heifers Needed</b>	<b>380</b>
<b>Number of Dairy Heifers Yielded</b>	<b>397</b>