

# Department of Agricultural and Resource Economics

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## 2018 BRED HEIFER DEVELOPMENT BUDGET

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*Xiurui Iris Cui, UT Extension Area Specialist  
Office: 931-648-5725, Email: xcui10@utk.edu*

*Andrew P. Griffith, Associate Professor  
Office: 865-974-7480, Email: agriff14@utk.edu*

The bred heifer budget is developed to assist Tennessee cattle producers in estimating the cost and profitability of developing bred heifers. This budget should be considered a template or guide for estimating expenses and revenues, and it should not be considered representative of all circumstances. Users of this budget are encouraged to enter information into the budget that reflects their individual situation and production practices. Using information most closely related to a particular operation will improve the decision-making process.

**Disclaimer:** Significant variability in inputs, prices and production practices exist across operations and from region to region. The information contained in this spreadsheet relies on estimates and assumptions specific to Tennessee. This budget should not be construed as a reflection of all circumstances across the state, as regional variability does exist. To improve the value of this tool, users are encouraged to use inputs, prices, production practices and management that are employed on their specific operation.

## Estimated Returns and Expenses for Bred Heifer Development in Tennessee

	Unit	Quantity	Price/Unit	\$/Herd	\$/Head
<b>ESTIMATED INCOME/HEAD</b>					
<i><b>Heifer Sales</b></i>					
Bred heifer	hd	_____	\$ _____	\$ _____	\$ _____
Cull heifer	hd	_____	\$ _____	\$ _____	\$ _____
Yearling heifer	hd	_____	\$ _____	\$ _____	\$ _____
<i><b>Death Loss</b></i>					
	hd	_____	\$ _____	\$ _____	\$ _____
			<b>Total Revenue</b>	\$ _____	\$ _____
<b>DIRECT EXPENSES</b>					
<i><b>Heifer</b></i>					
Starting value	lb	_____	\$ _____	\$ _____	\$ _____
<i><b>Feed</b></i>					
Hay	ton	_____	\$ _____	\$ _____	\$ _____
Commodity feed	ton	_____	\$ _____	\$ _____	\$ _____
Cool-season pasture	acre	_____	\$ _____	\$ _____	\$ _____
Warm-season pasture	acre	_____	\$ _____	\$ _____	\$ _____
Bull maintenance (2)	hd	_____	\$ _____	\$ _____	\$ _____
Salt and mineral	cwt	_____	\$ _____	\$ _____	\$ _____
<i><b>Health/Med</b></i>					
7-way blackleg	dose	_____	\$ _____	\$ _____	\$ _____
Respiratory, Lepto/Vibrio	dose	_____	\$ _____	\$ _____	\$ _____
Dewormer	ml	_____	\$ _____	\$ _____	\$ _____
<i><b>Repro Service</b></i>					
CIDR	hd	_____	\$ _____	\$ _____	\$ _____
Prostaglandin	hd	_____	\$ _____	\$ _____	\$ _____
Estrus detection patch	hd	_____	\$ _____	\$ _____	\$ _____
Semen	hd	_____	\$ _____	\$ _____	\$ _____
Breeding charge	hd	_____	\$ _____	\$ _____	\$ _____
GnRH	hd	_____	\$ _____	\$ _____	\$ _____
Cleanup bull service	hd	_____	\$ _____	\$ _____	\$ _____
Pregnancy detection	hd	_____	\$ _____	\$ _____	\$ _____
<i><b>Labor</b></i>					
Chute work	hrs	_____	\$ _____	\$ _____	\$ _____
Other labor	hrs	_____	\$ _____	\$ _____	\$ _____
<i><b>Other</b></i>					
Sales charge	hd	_____	\$ _____	\$ _____	\$ _____
Ear tags	hd	_____	\$ _____	\$ _____	\$ _____
Land rent	acre	_____	\$ _____	\$ _____	\$ _____
Facility maintenance	hd	_____	\$ _____	\$ _____	\$ _____
			<b>Total Cash Costs</b>	\$ _____	\$ _____
<b>INCOME OVER TOTAL CASH COST</b>				\$ _____	\$ _____

## Estimated Returns and Expenses for Bred Heifer Development in Tennessee

	Unit	Quantity	Price/Unit	\$/Head	Your Farm
<b>ESTIMATED INCOME/HEAD</b>					\$/Head
<i><b>Heifer Sales</b></i>					
Bred heifer	hd	80	\$ 1,630.00	\$ 1,303.69	\$ _____
Cull heifer	hd	15	\$ 1,160.00	\$ 174.00	\$ _____
Yearling heifer	hd	5	\$ 922.50	\$ 46.13	\$ _____
<i><b>Death Loss</b></i>					
		1	\$ 1,523.82	(\$ 15.24)	\$ _____
<b>Total Revenue</b>				<b>\$1508.58</b>	<b>\$ _____</b>
<b>DIRECT EXPENSES</b>					
<i><b>Heifer</b></i>					
Starting value	lb	500	\$ 1.58	\$ 792.00	\$ _____
<i><b>Feed</b></i>					
Hay	ton	0.89	\$ 80.00	\$ 71.43	\$ _____
Commodity feed	ton	0.62	\$ 225.00	\$ 139.08	\$ _____
Cool-season pasture	acre	0.71	\$ 116.84	\$ 82.53	\$ _____
Warm-season pasture	acre	0.35	\$ 116.84	\$ 40.52	\$ _____
Bull maintenance (2)	hd	1	\$ 19.69	\$ 19.69	\$ _____
Salt and mineral	cwt	0.3	\$ 7.50	\$ 7.50	\$ _____
<i><b>Health/Med</b></i>					
7-way blackleg	dose	2	\$ 1.07	\$ 2.14	\$ _____
Respiratory, Lepto/Vibrio	dose	2	\$ 3.96	\$ 7.92	\$ _____
Dewormer	ml	105	\$ 0.12	\$ 12.23	\$ _____
<i><b>Repro Service</b></i>					
CIDR	hd	1	\$ 12.78	\$ 12.78	\$ _____
Prostaglandin	hd	1	\$ 2.79	\$ 2.79	\$ _____
Estrus detection patch	hd	1	\$ 1.50	\$ 1.50	\$ _____
Semen	hd	1	\$ 20.00	\$ 20.00	\$ _____
Breeding charge	hd	1	\$ 5.00	\$ 5.00	\$ _____
GnRH	hd	1	\$ 2.00	\$ 2.00	\$ _____
Cleanup bull service	hd	1	\$ 11.21	\$ 11.21	\$ _____
Pregnancy detection	hd	1	\$ 10.00	\$ 10.00	\$ _____
<i><b>Labor</b></i>					
Chute work	hrs	1.2	\$ 12.00	\$ 14.40	\$ _____
Other labor	hrs	0.2	\$ 12.00	\$ 2.40	\$ _____
<i><b>Other</b></i>					
Sales charge	hd	1	\$ 45.71	\$ 45.71	\$ _____
Ear tags	hd	1	\$ 1.17	\$ 1.17	\$ _____
Land rent	acre	1	\$ 20.00	\$ 21.06	\$ _____
Facility maintenance	hd	1	\$ 50.00	\$ 50.00	\$ _____
<b>Total Cash Costs</b>				<b>\$ 1,375.06</b>	<b>\$ _____</b>
<b>INCOME OVER TOTAL CASH COST</b>				<b>\$ 133.52</b>	<b>\$ _____</b>

## Bred Heifer Development Budget Assumptions

### Herd Data:

- 100 spring-born heifers: Buy 500-pound heifer calves, sell bred heifers at 1,000 pounds with 2 2000-pound cleanup bulls.
- 80% bred with 1% death loss.
- 15% cull heifer rate; 5% of yearling heifers are sold.
- Average daily gain at 1.5 pound.

### Breeding:

- Artificially inseminate (AI) the whole group, assuming at least 50% conception rate and then clean up with two bulls.

### Supplemental Feed:

- Heifers and bulls: Fed commercial feed at 0.5% body weight for 330 days (11 months).

### Pasture/Hay:

- Cool-season and warm-season forage yield: 2.5 tons (3000lbs)/ac.
- Feeding hay from December 16-April 15. Graze pasture the rest of the production cycle.

### Veterinary/Medicine:

- Heifers are vaccinated: 50 dose Ultrabac 7/Somubac; 50 dose Bovi-Shield Gold FP5 VL5 HB.
- Heifers are dewormed: 1000 ml Dectomax Pour-On Solution. 3x at 500, 750 and 1000 weight. A total of 105 mls.

### Prices:

- Bred-heifer price: 2017 Kentucky state weighted-average price of bred heifers at \$1,630, including 10 sales across the state. No sufficient data for Tennessee state average.
- Starting value: Tennessee state average price of 500-weight feeder heifers for the week of 09/10/2018 plus a 20% premium for replacement heifers, 330 days (11 months) before the bred-heifer sale.
- Yearling heifers price projection: Tennessee state average price of 700-weight heifers for the week of 02/22/2018, when heifers reach 750 pounds.
- Cull heifers: As there is no good reference for cull heifers price, Tennessee state average price of heavy-weight heifers is adopted as a projection, as for the week of 08/06/2018.
- Marketing: Sales charge is at 3% of total sales.



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