

Instructions for Using Stocker/Feeder Cattle Spreadsheet Tools

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Evaluation of Retained Ownership vs. Sell at Weaning

- ◆ This spreadsheet was written in Microsoft® Excel¹. Conversion to other spreadsheet programs is not guaranteed.
- ◆ You will be asked if you want to enable macros in the spreadsheet. Click on the Enable Macros button.
The file has been scanned for viruses and is considered safe as it leaves my office.
- ◆ The starting point for this spreadsheet is the upper left corner (A1) of the RO vs. sell at weaning page. If you are not at this location as the file is brought up, press <Control><Home>, or use the scroll bars to go to that location. Many of the calculations for this spreadsheet are done on the Sheet 1 page. This page is available for you to look at and to examine the equations used, however you don't need to enter any information on the page and it is locked.
- ◆ If the page is too small or too large for your screen, you can change the magnification by going to the View menu and selecting Zoom and then changing the setting.
- ◆ Depending on what you want to calculate, select (left click) one of the two buttons: Return to Ownership and Management or Sale Price to Attain Given Return.
- ◆ As with any spreadsheet tool – the answers generated are only as accurate as the accuracy of the inputs.
- ◆ Although the mathematical calculations were evaluated by a number of specialists and were tested on thousands of test examples, no warrantee is expressed or implied about the accuracy of the spreadsheet. PLEASE USE THE SPREADSHEET AT YOUR OWN RISK.

To Calculate Return to Ownership and Management

You will be asked to fill in several variables concerning the retained ownership vs. sell at weaning situation you are evaluating, all variables are on a per head basis (not the entire group).

The return to ownership and management at the end of the report is difference in returns if the calves are retained past weaning versus sold at weaning (not the return to ownership from birth to sale). If the number is negative, the economic advantage is for selling at weaning. If the number is positive, the economic advantage is for retaining ownership past weaning.

Variable	Description
Weaning weight (Lbs.)	Use the most accurate weights you have available for the time you would sell the cattle if you did not retain ownership significantly past weaning.

¹ Microsoft Corporation, Seattle, Washington

Percent shrink prior to marketing	If you are using on-farm weaning weights, estimate the amount of shrink between on-farm weights and sale-weights. If you are using previous years' sale weights at weaning for the entry above, enter zero as the percent shrink.
Sale fees if sold at weaning	All commission fees, beef industry council fees, etc. incurred at the time of selling at weaning.
Trucking fee if sold at weaning	Trucking fees that you would pay or that you would charge against your own truck for transport from your farm to the livestock market.
Assumed price received if sold at weaning	The prorated average price for all calves sold at weaning. Use projected local market prices on the date you would normally sell to determine price for different descriptions of cattle: heifers, steers, light calves, fleshy calves, non-conforming calves etc. Caution: Do not be tempted to use the projected high price and apply it to all of your calves. Remember that most likely, your calves will be sold in several groups, with each group receiving a different price. To accurately estimate the weaning value of your calves, those different prices should be prorated over the percentage of calves that fall into each price category.
Hired labor cost per head (\$)	This is not where you pay yourself. This line is for any hired labor used to care for the cattle or facilities. One way to calculate the entry is to take the entire payroll and divide by the number of cattle fed per year. Another option is to charge the labor in the feedmill to the feed charge, the processing crew labor to the processing charge, the hospital crew labor to the treatment cost, etc. (in which case the hired labor cost per head is decreased or zero).
Annual interest rate (i.e. 10)	The entry should be a number greater than 1 – if the interest rate is 10%, enter the number as 10, not 0.10. The entry is the interest rate of borrowed money or if no borrowed money is used, the entry is the interest rate or return of an alternate investment.

Price paid per pound of diet, as fed (\$)	Price is reported on an as-fed (rather than dry-matter) basis. Since more than one diet are fed and the costs of different diet vary, the entry should be the prorated cost of the diets. Feed storage and mixing loss should be included in the diet price.
Days owned past weaning	The number of days between selling at or near weaning and the anticipated sale date.
Yardage / Rent per day (\$)	Yardage or pasture rent being charged per day. If kept on your own land, either enter an appropriate yardage fee or if zero is entered, return to management should be evaluated with that in mind.
Cost for processing products (\$ for vaccines, implants, dewormers, tags)	Your cost for the products used at processing, including the cost of administration equipment (syringes, needles, implant guns, etc.). Processing labor may or may not be included in this value (see Hired Labor Cost per Head)
Morbidity Rate (%)	The number of cattle treated for any reason (or that died without being treated) divided by the number of cattle originally in the group. If the morbidity rate is 20%, enter the number as 20, not 0.20.
Cost of treatment (\$; entire cost of multiple-day treatment)	The average cost of antimicrobial or other drugs given to treat sick cattle plus the cost of administration equipment (syringes, needles, etc.) and any chute charges or other applicable fees. Repeat treatment rate and charges are included in this entry. Hospital labor may or may not be included in this value (see Hired Labor Cost per Head).
Re-pull rate (%)	The number of cattle that are treated more than once (after they are considered cured) during the confinement period divided by the number of all cattle treated during the confinement period (i.e. if 20 calves in a pen of 100 are treated for disease and then 4 of those calves are treated for the same disease 2 weeks later, the re-pull rate is $4 \div 20 = 20\%$ (enter as 20, not 0.20).
Cost of re-pull treatment (\$)	Many times the drugs used to treat calves pulled from the pen a second (or more) time are different than the initial treatment, therefore the cost is likely to be different. The same guidelines are followed as with Cost of Treatment.

Mortality rate (%)	The number of cattle that die during the confinement period divided by the number in the group at the start of the evaluation period. If the mortality rate is 1%, enter the number as 1, not 0.01.
Chronic rate (%)	A “chronic” is defined as an animal that has respiratory or other disease and that does not completely recover, nor does it die. The percentage of chronics is often assumed to be equal to the mortality rate for a farm, feedlot, or group of cattle. If your records indicate a rate different than the mortality rate, use the most appropriate number.
Unshrunk sale weight (Lbs.)	The average weight at sale (of animals sold) prior to a pencil shrink being applied.
Percent shrink (%)	The shrink applied to the weight at sale to yield the pay-weight. The entry should be a number greater than 1 – if the pencil shrink is 4%, enter the number as 4, not 0.04.
Sales or commission fees (\$)	All sales or commission fees prorated on a per-head basis, including beef industry council check-off, brokers’ commissions, livestock market commissions, etc.
Return to ownership and management (\$)	The dollar amount you as the owner of the cattle want for your management expertise, risk assumption, and return on investment.
Trucking fees – departure (\$)	If you are paying trucking fees as the cattle leave your farm, enter the per-head charge.
Decreased return for chronics (compared to pen average)	The economic loss of chronics is greater than the treatment costs alone. This loss is due to slow and inefficient weight gain, and the fact that chronics are usually marketed at a lighter weight (less value) and with a lower value carcass. One researcher reports about a \$150 dollar decreased value for chronic animals compared to their pen-mates. Use a value that your records indicate is reasonable.

- The bottom portion of the report page gives results calculated from the entered variables. Other output is found on the Sheet 1 page, but the figures reported on the report page are considered to be the most valuable for the situation you are evaluating.

Result	Description
Cost of interest	The amount spent on interest (or opportunity from alternate investments) for the evaluated situation. This output was calculated by charging interest for the entire period (days owned) for those expenditures incurred at the start of the feeding period (i.e. price paid, arrival trucking, and processing cost) and for one-half of the days owned for those expenditures incurred throughout the confinement and grazing periods (i.e. feed, yardage, rent, treatment, re-pull treatment, and labor costs).
Shrunk sale weight if sold at weaning	This calculated value indicates what the sale weight would have been if the calves had been sold at or near weaning.
Income if sold at weaning	This would be the check you receive if you sell your calves at or near weaning. It is the price paid for the sale weight, with commission, sale, and trucking fees subtracted.
Average Daily Gain - (Pay Weight - Deads Out)	The gain from purchase weight to shrunk sale weight (pay weight to pay weight) divided by the days owned using the average weights of all the animals sold subtracted from all the purchased (i.e. dead animals were not counted in the animals sold).
Average Daily Gain – (Pay Weight - Deads Accounted For)	Differs from the “Deads Out” calculation in that the total pounds of cattle sold are divided by the number of animals purchased (vs. divided by the number of animals sold) to determine average sale weight.
Shrunk sale weight after retained ownership phase	This calculated value indicates the sale weight of the calves after a retained ownership period.
Total Pounds of Feed, as fed	The amount of feed consumed by the group including the feed consumed by animals that died and were not sold. The equation assumes that deaths occurred half-way through the retained ownership period.

Feed Efficiency
(Lbs. of feed / 1 Lbs. of gain – Deads Accounted For)

The total pounds of feed (as fed) fed during the retained ownership period divided by the average pounds of gain (shrunk weaning weight to pay-weight change in pounds divided by the number of animals purchased).

Cost of Gain
(w/o Return to Mgmt. – Deads Accounted For)

All of the costs, except purchase cost and return to management, divided by the average pounds of gain (shrunk weaning weight to pay-weight change in pounds divided by the number of animals purchased).

Return to Ownership and Management

The dollars returned to pay ownership

To Calculate Sale Price to Attain A Given Return

- This set of calculations is designed to determine the sale price for cattle with a given expected performance (health, growth, sale value) that will yield a given return. By using several production scenarios (expected case, best case, worst case), a confidence range can be produced for sale price.

Variable	Description
Weaning weight (Lbs.)	Use the most accurate weights you have available for the time you would sell the cattle if you did not retain ownership significantly past weaning.
Percent shrink prior to marketing	If you are using on-farm weaning weights, estimate the amount of shrink between on-farm weights and sale-weights. If you are using previous years' sale weights at weaning for the entry above, enter zero as the percent shrink.
Sale fees if sold at weaning	All commission fees, beef industry council fees, etc. incurred at the time of selling at weaning.
Trucking fee if sold at weaning	Trucking fees that you would pay or that you would charge against your own truck for transport from your farm to the livestock market.

Assumed price received if sold at weaning	The prorated average price for all calves sold at weaning. Use projected local market prices on the date you would normally sell to determine price for different descriptions of cattle: heifers, steers, light calves, fleshy calves, non-conforming calves etc. Caution: Do not be tempted to use the projected high price and apply it to all of your calves. Remember that most likely, your calves will be sold in several groups, with each group receiving a different price. To accurately estimate the weaning value of your calves, those different prices should be prorated over the percentage of calves that fall into each price category.
Hired labor cost per head (\$)	This is not where you pay yourself. This line is for any hired labor used to care for the cattle or facilities. One way to calculate the entry is to take the entire payroll and divide by the number of cattle fed per year. Another option is to charge the labor in the feedmill to the feed charge, the processing crew labor to the processing charge, the hospital crew labor to the treatment cost, etc. (in which case the hired labor cost per head is decreased or zero).
Annual interest rate (i.e. 10)	The entry should be a number greater than 1 – if the interest rate is 10%, enter the number as 10, not 0.10. The entry is the interest rate of borrowed money or if no borrowed money is used, the entry is the interest rate or return of an alternate investment.
Price paid per pound of diet, as fed (\$)	Price is reported on an as-fed (rather than dry-matter) basis. Since more than one diet are fed and the costs of different diet vary, the entry should be the prorated cost of the diets. Feed storage and mixing loss should be included in the diet price.
Days owned past weaning	The number of days between selling at or near weaning and the anticipated sale date.
Yardage / Rent per day (\$)	Yardage or pasture rent being charged per day. If kept on your own land, either enter an appropriate yardage fee or if zero is entered, return to management should be evaluated with that in mind.

<p>Cost for processing products (\$ for vaccines, implants, dewormers, tags)</p>	<p>Your cost for the products used at processing, including the cost of administration equipment (syringes, needles, implant guns, etc.). Processing labor may or may not be included in this value (see Hired Labor Cost per Head)</p>
<p>Morbidity Rate (%)</p>	<p>The number of cattle treated for any reason (or that died without being treated) divided by the number of cattle originally in the group. If the morbidity rate is 20%, enter the number as 20, not 0.20.</p>
<p>Cost of treatment (\$; entire cost of multiple-day treatment)</p>	<p>The average cost of antimicrobial or other drugs given to treat sick cattle plus the cost of administration equipment (syringes, needles, etc.) and any chute charges or other applicable fees. Repeat treatment rate and charges are included in this entry. Hospital labor may or may not be included in this value (see Hired Labor Cost per Head).</p>
<p>Re-pull rate (%)</p>	<p>The number of cattle that are treated more than once (after they are considered cured) during the confinement period divided by the number of all cattle treated during the confinement period (i.e. if 20 calves in a pen of 100 are treated for disease and then 4 of those calves are treated for the same disease 2 weeks later, the re-pull rate is $4 \div 20 = 20\%$ (enter as 20, not 0.20).</p>
<p>Cost of re-pull treatment (\$)</p>	<p>Many times the drugs used to treat calves pulled from the pen a second (or more) time are different than the initial treatment, therefore the cost is likely to be different. The same guidelines are followed as with Cost of Treatment.</p>
<p>Mortality rate (%)</p>	<p>The number of cattle that die during the confinement period divided by the number in the group at the start of the evaluation period. If the mortality rate is 1%, enter the number as 1, not 0.01.</p>
<p>Chronic rate (%)</p>	<p>A “chronic” is defined as an animal that has respiratory or other disease and that does not completely recover, nor does it die. The percentage of chronics is often assumed to be equal to the mortality rate for a farm, feedlot, or group of cattle. If your records indicate a rate different than the mortality rate, use the most appropriate number.</p>

Price received at sale (\$/Lbs.)	The sale price expressed on a per-pound basis. Four decimal places are available so that cattle that are sold at \$70.75/cwt are entered as \$0.7075
Unshrunk sale weight (Lbs.)	The average weight at sale (of animals sold) prior to a pencil shrink being applied.
Percent shrink (%)	The shrink applied to the weight at sale to yield the pay-weight. The entry should be a number greater than 1 – if the pencil shrink is 4%, enter the number as 4, not 0.04.
Sales or commission fees (\$)	All sales or commission fees prorated on a per-head basis, including beef industry council check-off, brokers' commissions, livestock market commissions, etc.
Trucking fees – departure (\$)	If you are paying trucking fees as the cattle leave your farm, enter the per-head charge.
Decreased return for chronics (compared to pen average)	The economic loss of chronics is greater than the treatment costs alone. This loss is due to slow and inefficient weight gain, and the fact that chronics are usually marketed at a lighter weight (less value) and with a lower value carcass. One researcher reports about a \$150 dollar decreased value for chronic animals compared to their pen-mates. Use a value that your records indicate is reasonable.

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Total Pounds of Feed, as fed	The amount of feed consumed by the group including the feed consumed by animals that died and were not sold. The equation assumes that deaths occurred half-way through the retained ownership period.
Feed Efficiency (Lbs. of feed / 1 Lbs. of gain – Deads Accounted For)	The total pounds of feed (as fed) fed during the retained ownership period divided by the average pounds of gain (shrunk weaning weight to pay-weight change in pounds divided by the number of animals purchased).
Cost of Gain (w/o Return to Mgmt. – Deads Accounted For)	All of the costs, except purchase cost and return to management, divided by the average pounds of gain (shrunk weaning weight to pay-weight change in pounds divided by the number of animals purchased).
Sale Price to Attain Given Return	The sale price needed to return the entered Return to ownership and management if the cattle perform as expected.
