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Appendix A

**Introduction**

To keep the excel document formulas correct and intact, **only input data into the ORANGE CELLS**. All “Variable Cost” names can be modified so the producer may label the costs according to what they are used to. Be sure to keep track of the name and the costs associated with that name, or the automatic cell reference formulas may be modified in doing this. It is recommended the names only be changed slightly on a few of the cost sections if needed.

**Inputs Tab**

(Refer to Figure 1) When inputting numbers into the excel budget, we first start on the “Inputs” tab which is the first tab when opening the document. Start in the “Herd Characteristics” section of the “Inputs” tab by entering herd size including the number of mother cows and bulls in their respective spots. You may also choose to enter your calving and weaning percentages manually to meet your herd specifications. Calving percentage is used to calculate the number of calves born, and weaning percentage is used to calculate any calf crop loss that occurs between birth and weaning. For no expected death loss, enter a 0 in this cell.

Figure 1: Herd Outline

(Refer to Figure 2) Following these entries, enter the percent of steer calves weaned. This will automatically calculate the number of steers and imply the number of heifers in the herd based on your entry. These numbers may be input manually; however, it is important to note that this will remove the formula from these cells and may make it difficult to enter new data into these cells in the future.

(Refer to Figure 2) Next, enter the number of calves to be backgrounded, and death loss expected during backgrounding. The default is set at 2% death loss, for no expected death loss, enter a 0 in this cell. (Refer to Figure 2) Next, the number of steers and heifers to be backgrounded should be entered. The Forecasted Spring Finish Weights are automatically calculated based on an entry that is further down the sheet.

Figure 2: Backgrounding information

Enter the backgrounding start and end dates according to the first and last day the backgrounded calves will be fed. The date must be entered in MM/DD/YYYY format for the excel sheet to record the number of days the calves will be fed.

Figure 3: Backgrounding Dates

Value-Added Programs may bring producers a premium at the sale barn or in online auctions. If you wish to use value-added programs such as “VAC-45”, Organic, Natural Raised, Grass-fed, EID Tagging, etc. for this calf crop, enter a “Y” in the section titled “Value-Added Program for Calves. Also, be sure to adjust the additional cost per calf for participating in these programs. Do the same for the “Value-Added Program for Yearlings” section if you have value-added costs associated with yearlings being backgrounded. If you are not planning on participating in value-added programs for calves or yearlings, enter an “N” for the “Value-Added Program” calf and yearling sections and a “0” for the costs associated. (Figure 4)

Figure 4: Value-Added Programs

(Refer to Figure 5) As we move on farther down the inputs tab, we see a section titled “Sale Prices”. This is where you will enter the Price to be received for fall calves in $/CWT. Heifer prices used are entered at -$10 from steer prices for calves and -$6 from steer prices for yearlings. These provide good baseline costs for producers but can easily be modified to fit current market conditions or contracted prices. When entering the forecasted yearling price, it may be valuable for the producer to speak with their local extension agent for an estimated spring price forecast or look up the forecasted spring calf price from the CME to get a rough baseline that can then be adjusted up or down. When comparing historic CME forecasted prices to Utah and Wyoming prices, the CME forecasted price varied by +/- ~$19/CWT on average. Below the calf and yearling price sections is where the premium for value-added programs is to be entered. If you entered an “N” for the Value-Added sections above, enter a “0” into the expected calf and yearling “Price Premium for Value-Added” sections.

Figure 5: Calf/Yearling Prices

The next section is “Feed Requirements” with subsections for “Calves” and “Yearling” feed entries. In each of the sections, enter the daily feed requirements for hay, barley, and straw, respectively. The entry columns that are not orange are automatically calculated based on entries into the orange cells and must be adjusted by changing the entries in the orange cells.

In the “Calf” subsection (Figure 6) there is a section for # of days fed post-weaning. This section can be adjusted according to how long calves will be kept after weaning.

Figure 6: Calf Feed Costs

In the “Yearling” Subsection, the orange cells ask for daily feed requirements for the backgrounding operation and then use the data entered in these cells as well as the backgrounding dates entered previously in an above section to calculate total daily herd hay consumption in Lbs. and Tns. As well as total hay needed for the backgrounding period.

Figure 7: Yearling Feed Costs

In the next sections titled “Costs”, there is a “Variable Costs” subsection and a “Fixed Costs” subsection.

The “Variable Costs” section allows the producer to enter their feed costs in $/Tn. As well as additional costs associated with raising the calves. These cost names may be changed, but a cost must be entered in the orange cell for the excel sheet to work properly. If a certain cost wasn’t incurred for the calf crop, be sure to enter a “0” in the corresponding orange cell. There are also blank cells at the bottom of this section for any additional costs associated with raising the calf or yearling crop. 

Figure 8: Variable Costs

The “Fixed Costs” section contains yardage costs. Yardage costs consist of $1000/yr. for infrastructure improvements, $2500/yr. for Accounting and Insurance Costs, $35000 for Management Labor costs, and 6% interest on the value of livestock $1500/Hd. For all cows and bulls in the herd. Many producers may not consider these costs even though they are potentially being implicitly incurred by the operation. The producer may choose to enter a “0” for this section, however, it is strongly suggested that some sort of fixed cost be entered into this section for accurate budgetary forecasting.

Figure 9: Fixed Costs/Yardage

**Outputs Tab**

The “Outputs” tab contains a summary of the data that was input by the producer on the “Inputs” tab. The excel sheet uses statistics and formulas to calculate the numbers associated. This tab is locked from being edited to protect the document and its embedded formulas. As we can see, the sections are divided similarly to the “Inputs” tab, with a summary of profit and loss at the bottom of the document. The numbers generated in this tab are solely based on the inputs tab. If you see something that doesn’t look right, try adjusting the inputs tab inputs for that section. (Figure 10)

Figure 10: Outputs Page

At the top of the document, to the right-hand side of the summary sections, there is a Profit/Loss table that shows the true profit from backgrounding. This is calculated by taking profit from selling calves in the fall from the profit made by backgrounding calves to the following spring.

Figure 11: Profit/Loss Summary

Below this section, is a Yearling Spring Price Sensitivity Analysis. (Figure 12) This table shows what the income would be if spring yearling prices were to increase or decrease by 0-25% and is based on the prices entered in the “Inputs” tab with no premiums added. This table gives producers a good baseline for how much price tolerance their backgrounding situation has.

Figure 12: Price Sensitivity Analysis

Below the sensitivity analysis section are calf and yearling 2-way data tables. (Figure 13) These show what profits would be at any given calf price (steer prices only, with no premiums added) and hay price. This also allows producers a baseline measurement based on the information input on the previous “Inputs” tab.



Figure 13: 2-Way Data Tables