

Monthly Beef Cattle Inventory – Head Day and AUM Calculator

Objective

There are two versions of this spreadsheet one for a **Breeding Cattle Herd** the other for a **Stocker of Yearling** operation. To have accurate financial statements and production performance the business must have accurate cattle inventories. Number of cattle need to be maintained through use of a monthly-reconciled inventory as provided for in the spreadsheet.

Before using this spreadsheet it is good to recall the basic inventory equation and review definitions.

Basic Inventory Equation

The basic formulas for reconciliation of cattle numbers are as follows:

1. Ending Inventory = (Total In – Total Out)
2. Total In = (Beginning Inventory + Purchases + Transfers In + Change in Category + Births + Longs in Count)
3. Total Out = (Sales + Transfers Out + Change in Category + Consumed + Death + Shorts in Count)

Definitions

Category is used to define a specific group of animals. This is particularly useful from a production standpoint (i.e., breeding cows, replacement heifers, herd bulls, etc.) See the suggested categories and classifications that follow.

Classification refers to the reproduction phase and/or growth, sex, or production stage (i.e., exposed, open, pregnant cows, or weaned steers). See the suggested classification that follows.

Change in Category is when an animal changes categories and/or class as they move through reproduction or production (i.e., open cows move to exposed or weaned steers move to stockers).

Transfers are used to keep cattle moved between enterprises, herds, or business divisions that do not really generate sales revenue. Examples include weaned calves that are transferred into the replacement category from the cow-calf herd and cows that are brought in from another herd.

Shorts in Count is normally used in larger operation to reconcile inventories. One-way to think of shorts is that they are cattle that cannot be accounted for through one of the normal decreases in inventory (i.e., deaths, sales/transfers out). These are cattle that are missing at the time of counting inventory and are not assumed dead or permanently lost.

Longs in Count is used in larger operations when cattle are rounded up and inventory numbers do not match. An example of longs in count is cattle that get mixed when a fence is broken. Information on longs is useful in identifying extra cattle in the wrong inventory group. Longs are cattle in the inventory that cannot be accounted for through one of the normal increases in inventory (i.e. purchases or transfers in).

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A summary sheet records shorts and longs by month this should be monitored closely. If shorts and longs are similar then losses are not occurring. If shorts exceed longs this would indicate errors in counts or losses of cattle.

When the animal unit months **equivalents (AUM)** is input (see line 49 in the **January sheet for the breeding herd** and **September for yearlings or stocker cattle** a graph of AUM is presented. The spreadsheet also calculates the **head days by category** of cattle based on the average of the beginning and ending inventories by month. End of year head days are a good base for allocation of production costs between categories of cattle.

Suggested Cow-Calf Ranch Categories and Classes

The actual categories used in the inventory must fit the individual's situation and what the owners and managers desire. Below are some suggestions that can be helpful.

Category*	Classification
1. Breeding Cows	Exposed, Open, Pregnant, Calved
2. Replacement Heifers	Exposed, Open, Pregnant, Calved
3. Cull Cows	Open, Pregnant
4. Nursing Calves	
5. Worked or Branded Calves	- Bulls - Heifers - Mixed Sex
6. Weaned Calves	- Bulls - Heifers
7. Stocker, yearlings or feeder cattle	- Steers - Mixed Sex
8. Herd Bulls	- Purchased or raised

*Separate categories can be set up for purchased and raised cattle for IRS accounting purpose.

According to the IRS tax inventory data requirements that are used to comply with the IRS data requirements, the inventory of purchased stock must be kept separate from raised breeding stock or retained calves. Purchased breeding stock is recorded on the business depreciation account so the depreciation schedule can be updated. Recall that the book value of purchased cattle is the purchase cost minus accumulated depreciation.

For stocker, yearlings and feeder cattle the cattle can be identified by sex and well as source or production and marketing to be employed. Purchased cattle need to be recorded separate from raised cattle for IRS reporting. A separate inventory for non breeding cattle should be maintained to better facilitate recording data and communications.

The end of year summary report can be used to record inventory valuation information to assist in preparation of the business balance sheet.

Months are linked but the shorts and longs must be monitored.

The graph of AUM and head shows the inventory throughout the year. The AUM per head is defined in the inventory first sheet of the year (see line 49).

Head days are calculated each month based on the average inventory by category. In the summary **the months to include in the report need to be specified**. Head day is a very good number to use to allocate fixed costs between production categories of cattle.

The graph shows a monthly inventory by month. The **user identifies the months** to include in these graphs in the summary page. The graph is not meaningful for months.

The reason months must be selected for reporting is that ending and beginning months are connected across all months. Defining the report month in the summary sheet (head day and Inventory value sheet) will give the correct months to include in summary head day, head of cattle and AUM reports in Graphs.

Inventory Data Worksheet

The monthly spreadsheets can be used as a worksheet and report for data collectors to assist in keeping inventories and help to insure that all ins and outs are accounted for.

Execution

Essential to effective use of this spreadsheet is to provide the monthly report to the personnel that collect the cattle inventory data.