

FEEDLOT CLOSEOUTS FOR HOLSTEIN STEERS

Tom Peters
Dekalb Feeds
Rock Falls, IL

Introduction

Feedlot closeout data is an important tool for measuring cattle performance and management practices for cattle production systems. Often, closeouts are quickly scrutinized by feedlot managers and cattle owners for economics and typical performance measurements and then filed. Unfortunately, a plethora of data that is reported in closeout reports is never adequately analyzed. A dichotomy of data often reveals pertinent information that may lead to management changes yielding important economic benefits to the producer.

Cattle producers have often assumed that Holstein steers perform sub-par when compared to traditional colored cattle. Much of the bias attributed to poor feedlot performance of Holstein steers is from inefficiencies in feed conversion documented from closeouts when feeding heavy Holsteins (>850# in-weights) to heavy finished weights (>1450#). While there are many observations that would substantiate assumptions of Holstein steers yielding inferior feedlot performance when compared to colored steers, many feedlots prefer the consistent predictability often realized when feeding Holsteins. This is especially true when feeding intensively managed Holstein steer calves that enter the feedlot under 500 pounds. Many factors effect Holstein steer performance in the feedlot, discerning these factors can often be facilitated by sorting tangible inputs entered in closeout data.

A summary of Holstein steer closeouts gathered from northern plains feedlots during the last five years has been included in this paper. Sort data based on the top 25% of closeouts based on feed efficiency is also included.

Choosing a Closeout Program

There is a wide selection of commercial computer closeout programs available on the market. Unfortunately, many of these closeout programs are cumbersome when sorting specific data that may be useful for management decisions and direction. It is important to thoroughly research the ability of a commercially available closeout program to perform the functions that your particular feedlot needs before purchasing the program.

Each feedlot should identify important performance criterion recognized by the management team, feedlot crew, consulting nutritionist and consulting veterinarian, before a closeout program is purchased. Many closeout programs will include a feedlot tracking system and a series of yard-sheet reports that will be utilized on a daily basis. However, I have seldom seen a commercially available record system that includes all

the important aspects that I feel should be documented. Therefore, many nutritionists decide to build their own database to use when combining feedlot data for quarterly closeout analysis.

Standard measurements used for feedlot closeout data are generated from the following basis data points:

1. Pen/Lot Information
2. Cattle in weight and date, number of head and cost
3. Feed/Ration fed to cattle in the period
4. Veterinary medicine costs
5. Yardage and Interest costs
6. Cattle out weight and date, number of head and price of finished cattle

These measurements will generate a standard closeout that will generally record average daily gains, feed efficiency, days on feed, death loss and cost, cost of gain and economics of the pen. The aforementioned measurements will provide closeout information that can then be scrutinized for each pen of cattle. However, there are many more measurements that should be considered when selecting a closeout program.

One should realize that required electronic tracking systems will greatly change the data cattle producers will need to record in the near future. Thus, feedlots should take extreme scrutiny when purchasing a new closeout or records system to conform to the national electronic identification system that will soon be mandated. Many feedlot programs also are capable of receiving inputs coming from radio frequency transmission, which will expand the data gathering capabilities of each system.

Measurements that should also be considered when purchasing/selecting a feedlot tracking system or closeout program are:

1. Lot movement/EID and premises identification
2. Sex and mixed sex of cattle, breed and type of cattle
3. Buyer of cattle, origin of cattle, previous plane of nutrition of the cattle
4. In and out shrink of cattle, physical description and background identification, realizer data, necropsy information, etc.
5. Classification of feedstuffs and processing of feedstuffs used in diet, Net energy efficiency and intake chart of each pen of cattle, by-product used, and feeding program utilized (limit feeding, program feeding, etc.)
6. Ionophore or additive used, metaphylactic treatment used, vaccination program used, implant or implant combination used, treatment type/duration/cost/etc.
7. Housing type that cattle are fed in, pen condition records, cattle movement
8. Check weight data from re-implant (chute scale download)
9. Packer/alliance, carcass characteristics, weigh conditions, risk management, etc.

The above items are just suggestions for data that should be considered for closeout data. Many more items should be collected for yard-sheet data. I would highly

recommend that one select a program that is compatible with your feedlots' chute scale, truck scale, batching scales and EID program.

Closeout Data Interpretation

Only include closeouts in the data set that are complete and include all desired measurements. I would recommend that closeouts be calculated on a pay-weight to pay weight basis, which represents a true reflection of the real economic and cattle performance of the pen. Also include dead weights and realizer weights in the closeouts.

Several closeout programs offer the ability to calculate net energy efficiencies and intake efficiencies for each group of cattle which is calculated from comparing that particular pen of cattle with the NRC equations for comparable breed, sex and weights of cattle. These efficiency numbers often prove to be valuable parameters to use when evaluating the closeout data. Many feedlots manipulate their closeout data to include full weights or adjust the performance data to "standardized" dressing percentages. This data may look impressive from a performance perspective, but the validity of the data should be questioned from an analytical value. A high quality closeout/data control program will allow the feedlot to apply quality control and quantitative control of feedstuffs, morbidity, mortality, veterinary supply costs, etc.

Many select suppliers such as implant manufacturers, pharmaceutical companies, veterinarians, feed companies or consulting nutritionist will sort and analyze data for feedlots. This service is a very valuable tool and should be utilized if possible by the feedlot. However, it is important to remember that each particular feedlot's closeout data is highly confidential. While one can compare implant programs, health programs, etc., it is important to consider with all sorts that the associative effects of any biological system (cattle) may make data interpretation difficult. However, it is easier to sort within each feedlot and compare pens, lots and groups of cattle.

Holstein Closeout Data Interpretation

As mentioned in the introduction, many feedlots have biases about Holsteins from past feeding experiences. As consultants we have all heard horror stories concerning Holstein steer production experiences in many feedlots. These "stories" include such statements as; "high death losses" or "inefficient breed" or "hard time grading USDA Choice". While many of these stories may be substantiated with hard data, these descriptions are generally not descriptive of modern Holstein steer performance. It is not the objective of this paper to site research that documents the higher feed intakes, feed efficiencies and higher water intakes of Holstein steers. Holstein steer production research data will be provided by other scientists reporting at this conference. However, it is my experience as a consulting nutritionist, to report that there are many Holstein steer production systems that yield outstanding growth measurements.

The availability of early weaned and intensively raised Holstein steer calves coupled with highly managed feedlots can easily yield exceptional growth parameters. Likewise, with the adaptation of wet distillers grains into many feedlot diets, heavy in-weight Holsteins (>850#) perform, yield and grade better than past experiences. Many Holstein calves used to be fed a corn /pellet mixture, and although this once popular practice was a labor “friendly” system, most lots were never closed-out. Instead, these self-feeder lots of Holsteins were most often constantly being sold-from or added-to, thus limiting the closeout data pool. While many Holstein steers performed adequately when using self-feeders, many steers “burned-out” from these low fiber diets, especially if pen or weather conditions were adverse.

Popular programs for feeding light in-weight Holstein steers today include a brief period (30-45 days) of Plateau Feeding a moderately high energy diet (56-60 Mcal NE gain) to “acclimate” and “condition” rumen integrity. This coupled with lower starch diets (due to higher amounts of distillers grains products) regularly produces excellent growth parameters from Holstein steers in the northern plains feedlots. Likewise, similar growth parameters are realized in southern plains feedlots when Holstein steers are fed in highly maintained pen conditions. Since these light in-weight Holstein steers (<350#) are often feed in feedlots for 330-365 days, it is essential to have excellent management and pen maintenance at all times to yield desired growth results.

Therefore, due to lack of adequate housing systems, poor management abilities, improper ration composition or many other reasons, feeding light in-weight Holsteins is not for every feedlot! However, the tools available to produce admirable growth observations from light in-weight Holstein steers are readily available to all producers should they be willing to modify their management techniques. Current industry discussion/direction, realizing the importance of source identity and age specificity in the cattle supply, make light in-weight Holstein steer calves a desirable commodity. Most often, light in-weight Holstein steers are 13-16 months of age at harvest and achieve out-weights of greater than 1325 pounds. To achieve these desired out-weights and performance with long-fed Holsteins, one must provide adequate bedding or housing surfaces to reduce foot abrasions or feet problems. Proper vaccination and immune system function is more easily obtained with the variety of vaccines and pharmaceutical products available today compared to 5 years ago. With the adaptation of the beta-agonist @Optaflexx, these light in-weight Holsteins are more likely to realize desired carcass characteristics.

Realizing efficient growth parameters from heavy in-weight Holstein steers (including desirable quality grade/yield grade attributes) has been a conundrum in the past. However, similar to light in-weight Holsteins, recent scientific advancements have improved the systems approach for this class of cattle and has resulted in improved growth patterns. Many heavy in-weight (>850#) Holstein steers are aged cattle (over one year of age upon entry into feedlots) that have been reared on pasture with minimal management inputs. In the past, these Holstein steers have yielded poor growth parameters, especially feed efficiency, compared to similar-weight colored steers. Intakes of heavy in-weight Holstein steers is often 15% higher when compared to similar

in-weight colored steers and efficiencies are 7-10% poorer (DM conversion). Heavy in-weight Holsteins historically have displayed more metabolic morbidity and mortality, increased bulling, poor USDA grading results, low dressing percentages when compared to similar weight colored cattle, etc. With the advent of more appropriate implants, wet distillers grains (digestible fiber and more fat vs. soluble starch), Optaflexx®, improved housing systems, improved vaccine technology and many continuing research developments, heavy in-weight Holstein steers have become a more predictable feedlot animal. With the future implementation of electronic identification and tracking systems, heavy in-weight Holstein groups should be more uniform in age and previous plane of nutrition and thus more responsive to current feedlot management practices.

Summary of Northern Plains Feedlots Holstein Closeout Data

Included is a summary of Holstein steer closeout data from northern plains feedlots. This database spans five years (from 1998-2003) and DOES NOT include Holstein steers that have been fed @Optaflexx during the last 30-35 days on feed. Use of @Optaflexx has improved Holstein steer performance/closeout data, but has not been used in enough cattle in this data base to impact total data dynamics. Therefore, I have opted to leave these closeouts out of this Holstein steer summary. Most of the feedlots I consult to that are included in this closeout summary are now using wet distillers grains as a portion of their feedlot diets. However, the vast majority of the closeouts included in this data set did not include wet distillers grains because of lesser availability of product six years ago. Inclusion of wet distillers grains into Holstein steers diets has improved production performance data. Much of this improvement in performance is due to reduced metabolic disorders. Diets that include wet distillers grains have higher ADF levels coupled with higher Mcal NE gain levels (66-67 Mcal NE Gain), thus yielding improved feedlot and carcass characteristics when compared to previous feedlot diets that yielded 63 Mcal NE Gain energy density diets. I should mention that one would expect better Holstein steer performance/closeout data from high plains/southern plains data due to their diet energy density, especially comparing past years data. With the inclusion of wet distillers grains in northern plains feedlots, long term closeout summary data is improving rapidly. This is coupled with more northern plains feedlots building facilities designed specifically for light in-weight Holstein steer calves (see other papers in these proceedings). Feedlot managers realize that raising light in-weight Holstein steer calves demands a high degree of excellent management practices including bedding and/or housing surface management. Southern plains/high plains feedlots have employed these management practices for many years.

As previously stated, only closeout data that was completed for all measured parameters are included in the following data set. Therefore, if the closeout did not include veterinary costs, mortality, etc., it was not included in this closeout summary data. I have also omitted closeouts that may include a percentage of colored steers or crossbred Holstein steers in the lot. A sort is included of the top 25% of the cattle in each weight group based on feed efficiency. This data set includes approximately

20,000 Holstein steers from 111 Holstein closeout reports gathered from northern plains feedlots. As previously stated, closeouts with Holstein steers including Optaflexx®, crossbred Holsteins or a percentage of colored cattle, have been omitted from this data set. I have also omitted economic data from this report due to the variation of prices (feed/corn prices, in and out prices, etc.) over this five-year time period. Included in this data set is a number titled Net Energy Estimated %. This figure represents the efficiency projection of a particular set of steers in similar weight groups when compared to the NRC cattle population in similar weight groups. Average performance colored cattle would have a Net Energy Estimated % of 100%. Cattle with scores over 100% would “out-perform”.

Cattle of similar weights and dry matter intakes fed iso-caloric diets for same days on feed. These numbers are obviously different dependent on sex, days on feed, dry matter intake and in-weight. Likewise, there is a similar percentage score for each closeout titled: DM Intake vs Proj. % (dry-matter intake versus projected dry matter intake). Again, this is a figure comparing a particular set of cattle to similar in-weight, sex, days on feed, iso-caloric diet and in-weight based on expected NRC cattle population.

I feel that the numbers displayed for Net Energy Estimated % and DM Intake vs Proj. % are valuable for a clients understanding of each particular closeout, as they represent a comparative score for that pen versus the mean cattle population. Cattle within a weight group, sex and breed group can also be sorted for comparing a wide number of variables. These variables may include housing type, implant, additive type, by-product type, forage type, etc.

Summary

The closeout summary table below displays averages of Holstein steer closeouts in northern plains feedlots compiled from 1998-2003. A sort was performed on the data set to identify the top 25% of the Holstein steers within each weight group based on feed efficiency (Feed/Gain (DM)). When comparing weight groups to the top 25% sort, many observations were similar, including total gain, mortality and veterinary medicine costs, days on feed and ration energetics (NE maint, and gain). Holstein steers in the <500# group exhibited trends for better daily gain and feed efficiency with less dry matter intake (17.41#/125.14% vs. 18.12#/134.53%) for the top 25% compared to the entire weight group. This same trend existed for the 501-800# Holsteins steers (19.73#/102.25% vs. 21.94#/104.25%). However, when compared to the population of similar steers in respective weight groups, the heavy weight group Holsteins consumed more feed with increased intakes as a percentage of similar in-weight cattle (108.87% vs. 106.83%) for top 25% >801# compared to entire >801# Holstein steers. Although these figures are confusing, it seems that increased intake may not necessarily predicate for optimum performance when feeding Holstein steers.

Table 1. Northern Plains Closeout Summary – Holsteins 1998-2003

| Item (avg.) | Holstein Steers Sorted by In-Weights | | | | | |
|---|--------------------------------------|----------|--------|-----------------------------|----------|--------|
| | Complete Weight Groups | | | Top 25% (F/G) Weight Groups | | |
| | <500# | 501-800# | >801# | <500# | 501-800# | >801# |
| Init. BW, lb | 353 | 690 | 891 | 366 | 618 | 858 |
| Init. Shrink, % | 6.02 | 6.37 | 4.55 | 2.41 | 5.59 | 4.08 |
| Out BW, lb | 1258 | 1274 | 1322 | 1271 | 1272 | 1338 |
| Out Shrink, % | 3.15 | 2.99 | 2.92 | 2.41 | 2.89 | 2.97 |
| Mortality, % | 3.67 | 1.60 | 0.96 | 3.09 | 1.54 | 0.57 |
| Vet-Med/Hd, \$ | 22.93 | 11.79 | 10.26 | 21.08 | 11.79 | 13.54 |
| Total Gain, lb | 908 | 587 | 432 | 910 | 655 | 480 |
| Days on Feed | 327 | 205 | 151 | 309 | 219 | 152 |
| Daily Gain, lb | 2.78 | 2.84 | 2.84 | 2.89 | 2.96 | 3.15 |
| DM Intake, lb | 18.12 | 21.94 | 24.22 | 17.41 | 19.73 | 23.06 |
| F/Gain, lb DM | 6.68 | 7.79 | 8.64 | 6.02 | 6.68 | 7.33 |
| Ration NE _m , Mcal/100 lb | 91.6 | 91.3 | 93.2 | 92.1 | 91.4 | 94.0 |
| Ration NE _g , Mcal/100 lb | 62.4 | 61.3 | 62.1 | 63.7 | 62.4 | 62.7 |
| NE Est. % | 99.82 | 96.76 | 89.15 | 104.12 | 103.65 | 97.2 |
| DM Intake vs. Projected, % | 134.53 | 104.37 | 106.83 | 125.14 | 102.25 | 108.87 |