



# Cattle Producer's Library

## Herd Data: The Clues to Cow Efficiency

*Ed Duren, Extension Animal Scientist  
University of Idaho*

Integrated Resource Management (IRM) is a systems approach to problem solving and management in a cow-calf operation. An important part of being able to manage effectively is knowing the status of the herd and having accurate records of management activities. This information is called “base data.”

Base data are necessary for measuring progress toward management objectives. In IRM, the primary base data to measure are the four key indicators: growth, open cows, length of calving season, and calf death loss.

### Annual Herd Summary

A cow herd should be managed by the objectives according to the stage in the biological cycle and season. Cow herd performance can easily be measured and evaluated annually based upon the four (4) indicators:

1. Growth in pounds for calves or yearlings.
2. Open cows or late calving cows—number in herd.
3. Length of the calving season in days.
4. Death loss in number and kind of cattle.

An annual summary of the **GOLD** (4) key indicators will clearly determine the efficiency or inefficiency of the cow herd.

### The Value of Good Records

Records can be cumbersome and time consuming. It is not uncommon for a producer or ranch manager to become overwhelmed with information. Records too few or too many may become a hazard to management and improved herd efficiency. Most ranchers are reluctant to keep records. However, they often become excited when they collect meaningful base data.

The IRM (red) pocket field book has been developed to help cattle producers gather, record, and summarize the base data on their herds. Sections in the book relate

to specific activities or events that take place throughout the year. When summarized, the base data from each of these sections can be used to develop a herd management flow chart or management picture (see next page).

The IRM pocket field book is designed for use beginning with the calving season and ending with weaning the calves and shaping up the cow herd. It provides direction to the selection and recording of pertinent herd data, which can enhance herd management for both reproductive efficiency and profitability. In addition to the herd data sections, the field book also contains a daily calendar and an address section making it one of the most useful and important tools that a cattle producer has.

The herd management flow chart helps identify key opportunities for improving herd performance, tracks the management changes that are made, and shows the impact of these changes as measured by the four key indicators. Management activities and the sections of the pocket field book related to each of those activities are described below.

### Calving Season

**Calf Information**—The calf information record section is completed throughout the calving season and provides space for individual records on each calf. The records include cow identification and age, sire, calf identification, date of birth, birth weight, calving ease score, sex death code (if needed), weaning date, and weaning weight.

**Calving Activity**—This is one of the most valuable sections of the book because it summarizes the calving season. The number of births occurring on each day of the calving season is recorded according to the age of the cow. The calving season is divided into 21-day periods, thus showing the distribution of births throughout the

**Total Beef Program  
Management Opportunity Worksheet**

Name \_\_\_\_\_ Ranch \_\_\_\_\_  
Date \_\_\_\_\_ 1985-87 \_\_\_\_\_

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<b>Data base key indicators</b>	<b>Key causes</b>	<b>Key approach to problem isolation</b>	<b>Problem identified</b>	<b>Key management technology changes</b>	<b>Key results to adoption</b>
Growth	Nutrition	Feed analysis Clinical tests	Low Se, Cu, Mn, P	14% P supplement containing vitamins and trace minerals with elevated levels of Cu, Mn, Se	Average weaning weights 1986: 646 pounds, steers 580 pounds, heifers
576 pounds Steer weaning weights, 1985	Management	Evaluate processing and handling of calves	More opportunity to utilize implants	Ralgro implanting early-born steer calves and reimplanting at branding	1987: 658 pounds, steers 600 pounds, heifers
Open cows	Bulls	Physical evaluation Clinical tests	62.5% positive for trichomoniasis	Cull positive bulls	1986: 5% open cows
15% - 1985	Nutrition	Feed analysis Clinical tests	Low Se, Cu, Mn	Treat negative bulls 14% P supplement containing vitamins and trace minerals with elevated levels of Cu, Mn, Se	1987: 3% open cows
	Management	Review management program	Too many cows bred after mixing on summer range	Estrus synchronization of cows calved at least 45 days	
<b>Length of calving season</b>					
<b>WAS NOT A FOCUS OF THE PROJECT AND WAS NOT VIEWED AS A PROBLEM</b>					
Calf death loss	Disease	Evaluate vaccination program Evaluate loss by reason	67% sickness rate	Changed vaccination program and schedule Early recognition and treatment of sick calves Video monitoring of calving, 1987	Improved immune response 1986: 7.2% death loss 7% sickness
8.8%, 1985	Nutrition	Feed analysis Clinical tests	1.7% - scours 3.8% - other 3.3% - dystocia Low Se, Cu, Mn, P	14% P supplement containing vitamins and trace minerals with elevated levels of Cu, Mn, Se	1987: 3.9% death loss
	Management	Evaluate flow pattern	Grouping too many pairs	Maintained smaller groups with calf shelters	6% sickness 0.50% death loss to dystocia

calving season. This distribution of births is as important as the length of the calving season. The information from this section can be used in the herd management flow chart to help identify specific problems with the reproductive performance of the herd.

Management changes can be implemented and the results measured through the information collected in this same section the following year. For example, reproductive problems of second-calf heifers show up in this section and the results of changes in nutrition, breeding management, or other possible causes can be measured the following year.

**Death Loss Date**—Death loss is a key indicator of herd performance. Recording the calf identification, its age, cause of death, the cow identification, and the cow's age help in isolating the causes and solving the problem.

## Cow Herd Management

Cow evaluation after weaning is one opportunity to reshape the cow herd. The sections related to cow herd management assist cattle producers determine what needs to be done and how to record the actions taken. Two of the primary key indicators can be measured at this time—the number of open cows and length of calving season in the coming year. This information is critical for a cattle producer to develop a herd management flow chart and further assists the producer to identify management opportunities and to measure the results of any changes made.

**Cow Fertility Data**—The results of pregnancy testing are recorded. This is indicated by the number of cows, by age, to calve in the first 30 days of the calving season; in the 30- to 60-day period of the calving season; those calving over 60 days into the calving season; and the number of open cows.

**Cow Herd Inventory**—At weaning time cattle producers may take inventory of the cow herd and its makeup. The number of cows are listed in this section by age and breed.

**Cow Herd Immunization/Parasite Control**—Cattle producers may record herd health records in the same manner as they do branding and weaning records, including immunizations and parasite control.

Body condition record is extremely useful in being able to sort the cow herd according to nutritional needs. The spring condition score would permit the selection of early pastures or range for abundant grass growth to graze the thin or heavy milking cows. The fall scores again would permit sorting cows for winter feeding. The impact could become economical in the purchase of supplements and even hay or other forages.

The body condition scoring record supports the determination of supplement needs and allocation with the supplement record sections. Body condition scores compliment pasture use and supplement use. This is a key to economical decisions.

## Bull Management

**Bulls: Breeding Soundness Evaluation (BSE)**—The results of bull soundness evaluations conducted by a veterinarian are recorded in this section. This information is helpful to cattle producers who isolate problems associated with open cows and length of the calving season. Bull soundness evaluation should also include a trichomoniasis test.

**Bull Inventory**—The makeup of the bull battery can be analyzed by reviewing the bull inventory. Numbers of bulls are listed by age and breed groups. This information is especially helpful when planning bull purchases.

**Bull Immunization Data/Parasite Control**—Herd health information on bulls should be in harmony with the cow herd health record. The A.I. records can enhance selective artificial breeding to high performance cows. This record could be useful in recording live mating as well.

## Calf Management and Marketing

**Calf Health**—This record becomes extremely important to establish an immunization program conducive to calf or yearling marketing. The vaccination treatments are normally in the spring at birth, at branding time, and again in the fall at pre-weaning.

Space is provided in this section for recording vaccines, implants, insect control, and other management practices applied at branding time. The number of head processed is recorded along with the names and serial numbers of the products used and the date of processing. This information provides a record of treatment and valuable data for the herd management flow chart. Other treatment data may include parasite control, growth implants, micro-mineral nutrients, medicated feed, and creep feeding. This constitutes the first steps in an organized pre-conditioning program.

## Weaning and Marketing

**Weaning Data**—The Weaning Data section is used by cattle producers to record marketing information on calves they sell at weaning. The number of calves by sex, their weight, and price received may be recorded along with marketing costs such as trucking, commission, brand inspection, and shrink.

Growth performance is measured, in the final analysis, by the number of pounds of beef raised per cow in the herd. The weights of calves raised are summarized in this section. The type of animal, the date weighed, the number of animals, and their average weights are recorded. Regardless of when or how the calves are weighed and/or marketed, this section is used to record the base data on one of the key indicators—growth. The last section of the pocket field book for herd data is called “cattle sales” where the sale of cows, replacement heifers, yearlings, and bulls may be recorded.

## Cattle Management System

Cattle management by objectives is essentially a system of incorporating known scientific technology into a more logical and effective pattern that requires a systems analysis to enhance the rate of adoption. Therefore, a total program demands the application of appropriate technology from diverse disciplines within animal agriculture.

The IRM pocket field book is a powerful management tool. It provides the rancher with the base data needed to take full advantage of the IRM concept. The rancher can identify the opportunities for improvement and mobilize the resources of IRM to bring about change. *The Cow-Calf Management Guide & Cattle Producer's Library* are aides to planning and a current reference source of technical information. This information reinforces the management changes.

As a producer or manager becomes more aware of herd problems, it is in the best interest of the ranch to seek professional assistance to solve the problem(s). Consequently, teams composed of, but not limited to, an extension agricultural educator, veterinarian, banker, extension livestock or farm management specialist, and the producer become more involved and more effective. As problems are attacked on a team basis, the challenge becomes a part of the motivation to the key people involved to rapidly integrate by developing and implementing the Idaho Total Beef Program for a specific ranch or a group of ranches within the community.

## The Challenge in the 21st Century

The environmental resource system must be managed properly to optimize growth and maximize economic returns while at the same time sustaining the resource. It is understandable that a manager must learn how to analyze the system and measure progress. Bench marks obtained from field data must be established for the key indicators in cow herd management. Reference data can be used to identify problems and measure progress in the management by objective.

If profitability and competitiveness become a reality on the ranch and within the industry, production, financing, and marketing must become efficient through management and educational programs. A total manage-

ment program results when these are blended for optimum production and maximum profitability at the ranch.

In looking ahead to management in the 21st century the day is gone when we can run a cow operation out of our hip pocket. We must remember that the cattle producer has the largest impact on the production of our ranches because we manipulate the environmental system through our system of management. We must have a system of analysis on the key indicators of level of production. We must be willing to change. All of the technology in the world is useless until it is incorporated into the management system.

Seldom will we be successful unless we use an interdisciplinary approach. In Idaho we call it the Total Beef Program; nationally it is called Integrated Resource Management. You, who are producing cattle, need to obtain all of the technology available and incorporate as much as you economically can afford into your management.

Professional educators need to be innovative in the effort to speed the rate of technology adoption. We have read that from time of discovery of technology to general adoption is 7 to 15 years, or a 12-year average. This is definitely too long in these fast-changing times.

A total program of Integrated Resource Management for beef cattle is a line of action that involves the cooperation of people to speed the rate of adoption and flow of technical information from the scientist to the producer. Participation, involvement, motivation, and commitment are the instruments used in a successful ranch operation. With people in place fully informed, the educational process will result in a "hands-on" experience long to be retained.

The 21st century will be a challenge to producers, ranch managers, allied professionals, and extension educators. Two questions that producers must answer are:

- What are the opportunities for change?
- What will each of you do to make change happen?

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NOTE: The IRM (red) pocket field book was developed in Idaho. Books are now available throughout the West from county extension offices, industry representatives, veterinarian offices, or the National Beef Cattle Association.



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