

Farm Management

ART OR SCIENCE ?

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That famous sign on Harry Truman's desk "THE BUCK STOPS HERE" could appropriately be found on your desk, in the pickup, or wherever your business center is located. When all is said and done you, in your role as manager, are the one who accepts responsibility for the success or failure of your business.

You set your goals (level of income, size of calf crop, crop yield, etc.). You seek advice and ideas from farm magazines, your extension agent, feed dealer, etc., but you are the one who makes the final decisions and pays the bills. We like to think of management as a science, but, because of many unknowns, management is still largely an art.

Your farm is like no other. It has its own mix of soil types, fertility levels, field sizes, drainage patterns, livestock, machinery, labor (yours, your families, or hired labor), the list could go on and on. You, the manager, pull all of these "pieces" together and organize individual cropping and livestock systems. You then combine these systems into a production "unit"—your farm. Your success or failure in reaching your goals will ultimately depend on the mix of systems you choose; how well these systems fit together, to use your resources to best advantage, and the production practices you choose for each system. An off farm job or business is often included as part of the "mix" if you are just starting out, have a small acreage, or for whatever reason.

Management would be easy if you knew what the weather will be during the growing season, how much pasture you will have and when, what cattle prices will be so you can sell when prices are highest, which bull to mate to what cow—and when—to get the best calves, and on and on. Unfortunately, few of these things are known with a high degree of certainty. Agricultural research is pushing

back the frontiers of knowledge to provide information so management decisions can be made with less risk of failure. In other words, research is moving management from the realm of art to that of science.

Agricultural research, both public and private, has made great strides in providing products and knowledge to remove some of the risk and uncertainty from farming, yet much remains to be done. Relatively little research has been done with beef cow-calf herds, partly because cow-calf-forage systems are complex and difficult to study. Most pasture research has been done with steers or heifers because all of the gain is salable and results are easier to evaluate.

A relatively new approach to agricultural research, called systems research, has come to the forefront in recent years. This approach requires an interdisciplinary team of researchers working together to study an entire operation under field conditions. In beef-forage systems research, animal scientists, agronomists, agricultural economists, agricultural engineers, and entomologists all pool their knowledge to study the workings of the system in action. Traditionally, research is based on reducing a system being studied to its basic parts and by studying and understanding each part it is believed the whole system can be understood. This kind of research continues to be needed, but from a management point of view it is important to know how all the parts of a system work together. You can think of all the products and management practices needed to raise a calf from breeding the cow to weaning and marketing the calf as one cow-calf system. For example, cow-calf systems research would measure the change in calf weaning weight, cow conception rate, number of animals carried per acre of land, etc., as a result of changing one piece (or component) of the system. One might look at the effect of using a different species of grass for pasture during the summer, the effect of adding nitrogen fertilizer to the pasture at a specific time of year, or any number of things. Systems research is expensive and requires large numbers of animals and acres of land to study just a few of a large number of possible systems.

Recognizing the need for beef cow-calf systems research, the University of Missouri established the Forage Systems Research Center in north central Missouri. Year around

research with beef cow-calf forage systems has been conducted on the Center since 1971. The first studies examined the change in pasture carrying capacity and pounds of calf produced per acre from adding 100 or 200 pounds of nitrogen fertilizer annually to fescue-ladino clover pastures. Both spring calving systems (February, March, April) and fall calving systems (August, September, October) were studied.

Individual animal performance was greatest on fescue-clover pastures where no nitrogen fertilizer was added. Carrying capacity of pastures was increased with addition of nitrogen fertilizer, but calf weaning weights and cow conception rates were lower in the spring herd, resulting in less total

production in some systems. With fall calving systems, individual animal performance was not significantly affected by applying nitrogen fertilizer. Applying nitrogen to glass-clover pastures will stimulate the grass which in turn crowds out the legume. Presence of a legume in pastures will increase individual animal performance. Applying nitrogen to grasses other than fescue would not reduce individual animal performance as much as with fescue. Unidentified "anti quality" factors in fescue are believed to be responsible.


More recent work at the Forage Systems Research Center has shown outstanding improvement in conception rate of spring calving cows, on nitrogen fertilized fescue pastures,

when cows were supplemented with only two pounds daily of an 85 per cent ground shelled corn and 15 per cent soybean oil meal ration from calving until start of breeding season, around May 1. Research at the Dixon Springs Research Center in Illinois shows no increase in number of cows settled when a grain supplement was fed only during breeding season.

Creep feeding calves was also studied at the Forage Systems Research Center. Bull calves made considerably better gains on creep feed than heifer calves, especially fall born bull calves. Feed conversion averaged around eight to ten pounds of creep feed for each pound of additional gain above non-creep-fed calves.

Birth weights of fall born calves averaged about seven pounds lighter than spring born calves and most of the difference was in bull calves. Calf survival was higher in the fall calving systems, with about 92 per cent of the cows calving raising a calf to weaning compared to 85 per cent in spring calving systems, over a four year period. Fall calving cows bred back quicker and conception rate was higher than spring calving cows. This was no-doubt due to excellent nutrition for the cow from fall regrowth fescue through September, October, and November. In north Missouri, fall calves are lighter than spring calves at a given age. As you move south, through south Missouri, Arkansas and into Louisiana, differences in weight at a given age will become less and less because of milder winters and a longer grazing season.

Managing a farming operation is surely one of the most challenging—sometimes frustrating—but often the

most rewarding professions around. The job of putting together all of the "pieces" into an efficient production system and making the system work, in spite of insects, diseases, weather, markets, etc., is a sizable accomplishment. As we learn more and more about how pieces of beef-forage systems work together we will also learn more and more about what pieces work best together to increase production without a corresponding increase in costs. Systems research has the potential for further pushing back the frontiers of knowledge and uncovering more and more hard information on which you can base your management decisions. 

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pricing and reporting and to respond to new legislative and regulatory proposals in this area. New subcommittees will examine other problems more closely, too—including cattle cycle monitoring, futures trading and market structure and marketing alternatives.

2. *Meat boycott recommendations* have shown up around the country. To the uninformed, such an approach to a supply and demand problem seems logical. However, in the case of beef, a boycott would discourage producers

from going ahead with the rebuilding of breeding herds, and the longer term result would be even smaller supplies and higher prices. As NCA has explained to the public, we need to stimulate production, not discourage it.

Inflation advisor Alfred Kahn, White House consumer adviser Esther Peterson and agriculture secretary Bob Bergland all have said the same thing: Much of the blame for today's higher beef prices can be traced back to the market disruptions caused by the boycott and price controls of 1973. They say a boycott would be counterproductive.

The NCA and its affiliates have responded to recent boycott efforts, not by issuing news releases that might fan the "press fires," but by contacting the protest leaders directly with facts supporting the cattle industry stand and by working only with those media who have requested information or who may be covering the story locally.

3. *Meat import legislation* aimed at amending the 1964 Meat Import Law developed some "snags" on its way through the Congress. On May 2, H.R. 2727 was reported out of the House Ways & Means trade subcommittee with some amendments that made it unacceptable to NCA.

The bill, as introduced by Congressman Al Ullman and supported by the NCA, called for a counter-cyclical import formula and a limitation of Presidential authority. It also would close any loopholes by covering fresh, frozen or chilled beef even if processed. However, the amendment was unacceptable for several reasons—including a "sunset" provision which would terminate the Import Law in 1989.

The test was to see whether these changes, obtained by the Administration, could be eliminated during the legislative process. Without needed changes, NCA opposed the legislation.

4. *Balancing the Federal budget* became a priority item for the NCA when members voted at the last annual meeting to support a constitutional amendment, preferably via the state ratification process, requiring a balanced federal budget, except in time of national emergency.

Since NCA's last annual meeting, the officers and staff have been busy visiting with various leaders in both Houses of Congress on this subject. They have found that there are now over 67 separate resolutions in-

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