THE GRAZIER

Management-Intensive Grazing, Not Intensive Grazing Management

Do you ever wonder how we come up with some of the acronyms used for certain organizations or management systems in agriculture?

We have integrated pest management (IPM), integrated resource management (IRM), best management practices (BMP), and the list goes on and on.

Even intensive grazing management has been shortened to IGM, but I think that sometimes we get the wrong names and acronyms tagged onto certain concepts. If we say, "intensive grazing management," you derive the terms "intensive grazing" and "management." Unfortunately, what this may conjure up is a vision of pastures only "intensively grazed."

The second and more important concept, that of "management," is sometimes overlooked. I would propose that a better terminology for this approach to grassland management is, management-intensive grazing, with emphasis on management-intensive.

What we are attempting to do in a forage-soil-livestock system is to replace capital and external resource inputs with intuitive management. The system's focus is on the manager, not on individual components.

One of the reasons university researchers haven't been able to report a positive economic or environmental impact when converting a farm from more traditional grazing management systems to management-intensive grazing (MIG) is for that very reason. Their focus has been on the components rather than the manager.

It is the manager's ability that determines the success or failure of a particular grazing management system more than the particular system components. If "can't" is a commonly used word in the manager's vocabulary, any attempt at MIG is doomed to failure.

Understand Ecosystem

To really understand the potential economic and environmental impact of MIG, the total ecosystem must be considered. Remember, the "eco" in ecosystem also encompasses the "eco" in economics. The focus of grazing management must be the integration of total ecosystem concepts within the framework of economic viability.

In thinking about management strategies, how often do you ask, "Why am I doing this? Or, for example, "Why are my calves born in February? Why clo I graze fescue? Why do I deworm cows? Why do I put nitrogen fertilizer on my pastures? Why am I feeding my cows corn? What does all this cost me?

Too often we accept management practices simply because that's the way it has always been done or because everybody else is doing it.

In seeking answers to all of the questions above, you will find that all are interrelated and each answer we deduce leads to another set of questions. Imanage grasslands effectively, you must understand the how's and why's of these interrelationships.

Grazing System Fundamentals for Success

1. Nutritional needs of livestock are met;
2. forage yield, quality and persistence are optimized;
3. natural resource base is maintained or enhanced;
4. system is economically profitable.

There are many production systems around that meet the first criteria, but fail on the other three accounts. The reason for this failure is that in our industry livestock have been the manager's focal point. If a manager wishes to revel in the size or looks of their livestock, then this approach is fine. If the manager's focus is to produce a certain net return from a resource base while maintaining or enhancing that resource base, then the focus must be on the land resource itself. MIG is a production system that focuses on the land resource.

MIG Life Cycle

The most profitable forage-livestock system is likely to be a system that matches the cycle of livestock nutritional needs to the forage availability patterns of a particular land resource unit.

A system which features high cost inputs, such as grain supplementation, elaborate facilities and high labor, generally results from having the reproductive cycle of livestock out of synchrony with the natural forage supply. The more an animal's diet consists of harvested pasture, the lower the cost of production.

Grazing management which encourages plant diversity development in pastures will generally be more profitable than systems which are dependent upon large inputs of external resources to maintain productivity. Plant species diversity tends to produce a more consistent feed supply in terms of both quality and quantity.

The total forage yield may be lower than the yield of a nitrogen fertilizer supported monoculture system, but the gross margin per acre or per pound of meat produced is generally higher with MIG. Pastures with legumes, such as clover, tend to be lower cost than nitrogen fertilizer-based pastures. And legume pastures are higher in forage quality.

Efficiency of nutrient cycling is enhanced by reducing the distance animals must travel to water and by spreading out animal focal points on the landscape. As pastures are rested in a rotational system, root development is enhanced Greater root development results in improved soil structure, which leads to improved water infiltration and water holding capacity.

Many droughts experienced on grazing land are, in reality, man-made. Overgrazing which exposes the soil surface allows greater runoff, hence less water to infiltrate. The shortened root structure of overgrazed pastures will not reach to deeper soil depths where water may be held.

Environmental degradation associated with grazing livestock, such as stream bank degradation and destruction of wildlife habitat, are really associated with the continuous presence of livestock on the landscape, not the mere fact that grazing animals are present in the ecosystem.

-James Gerrish,
University of Missouri Agronomist

Water Quality Task Force Releases 103-page Report

The Council for Agricultural Science and Technology (CAST) has recently released a 103-page task force report titled, "Water Quality: Agriculture's Role."

This report discusses modern agriculture's impacts on the environment, especially surface and groundwater. Ag policy and shifting legislation have sent conflicting signals on production and environmental needs. Our ag industry will be increasingly directed by public concerns and environmental policies that focus on water quality protection. Highlighted in this report are the public policy process and current as well as future approaches and conservation programs to protect water quality from certain ag practices.

The CAST task force of 23 scientists report on the latest research results pertaining to agriculture's role in water quality. CAST is a nonprofit consortium comprised of 29 member scientific societies in food and agricultural science, as well as individual, student, company and associate members.

"Water Quality: Agriculture's Role," CAST report no. 120, is available for $15. To order, contact CAST, 137 Lynn Avenue, Ames, IA 50010-7197; (515) 292-2125

New Products

Vitamin E Supplement Helps Fight Disease

Evidence points to the fact that vitamin E supplementation can moderate the effects of specific diseases in beef cattle. Some of the most recent research suggests levels of vitamin E beyond those needed for normal growth and reproduction may actually enhance bovine immune systems.

"Vitamin E in Animal Nutrition and Management," a new reference manual published by BASF Animal Nutrition, summarizes current knowledge on the topic.

Vitamin E is essential for the integrity and optimum function of reproductive, muscular, circulatory and immune systems, says Michael Coelho, BASF nutritionist and technical service manager.

Recent studies have focused on the possible enhancement of animal immune systems by feeding vitamin E. Most report8 indicate that vitamin E alone, or in combi-

Continued on page 94

continued from page 92

nation with selenium, enhances immunity in a variety of species, Coelho says.

Several studies have shown that vitamin E administered to young cattle improves stress and disease resistance. In her section of the manual, Cheryl Nockels of Colorado State University department of animal sciences, cites research data dating from 1982-89.

In a 1986 study, for example, stressed feeder cattle were fed either 0 or 1,600 international units (IU) of supplemental vitamin E per kilogram in their daily rations. The cattle fed vitamin E gained 22.2 percent faster, had 11.7 percent lower death rate and 12.5 percent fewer sick days than unsupplemented cattle, Nockels reported.

"The discovery of vitamins is relatively recent," Coelho said. "In fact, vitamin E was not identified as a dietary factor until 1922. But just as vitamin E is now recognized as an indispensable part of a balanced human diet, research confirms its importance for animal health and reproduction."

Vitamin E occurs naturally in a wide variety of feedstuffs, but current feedstuff preservation practices may cause serious reductions in vitamin E levels in livestock raions.

"Rations containing high-moisture grain may require more vitamin E supplementation than rations containing dried grain," Coelho said. "A number of factors must be considered, such as the feedstuff's initial vitamin E level and any additional processing it has undergone."

Allflex Makes Progress On Electronic Eartag

One year ago, Allflex USA Inc., a Texas-based livestock product company, was provided exclusive rights to develop and market an electronic eartag for use in the livestock industry. This eartag will incorporate Texas Instrument's TIRIS transponder.

Development efforts have been focused in three areas: First, the testing and refinement of prototype tags; second, creating the appropriate reading systems; and finally, integration of the tag's on-farm use with appropriate computer software and hardware.

After a year of study, Allflex has found that the electronic eartag prototype has performed well through accelerated environmental and laboratory testing. Production of eartags is underway for conducting extensive, worldwide field trials. The first U.S. trials are scheduled this spring.

In cooperation with Texas Instruments, Allflex USA is working toward developing a reading/interrogation system for the electronic eartags. Work is being done to develop a hand-held reader with downloaded computing and data assimilation features, as well as stationary chute-side readers incorporating an antenna and computer interface capabilities.

For more information, contact Glenn Fischer, vice president, marketing, Allflex USA, Inc., 1-800-989-8247.

American FarmWorks Offers Life-time Insulators

American FarmWorks is the exclusive distributor for electric fencing insulators manufactured by Wisconsin Porcelain, the world's largest manufacturer of ceramic insulators.

American FarmWorks, offers a lifetime guarantee on these insulators. If they break or fail for any reason, it will replace them free of charge.

American FarmWorks, the largest manufacturer of electric fence controllers in the United States, is located in Rochester, Minn. For more information, call 1-800-437-1839.

Byntex Color-Coded Clips For Growth Promotants

To help promote accurate and safe product use, Syntex Animal Health has announced that Synovex® implants will now be packaged in letter- and color-coded clips or cartridges.

"Packaging for each of the three Synovex implant products has always clearly identiiied the particular formulation," explains Lynn Godbersen, marketing manager. "But now, as part of our continuing effort in support of the beef quality assurance program, these clips will be letter-coded and color-coded for convenient identification. The letter code on each clip also should prove helpful to those who have difficulty distinguishing colors."

New Cattle Vaccine Gives IBR Protection

Sanofi Animal Health has applied for a patent for a new cattle vaccine that provides extra protection against Infectious Bovine Rhinotracheitis (IBR) by combining two IBR fractions in one vaccine.

Developed in response to a recognized need for ongoing protection against IBR infections in cattle in high stress situations, Tandem SV+3 IBR Plus contains modified-live and killed forms of IBR virus.

"The combination IBR clearly induces better cell-mediated and humoral immune responses," said Dr. Gary Anderson, Sanofi Animal Health's biologicals R&D director. "Both responses am important in preventing IBR." This leads to an earlier, quicker response as well as longer-lasting antibody levels.

For more information, contact your Sanofi Animal Health products distributor, or call 1-800-538-2382.

Kiefer Built Magnum

Kiefer Built's new Stockmaster Deluxe "Magnum" trailer was designed with bull haulers in mind. It features 36, 48 or 54 inch sides of which the lower 15 inches is 3/8 thick high density plastic with formed upper sheet metal. Gooseneck models are available in 16 and 24 foot lengths. Pull-type models are available in 16 and 18 foot lengths.

For more information, contact Glen Schulz, sales manager, Kiefer Built Inc., Kanawha, Iowa, (515) 762-3201.

New Technology

Carcass Spray Research leads to Enhanced Safety

Start clean, end clean. That's an adage often voiced among food manufacturers talking about food safety assurance programs.

A solution to enhancing meat product safety, however, has been more complex than that simple axiom.

The research of an industry-sponsored research project testing the efficacy of organic acid rinses on beef and pork carcasses has led to enhanced product safety and extended shelf-life. Research success also convinced the U.S. Department of Agriculture (USDA) to approve its use industry-wide.

The research method, known as organic acid rinse, was a project carried out by the Beef Industry Council (BIC) and Pork Industry Group of the National Live Stock and Meat Board on behalf of the Beef and Pork Boards. The study's objectives were to determine the efficiency of using mild solutions of three organic acids — acetic, citric and lactic — in reducing or even eliminating food-borne microorganisms.

"The results from this research show the carcass spray can help greatly reduce the number bacteria present on beef or pork carcass during the processing procedure; said J.O. Regan, Meat Board director of product technology research and project leader. 'We also found the spray can alter bacteria's ability to attach to the carcass surface — no attachment, no future growth."

Product safety enhancement is crucial in providing meat purveyors with beef and pork with maximum shelf-life, Reagan said. Heightened product safety is important in assuring consumer confidence with meat products. Livestock producers will also reap the rewards of intensified consumer confidence in wholesomeness of meat products.

On Nov. 24, 1992, the USDA Food Safety and Inspection Service (FSIS0 issued a directive which allows the general use of the pre-evisceration carcass spray systems in meat processing facilities with HACCP or partial quality control systems already in place.

"The approval for carcass sprays became reality because of the cooperation between the Meat Board research team, Monfort and IBP personnel, and the FSIS staff," said Max Deets, chairman of the BIC beef product technology research subcommittee and Kansas BIC director. 'The sprays have been tested **in** processing plant situations in the past, but this research project had USDA oversight of the protocol all the way through the project."

Carcass spray research, and subsequent USDA approval for its use, will have significant impact on improving product shelf-life, said Kent Gansebom, chairman, Pork Industry Group product research subcommittee from Nebraska. This is a primary determinant on the price/value relationship for both domestic and foreign markets.

— Wendy F. ***Pinkerton***
National Live Stock & Meat Board