

A New Ethos and Ethics for the Year 2000

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Introduction

The implications of science and technology for society and government have grown enormously over the last few decades and will continue to do so. Geographical borders are less relevant today than locations and considerations of trading partners. The global economy has overshadowed any single national economy, and scientific and technical advances are leaving past animal health practices and policies obsolete. In many countries, animal agriculture is management of these risks within the framework of fair trade is inexorably forcing animal health officials and practitioners to reconsider past policies and programs, the methods of decision-making, legislative guidelines, and the delivery of services directed to animal health. Besides changes in global markets, new sensitivities and constituencies are developing that are profoundly influencing agricultural policy. Together, these issues are molding a new domestic policy that will evoke a new ethos and ethics in food animal agriculture and the veterinary profession.

First, we will examine these contemporary issues in more depth. Then, we will consider how these issues affect our profession and you personally. Finally, we will look at prescriptions for change and how veterinary medicine collectively and you and I, personally, can consider appropriate strategies to be well positioned in the year 2000.

The forces reshaping agriculture will continue to foster a climate of change and new opportunity for veterinary medicine. These major forces include new markets and trading partners, new constituents, changes in domestic policy, and changes in decision-makers, especially Congress. Now, and in the future, we will continue to face critical choices that will determine the future and quality of new services because of the strength of these forces. A new veterinary ethos and ethics is demanded.

Markets

Aggressive export policies and other efforts designed to keep U.S. farmers competitive in the world marketplace provide only short-term fixes to fundamental problems. The United States' call for multilateral elimination of all trade-distorting government measures by the year 2000 reflects the widely held view that a longer-term solution is

needed. Reaching that solution will require concerted international action.

Agreement in principle to liberalize agricultural trade conditions, however, is only the first step. Which countries would need to give up what? How would each country's farm support programs be affected? More to the point, what part must the United States play? And, would the sacrifices be worth the gains? Who would be the winners? The losers?

The heyday for U.S. exports, the 1970's, has gone. Thanks in part to a world recession and the debt burden shouldered by developing countries during the first half of the 1980's, U.S. agricultural export income dropped from a peak of \$44 billion in 1981 to only \$26 billion in 1986. Though economic recovery has prompted an upswing in global demand over the past couple of years, recovery of U.S. competitiveness has come at a high cost to the U.S. budget.

How does the fate of developing nations fit into the U.S. trade picture? In the eyes of some agricultural trade experts, potential new markets in the Third World are the only bright spot on the horizon. They say that freer trade and development assistance will increase Third World economic growth and consumer income, help payment of debts, and thus create better customers for U.S. commodities. Others contend that expanded Third World economic growth will result in greater agricultural output, which means only one thing—stiffer competition for U.S. farmers.

With the demise of socialism in Eastern Europe, new potential markets, especially for agricultural goods, have quickly and unexpectedly opened. There are 130 million people in the six countries of Eastern Europe and 280 million in the U.S.S.R. In the short run, there will be large increases in the purchase of agricultural products through new loans and aid programs. In the long run, the results of significant economic reform will probably not catch up until at least the year 2000. Thus, there will be a decade of food and agricultural imports. Improved technology and food processing machinery will be at a premium.

The European Economic Community (EEC) is trying to totally harmonize trading policies among unique agricultural units in 12 countries. Some type of agreement will emerge in 1992 which will profoundly alter world trade from that point forward. Certainly, it will be advan-

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VETERINARY — For intramuscular use for estrus synchronization, treatment of unobserved (silent) estrus and pyometra (chronic endometritis) in cattle; for abortion of feedlot and other non-lactating cattle.

INDICATIONS AND INSTRUCTIONS FOR USE

Cattle — LUTALYSE Sterile Solution is indicated as a luteolytic agent. LUTALYSE is effective only in those cattle having a corpus luteum, i.e., those which ovulated at least five days prior to treatment. Future reproductive performance of animals that are not cycling will be unaffected by injection of LUTALYSE.

1. For Intramuscular Use for Estrus Synchronization in Beef Cattle and Non-Lactating Dairy Heifers. LUTALYSE is used to control the timing of estrus and ovulation in estrous cycling cattle that have a corpus luteum. Inject a dose of 5 ml LUTALYSE (25 mg PGF_{2α}) intramuscularly either once or twice at a 10 to 12 day interval.

With the single injection, cattle should be bred at the usual time relative to estrus.

With the two injections cattle can be bred after the second injection either at the usual time relative to detected estrus or at about 80 hours after the second injection of LUTALYSE.

Estrus is expected to occur 1 to 5 days after injection if a corpus luteum was present. Cattle that do not become pregnant to breeding at estrus on days 1 to 5 after injection will be expected to return to estrus in about 18 to 24 days.

2. For Intramuscular Use for Unobserved (Silent) Estrus in Lactating Dairy Cows with a Corpus Luteum. Inject a dose of 5 ml LUTALYSE (25 mg PGF_{2α}) intramuscularly. Breed cows as they are detected in estrus. If estrus has not been observed by 80 hours after injection, breed at 80 hours. If the cow returns to estrus breed at the usual time relative to estrus.

3. For Intramuscular Use for Treatment of Pyometra (chronic endometritis) in Cattle. Inject a dose of 5 ml LUTALYSE (25 mg PGF_{2α}) intramuscularly. In studies conducted with LUTALYSE, pyometra was defined as presence of a corpus luteum in the ovary and uterine horns containing fluid but not a conceptus based on palpation *per rectum*. Return to normal was defined as evacuation of fluid and return of the uterine horn size to 40mm or less based on palpation *per rectum* at 14 and 28 days. Most cattle that recovered in response to LUTALYSE recovered within 14 days after injection. After 14 days, recovery rate of treated cattle was no different than that of nontreated cattle.

4. For Intramuscular Use for Abortion of Feedlot and Other Non-Lactating Cattle. LUTALYSE is indicated for its abortifacient effect in feedlot and other non-lactating cattle during the first 100 days of gestation. Inject a dose of 25 mg intramuscularly. Cattle that abort will abort within 35 days of injection.

WARNINGS

Not for human use.

Women of child-bearing age, asthmatics, and persons with bronchial and other respiratory problems should exercise **extreme caution** when handling this product. In the early stages, women may be unaware of their pregnancies. Dinoprost tromethamine is readily absorbed through the skin and can cause abortion and/or bronchospasms. Direct contact with the skin should, therefore, be avoided. Accidental spillage on the skin should be washed off **immediately** with soap and water.

Use of this product in excess of the approved dose may result in drug residues.

PRECAUTIONS

Cattle — Do not administer to pregnant cattle unless abortion is desired.

Do not administer intravenously (I.V.), as this route might potentiate adverse reactions.

Cattle administered a progestogen would be expected to have a reduced response to LUTALYSE Sterile Solution.

Aggressive antibiotic therapy should be employed at the first sign of infection at the injection site whether localized or diffuse. As with all parenteral products careful aseptic techniques should be employed to decrease the possibility of post injection bacterial infections.

ADVERSE REACTIONS

Cattle:

1. The most frequently observed side effect is increased rectal temperature at a 5X or 10X overdose. However, rectal temperature change has been transient in all cases observed and has not been detrimental to the animal.
2. Limited salivation has been reported in some instances.
3. Intravenous administration might increase heart rate.
4. Localized post injection bacterial infections that may become generalized have been reported. In rare instances such infections have terminated fatally. See PRECAUTIONS.

IMPORTANT

CATTLE — No milk discard or preslaughter drug withdrawal period is required for labeled uses.

DOSAGE AND ADMINISTRATION

CATTLE — LUTALYSE Sterile Solution is supplied at a concentration of 5 mg dinoprost per ml. LUTALYSE is luteolytic in cattle at 25 mg (5 ml) administered intramuscularly. As with any multidose vial, practice aseptic techniques in withdrawing each dose. Adequately clean and disinfect the vial closure prior to entry with a sterile needle.

HOW SUPPLIED

LUTALYSE Sterile Solution is available in 10 and 30 ml vials.

Caution: Federal (USA) law restricts this drug to use by or on the order of a licensed veterinarian.

US Patent No. 3,706,789

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tageous for Eastern European countries to join this community; and the Scandinavian countries are also considering membership.

Other countries are searching for compatible trading partners, and a series of competing economic communities is likely to result. A Pacific Rim Economic Community with U.S. membership is feasible.

The General Agreement on Tariff and Trade (GATT) further propels all of us forward into a global economy and market. Terms such as harmonization, transparency, equivalency, and regionalization have become the "buzz words" of the 1990's. Yet, no matter what the vernacular, the U.S. must carefully examine and change the basis of decision-making for exchanging animals and animal products. Risk analyses and decisional analyses are not only in vogue, but the essence of future policies, protocols, and decisions.

New Constituents

Today's reality suggests that America has entered a post-rural age; agriculture must embrace a new constituency and a new focus. There is a new concern for human health and humaneness, of evolving attitudes toward ecology and toward science and technology in general.

Choices at any crossroads augur risks, contradict tradition, point away from the comfort zone of status quo. This is true even when all signposts forecast the proverbial pot of gold—which in this instance is an irrefutable, undiminishing need for greater productivity in animal agriculture in the years ahead.

The United States' animal population is a remarkable, uniquely important national resource. Yet, research in the biology, health, and diseases of animal species has not kept pace. Federal financial support has remained small compared to monies for research in human health and the plant sciences—despite the fact that the biology, care, and diseases of many animals are essential to human health, well-being, and the quality of human life. This correlation has become a guiding focus for USDA in the next decade and beyond.

USDA is now the only Federal funding source for animal livestock research. The support seems even more minuscule when compared to the \$24 billion annual losses our economy suffers from diseases of our food animals, and the escalating significance of food safety. Obviously, in the future, we must do a better job in promoting the importance of animal science and research. We know the substantial benefits to human welfare, ecology, fundamental biology, medical knowledge, and scientific advancement; but I am afraid it is a well-kept secret among only a few of us.

In recent years, almost all vertebrate animal species come under some human management—harvesting, domestic production, or protective regulation. The future

demands enhanced sensitivity to the fact that animals are totally dependent upon people for their well-being as well as their existence. Man seeks to deal more thoughtfully and humanely with this awesome responsibility, because our world society is progressively becoming more heavily dependent upon animals. Never before has the health and welfare of people been so closely identified with the health and welfare of animals.

Animal agriculture represents a remarkable national resource that deserves our special attention and responsibility regarding human animal interrelationships. Yet the new statistics tell us that only two percent of the U.S. population is directly involved in agricultural production. More and more, we are engaged in a paradigm shift where our policies and sensitivities are greatly influenced by the remaining 98 percent. In Congress today, we have only a single district that has a farm base of over 20 percent of its voters. Agriculture is of great economic importance but of diminishing electoral relevance. Today, a huge food and fiber network is responsible for 18 percent of our GNP. This network includes marketing, distributing, retailing, and many ancillary industries.

Farmers and producers are only a single and minority link in this network yet sustain the entire system. Policymakers view the entire system and not a single facet, such as animal agriculture. There are many alliances and accommodations needed to effect this system. Our agricultural policies are continuously being reshaped by new competing interest groups.

We have our work cut out for us. Participatory democracies of the next century will not be satisfied to delegate decisions on the social and ethical implications—the economic, environmental, and humane issues. There must be greater communication between all concerned; the stakes are too high. The future of agriculture is dependent on consensus building, and we have an inherent obligation to educate the constituents comprising this mostly nonagricultural body.

In 10 years, there will be 260 million people to feed in the United States and 6 billion more people in the global food marketplace. Currently, we add approximately a billion people to the earth's population every decade. This translates into about one more China or India, or four U.S.A.'s to feed every 10 years. International exports are indispensable to the U.S.'s future growth and prosperity in animal agriculture; and, as you can see, to the well-being of a burgeoning world population.

In 1990, the U.S. population will reach 250 million people, with about 100 million cattle, 55 million swine, and nearly 8 million horses. In 1990, Americans will consume almost 6 (5) billion chickens—three-quarters of a billion more chickens than there are people on this earth. Our nation will also consume 280 million turkeys, or 30 million more than our national population. We project a \$30 billion-a-year beef industry and an \$18 billion-a-year

dairy business. We have 230 million laying hens producing 60 billion eggs annually. Is veterinary medicine prepared to shoulder the burden to ensure the health and productivity of our national herds?

But the fastest growing animal industry in our nation is aquaculture. "The world aquaculture crop is over 23 billion pounds per year. The Food and Agriculture Organization of the United Nations projects that it will grow 8 percent annually through 2000." Health conscious consumers have increased fish consumption from 10.3 pounds per capita per year in 1960 to 14.5 pounds in 1987. Our domestic consumption alone is 65 million pounds per year.

Fueling greater animal agriculture productivity is a steadily increasing demand by all American consumers for a continued abundance of safe, nutritional, inexpensive foods of animal origin. And this echoes throughout every country in the world, where an increasing demand for greater access to safe, affordable animal food parallels the higher standards of living being sought and achieved in the newly formed democracies around the globe.

It is ironic that, as the grazing lands of our planet become more finite, the potential for animal agriculture appears infinite. As I have already pointed out, U.S. farm population has declined to 2 percent of our total population; and indications are that this downward trend will continue. Another contradiction in our midst: the most populous state in the U.S. today has the highest number of residents—30 million—in California, and is also the state which leads in agriculture income; not necessarily a blissful union.

Late last month, a lead article in *The Washington Post* discussed fear of a new political war between the Californian urban/suburbanites and their neighboring agriculture industry which uses more than 80 percent of the available water. Even though the state is experiencing the first drought in 60 years, the situation points out new potential dilemmas and rapidly changing attitudes toward water's role in the Southwest's economic-environment clashes which, I believe, we must and will resolve in the years ahead.

In other words, just as our country should move into fourth gear to accelerate our agricultural productivity—our nation has, in fact, entered the post-rural era.

This is not an epitaph for American agriculture. Rather, it says we need new ways to deal with the new demands. The third major breakthrough in the history of agriculture is biotechnology, which offers us a new frontier for the future of animal agriculture. And, I am convinced the future only makes sense when discussed in the new societal context which includes the environment and humanness as well as the traditional, economical and political considerations. Clearly, a new ethics and ethos are emerging in post-rural America of the 1990's, which cannot be ignored.

Said another way, by the year 2025, there will be about 8.4 billion of us on this planet competing for the same natural resource base. Only by the rational application of knowledge and science, combined with rational economic and environmental decisions, can we multiply those resources to the level that will soon be needed. We must fuse the political, economic, and scientific will to do so. And we must be willing to compete for it. We must take advantage of the best we have to offer, promote quality, and be leaders in what we do.

Domestic Policy

The 1990 Farm Bill is currently being debated in Congress and is especially telling with regard to how policy is being crafted.

Target prices and price supports have been established at about \$52–56 billion for the next 5 years. The 1985 Farm Bill set price supports at \$85 billion. Over 215 groups actually were involved in influencing this bill. More and more, accommodation of nontraditional agriculturists ensures that agricultural policy is open and no longer limited to an exclusive clientele.

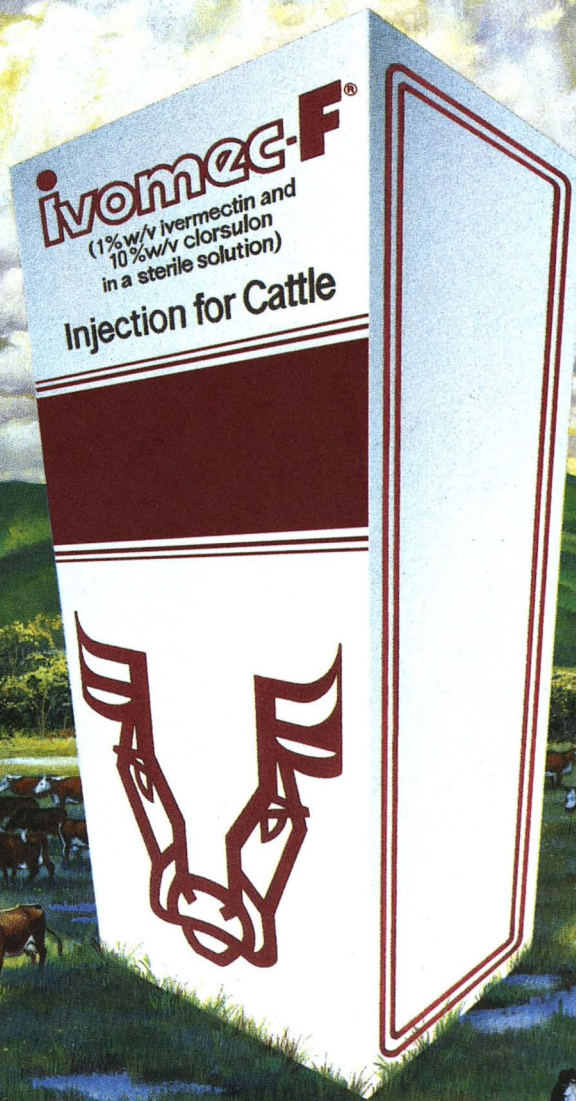
Trouble signs are on the horizon. There is a growing public resentment of the Farm Bill beneficiaries. Although there are 2.2 million farms, 600,000 produce 90 percent of the total agricultural output; these are split about 50–50 between grain and livestock producers. Each of these 600,000 has a net worth of at least \$1 million. Thus, farm subsidies would seem to transfer income from the poorer to the wealthier. In addition, with a serious budget deficit, there is a great amount of pressure to reduce the subsidies a lot more. As a matter of fact, the 1990 Farm Bill may even be vetoed by the President based on a recommendation of the Secretary of Agriculture himself. Secretary Yeutter has already recommended, and is actively pursuing, a policy in which, by the year 2000, there will be no Federal agricultural subsidies. The international market should be allowed to freely determine costs, supplies, and demands.

In addition to the trends of a reduced Federal role, an anti-agricultural sentiment has emerged in the U.S. and also in Europe. Environmentalists and other special interests are blaming agriculture in part for air, water, and soil pollution, along with food-safety problems.

An imminent crisis is developing before the 1995 Farm Bill. Public opinion and special interests will truly catch up with agricultural policy. Our old constituents are losing purpose (e.g., brucellosis and cattlemen). Our agrarian sentiment is being transformed into environmental concerns.

Proposition 65 in California is also a good barometer of the changing public sentiment toward agriculture. This frontier legislation was designed to reduce toxic chemicals in foods, water, and the environment but will have

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*Simpson, J., Kunkle, W., Courtney, C., and Shearer, J., Economic Analysis of Controlling Liver Flukes, *Agri-Practice 2*: Vol. 6, No. 2, 1985.

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profound ramifications for the entire agricultural economy and beyond—all the more so if used as a model by other states.

Congressional Changes

The number of congressional issues has literally exploded. In agriculture alone this year, over 400 distinct issues have demanded time and attention. There are problems in interest groups themselves who are having difficulties in narrowing their focus in the proliferation of all these issues. There are a lot of variations in their policy positions. Our old allies and friends, with a lot of past influences, have been dramatically reduced. For example, the Farm Bureau has dwindled from a power broker as commodity groups have leveraged their support over those just owning farms. There is also an emergence of public interest sectors that have been neutral toward agriculture in the past, such as the National Wildlife Federation, which now have mobilized opinions, dollars, and influence. These groups are ready to join or coalesce with other interests if they can benefit their own cause. A substantial environment coalition seems to be gaining momentum.

How do these changes impact congressional decision-making? (1) There is more confusion and lack of clarity as agricultural issues become more complex and competing. (2) There is a greater balance of home interests with Washington-based problems, and these districts are less and less involved with agriculture. (3) There is more specialization needed, yet issues are less stable. (4) Other nonagricultural congressmen are getting more involved with agriculture because their constituents back home are pressing them on environmental and energy issues and on anti-agricultural sentiment. (5) Issues are being bundled together to balance policies and budgets which portends of greater accommodation and tradeoffs for agriculture.

Conclusion: Paradigms of Change

We have conducted an "environmental scan" whereby we have identified a series of rapidly changing issues which are significantly impacting agriculture and veterinary medicine. In order to devise strategies to cope with these challenges, we cannot think of the future as merely an extension of the past.

Therefore, our prescriptions for change and action center on our ability to rethink strategies without the encumbrance of blindly following past tradition. Success is based on a conscious choice to change our paradigms and reframe the issues we face as we develop a new ethos and ethics.

Joel Barker suggests that success depends on accepting new ideas free from the limitations of our past ex-

periences. Barker believes that paradigms (models, sets of rules with established boundaries) act as filters and screen what enters our minds. Our preconceived boundaries do not allow us to accept data not fitting into our expectations. Truly, our new ethos is inexorably linked to changing paradigms. There are many examples, such as the Swiss watchmakers, that prove that past success guarantees nothing in the future if the roles continue to change. Barker further suggested that this "paradigm effect" blinds us to new opportunities and creative solutions. Is the veterinary profession guilty of inappropriately screening new information that is pouring down on us? Consider what, today, is impossible to do in your practices, jobs; but, if possible, would profoundly change your business—today's impossibilities are tomorrow's norms.

Rosabeth Moss Kanter (Editor of HBR) suggested in her book "When Giants Learn to Dance" that mastering the challenges of strategy and management in the 1990's means employing four F's: being focused, fast, friendly, and flexible. Kanter believes that successful competition is based on a greater responsiveness, change, and an openness to strategic alliances with other businesses and/or groups.

Agriculture must be accountable to society's value judgements, health perceptions, consumer concerns, environmental needs, and humaneness, including proper animal care. We must anticipate and we must build new communication arteries and mend old ones. These are contemporary national and international touchstones, the context in which future animal agriculture will succeed and survive. It is unrealistic to expect easy identification and understanding of the values, preferences, and interests of those we serve.

We can only build legitimacy in this milieu of dynamic and shifting alliances and values through accommodation and better understanding and appreciation of the actions and thinking of others.

In order to accomplish this, it is helpful to consider decisions and issues through four different lens or viewpoints. Each perspective then needs to be explored in-depth and fully understood to ensure that a problem has been adequately identified and resolved. The sequential application of each frame to events and issues can be done individually or by the profession collectively. This technique is useful to comprehend the multiple realities of people with whom we interact—whether they are clients, consumers, or colleagues.

Traditional Lens

Disease eradication has been adopted as the traditional mindset for achieving our mission of "protecting America's agriculture." This traditional frame emphasized and focused on: single infectious disease agents; disease rather than health; only farmer/producer participation; and inculcated these values internally throughout the last

century of animal health. There is a bias toward action, emergencies, and clinical medicine. Agencies often tend to be quite inbred with static ideas and taught with the mindset of past eradication campaigns and veterinary medical education that deemphasized and limited the scope of animal health alternatives. This limited perspective is apt to leave any organization vulnerable to the rapid changes and paradigms of today; i.e., a few pat answers awaiting the right question. Eradication methodology is tried, true, and will be used in the future as long as it is supportable but new public needs and concerns suggest that new questions and issues may not be answered through experiences of the past. The emphasis is on control, hierarchy, and structural clarity. Tradition is often about doing things right—not necessarily the right thing.

Human Resource Lens

This frame considers the capacity of an organization to successfully fulfill its mission and undertake future programs. It considers the scientific and technical personnel base, recruiting ability, and professional development. After needs are assessed for future programs and strategies, the skills, knowledge and attributes of employees are examined. People's actions and thoughts often are the result of group dynamics and their personal agendas. Team building and considerations of personal development are part of fitting organizations and people.

Political Lens

There are inherent conflicts between animal disease control policies and politics that are manifested in the following four areas: law, knowledge, coordination, and politics. Through legal mandates and attempts to interpret them, legal constraints exist that provide for limitations on our policymaking adaptability. For example, during the last major U.S. disease outbreak, avian influenza, in 1983–1984, 26 legal changes were required within the USDA regulations in order to support disease eradication measures. We are still involved in litigation 5 years after the successful completion of that eradication campaign. Ultimately, resources and policies to deal with major disease control programs lie in the hands of non-technical people; i.e., legislators, politicians, and lawyers. While most of these groups consult with experts, the policy process depends on their understanding of what is known, our ability to collect and present information to them, and the expansion of our knowledge base.

In coordinating disease control activities, we rely on the conscious process of assembling and coordinating different functions harmoniously to attain our objectives; e.g., State-Federal cooperative programs. However, there is often ambiguity because of fragmented or overlapping jurisdictions and competing divisions at the local, state, and national levels. The lack of unification between human health and animal health issues is an example of the

need for better coordination. Prevention and control of *Salmonella enteritidis* is a notable example today.

Animal health policies and programs must continually accommodate certain political realities. The U.S. Congress is composed of dozens of committees and several hundred subcommittees; there are several thousand political action committees (special interest groups that fund campaigns and politicians) and the diverse home-base constituencies of each member. Our programs and policies must be congruent with these political forces. Today, protecting the environment and the humane care of animals are just as forceful and significant issues as advocating animal disease eradication measures. Agriculture must be more competitive and sensitive in order to successfully work in this new socially conscious era.

Finally, regulations and legislation create new institutional relationships which require new frameworks for political, analytical, and strategic considerations. In addition, regulations will create winners and losers within regulated sectors (principle of comparative advantage). This premise suggests that, instead of complaining about regulations after the fact, those affected by regulations need to proactively gain a better knowledge of the system and work with politicians and regulators to effect change.

The future of animal health requires all of us to develop a strategy to ensure that animal health is properly represented in the decisionmaking process involving future resources, research, and new program initiatives. The ability of the veterinary and animal health professions to effectively work within today's political and legislative systems can neutralize the constraint of having a smaller voice. The political lens suggests that we look for order out of chaos, build coalitions, learn to bargain, compromise, and gain new allies for leveraging and networking.

Symbolic Lens

How do new program considerations fit into the organizational strategic plan, USDA directions and administrative initiatives? Will they meet public needs and demands and will new programs withstand the scrutiny of today's social values as well as the demands of special interests? Do domestic programs have a global perspective; i.e., is there a value added effect to enhance our export market and promote trade? It is useful to have the perception of competitive advantages. The public's sensitivity to animal welfare, the environment, and conservation must be stressed and mollified before any new activity can even be considered. The National Environmental Protection Act and Endangered Species Act are statutes that cannot be circumvented. Agendas are constantly changing at many levels and new programs, along with new solutions to old problems, must fit into the symbolism of today's political agendas.

The nexus of human and animal health issues will grow and strengthen as food safety concerns and onfarm

quality assurance/certification programs expand. The public's perception of the safety and wholesomeness of our food supply can threaten the economic viability of animal agriculture and, as such, warrants our attention and prudence when considering future programs. Not only are we protectors of animal health, we must be protectors of the public's health as well. Some of the symbols for reframing include food safety, global markets, humaneness, competitiveness, and free trade. During times of complexity and uncertainty, our work needs to be infused with meaning and a sense of mission.

Special interests today present conflicting political, economic, and social currents. Therefore, as the political and electoral base of agriculture is further eroded, new programs will have to be built on consensus and negotiation with groups and forces not aligned with animal health and production. By viewing issues from these with frames or perspectives, a greater understanding of problems will result and new solutions and program initiative will have a higher probability of success.

These are indeed exciting, historical times for animal agriculture. But we must ever keep in mind that information expands, but not necessarily wisdom and knowledge—the very important human factor. Increasing information demands great dependence on human judgment and experience to interpret, to assess risks, to build on as well as determine how to utilize the emerging science, technological tools, and levels of sensitivities. And it is this all-important human factor that has marked our survival unto today. Reframing issues for better understanding and improved performance is also part of humanizing veterinary medicine to be more effective in the future. None of us can afford to stand on the sidelines, or remain disinterested. We cannot afford *not* to look at the new fabric and context of our society and environment. Paradigms are changing and so must we. For we are also entering a new age of Ethics, Ecology, and Economics. And everyone, expert and layman and consumer, must take a part in the road we choose.

For Your Library

Law and Ethics of the Veterinary Profession

James F. Wilson, DVM, JD

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Dr. Wilson is also the author of *Business Guide for Veterinary Practice*. He is acting Medical Director at the Veterinary Hospital, University of Pennsylvania and co-owner of Four Corners Veterinary Hospital, Concord, California; visiting lecturer at the School of Veterinary Medicine, University of California, Davis, author of 50 veterinary journal articles and speaker at over 70 veterinary association meetings. Dr. Wilson is a member of AVMA Council on Public Relations.

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