



# IT'S HIGH TIME THAT WE SPOKE WITH ONE VOICE!

by Bart P. Cardon\*

*Change is a characteristic of biological systems. It occurs because of the passage of time. Our basic tendency is to resist change. We all speak of the "good old days" and tend to feel that change is bad. But change is inevitable and need not be bad. In our business life we recognize that change will occur, so we organize to manage it. This we call "long range management." Most of our success in business is dependent upon our skill as long range planners. All too often, however, in our social and political life we meet change only as it occurs, we play "fireman" and spend too little time on prevention or long range planning.*

*Because of the rapid changes occurring in public attitudes about technology, particularly agriculture technology, I feel that the agriculture and food industry is facing*

*two major problems. The first is regulatory over-kill, while the second is the tendency to permit the legal arm of society to make decisions on scientific matters.*

*According to a recent issue of "Industry Week," in 1974 the Congress of the United States passed 404 laws. These laws had been published in two volumes. During the same year the regulatory agencies and departments of the government developed approximately 7,500 regulations. These regulations have been compiled into 38 volumes. Do you realize the relationship between law and regulation as they are currently developed by our government? The legislative branch of our government, which is responsive to the will of the people, has the specific responsibility of passing laws. A regulation, however, once developed and approved, has the force of law. Regulations are not developed by legislative bodies, responsive to the will of the people, but by regulatory agencies. Thus, the large share of our laws are not developed by legislators but by bureaucrats.*

*I've given you the situation in '74. One indication of change is the increasing rate with which regulations are being developed. A recent newspaper article reported as follows: "No accurate count of the number of government regulations is available. But the code of federal regulations fills a 15-foot shelf. New and amended regulations took up 21,914 pages in the Federal Register last year (1976) adding up to about 35.9 million words—46 times as long as the King James version of the Bible." If this trend continues, it is apparent that there is a threat of regulatory over-kill.*

*Now consider the second question raised. I would like to use an example that may be somewhat different from those with which you are familiar. Modern agriculture is the application of science. Science generated by a large group of researchers. I'm sure you know that all scientists do not agree. Here, I am not speaking of the average technical worker but of truly great scientists. For instance, consider ten researchers working on cancer. If one questioned these ten researchers about the cause of cancer one would get almost ten different viewpoints. The differences in viewpoints may not be great, but they are real. How have these differences in viewpoint been resolved? This obviously has been accomplished by more research.*

*In one sense science polices itself. Understandably this is not a perfect method, and mistakes are made. But in general if two scientists disagree, they—and often a third party—through further research, eventually resolve these disagreements. This method of policing has gone on since the beginning of science, and the net result has been modern society and the abundance of life we have today.*

*You are also familiar with the controversy over the use of many pesticides, herbicides and feed additives that at some concentration are suspected of being carcinogens. In 1975, the legal staff of the Environmental Protective Agency examined the testimony presented in hearings on certain pesticides and, from an analysis of this evidence, developed seventeen principles which they proposed as a legal basis for determining whether a chemical is cancer-causing. The basic law designed to protect the public against harm from pesticides was good.*

\*President of Arizona Feeds, 1935 graduate University of Arizona, 1946 doctorate U. Cal. Berkeley, faculty member University of Arizona until 1954.

*But note that the rules promulgated to implement the law require that the legal fraternity now evaluates scientific controversy. This was not part of the law but was the legal interpretation placed on the law. In a sense such rules tend to freeze the relevant science at its present state and discourage further research and development. Many other examples of this legalistic evaluation of scientific matters can be listed. Suffice it to say that, for the future of scientific agriculture and food production, it is essential that scientists be permitted to make judgements on scientific matters, for they are the only people qualified to do so.*

*What can be done about these problems? Over the desk of the senior editor responsible for Merck & Company technical publications is the sign: "The problem with communication is the illusion that it has been established." I feel this is the real problem and indicates the method of correction. We have a common language in the United States, but unfortunately the words we use have different meaning for different groups. Somewhere along the line technical agriculture lost true communication with the nonagricultural public. For our society to survive we must reestablish communication.*

*The need for research was early recognized in our country. Abraham Lincoln signed the Land Grant College Act in 1862. The Hatch Act, which established an Experiment Station in each state, was signed in 1887. Our agricultural production ability—the greatest of any country in the history of the world—resulted from appreciating the importance of science in agriculture.*

*As agriculture developed, it inevitably became more complex. When we say scientific agriculture, we truly mean just that. Scientific disciplines developed, and the science of agriculture became compartmentalized. Today no one does research in general agriculture. Currently there are over twenty scientific societies in agriculture, and the list will continue to grow.*

*The structure of the Experiment Station, established almost one hundred years ago, permitted communication among these technical groups and between them and the producer. However, as this communication increased and intensified, we gradually lost communication with the non-agricultural public. Perhaps the best statement of this problem was that as science developed there was no single voice for agriculture. When the public asked a question, they got answers depending upon the technology contacted. It is not difficult to recognize why we have a problem today when one considers the impact of these diverse voices on legislative and public questions about agriculture. The inevitable result was that the scientists were gradually by-passed in these discussions and decisions. The public and the politician turned to groups or interests that spoke with a single voice.*

*So scientific agriculture is under public and political attack today. There is a popular belief that we could solve all our problems by doing away with scientific agriculture. It is an astonishing paradox that a large part of the world—particularly the third world—is looking to this same scientific agriculture as the main hope to prevent mass starvation*

*in the future. Any reasonable evaluation of our national needs indicates that we need this technology to produce food at the level we have in the past. Even more important, we need an increase in technology if we are to produce adequate food in the future for our own expanding population, let alone help solve the world's increasing food problems. This world isn't going to be fed by horse and buggy agriculture. Only scientific agriculture can provide enough.*

*As I see it, communication is our real problem. Communication between technical agriculture and the nonagricultural public is difficult, because agriculture is technical in nature. Although some simplification of the language can be made when science is transmitted to the public, these are scientific problems, and a certain amount of scientific language is necessary for accuracy. We often hear the statement, "The public wants headlines and will make up their minds about the subject based on headlines." There is a limit to which scientific language can be simplified to explain the technology and complexity of agriculture. I believe that communication is a two-way street. If the members of the public really do feel that they can understand agriculture by reading only headlines, society is in serious trouble. So is agriculture.*

*Positive efforts are being made to correct this communication problem. The Council for Agricultural Science and Technology (CAST) was formed in 1973 so that all technical agriculture could be represented by one voice. CAST is a consortium of the technical societies in agriculture. Its formation was prompted by the recognition that the scientists—those technologists responsible for developing the highly efficient system of food production that we have today—were being bypassed in public and political discussions about technical agriculture. More than any other cause, I feel it is lack of communication that has led to the accelerating proliferation of regulations covering agriculture.*

*CAST's involvement and aggressive response to statements that are scientifically ridiculous help. An aggressive response by CAST to the Environmental Protective Agency's principles of carcinogenicity has probably been a factor in EPA's retreat from that position. During its less than four year's of operation, CAST has produced over 65 technical reports covering wide areas of public and legislative interest. These reports are having an increasingly important impact upon the legislative process in the area of food and drug laws and in public attitudes about scientific agriculture.*

*But it's a big job. It is insufficient just to contact legislators and the officials of the regulatory agencies. We must convince the public, and this will require a monumental communication job. In one sense, the people in agriculture are a minority group. Less than 5 percent of the U. S. population live on farms. Less than 2 percent of the population is directly engaged in the production of food and fiber. To get the job done, we must organize.*

*As pointed out above, the scientific community through CAST has organized for this effort. I feel it is time now that the production and the agribusiness section of agriculture*

*(Continued on back cover)*