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Effective Communication of Research Information to the Meat Industry

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It is one thing to have valuable knowledge about a subject or to make significant research findings, but those in themselves may not be too useful until they are communicated to those in a position to act on that information. No matter what field one is in, communication is an extremely important process. Whether it is between nations, or between ethnic groups, or between teachers and students, or between husbands and wives, or between universities or research institutes and industry, effective communication can facilitate understanding and harmony, while poor communication can stifle change and lead to frustration.

For the past 26 years I have served in the role of Extension Meat Specialist within our Meat Science Group at the University of Wisconsin. My appointment is really 80% extension and 20% research. Although all our staff members have an obligation to participate in "outreach" to our constituents, in our Land-Grant Agricultural Universities Extension personnel take the lead in extending knowledge and findings beyond the campus. We have long held a concept known as the "Wisconsin Idea" – that the boundaries of the university are the borders of the state. This attitude is not unique to our university.

Since Cooperative Extension programs such as we have in the U.S. are not universal around the world, it might be worthwhile to describe our system. It is called Cooperative Extension because it involves a partnership between the federal government, the state government and the county government. All three levels contribute to managing and funding the extension system. At the state university level, our College of Agriculture and Life Sciences has about 50 extension specialists in agricultural fields. I am one of those specialists, and I focus on meat and meat products, providing education and assistance to a broad audience, from meat processors, to retailers, to farmers, to consumers, to youth – all related to meat science and technology.

All levels of the extension program come under the umbrella of our state universities. I am housed within the Animal Science Department, and our department has other extension specialist who address beef production, swine production, sheep production, youth programs and horse programs. We serve the educational needs of our clients in one of two ways – through direct contact with people out in the state, and by working through county extension offices. Our counties are geographic sub-units within the state. We have 72 counties in my state, and every county has a cooperative extension office. The county extension office is typically staffed an Agriculture Agent who works with farmers and agricultural businesses, a family living agent who works with consumers in general, a youth agent who works with children in programs such as

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4-H and a community resource agent who works to stimulate economic vitality and growth in the county. Usually when people in the county have needs for information or assistance, they first approach local extension personnel. If those needs cannot be met by the county staff, the requests are passed along to state specialists for attention. Likewise, information from specialists passes in the other direction, to the county staff for dissemination to county residents. It is an effective system of education and assistance which has been in existence in the United States for about 100 years, and certainly has contributed to our progress in food production and other agricultural enterprises. Because much of work is with a specific industry, the meat industry, I tend to work less through the county extension system, and more directly with processors and meat-related organizations.



I think that one of the things which helps communication to the various elements of a broad industry such as the livestock and meat industry, is "walking in their shoes," that is having experience in the clientele's situations to better understand them. In that regard I have been fortunate, growing up on a farm that produced meat-animals, being a military food inspector for almost three years and working for a major meat processor, Hormel Foods, for almost two years. If I could have changed anything, I would have liked to have a few more years in the industry, but one cannot control when job opportunities come along. This background has helped me to understand the circumstances in which the people I deal with operate.

With that rather long introduction, I shall more directly address the topic of "Effective Communication of Research to the Meat Industry." I would like to take the liberty of broadening that perspective to include not only cutting edge research, but also knowledge related to meat processing in general, as we seek to train generation after generation of new workers in the industry.

I believe that effective communication begins with good information. It must address industry needs or possibilities within their sphere of endeavors. It must be relevant to the industry, and within the realm of current or future application for them. It must be well understood and arise from well designed and carried out experiments. The person communicating must have a solid knowledge and understanding of the research or subject matter. It cannot be that a person will know everything about a topic, but they must know enough to generate interest and confidence in the client.

When communication is via direct, live interaction, the attitude and personality of the educator will influence the effectiveness of the communication. To communicate effectively on any topic you must truly enjoy working with people and have a sincere desire to help and teach them. Enthusiasm can be infectious, and convincing to even the most skeptical audience. Some of these interpersonal skills are learned, but many are just part of our personal nature, which is not always easy to change. I had a colleague in extension, who was extremely proficient in the subject matter area, but he always came across a little "cold" in relating to people. Unfortunately, this caused him to struggle for many years in gaining the total support and confidence of the industry he served. I have also known extension educators who were marginal in their subject matter knowledge, but related extremely well to people and worked hard to serve them. Such people do quite well. It is not always that you have all the answers, but that you are willing to hunt for the answers, that builds strong relationships among people.

One more thing about the communication process itself – the information must be in a readily understandable form. Often when we come out of our university training, and may not have had a large dose of the real world, we do know a lot, and we sometimes feel we must communicate all of it to our clientele, including all the details. Now some

details are important, but they can over-run an audience and dilute the important message. The people we are assisting often do not have the same background that we do, and their time to absorb our message is limited and important to them. We must get to the point quickly, and in an effective and enthusiastic manner, including only the details which are central to the message. I thought I understood this coming into my job as Extension Meat Specialist, but I still found myself often wanting to give people too much information – after all, I know so much. Over the years I have gotten better at being concise and not so complex in my communication, but it is something I must continually keep in mind.

So if you have sound, relevant information to share, and you have prepared with the proper combination of understandability, conciseness and relevant details, it can be conveyed to the target audience in many different ways today. That is a valuable asset, because different people like to acquire information in different ways, dictated by their own personal traits, and by the situation they are in. Here is a list of effective ways of communicating research and other needed information to industry personnel.

Industry-sponsored conventions, conferences or workshops. These are gatherings of large numbers of industry personnel at one time and place. It is an effective way to communicate a message to a large segment of the industry at one time, and to get interactive feedback from them. In some cases these events are sponsored by industry associations. Examples of this in my country are the conventions and workshops of national organizations such as the American Meat Institute, the National Meat Association and the North American Meat Processor's Association. Sometimes these have industry supplier exhibitions held in conjunction with the meetings, where the latest in equipment and supplies can be viewed or demonstrated.

These also take place at the state level. In Wisconsin I work very closely with the Wisconsin Association of Meat Processors – an organization of about 120 smaller-scale meat processors. The educational programs at their spring convention and fall workshop provide an opportunity to describe new research, or teach on other topics of need or interest. We have found it very effective to use processors as part of the teaching team, since processors learn very effectively from their peers.

Society-Sponsored Conferences. Some of these educational gatherings are sponsored by professional and scientific societies. This meeting of the International Congress of Meat Science and Technology represents such an event. The Reciprocal Meat Conference of the American Meat Science Association would be very similar. These are excellent opportunities to present and discuss research findings. However, the attendance at these meetings tend to be dominated by personnel from universities and institutes, with lesser participation from the operating industry. These tend to be excellent forums for researchers



to share and discuss research, but may not be so effective in communicating it to Industry.

University or Institute-Sponsored Workshops for Industry. Universities and Institutes can be the organizers of workshop which focus intensely on one or more topics. In this case industry representatives are the primary audience, and research results and teaching principals can be effectively communicated to them. In my state we have organized annual meat processing workshops for industry personnel for the past 20 years. In the past we have had two-day workshops, alternating by years at state universities which have meat science programs. That format allowed for hands-on learning activities, which is always an effective means of communication. In the past five years we have conducted many HACCP workshops around the state for processors, and likewise this 2 day-event involves actual hands on development of HACCP plans by small groups of attendees for different processing operations. Actual making of a product or struggling with a challenging exercise enhances comprehension of the subject.

Joe Cordray, Extension Meat Specialist at Iowa State University has been a leader in producing annual two and three day workshops, utilizing hands-on participation, on a variety of specific meat processing topics such as cured meats, sausage-making and dried sausage. For the last 5 years, Larry Borchert, a meat scientist retired from a major U.S. processor and now an adjunct professor in our lab, has led many week-long training programs for personnel from his former company, teaching meat processing principals to employees who lack a background in meat technology.

Information communicated in written form.

Publication of scientific research in journals is the way most research becomes exposed to the rest of the scientific community and the industry. It truly is the basis for starting communication of research results. However, direct contact with many of the scientific journals does not always take place in many companies, and busy employees often don't have time to review the wide range of studies thoroughly. Therefore, it has become a common practice to package research results in a more user friendly manner for the general industry. Sometimes association newsletters will carry short summaries of current research articles of interest, to expose the industry to this work, and tell where the full report can be found. The National Meat Association and other associations regularly publish such research summaries.

Some industry trade magazines regularly carry articles prepared by university or institute meat scientists, which provide an ongoing review of new research, and solutions to key problems arising in the industry. These short articles have come to be greatly valued by industry personnel, and are often clipped and filed for future reference.

Likewise, university, institute or association stand-alone "fact sheets" are another effective way of communicating research results, in more detail than summaries or industry press articles, but still in a very understandable and applied format. I personally use fact

sheets to a great extent in my work. They are a fast and convenient means of communicating science or addressing an industry question or problem in a very straightforward and targeted manner.

Communication of research findings to individual companies. When a new discovery or development is made with strong potential for current or future application to the industry, an effective way of interesting companies in this technology, and convincing them of its merit, is to bring in individuals from individual companies, to demonstrate the procedure to them, and to perhaps to apply the process to some of their products. I have an excellent example of that in our laboratory, where my colleague Jim Claus, has worked with an equipment manufacturer to advance the process for tenderizing meat through the use of shock waves through water to affect the product. There has been a long stream of meat processing companies who have visited our facility to observe the process and determine its effect on their product. There is nothing like seeing test results on the products you make. If the process is effective, this on-site, individualized approach is a powerful means of communicating research results. It also allows companies to be more open in discussions with the researcher about the process, since no competitors are present during the work.

Communication of research and other information to industry by electronic means. Video tape, CDs, and websites are facts of life today (and have been for some time), and communicators to industry must utilize such technology to satisfy the needs of the growing segment of the industry who desire to learn in these ways. If you are an educator, it is a great time to be communicating information, with all the tools currently available.

I have been involved in making many teaching videos, which can visually demonstrate the points you want to make. With a trend toward less reading and more viewing, videos make sense for much of today's industry.

Electronic websites provide rapid access to a wide variety of information. Such sites need to be maintained and regularly updated to be effective, but when they are they can reach an enormous number of people, on a wide variety of topics, in an almost instantaneous fashion. This means of reaching clientele will undoubtedly grow and become more effective in the years ahead.

In summary, there are a large number of tools to assist with effective communication or research findings, and the transfer of on-going knowledge to industry personnel. However, for this to really work well, the information must be scientifically sound, applicable to the industry now or in the future, presented in a readily understandable format, by creative and (where applicable in direct interaction among people) enthusiastic approaches. As the pace of research quickens, and with the ever present need to train the next wave of industry employees, the valuable art of communication will continue to be a key factor in the progress of the industry.