

Summary of the 41st International Congress of Meat Science and Technology

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INTRODUCTION

It is indeed an honor for me to be invited to give the closing summary of this Congress. First of all, I would like to congratulate the Congress Organizing Committee with the selection of San Antonio for this conference. A tour guide told me the other day that it is Saint Antonius who cares for and protects lost items, small children and single women.

It struck me that in the Netherlands, we have the same beliefs, with examples given about his influence as well. In Western Europe, San Antonio is seen as the special protector of swine. Farmers in the past went to the statuary in the church to have their feed blessed in order to help diseased animals to recover. In some villages and towns, you might see pigs roaming free in the streets, like the cows do in India. These pigs, called *Antonius pigs*, took care of the garbage and leftovers and were protected by the church until they were slaughtered and the meat distributed to the poor. Some mysterious influence from outside was probably needed at that time to keep animal production at its optimum. Today, science has taken over many of the things Saint Antonius was concerned about.

The theme of this meeting, *"Linking Science and Technology to Societal Benefits,"* addressed many of the social benefits Saint Antonius provided earlier. So clearly, the right city, named after this Saint, was chosen!

But I am not here to talk about the past, but rather about the present. In summarizing the conference, I'd like to condense the subjects into two areas: Bits and Bites.

On one side is the quality of the product (meat) characterized by its palatability — tenderness and flavor (bites) and on the other side, the enormous development of technology based on computer hardware and software (bits and bytes).

For the quality aspect, we saw several contributions demonstrating progress in flavor profiles, discriminating

through quality parameters, whereas the technology development demonstrated the options for better quality in terms of food safety. Furthermore, improvement of labor conditions is one of the by-products. In the final circular of this Congress, Bush (not the president, but an engineer) was quoted:

"Scientific knowledge and its applications continue to transform the world, and condition every aspect of the relations between man and nations."

This meeting presented us with several examples through which this statement comes true. One may approach the Congress with an analogy: It is a little like being in a restaurant: What is the quality of the ingredients offered in the menu; how is the cooking done; and what is the atmosphere in which one enjoys one's meal?

ABOUT THIS CONGRESS

Has there been something new presented? This is an important and basic question which cannot be answered satisfactorily. Many new things have been reported, especially the information about the state of the art in tenderness research. In general, however, much of the information presented at this Congress has been very appealing to the individual. The poster sessions may inspire individual scientists when a new idea is developed during the discussion. One of the signs that these sessions fulfilled a need for getting ideas across was the fact that the closing session had to be delayed because of the intense exchange of opinions which were still underway in the poster session rooms.

In what manner did this conference differ from the foregoing in the Hague? First of all, the "Bible" with the disks was not perpetuated in San Antonio. In this computer age, one might regard this as a step backwards, but from the point of view of practical handling of the information from the proceedings (so nicely put together at this conference), this was, in fact, progress!

Another distinct difference was the larger number of participants, partly due to the combined organization with the National Live Stock and Meat Board and the American Meat Science Association, which each took responsibility

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for part of the program. The total meeting attendance here was 1382 versus 573 in the Netherlands in 1994.

In the Netherlands, we attempted to have people from the industry participate in the exchange of ideas, which didn't work very well. In the United States, by involving the aforementioned organizations, the interactions with people from outside the scientific community succeeded wonderfully. It succeeded so well that I had the feeling (especially in the first two days) that science went to the back-bench. On the other hand, scientists were becoming aware of the problems their prospective clients have, which may be (partly) solved by scientific approaches. The coordination between these bodies must have required an enormous effort by the Organizing Committee. Hopefully, the spin-off will be an even better understanding of the importance of meat science.

THE PROGRAM DURING THE WEEK

After the impressive opening ceremony, built around the history of Texas and against the background of all the national flags of the world, a symposium organized by the National Live Stock and Meat Board, based on interview sessions, was very informative about the situation in the U.S. The subjects of Diet and Health, Food Safety and the Environment were also very interesting for the non-delegates. Regulations, environmental constraints and health care are the **"big three,"** not only in the USA, but worldwide. The afternoon sessions focussed predominantly upon food safety aspects (microbiology, risk assessment, human susceptibility, residue avoidance), and gave the participants an opportunity to discuss each subject. Rotating sessions were appropriate to allow selection of several sessions of your choice. The HACCP system approach got the extra attention it deserves.

In a kind of "stage show," Ira Blumenthal from the U.S. made the participants aware (in a very lively manner) that not adapting to the changing market meant going out of business. Convenience, convenience and convenience is what the consumer wants.

Tuesday, David Lister, in the AMSA International Award Lecture, "Global Demands for Nutritional Value and Quality of Meat," reviewed the fundamentals of meat and its nutritional potential. The presentations of the international meat quality audit by Brad Morgan from Oklahoma showed that specific appreciation of meat differs significantly between different countries. The product itself, and the way the product is presented (for instance, the state of the boxes in which the meat is packed) is becoming more and more important.

The video showing the quality of beef desired by the Japanese customer made it clear that the degree of marbling is extreme compared with the beef the U.S. and European consumers want to buy. Quality definitely has a different meaning in different places.

The organization of the poster sessions made it possible to have a group discussion at the site of the posters, which was very valuable for both the participants and the authors.

The Value-Based Marketing session, introduced by prominent speakers and summarized by Wayne Purcell, U.S., made it clear that the beef industry in the States is not yet ready to jump the hurdles on their way to a smooth and efficient trade system, and one which also stimulates the right breeding goals. "It looks so simple, but is so complex" was one of the remarks made. One participant even suggested using the money now spent on advertising, for research, which did not evoke protests!

The very well-organized excursions and tours on Wednesday underlined the quality of the social program for the non-delegates. There was a lot to see and also a lot to learn about the different American institutions and cultures.

The following days, Thursday and Friday, brought us more recent and interesting research and scientific data. The Reciprocation Fair, with 14 Topics, was well organized. For those who had to supervise and present the different sessions, it must have been a rather demanding job to repeat their subjects and lead the discussion time and again, due to the revolving session concept. Some of the subjects brought us the following statements:

- Welfare need not cost more, but can bring us extra money.
- ECCEAMST, the European education exchange program in the meat industry, has proved to be an effective system to transfer knowledge to those in the meat sector who don't have easy access to the developments which take place.
- Internet has great potential to help the researcher, the manager and staff person in the industry to keep up with the latest literature and news.
- Emulsifying indexes need to be replaced by other more appropriate indexes. This new approach also opens new ways for measuring tenderness of the material.
- Tenderness of the meat might be better controlled if the genetic background determination can be improved.
- Interaction between different fiber types and tenderness is important for ultimate quality.
- Growth-promoters are very helpful in making meat production much more economical, provided the government and the consumer would be willing to buy them.

The keynote presentation of Darrell Goll, U.S., on Friday addressing new scientific insight in the tenderization of meat was one of the scientific highlights of the Congress. Despite that rather convincing treatment of this subject, there still seems to exist controversy about this very intriguing, but also very crucial, aspect of meat quality. In the morning session, Jorgen Zink from Denmark reviewed the development of automation and robotics in pig slaughtering, illustrated by examples from predominantly Danish and Dutch origin. The big improvement is in the ergonomics area; the big constraint is the hesitation of the financial world to invest in the modernisation of the meat sector. As already indicated, the poster sessions of the last day were very successful, measured by the reluctance of the participants to join the Summary and Closing Session in which the Chairman of this 41th ICoMST, R.B. Sleeth, handed the Congress

bell over to E. Risvik from Norway, where the 42nd ICoMST will be held in Lillehammer from September 2-6, 1996.

RECOMMENDATIONS AND SUGGESTIONS

1. The market develops more and more into a consumer market, meaning convenience is the keyword. In turn, this means the meat production and processing area must adapt.

2. We learned what the big problems and issues are today in the American industry and production sector. Research is a very important and helpful tool to provide solutions.

3. A Congress like this is a very appropriate platform to meet and mix research findings from different fields for the benefit of meat science and ultimately for the meat sector as a whole.

4. This meeting has brought the meat researcher much to think about. Wouldn't it be a good idea for the scientific community to undertake an audit asking the user of research findings which kind of research is most wanted? Some kind of reflection is needed; otherwise meat science might simply go out of business altogether. Would there indeed be a danger that meat science goes to the dogs?

5. The funding decline everywhere is a clear signal in the aforementioned direction, which begs the question: What help could meetings like the ICoMST bring in this respect?

Dr. Niniivaara started this activity 41 years ago because communication was poor and meat science hardly existed after the Second World War. The world has changed enormously but communication on the strictly personal basis is of even greater importance. The interest and enthusiasm shown during the poster sessions brought science to the forefront, demonstrating the importance of an international ICoMST-like meeting for the individual researcher. This kind of meeting is important to keep meat science in business, with every country still having the freedom to organise the ICoMST in its own way.

CONCLUSIONS

The Organizing Committee can be proud of, and can take a great deal of satisfaction in, all the efforts during the five years invested into the Congress, making this meeting such an organizational and scientific success. All the members deserve our greatest appreciation.

If we were to compare this meeting to an outdoor meal, we could easily agree that most of the ingredients have been of excellent quality, and the cooking was a great success (although some participants had to come to terms with the American sauce which marked the wonderful taste of the food). We can conclude that R.B. Sleeth, in this first-class restaurant, is undoubtedly a great chef!