

CODEX ALIMENTARIUS COMMISSION



Food and Agriculture
Organization of the
United Nations



World Health
Organization

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SPEECHES OF OPENING SESSION

Part I: Mr Ted McKinney, Under Secretary for Trade and Foreign Agricultural Affairs (TFAA), USDA

Welcome to the United States, to Chicago, and to the Magnificent Mile. As I look around the room, I see that we have countries from Angola to Zimbabwe and everywhere in between. We are very excited to have such a truly international group visiting our fine country for CCFH.

From both my heart and my head, I want you to know how passionate I am for what you do. Codex can be one of the finest organizations that the world has ever produced, because it is based in science. You have kept to that mission, or at least have tried your best, and you are going to hear encouragement from me to stay that course, because without that science in which you are so grounded we have little. And so you have my support and my applause for what you are doing here at this meeting on food hygiene, and in the other Codex committee meetings and work groups. Thank you for letting me be a part of this.

I know you are going to be working hard this week, but I hope you will also enjoy your time in one of our great U.S. cities and this Magnificent Mile. We are very pleased to be host for this meeting of the CCFH. The United States as a country, I as an individual, and USDA as an agency, are fully and completely committed to Codex as the preeminent international food standards-setting body, establishing science based food standards that both protect the health of consumers and ensure fair practices in the food trade--in that order, science then trade. It is something I believe in and always have since I was first introduced to this group.

I'm here with you today because both of the elements of the Codex mandate--consumer health/food safety and fair trade--are vital to me. When our new USDA mission area was created it was not simply to create an Under Secretary for Trade. The mission area is the Under Secretary for Trade and Foreign Agricultural Affairs. It is both, and one doesn't have greater importance than the other. Trade considerations will not and cannot be more important than the science, and they should not be. So as the first-ever U.S. Under Secretary for Trade and Foreign Agricultural Affairs, I am thrilled to be here.

We all know, it goes without saying, that for trade to be successful we have to have the science-based standards which you all are dedicated to creating. I joined USDA about a month ago, and while I have known about Codex from my perspective in the private sector and to some degree in my role as State Director of Agriculture for Indiana, I am delighted to be here to see you in action for the first time. I want to do anything I can to lift all of you up to continue this great work. Science-based standards are the reason that the WTO respects Codex so much, and I think all of us as countries and as regions must fight hard to ensure that those forces that attempt to undermine science are not successful. We have to stand on science.

I want to quote my boss, Secretary of Agriculture Sonny Perdue, who has said that "food is a noble thing to trade." We remind all our colleagues that yes, we love steel, aluminum and widgets and all the things that are traded between our countries, but I would hold food up as the most noble. That is why I am so committed to making sure that what you are doing in food standard setting, followed by trade, works successfully.

This is especially important for producers in developing countries that have small domestic markets. Agricultural trade is a good way... a noble way... for producers in the developing world to earn more to improve their lives and to provide a better future for their families and communities. Trade also provides consumers with a more abundant supply of diverse foods at a lower cost.

Agriculture has been the key to the economic success of my home state of Indiana, which now has a \$25 billion dollar agricultural economy. Agriculture has been central to my life, both professionally and personally.

I was raised on a grain and livestock farm in Tipton, Indiana, which is about a 3 hour drive south of here, and I studied agricultural economics at Purdue University, which is about a 2 hour drive south of Chicago. One of my professors was Dr. Don Paarlberg, who worked with President Dwight Eisenhower to develop and run the

Food for Peace Initiative. After more than 60 years, Food for Peace continues life-saving food assistance work as part of the U.S. Agency for International Development.

Purdue is a leading university in science and engineering as well as agriculture, and its distinguished professors have produced distinguished graduates.

A graduate of Purdue University, Neil Armstrong, was the first man to walk on the moon, and another graduate, Eugene Cernan, was the last man to walk on the moon, in 1972.

Purdue is a land-grant university, which means that the United States government granted land to the State of Indiana more than 100 years ago to start a university that trained young people in the applied sciences. The university graduates then developed the state's economy and contributed to America's future.

In fact, Purdue University also contributes to the global future as do many of you. I want particularly to congratulate Nigeria, home of the winner of this year's World Food Prize. Let's all congratulate Nigeria for this great work.

I am confident that students at Purdue today, and students in schools and universities around the world still reach for the stars like the astronauts, but they need the foundation of a fertile Earth under their feet. Agriculture continues to be the foundation for our lives, and science is the key to success in agriculture.

You, Codex delegates and observers, see the connections between public health and food safety, market access and consumer confidence, international trade and a good price. I share your vision, and I want support implementation of that vision with you through the work of Codex.

I commend you for your contributions to Codex, and I thank you for your participation in this 49th Session of the Codex Committee on Food Hygiene.

I want to thank the Codex Secretary and the U.S. Secretariat for organizing and hosting this meeting. Please join me in a round of applause for them, and for the interpreters who will help us all understand each other better.

I will be with you today, so I hope that we will have a chance to get acquainted in person.

Please accept my best wishes to you for a productive session and a pleasant visit to Chicago.

Part II: Dr Robert Brackett, Vice President and Director, Institute for Food Safety and Health, Illinois Institute of Technology.

Thank you for that kind introduction, and I want to personally welcome all of our international guests to Chicago. I am especially honored to be able to come before you to present this opening address. What I hope to discuss with you over the next short while, is how food safety impacts both public health and trade in food and agricultural products, and discuss the unique challenges for small and developing economies in addressing food safety.

Never before has there been such a need to address food safety on a global scale, and harmonize to the greatest degree, the standards that we apply to food safety. And this is exactly why CODEX is so important. Without having the common standards that apply to all economies, we impede improving public health, we interfere with trade and commerce, and we reduce public trust in government and their regulatory systems.

Indeed, food safety has become an increasingly important issue to the public in the past few years. Why is this? Well first of all, there are very few things in life that are as personal and touch us as is the food we eat. True, we need to eat to survive, but in most cultures food is much more than just survival. Food is central to family gatherings, business functions (including this one), and celebrations of all kinds, regardless of which economy we are talking about. So consequently, it should not be surprising the food safety is so important to so many.

Secondly, foodborne illness is a genuine global public health problem, a fact not understood or appreciated by many government OR industry leaders. Indeed, the WHO estimated in 2015 that contaminated foods were responsible for approximately 600 million cases of foodborne illness and 420,000 deaths per year. Those are a very big numbers. To make matters worse, WHO determined that children under the age of 5 years old, and person living in low-income subregions of the world were disproportionately affected and bore the brunt of these illnesses. Obviously, there is a need for global, science-based food safety standards to help address this public health issue especially in developing economies that are disproportionately affected.

Developing and emerging economies often present unique challenges that are not typically, or as often, faced by advanced industrialized economies. Let me outline some of the challenges.

First off, let me talk about some challenges that are common to all countries and economies, regardless of their size or economic scale. One obvious challenge is that of funding. Establishing and maintaining a robust food safety system is not inexpensive. And the costs impact both governments and the private sector producing

the foods. For example, on the government side, there are costs associated with the needed personnel, including inspectors, scientists, regulatory writers, and administrative professionals. In addition, there are costs associated with building and maintaining laboratories, conducting travel, and other costs associated with regulatory actions. Likewise, the private sector has these and other costs, while generally operating in a competitive environment that has not generally rewarded food safety efforts.

A common but often unrecognized element in good food safety systems is the importance of relationships. These relationships exist between suppliers and their customers, between the regulators and the regulated, and between governmental entities (both within a country and international). The most valuable relationships go beyond just a simple contractual agreement or regulatory requirements. They are relationships that have developed an atmosphere of trust, understanding, and mutual respect. It takes work, and time, to get to and MAINTAIN that level of relationship but it is well-worth it and pays dividends in getting things done. I want to stress that I've primarily been talking about institutional relations up to this point, but from my experience, it is actually the PERSONAL relationships that truly allow the most progress in food safety to be achieved. As an example, one need look no farther than this room – the personal relationships between and among delegates allows for discussions and debates that would be much more difficult if delegates didn't know each other.

Another general challenge that impacts the success of food safety systems is government philosophy or limitations. Various economies or countries often have different viewpoints on such things as who is responsible for public health, which department or ministry has authority over regulating foods (for example Agriculture vs. Health), and where food safety fits as a priority among other priorities (eg. economic development).

Likewise, regulatory compliance and alignment can often offer significant challenges to harmonizing food safety standards. Food safety laws and regulations, as well as what constitutes a public health risk, often differ from economy to economy. Navigating and negotiating these differences often takes extra time and effort. We do see a trend in recent years of a convergence on the general theme of "prevention" (and is on the agenda for discussion at this meeting) which will hopefully reduce this challenge in future years.

And finally, there is the ever present challenge of culture and language. These differences transcend the size or economic status of a country. By culture I mean the characteristics and knowledge of a particular group of people, encompassing language, religion, cuisine, social habits, music and arts. All of these aspects could potentially have an impact on food safety, but religion, cuisine, and social habits are of particular importance. Religion will often dictate what a group of people considers acceptable to eat. A good example would be those who are vegetarian versus those who eat meat. These foods have very different food safety risk profiles. Likewise, some religions avoid certain meats, such as pork. However, our social mores likewise influence what we consider to be an acceptable cuisine. Some cultures would shudder at the thought of consuming insects or certain organs of an animal. Such attitudes are not necessarily based on religion, but societal norms and tradition. Again, these food choices affect how much and what kind of hazard would need to be considered. Mixed in with these choices, is HOW a particular culture views meals. Some (for example in the U.S. and other industrialized economies) eat almost half their meals in restaurants or food service facilities. In many ways, these could be considered to be group meals from a social viewpoint (even though the patrons may not know any of the people around them). Contrast this to a wedding feast in a developing economy, in which an animal (say a sheep or goat) is roasted outside and consumed by the wedding attendees. Again, this too is a group meal but one in which family or social bonding is the focus of the meal. So, the point here is that identifying the context in which food is consumed is part of the challenge in establishing a food safety system that does not contradict or disrespect, the culture.

The challenge of addressing different languages seems obvious, as evidenced by the need for translators and ear phones in this room. However, even subtle differences in a language can present challenges. We often see this in the form of regional dialects or accents, that make it difficult for individuals speaking the same language to accurately or clearly understanding each other. Some well-recognized examples include French as spoken in Canada vs the French spoken in France; or, Spanish spoken in Mexico vs Spain. We have that in English as well. For example, in a training program with which I've been involved, we use a "biscuit" as a model food for teaching and discussion. However, it wasn't until we had some British participants in the class, that we realized that a biscuit in England is a different food than a buscuit in the U.S. Here in the U.S. it is more akin to a breakfast croissant whereas in England it is more of a cookie. This may seem like a minor difference but in fact it completely changed the outcome of the hazard analysis exercise. (6 min)

Transition – Well, so far I've been talking about general challenges that are common to all countries and economies and I probably could have listed more. So let me now move on to focus on special challenges that confront developing and emerging economies.

I mentioned funding earlier, but it deserves mentioning again as a special challenge for developing and emerging economies. In many of these economies, funding is already barely sufficient keep their food safety and regulatory system operating. The thought of bringing their systems up to international standards

sometimes seems overwhelming. The need for special or additional funding is especially needed because many of these countries are already behind the rest of the world in terms of having the type of food safety system that they want and deserve. Consequently, in addition to the challenge of maintaining what they have (as in the case of all countries), they must also move into a “growth mode” so that they can improve their system and facilities to international (and CODEX) standards.

Technical capability and expertise has been a major challenge for developing countries, particularly as we rely more and more on automated and molecular methods of analysis. Again, this is a fiscal issue but it is also more than *JUST* that. These new methods often require special expertise and skills, the training for which is not available in the home country. Consequently, the analyst must sometimes go overseas to obtain the necessary skills to operate the equipment. Not only is this expensive, but many developing country labs are understaffed and cannot afford to have their key people leave for extended times. And as if this wasn't daunting enough, the pace with which analytical equipment is being updated makes it difficult to keep pace with new technological developments once one is trained. However, even “older” (and I will explain what that means, momentarily) techniques in some developing country laboratories are lacking.

Let me give you a specific example. In virtually every microbiological laboratory I've seen in the U.S., it is standard practice to use disposable plastic petri dishes, pipettes, and other utensils during the microbiological analysis of foods. In many of the most modern, and well-equipped laboratories, media is actually prepared in an automated media maker, and the molten agar automatically dispensed into the petri dishes with little human intervention needed. However, most labs still use the “old fashioned” process of preparing the media from a powdered concentrate, sterilizing the hydrated media in an autoclave, and then having a technician manually pour the molten agar into the petri dishes. Now, let me contrast this to what I have seen in microbiological labs in developing countries – In these cases, glass petri plates and pipettes are used, because disposable plastic versions are too expensive, and the glass variety is reusable. However, that also means that the technicians must WASH and sterilize the plates before they can be used. This adds one more tedious step requiring human labor. If they are very lucky, they will have an autoclave to both sterilize the glassware, as well as the molten media. Most autoclaves are of sufficient size to sterilize dozens if not hundreds of plates. However, many developing country laboratories are NOT lucky enough to have an autoclave. Instead, they rely on pressure cookers (which have MUCH smaller capacity than autoclaves) to sterilize their glassware and media. The result is, that these laboratories are: 1) much slower than similar labs in developed countries, 2) lack the throughput of samples needed, 3) require more people to accomplish the same task. This directly and adversely affects their capabilities.

As mentioned earlier, it's often difficult for subject matter experts in developing economies to keep up to date, given the fast pace of technological development. However, one has to actually HAVE subject matter experts before they can keep up with technological advances. This too is a challenge for some developing economies – having enough experts to implement food safety systems. Some developing economies simply do not have a sufficient number of trained personnel available to support their food safety program or system. Consequently, they must rely on upon technical assistance from trading partners, academia, or industry to succeed in their mission. I will say more about training, later in this presentation. However, I also want to stress that CODEX also plays a very important but perhaps not obvious role in helping in circumstances where there is limited expertise. The CODEX standards become a valuable science-based source of guidance and structure that empowers the analyst or policy-maker that has limited subject matter knowledge, to make good food safety decisions.

A related need and challenge is one of capacity. As mentioned a few minutes ago, developing economies often lag, not because of desire, but because they simply do not have the physical resources to keep up with the demand and need for their expertise and input. Capacity is essential if an economy wishes to participate in international commerce, where increasing volumes of food are imported and exported.

One of the more obvious challenges to developing and emerging economies is the lack of infrastructure needed to have a solid food safety system. What do I mean by the term “infrastructure”? I mean all that goes into allowing the supply chain to function in a way that protects the safety of food products. It includes such tangible assets as potable water, reliable electricity and transportation, and information technology to facilitate information flow and communications. But “infrastructure” also means the “system” or processes that encourage, allow and promote the safe production, distribution, and regulation of foods. One can have the best analytical equipment or the most up-to-date food processing systems, but if the electrical grid is unreliable, or there is a lack of potable water, it is much more difficult to implement an effective food safety system.

Transition – So, I have briefly gone through some of the multiple challenges confronting developing countries. I'd now like to talk about what has been done to help remedy this situation, and perhaps more importantly, what more can be done in the future.

Well first off, I want to acknowledge that much HAS been done by developed countries to assist developing countries, mostly in the area of capacity building and infrastructure. For example, the European Union has

invested in projects aimed at growing the agricultural sector in African nations, while Australia has focused on improving agricultural and fisheries systems in the Asia-Pacific regions. Here in the United States, the primary organization for assistance has been the Agency for International Development, who has invested in food and science infrastructure of developing countries in just about every region. Some of these projects have had a direct impact on food safety. For example, I was involved in a USAID project in Southeast Asia, one goal of which was to minimize aflatoxin contamination in ground nuts (peanuts).

In addition to the efforts of individual countries, the international community as a whole has contributed to programs to assist developing countries to improve their food safety systems. One obvious contributor is The Food and Agricultural Organization (or FAO), through its sponsorship of CODEX. Likewise, the World Health Organization coordinates its food safety efforts with FAO, and has developed food safety educational efforts, such as their "Five Keys to Safer Food Program".

The Asia Pacific Economic Cooperation (or APEC) took the bold step in 2007 to launch its public-private partnership, the Food Safety Cooperation Forum, Partnership Training Institute Network (or PTIN) in the 21 member APEC region. This effort looked at food safety holistically, by forming a network of private sector, government, and academic entities to conduct programs to improve the scientific capabilities as well as regulatory processes and systems of member economies. The PTIN is still going strong today, and in fact, resulted in a broader effort, the Global Food Safety Partnership (sponsored by the World Bank), to expand the goals of the PTIN beyond just the APEC region.

Educational institutions both in the U.S. and other countries have also initiated training and formal education efforts for and in developing countries. In many cases, the training is provided by individual university outreach programs, with the help of government or foundational grants. In other cases, there are university programs that are public-private partnerships between government agencies, private companies, and the university. Probably the best example of this is the Joint Institute for Food Safety and Nutrition (JIFSAN) at the University of Maryland. JIFSAN has provided training on a variety of topics from on-campus training on instrumental analysis to good aquaculture practices at fish farms in Southeast Asia. Although university-based efforts have largely been successful and beneficial, they suffer from two important shortcomings. Those shortcomings are, that the training and educational efforts are often "one offs", with little or no coordination with other similar programs at other universities, and secondly, because they are funded by grants, they are often not sustainable long-term.

And finally, various Non-governmental Organizations (or NGOs) have also put effort into improving the food safety systems. One example is AOAC International's involvement in the CODEX process. For those of you who may not know, AOAC is a U.S.-based organization whose mission is to develop science-based global standards for microbiological and chemical analyses.

TRANSITION – So how can we continue to improve the global food safety system going forward, and meet the challenges of developing and emerging economies in particular? There are probably many positive actions that can taken, but I will focus on a couple.

First, we should make an effort to have better coordination of training and educational efforts among and between educational institutions. This will not only minimize duplication of efforts but also enable the precious educational funds to go further. Following the model of the APEC PTIN in establishing a cooperative network might be a good first step.

Secondly, we should enhance our efforts to engage all affected parties in developing economies, particularly the private sector. Both governments and the private sector need to understand that, when it comes to food safety, each country (and the private companies within them) have a "Brand" to protect. A strong food safety system enhances that brand, whereas a poor food safety record or system tarnishes the brand in the global market. CODEX should be viewed by these affected parties as a strong, science-based process to enhance the food safety brand of all participants. The end result will be a positive impact on public health, and a path to facilitating global commerce in food and agriculture.

Finally, I would like to make a few comments that tie my previous comments together.

First, I would like to comment on the importance of a regulatory system. A credible food safety system relies upon a well-designed and run regulatory infrastructure. Proper regulatory oversight is absolutely essential to engendering confidence, not just among consumers but especially among the companies who are actually CHOOSE their suppliers. A strong regulatory infrastructure means that the regulatory agencies have both capacity (meaning financial and human resources) and capability (meaning knowledge and skills) to properly regulate. Regulators must have the technical understanding of the science that is the foundation for good food safety practices. For example, what are good manufacturing practices and how does one judge their implementation. Moreover, if an economy is to successfully compete in the global marketplace, its regulators must now understand how what they do fits into the context of international treaties (such as SPS), and standards (such as CODEX). Another example – what is the role of risk or safety assessments in

developing and enforcing food safety regulations? And how does a regulatory agency actually do this? This is a lot of information to learn and absorb and, unfortunately, many regions do not possess the expertise to train their regulators in all these issues.

Now lets talk about the private sector, the food industry. Although I mentioned just a moment ago, that a strong and well trained regulatory infrastructure is important, it is the private sector that actually **MAKES** the product. Hence, it is also the private sector that is ultimately responsible for safe food. Government simply tells industry **HOW** safe. To do this, the food industries in developing economies also need to possess the knowledge and skills to do what is needed. Although the specifics and emphases may differ, the food safety infrastructure needs of the private sector are not that dissimilar to those of government. Again, those companies who possess at least a basic understanding and appreciation for scientific principles behind food production and good manufacturing practices, are far more likely to succeed in the global marketplace. However, unlike government, the food companies must also possess the physical and technical capability to actually produce the food or ingredient in a safe manner. This doesn't necessarily mean the newest or most sophisticated technology. It simply means companies need to know **WHERE** to apply their efforts and resources to meet the food safety needs of their customers and regulators. And again, they may not have the expertise within a given economy to provide the knowledge.

Finally, I'd just like to close first by again thanking CODEX for inviting me to speak, but also to re-emphasize how vitally important the work done by CODEX and in particular, the Codex Committee on Food Hygiene is to achieving the dual goals of enhancing public health, while supporting trade. Thank you.