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## Scanning the Horizon

The cereals industry is as hard hit as any part of the food industry when scares about food safety and new trends in nutrition emerge. Therefore, the frequent requests to scan the horizon for issues likely to impact the industry come as no surprise. Although, even better would be the ability to see beyond the horizon and predict likely issues before they enter public view. I don't know about you, but I sometimes have difficulty coping with the volume of current issues, let alone seeking out new ones. However, part of our role as cereal scientists is to be ready to deliver knowledgeable answers to yet-to-be-posed questions.

The cereals industry may be global, but reactions to food matters can be very local in nature. A nutritional trend can be important in one part of the world, while in another it hardly attracts any attention at all, and this makes predicting future food trends all the more difficult. A good example of how local attitudes affect the future of cereal-based foods is the largely puritanical and antiview on the growth and use of genetically modified (GM) crops in Europe compared with many other parts of the world. As cereal scientists, we would have (and did) predict great things for GM crops, but in Europe we really did not see the antiGM lobby becoming as powerful as it was (and still is).

There is no doubt that the future will see increased focus on the nutritional aspects of cereals and the products made from them. This is hardly an earth-shattering prediction since the contribution of cereals to diet and health has always been appreciated. But wait a minute—appreciated by whom and in what context? All too often of late, the “appreciation” of cereal-based foods has been about the negatives, e.g., carbohydrates, rather than the positives, for example, fiber. On the subject of fiber, behind the hill somewhere has got to be a definition of fiber which we (scientists, consumers, and legislators) can all buy into and I guess sitting next to it will be a universally accepted method of measuring it. There was a lot of debate about this issue at the recent ICC dietary fiber conference in Vienna, Austria.

The concentration on a single negative aspect of cereal-based foods often means we lose sight of the positive contributions. The United Kingdom's focus on reducing salt in bread is a good example of this problem. Progressively, the U.K. baking industry has responded to government pressure and reduced salt levels in bread; the same incremental reduction approach is now spreading throughout Europe. The concept of gradual reduction was to “re-educate” the consumer palate and this seems to be working, since many people now complain that bread has less flavor than it used to. If this flavor perception drives the consumption of bread downward, consumers risk losing the benefits of the fiber and calcium contributions that come from bread products. I would like to say that I see common sense looming on the hori-

zon with respect to this topic in the United Kingdom, but that would be overly optimistic. The reason why the U.K. bread industry has been out under such pressure on salt reduction escapes me, especially when others sectors of the food industry attract considerably less attention.

To help get clear messages through to consumers, the U.K. Food Standards Agency has been pushing the “traffic light system” for nutritional labeling on the front of product packs; essentially, green is good for you and red signals “eat with caution” for the various categories of nutrients. What does need to emerge is cohesion between this approach and that of the European Food Safety Authority with respect to health claims for foods. Not least because you might have green lights for low salt, low saturated fats, etc., but still not be able to make any claims that a particular food has associated health benefits. Of one thing you can be sure, not eating any food is unhealthy!

An emerging trend for cereals and cereal-based foods has to be food security in the sense of ensuring that we have enough food to go around and have it in the right places in the world. At the recent ICC summit on food security in Vienna, I was struck by the fact that the number of clinically obese people in the world is roughly equal to the number suffering from malnutrition. Some people are going hungry in the same parts of the world that are exporting food to other places with high food-wastage rates.

Clearly, there is no simple solution to the complex nature of trade and economics, but I can't help but feel that we as cereal scientists must be able to contribute to the resolution of such imbalances.

In the context of climate change, the agricultural practices carried out and the crops that are grown in different parts of the world, will certainly change and the very least we should do is share information and best practices to contribute to future food security for all. This should not be seen simply as a flow from the developed to the developing regions, not least because some of the climatic challenges that developing regions currently face are likely to be ones which developed regions will face in the future. Analyzing and learning from the experience of others has always been of benefit to humankind.

The “era of cheap food is heading to an end” proclaimed a U.K. newspaper headline. The article went on to discuss the cost of transporting foodstuffs around the world and the potential contribution of that transport to carbon dioxide emissions. The concern over food miles is not all that new, but for globally traded raw materials, such as grains, what will be the end result? Here, I will get my crystal ball out. I think that there are two options we have to consider; the first less radical than the second.

Energy costs in transporting the raw materials are only one

aspect of the grain chain. There is a need to evaluate the energy involved in processing grains to foods and seek ways of reducing those costs to contribute to world energy sustainability. By its very nature, the conversion of dough to bread involves a lot of energy, with about 60% of energy in the bakery being used in the oven. With rising energy bills and dwindling resources we need to find new ways of making bread that are less energy intensive. Yes, we can look at heat recovery options for the ovens, but in the medium- to longer-term we need to find new ways of making and baking bread using less energy. This will not just be by designing more efficient ovens but will have to include redesigning the bread-making process from start to finish.

If we are going to redesign the bread-making process, then maybe we could consider the more radical idea of redesigning bread! I don't mean redesigning it to get a marketing edge, but looking at better ways to deliver the nutritional benefits in a manner which retains the sensory pleasures associated with eating bread. Once you have enough food for you and your family to eat, then eating becomes more of a pleasure. When this hap-

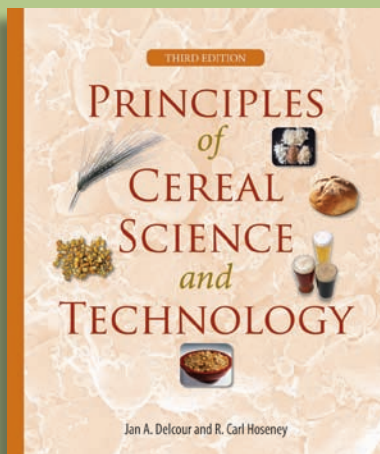
pens, you can worry more about the sensory properties of cereal foods, such as how soft bread crumb is or how crispy the crust, rather than from where will I get my next meal?

For me, the emerging challenge is how do we combine all of the knowledge that we have regarding cereal science to deliver food security for all while also delivering good cereal-based nutrition in a form that is a pleasure to eat? Throughout the centuries, bread in its different forms has delivered all of these things, but in our modern world we need to find new ways of ensuring that bread continues to make a significant contribution to our future diet, health, and pleasure.

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