C&E Spring Meeting 2009—Whole Grain Global Summit

Whole Grain Products: The Holy Grail for Health Conscious Consumers?

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The 2009 Cereals&Europe Spring Meeting—Whole Grain Global Summit, to be held at Newcastle University, Newcastle upon Tyne, U.K., March 25–27, 2009, will be the second C&E Spring Meeting, following the highly successful inaugural meeting held in Montpellier, France, in 2007. It is also the third in a series of Whole Grain Global Summits (after meetings by VTT Biotechnology, Finland, in 2001, and at the University of Minnesota, U.S.A., in 2005).

Cereals&Europe, the European arm of AACC International, represents the largest grouping of cereal-based R&D professionals in Europe. The meeting was developed to bring together these experts with nutritionists and consumer scientists to debate the worldwide drive to promote the use of whole grains in human nutrition. The use of whole grains and their role in nutrition and health, and in food manufacturing, cannot be more topical. Regulatory bodies, including the European Food Safety Authority (EFSA) in Europe and the FDA in the United States, are currently debating ways to promote their use, legislate on associated health claims, and establish workable definitions of “whole grain” and “whole grain foods.” These organisations are charged with ensuring that the best interests of consumers are safeguarded, taking into account the industry’s requirements in regard to the claimed health benefits of whole grains. At the same time, industry must meet the challenges of developing tasty, safe, and affordable whole grain foods that consumers will purchase.

The aim of the C&E Spring Meeting 2009—Whole Grain Global Summit is to contribute to the discussion and inform these policymakers with a state-of-the-art and interactive programme, presented by leading experts from industry and the academic world. The structure of the meeting will ensure close integration of nutritionists, food technologists, food processors, and regulatory affairs experts, offering a truly global, multidisciplinary perspective.

Below are the abstracts submitted for the meeting’s Plenary Session, which aims to review progress made since the 2005 Whole Grain Summit in Minneapolis, MN, U.S.A. The full programme and abstracts submitted for presentation at the 2009 C&E Spring Meeting are available in an online supplement to Cereal Foods World at http://www.aaccnet.org/cerealfoodsworld/pdfs/CFW-54-2-suppl.pdf. Abstracts for both the oral and poster sessions are included. Also online are descriptions of the AACC Intl. Whole Grain Task Force Workshop, covering technologies used for processing, different definitions of “whole grain” and the range of cereal grains to be included in the definitions, and discussion on if a marker, such as a minimum level of dietary fibre, is needed; in addition to details on the GRAINITY Project Symposium—Nordic Experience and Approaches on Using Grains for Health. The GRAINITY project, a consortium of researchers from the Nordic countries, aims to provide a scientific discussion forum and platform to assist in the development of healthy rye- and oat-based foods and to discuss related nutrition communication, as well as their role in dietary strategies. In this
Whole grains, fiber, and bioactive components are an integral platform for the advancement of the grains and health industry. Considerable research is underway to explore the biological, consumer, and technological aspects of grain foods throughout the continents. As we move into the next decade, there is a need to focus and prioritize grain-related research efforts among scientists to more effectively target and leverage our research dollars. Additional issues include the development of collaborative research projects that address identified gaps in the supply chain, which in turn enhance the development and delivery of whole grain/fiber foods to the consumer. Lastly, academic programs are encouraged to develop visionary leaders who can communicate across sectors, disciplines, and cultures and possess the necessary skills to comfortably navigate the supply chain. Academic programs that emphasize multidisciplinary, interdependent teams in the development of grain-based food products that are sustainable and cost-effective, and that reduce risk for chronic disease are requisite to empower future scientists and health professionals to solve today’s and tomorrow’s public health issues.

Consumer and Market Drivers for Whole Grain Foods

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“Consume more whole grains” is a mantra transmitted by nutritionists, dietitians, and food manufacturers. Government agencies across the developed countries also advocate increased intake of wholegrain foods, with several countries developing guidelines, which include setting recommended daily amounts. The bulk of the evidence to support these messages has come from observational studies, in some cases including cohort studies with follow up. The data from these studies are a powerful indicator of the relationship between whole grain intake and improved health; however, such relationships do not demonstrate causality. Nevertheless, the strength of this evidence cannot be disputed, particularly for the benefit of whole grains in reducing cardiovascular disease (CVD) risk. Repeated meta-analyses show that CVD risk is reduced by approximately 30% when comparing the lowest whole grain consumers with the highest whole grain consumers. To help explain the benefits of whole grain, and in particular to confirm and develop health claims for wholegrain foods, intervention studies are needed to link observational data with mechanistic explanations. Until recently, the number of intervention studies with wholegrain foods has been small; most have included subjects at high risk (e.g., obese subjects, hypercholesterolaemic subjects), and most are of short duration. However, data from larger and longer-lasting interventions are gradually appearing. In some cases, the results of these studies support the observational data, but in others they do not. This paper will compare and contrast the observational data with that from intervention studies to try and reconcile these differences and make recommendations for future research.

Can the Demands for Whole Grain Foods Be Met by Technological Processes?

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Today, foods made with whole grains are recognized as important sources of nutrients, including fibre, trace minerals, certain vitamins, and health-promoting phytochemicals. The health benefits of whole grains are well documented. According to recent polls, consumers are increasingly seeing the link between diet and health. More and more, consumers are looking at preventative measures to stay healthy and improve their sense of well being. That includes exercise and it includes diet as a major component. However, convincing consumers to eat more whole grains, especially in the amount recommended, has been unsuccessful. In the battle for the winning “share of the stomach,” other healthy foods (like probiotic yoghurts or pure fruit smoothies) are suspected to win the competition against whole grain foods. Adults and children give a variety of reasons for not choosing whole grain foods, including the unpleasant taste and unappetising look of most whole grain foods, a lack of understanding of the health benefits of whole grain foods, and an inability to identify whole grain foods. Food technology has to face the challenge of formulating whole grain foods consumers are looking for. To help solve such complex problems, not only new technologies, but also conventional milling technologies in combination with innovative raw material sourcing strategies, have to be mobilized. Food technologists also have to get acquainted with the bioavailability concept. It identifies the degree to which a nutrient substance becomes available to the target tissue after administration. Innovative whole grain ingredients can increase the absorption of healthful nutrients. Innovative, higher technical capabilities have to be built up by applying new findings from the related disciplines to allow food technology to play its vital role. Food technology has to be emphasized to increase the availability of appealing whole grain foods and innovative foods with “whole grain power.”
product categories. Apart from this, whole grain foods will also have to bring real advantages for consumers. Whole grain or specific fractions of whole grains will have to bring benefits that are scientifically proven: to comply with legislation and to bring a clear message toward the health-conscious consumer. It is also clear that the consumer is convinced more by tangible effects than by scientific evidence. Especially in these challenging times, the products will have to convince by their performance. The growing category of whole grain foods offers an opportunity to the baking industry and this will be illustrated by several cases.

**PL5a 17.10–18.00 Regulatory Aspects for Whole Grain and Whole Grain Foods: A U.S. View**

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Whole grains have been shown to have many health advantages. Therefore, many companies are adding whole grains to their products and consumers are looking for these foods in their diets. Making regulations that encourage industry to formulate products with whole grains and accurately convey to the consumer the amount of whole grain in the product create many challenges. Furthermore, the label should give enough information to enable the buyer to know whether the product is delivering a dietary significant amount of whole grain. Labeling regulations create a level playing field so that consumers know what is in the product and all manufacturers have the same opportunity to express their products’ benefits. In order to establish regulations regarding whole grains, there first needs to be an agreement as to which grains are included and which are not. Next, there needs to be agreement on what definition is being used for whole grains. In the United States, the AACC Intl. definition of whole grains is widely used in industry. However, as grains are processed in various ways there needs to be attention paid to the effects of the various processes on the proportions of the kernel required to meet the AACC Intl. definition of whole grains. Furthermore, there needs to be a vehicle that tells the consumer the amount of whole grain in a product. Label declaration of the amount of whole grain required and the amount in the product can help consumers with food choices. The FDA-approved health claim for whole grains is one way to label whole grain products. Since it is based on product weight, not dry weight, it gives lower moisture products an advantage. It also has a fiber amount required, and this gives an advantage to those whole grains with higher fiber contents, such as wheat and barley. Traditional processing of foods, such as the making of bulgur, the pearling of barley, and the nixtimalization of corn, offers special challenges to the definition and for regulation. All of these will be discussed.

**PL5b 17.10–18.00 Regulatory Aspects for Whole Grain and Whole Grain Foods—An EU Perspective**

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Whole grain and whole grain foods enjoy recommendation as part of many national and international dietary guidelines. However, if the food industry makes claims for the health benefits of whole grain foods, then a raft of regulatory requirements must be met in the European Union (EU). Under the relatively recent EU regulation on nutrition and health claims made on foods (Regulation (EC) No 1924/2006 OJ L12, 18.01.2007 p. 3) any nutritional claims about the energy, nutrients, fibre, or other beneficial substances the food contains need to comply with the annex of that regulation. As far as health claims are concerned, until January 2010, food businesses may use any health claims that can be validated by scientific evidence, providing that they meet any specific requirements of the regulation that are applicable prior to that date and providing they are not (a) prohibited claims; (b) claims referring to a reduction in the risk of disease or a disease risk factor; (c) referring to children’s development and health; or (d) claims that have been rejected by the EU regulatory procedure. Claims under (b) or (c) require submission of a dossier. Once the list of so-called Article 13 health claims is published (for the main part expected in January 2010), then only those claims included in the list or those claims approved following submission of a dossier to EFSA may be used. Whole grain foods making nutrition and health claims will also ultimately have to respect the nutrient profiles that will be established in spring 2009. A definition of what counts as a whole grain food has been proposed for the U.K. by the Institute of Grocery Distribution, but this has no regulatory standing. The conditions of use that will be documented as part of the EU-approved list of health claims may in essence establish a definition.