## Rabobank: Innovations that will shape the future of the food industry

**Lack of growth, price pressure from food retailers and changing consumer behaviour are all creating a challenging environment for the foods sector. New technologies and innovations such as 3D printed food, algae and insects as a form of protein, wearable technology and smart shopping tools have the potential to structurally change the food supply chain in the very near future. In the context of three mind-sets of the dynamic consumer - sustainability, convenience and health, Rabobank has gauged the viability and timing of a selection of innovations in its report; *‘What’s Cooking in Tomorrow’s Kitchen’* that are the cusp of breaking through and have the ability to drastically change the market.**

“Traditionally static consumption patterns have undergone a transformation and we believe there are now three prevalent consumer mind-sets for food buying: sustainability, convenience and health” explained Rabobank analyst Jelle Groot. “Understanding these mind-sets and using appropriate innovations could not only have a game-changing effect on food processors’ businesses, but will be essential to remain relevant in a highly competitive environment.”

For consumers with a sustainable mind-set, alternative ingredients may replace existing ones. In the face of a growing global population and limited natural resources, alternative ingredients that are more environmentally friendly – such as macro-algae (seaweed), micro-algae and insects as a form of protein, are promising. However, adoption may take time as challenges lie in scale, cost competitiveness and consumer acceptance. Significant research and development, marketing and promotional efforts by food companies will be required to develop products with these novel ingredients at a price level consumers will pay.

The convenience trend centers on reducing consumer’s time, effort and energy. Over the next two decades, online food shopping will continue to grow and inside stores, new technologies will enable retailers to deliver an augmented shopping experience, helping companies engage with customers through personalised offers and product suggestions to fit with diet and lifestyle.

Those consumers with a health mind-set want to increasingly understand what their bodies need, and eat accordingly. Wearable technology and self-tracking apps are already in the market to help consumers ‘quantify’ and track data on their lives, including calories consumed.

New technologies in this category will facilitate personalised diets and customised food. This will include 3D printed food which can be personalised with respect to nutritional values and ingredients, as well as flavour, texture and size. Hand-held food scanners allowing users to get the nutritional values of food also looks set to rise in popularity. However, this will lead to food companies being challenged to deliver more consistent quality.

Predicting the future is impossible, but technologies such as wearable devices and smart shopping tools are already changing consumer mind-sets and demands. Playing into these trends comes at a cost, and while the results are uncertain, using innovations that tap into consumer megatrends can help processors find those much sought-after pockets of growth.

*Note for press:*

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