

Abstract Key note Presentation Atze Jan van der Goot

Modern Food Technology: what do we need to make our food in future?

To feed the growing world population, we face several challenges. Food demands will rise, and trends are towards more affluent diets, among others due rising intake of food products from animal origin. Besides, current food products are associated with certain health problems, such as obesity and cardiovascular diseases. Finally, an increased consumer distrust is emerging against industrially produced products.

Those trends indicate the need for developing science and technology that leads to production of food products in a different manner. Current technology allows production a massive quantities of foods with constant quality in a cost-effective manner. This technology is based on the use of highly refined ingredients with standardised properties and general applicability. The intensive processing of raw materials in ingredients and food products leads to losses and use of many natural resources.

However, new product attributes like naturalness, locally produced and sustainability are becoming more important. Most likely those attributes cannot be achieved by optimizing current processing routes; a need for an alternative approach seems unavoidable.

The novel approach is based on using milder processing steps, for examples through the use of less or no organic solvent, chemicals, for example to control pH, and less drying. The consequence of approach is that milder processing results in more complex products streams. For example, it will not be possible anymore to reach high purity in case of ingredient products. Fortunately, for many food applications, high purity is not necessary; the use of functional fractions might be sufficient or can even offer novel opportunities.

In this presentation, possibilities, consequences and challenges will be highlighted and illustrated with recent research examples.