Improved international competitiveness

New technologies and methods for improving the international competitiveness of Hungarian food products including consumer protection aspects

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The aim of this research was to develop the implementation of new technologies and test methods in Hungary that will add value to food products and improve food safety.

Objectives

- Development of minimally processed chilled and MAP products.
- Development of new added value frozen vegetable and fruit products.
- Introduction of new methods for improving food safety and development of models for practical application:
    - demonstration models
    - predictive microbiological models
    - validation of microbiological safety
    - challenge testing
    - developing GHP codes
    - improving cleaning methods

- Establishing a new range of sensory services available for Hungarian food manufacturers.

Achievements

- **Modern sensory laboratory** and related network of factory laboratories.
- **Shelf life investigations** of chilled and MAP packed fresh fruit and vegetables, as well as processed and chilled poultry products (investigation of raw materials, quality, temperature, packing materials, modified atmosphere, applications for fresh produce washing), with significant increase of shelf life of some products (sour cherries, peppers and 2 poultry products).
- **Development of the main process steps of the new processing technologies for fruits and vegetables** (varieties and planting methods, cutting, peeling and drying methods of sensitive fruits; cooling and transporting of fine chopped vegetables, grilling method of vegetables).

- **Development of more exact sensory evaluation methods** (detailed description of properties; benchmarking techniques; photographic aids and illustrations; validation of sensory evaluation methods by statistical analysis; improved product specifications; testing more than 300 products).
- **Validation of microbiological safety** (application of validation methods for the microbiological safety of two minimally processed middle heat treated products; microbiological investigations of minimally processed vegetable and chilled poultry products).
- **Improved cleaning method** to prevent cross contamination with *Listeria* (identification of the potential sources; improved cleaning and disinfection methods).
- **Technology transfer for the food industry** (training of more than 30 experts; one chapter of a book for safety of chilled food and technologies; 2 good hygiene practice guidelines; new training seminars for chilled and minimally processed foods; microbiological methods and novel sensory methods).