

ISAFRUIT

Increasing Fruit consumption through a transdisciplinary approach leading to High quality produce from environmentally safe, sustainable methods



Since 2006, the ISAFRUIT Project has worked towards increasing fruit consumption in Europe by identifying its obstacles: consumer perceptions, fruit availability, quality and convenience, and environmentally-friendly production. Combining the expertise of over 300 scientists from 60 research and development institutions as well as SMEs in 16 countries across Europe, the USA, and New Zealand, ISAFRUIT is based on a Fork-to-Farm, total fruit chain, approach through which it has investigated characteristics of fruit and fruit product supply chains as well as consumers' behaviours to identify their buying decisions for fruit and

fruit products. Thus, consumer linked sciences are the starting point of ISAFRUIT. Research on quality and health effects of fresh and processed fruit shall stimulate consumer interest in a wider range of healthy products.

Background

Consumption of fruit is important for a healthy diet. It is a goal for European countries to have the citizens consuming more fruit for the sake of reduction of certain health risks. The idea of ISAFRUIT is to fulfill the consumer needs and expectations and increase fruit consumption through consumer satisfaction. Awareness of the health effects of fruit may be a driving force for the consumers, but only if the products meet their expectations. An area of growing concern is the significant number of European consumers who suffer from fruit allergies, an obstacle to increased fruit consumption. Close co-operation among ISAFRUIT scientists (human health experts, fruit geneticists and horticulturists) is addressing this problem.

Objectives

While its long term mission is to improve human health through increased consumption of fruit produced in a sustainable way, ISAFRUIT has for strategic objective to increase fruit consumption, and addressing them by consumer driven preferences. Research has been held on:

- Increased fruit safety
- Convenience fruit products
- Searching consumer preferences and attitudes
- Improving availability of quality fruit and
- Raise consciousness of consumers to consumption of fruit and fruit products

Results

- The multidisciplinary research is in itself a promising outcome of the project.
- Health effects of selected fruits and fruits products on risks factors for cardiovascular disorders.
- Prototype fruit tree sprayer based on new technologies for reduces use of pesticides.
- Consumer perception of quality of peaches, nectarines, processed products and apples.
- Allergenicity of apple and peach.
- Non destructive quality measurements and quality grading perspectives.
- Hot water treatments as replacement of certain pesticide sprays to combat infectious diseases on peach and apple storage and sale.
- Decision support system for the fruit chain with the goal to forecast and maintain product quality.
- New methods and processed products



- Mapping of genes for expected health related bioactive compounds and fruit quality of peach, apricot and apple

Impact

- New processed products of apple and other selected fruit are developed and can be marketed. There are snack-like products, probiotic enriched fruit products and other fruit based products.
- Apple cultivars with low allergy effects are identified
- Hot water treatment can replace the so-called before-storage-pesticide-applications on peach and nectarine and to some extent apple.
- A prototype fruit tree sprayer based on new technologies has the potential to reduce amount of pesticides used to protect the crops.
- Results showing that apple can reduce cholesterol level can motivate consumption of apple and impact on human health.
- New methodology and better efficiency for breeding new fruit varieties meeting the consumer expectations.
- Cooperation with SMEs as research partners delivering input to research processes by providing goods and technologies as well as developing new products (nurseries developing new cultivars, food processors, technical equipment related to fruit storage).

To follow

A comprehensive synopsis of ISAFRUIT achievements and influence on fruit consumption will be presented at the 28th International Horticultural Congress in Lisbon, Portugal, between 22–27 August 2010.

For more information, please visit the website: <http://www.isafruit.org>

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