

AARHUS UNIVERSITY

The research within organic foods at the Department of Food Science takes place in many sta-ges of the production chain. The combination of scientists and the facilities makes this depart-ment a key supplier of knowledge regarding organic foods - nationally and internationally.

The scientists possess many years of experience within research of the production and quality of vegetables, fruits, berries, cereals, medicinal plants, meat, milk and eggs. Research is carried out in close collaboration with organic producers and the industry, and the results create a platform for the development of new products and production methods.

Interdisciplinarity is a trade mark of the research. The contact between scientists and their col-laboration partners during the various stages of the production chain gives an overall integration of aspects of economic and environmental sustainability and human health.

ORGANIC RESEARCH IN THE ENTIRE CHAIN OF PRODUCTION

GENES

- Evaluation of modern and traditional fruit and vegetable cultivars
- Registration, evaluation and domestication of wild plants for production
- Preservation of living clone collections of vegetative reproduced vegetables
- Quality of milk and native breeds of dairy cattle and genetic lines
- Evaluation of breeds of livestock for production of meat and milk

PRODUCTION

- Optimization of yields and use of resources to reduce losses from the agro ecosystem
- Recirculation of nutrients in the agro ecosystem by use of catch crops and deep rooted crops
- · Robust production systems with new methods of pest control
- · Open field and protected production
- New methods of cultivation focused on crop diversity and soil fertility
- Fertilization strategies including production of plant based and liquid fertilizers
- New products and product development
- Impact of cropping system on the quality of the raw material
- Impact of feeding and alternative forage on the quality of the raw material

STORAGE AND PROCESSING

- New harvest and storage methods to reduce waste and maintain quality of fresh fruit and vegetables
- · Improved handling, processing, and packaging of fruit and vegetables
- Milk quality, composition, storage, durability and applicability for specific dairy products
- Optimization of post mortem handling of meat
- Herbs and berries for conservation of meat product

HUMAN HEALTH

- Importance of cultivar choice, cultivation method and processing regarding bioactive substances in fruit, vegetables and new food crops
- Impact on fatty acid composition and bioactive substances in meat, milk and eggs through feeding and evaluation for human consumption

CONSUMER PREFERENCES AND SENSORY QUALITY

- Importance of cultivars, cultivation methods and processing regarding the sensory properties
 of fruit and vegetable products
- Importance of feeding and processing regarding the taste and aroma of milk
- · Importance of cultivation methods regarding sensory quality of organic meat and eggs

RESEARCH FACILITIES

The facilities include an organic research area of 20 ha for vegetables and orchards with various fruits and berries as well as specialized equipment for irrigation, organic fertilization, pest control, facilities to cultivate in tunnels plus analytical equipment, for example minirhizotrons for root studies. Besides that also test facilities for storage and packing of fresh fruit and vegetables are available.

Laboratory facilities count various state-of-the-art analytical equipment for example for color and texture analysis, mass spectrometry for profilings and identifications of biomolecules, in vitro laboratories, dairy pilot plant, low-field and high-field NMR and sensory science facilities.

CONTACT

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