

# AGRIBUSINESS FACTS & FIGURES



The Northern Netherlands has a modern agricultural sector, which also has links with agribusiness. The strength of the agribusiness in the Northern Netherlands is in the pioneering role played by trade and industry in raising the economic value of biomass containing carbohydrates. Carbohydrates are found in foods and healthy ingredients, but also in non-food products such as biofuels, plastics, paper, textile, medicines and cosmetics. With its innovative knowledge and broad support in the industry, the Carbohydrate Competence Center (CCC) plays an important role in the transition to a bio-based economy.

## CCC: The leading EU knowledge center for carbohydrate applications

Agribusiness comprises all the businesses in agriculture, varying from farmers and growers of vegetables, fruit, flowers, dairy or meat produce to businesses which produce agricultural machines, sewing seeds or fertilizer. The agribusiness sector takes up around ten percent of the Dutch economy and employment and is therefore of major economic relevance. Also internationally the Dutch agribusiness sector takes a leading position. The Netherlands are the second biggest export country of agricultural produce and nutrition in the world.

### Carbohydrate Competence Centre

The transformation of the European agricultural policy demands a thorough reflection on the future of the sector and a different approach to better farming. The opportunities for agribusiness lie in the intersection with life sciences and chemistry: new crops, new applications, new markets.

To maintain a leading international position the agricultural and industrial sectors must innovate continuously. Since 70 percent of all the (dry) plant material consists of carbohydrates, they play a major part in the innovation process. The Carbohydrate Competence Center propels this process with innovation research. New practical knowhow that can be applied instantly to enhance the added value. Also cost reduction is a major focal point. In this way CCC actively cooperates with partners for a better competitive position and the continuity of the sector.

### Facts

- The agricultural sector in the Northern Netherlands has an added value of 5.7 billion Euros and offers 80,000 jobs (fourteen percent of all the jobs in this region),
- Twenty eight percent of Dutch agriculture takes place in the Northern Netherlands.

### Cross-cluster links

- Energy: Supply of bio energy
- Water Technology: Supply of high quality water
- Healthy Ageing: Supply of functional food
- Sensor Technology: Precision farming and Smart Dairy farming

### Partnerships include

University of Groningen	Agrifirm
FrieslandCampina	HZPC
Nutreco Holding	Mars UK
Avebe	Wageningen University & Research Centre
Norwegian Food Research Institute	University of Copenhagen
EURADA	CEPI
University of Utrecht	TNO

*Please turn this page over for a map that shows the knowledge and business partners of CCC.*

### Research achievements

- The viability of six new product lines
- The principles of in vitro screening for the digestibility of nutrition have been elaborated and implemented as a prototype
- The viability of new pre biotic concepts

### Important existing and future applications

- Development of healthier foods, e.g. slow digestible foods that contribute to lower obesities and diabetes
- Sugar substitutes in foods, e.g. in cereal bars
- New pre-biotic products
- Healthier animal feeding
- Enhanced knowledge to transform agricultural building materials into end products, e.g. snacks
- Bio plastics
- First rate bio fuel from agricultural waste
- Encapsulation of drugs for targeted release in the body

# AGRIBUSINESS CLUSTER

