

**TOP
DUTCH**
Naturally leading
the transition

A glass flask and a jar of potatoes are positioned in the center of the image. The flask is on the left, and the jar is on the right, with several potatoes spilling out of it. The background is a solid green color.

AGRIFOOD

Discover the TopDutch AgriFood industry, where our ecosystem of knowledge and innovation communities, business and government are growing the smart and sustainable value chains of the future.

As a small, densely populated country, the Dutch were driven to optimize their agricultural yield, whilst still being committed to sustainable agriculture. Realizing unparalleled yields and becoming the world's second largest exporter of food, it may well be the Dutch who will guide the world on how to feed the 10-11 billion people that will inhabit planet Earth by 2040. Gaining a global leadership position in agriculture because of their strong focus on input, in the Netherlands we are now expanding our expert position and impact by maximizing value from output, creating the food, bio-based and circular value chains of the future. Here, we grow a healthy future.

1. Dairy Capital of Europe

2. Healthy Ageing Capital of Europe

3. Feeding a healthy and sustainable economy

4. World-class knowledge & innovation communities

5. Gateway to EU market & access to talent

1. DAIRY CAPITAL OF EUROPE

The TopDutch region is dedicated to building the most **innovative, sustainable, remunerative and animal-friendly** dairy chain in the world.

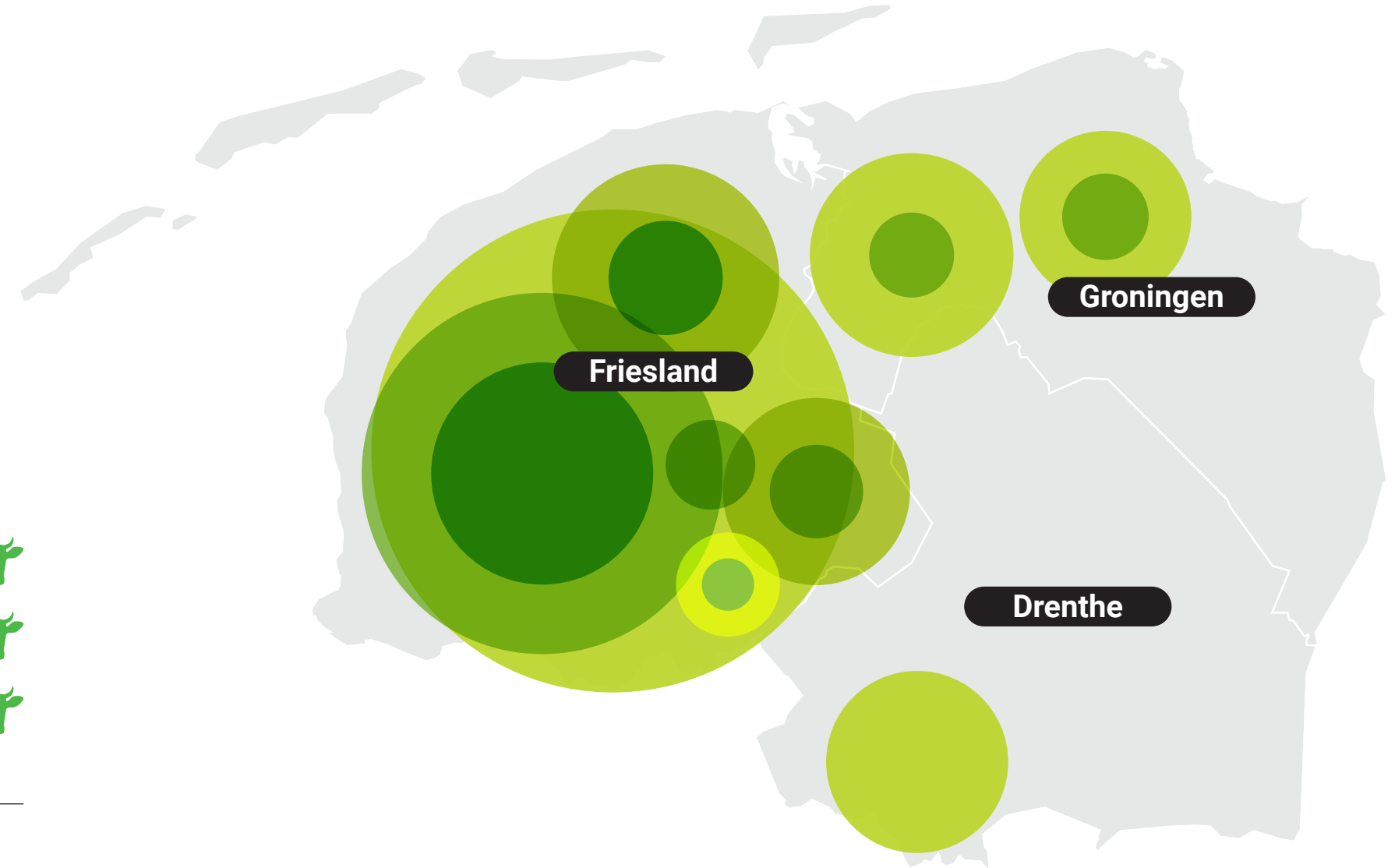


- **Home to the Dairy Campus.** The world-renowned Wageningen University has established a Dairy Campus in the Northern Netherlands. At the Dairy Campus, located in the city of Leeuwarden, we share state-of-the-art research & development, knowledge and education to spur innovation and improve the dairy industry around the world.
- **The Netherlands has the best cow environment and cow density.** The Dutch high-quality pasture, with ideal quality and quantity of grass, together with the optimal use of spaces, supports a higher density of healthy cows than anywhere else in the world.
- **Our healthy cows produce exceptional, nutrient-rich milk and high lifetime yield.** Optimized timing and frequency of pregnancies and lactations results in happier cows, producing a higher yield of better quality milk over their lifetime.
- **We enhance industry performance through smart farming:** Our dairy farmers utilize specialized technologies which can identify problems and opportunities to optimize performance at the earliest possible moment.

- **Highest quality dairy is 'Made in Holland'.** Dutch milk companies protect their product's quality by far beyond industry-standard monitoring, in every step in the process of the production chain, minimizing risk of contamination and losses.

- **Offering the ideal business environment.** The TopDutch region provides direct access to a suitably-skilled workforce. Together with favorable government policies, fiscal climate and geographic and geo-political positioning, we enable every business in the chain to thrive.

Cow density in the TopDutch region



2. HEALTHY AGEING CAPITAL OF EUROPE

The Healthy Ageing Capital of Europe, dedicated to extend the human lifespan with more healthy years by performing groundbreaking research to support a healthy diet and lifestyle.

- **Lifelines Healthy Ageing research, in the TopDutch region, are performing the largest and longest multigenerational healthy ageing research in the world.** Lifelines is the region's unique research cohort and biobank, collecting samples and data from 167,000 participants from the region, for over 30 years. This unique data- and biobank provides researchers and companies (among others) insight into the effects of lifestyle on people's health and ageing process.
- **Lifelines '10K Metagenome Project' studies the gut flora of 10,000 Lifelines participants in a metagenomics analysis,** involving analyzing the intestinal bacteria in feces samples. By metagenome sequencing, the project will examine the composition of bacteria, their function and learn how intrinsic facts and exogenous factors correlate with changes in the gut flora. This knowledge is the first step towards new ways of preventing or treating diseases on the basis of intestinal bacteria.



- **We are developing healthy ingredients and advanced nutrition.**
In the TopDutch region we have many research and development facilities and innovation communities developing useful nutritional value from a wide variety of crops that support healthy ageing. By extracting dietary building blocks from crops we develop new and advanced nutrition.

- **A focus on healthy agriculture; inclusive and circular.**
Besides the food we consume in our diet, our health is being affected by our environment. In the TopDutch region we are dedicated to sustainable farming; protecting biodiversity, land, seed and crop quality; optimizing processes for sustainability and promoting circularity.

3. FEEDING A HEALTHY AND SUSTAINABLE ECONOMY

The TopDutch region is dedicated to **feed linking industries with sustainable building blocks for a healthy economy, and leading the protein transition.**



- **Cross-over with green chemistry and bio-based economy.**

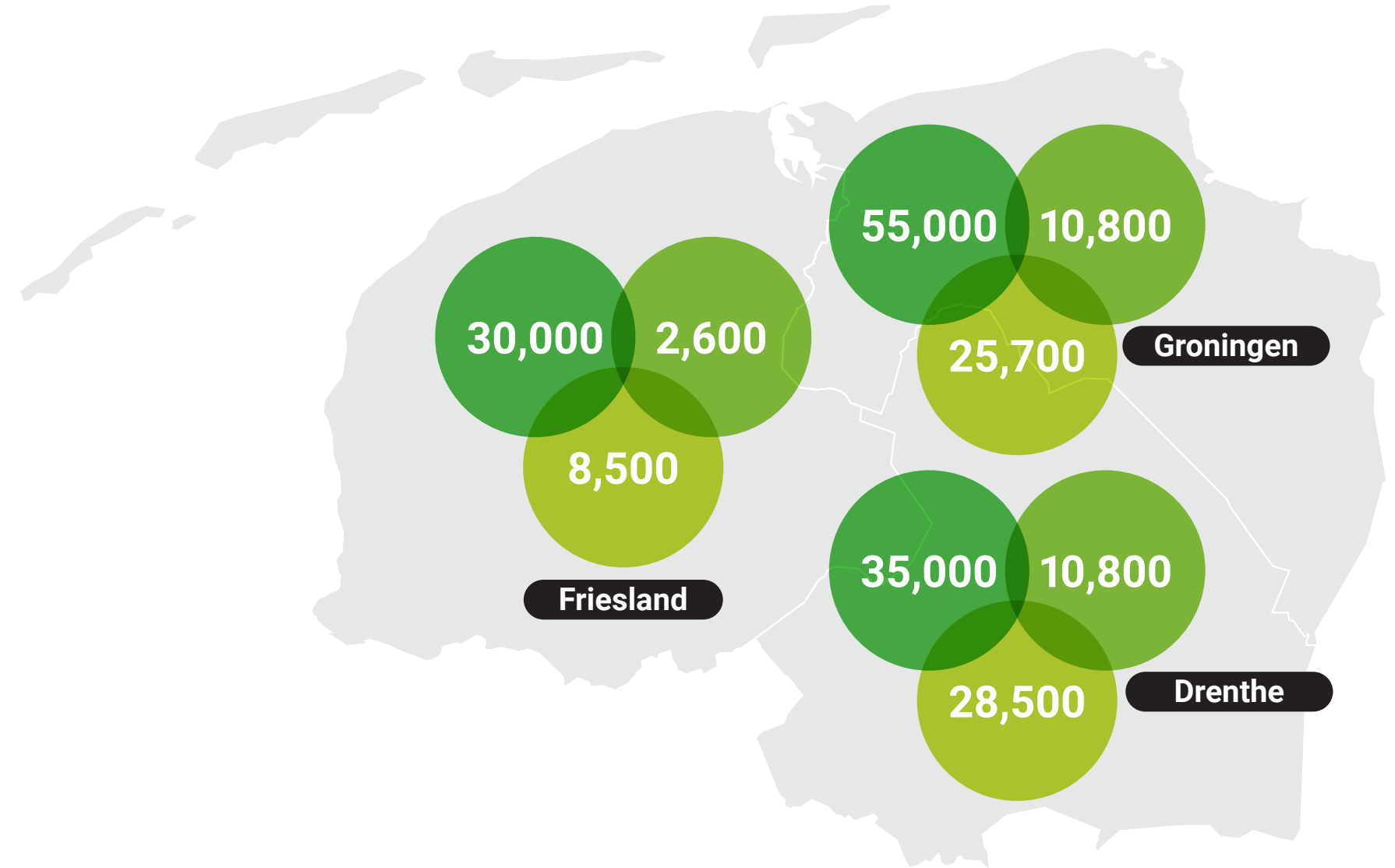
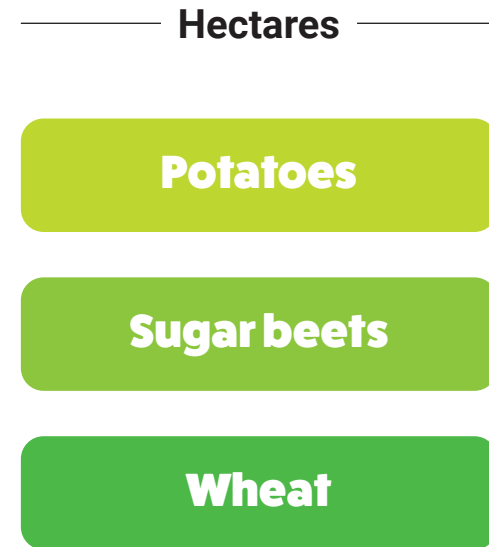
The crops that grow in our agricultural hinterland provide the bio-based economy and our green chemistry ecosystem, Chemport Europe, with an abundance of green building blocks. We are able to extract valuable chemical building blocks, such as sugars, starches, glucose, carbohydrates and lignin from sugar beets, potatoes, woodchips and even shrimp shells. We produce and recycle green packaging materials for the food industry and produce bio-methanol from wasted biomass.

- **Cross-over with energy.** Our farms have become energy producers instead of energy consumers. Agricultural waste is used as feedstock for green gas and bio-energy.

- **Cross-over with digital innovation.** Cross-linked with our digital innovation ecosystem, we develop new technologies such as soil sensor systems, smart dairy farming technologies and technologies that perform calibration measurements to optimize the performance of our cultivation and greenhouses.

- **Cross-over with WaterTech.** Cross-linked with our WaterTech innovation chain, we develop water recycling and resource recovery solutions for the AgriFood industry.
- **Cross-over with Healthy Ageing.** Together with regional life sciences & health research partners we unfold protein structures in food for advanced antibiotics research and we research healthy nutrition at our Carbohydrate Competence Center (CCC) and Food Circle.
- **Growing crops for plant-based proteins to accelerate the protein transition.** In the TopDutch region we are able to extract valuable proteins from potatoes, peas, beans, vegetables, seeds and other crops. Although today most proteins consumed are still animal-based, from protein rich dairy and meat, we see a strong shift in demand for plant-based proteins in the industry and consumer market. Our AgriFood industry is more and more providing these plant-based proteins in large quantities to accelerate the protein transition.

TopDutch agricultural building blocks



4. WORLD-CLASS KNOWLEDGE AND R&D COMMUNITIES

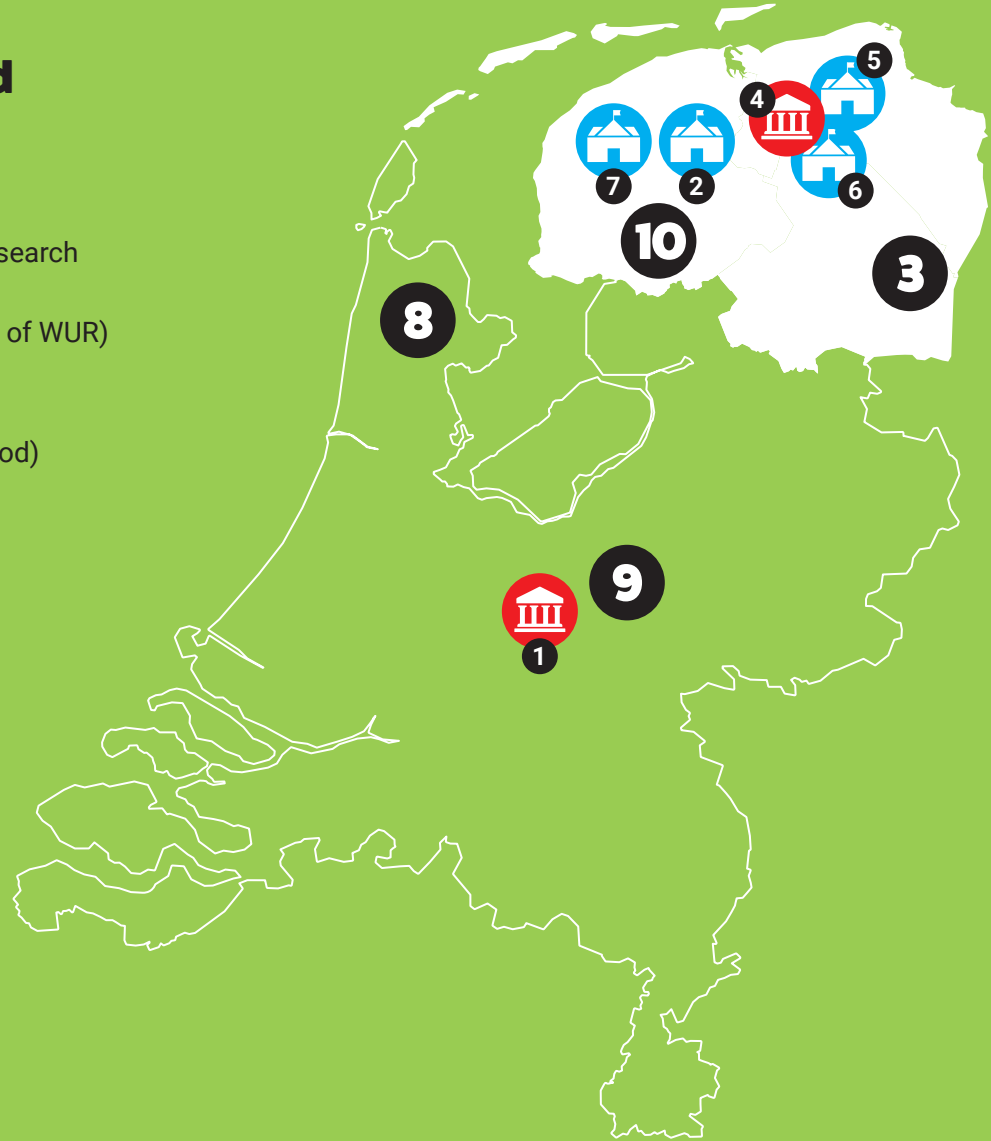
The TopDutch region has the **best knowledge institutes and communities** for cutting edge **AgriFood innovation R&D**.



- **The Netherlands is home to the no.1 university for AgriFood in the world: Wageningen University & Research (WUR).** The university has two specialized facilities in the TopDutch region, namely its DairyCampus and Field Crops test location.
- **The TopDutch region is home to an extensive ecosystem of dedicated research and innovation communities in AgriFood,** accelerating the development of a healthy and sustainable economy and supporting innovation in many industry cross-overs:
 - **Research campus locations:**
 - Campus Groningen: Healthy Ageing and Zernike Campus.
 - DairyCampus.
 - WaterCampus.
 - **Food innovation communities:** Holland Dairy Valley, PotatoValley, Carbohydrate Competence Center (CCC), Food Circle and Water Alliance.
 - **Pilot facilities:** Food Application Center for Technology (FACT), Innovationlab AgriFood, Innovationlab Chemistry, Zernike Advance Processing (ZAP), Zernike Institute for Advanced Materials (ZIAM).

TopDutch AgriFood key locations

1. Wageningen University & Research
2. Dairy Campus (part of WUR)
3. Field crop test location (part of WUR)
4. University of Groningen
5. Healthy Ageing Campus
6. Zernike Campus (Innolab Food)
7. Water Campus
8. Seed Valley
9. Food Valley
10. Potato Valley



- **The Netherlands has cutting edge food innovation R&D**
 - 12 of the 40 largest AgriFood companies have located their R&D facilities in the Netherlands.
 - The Netherlands has the third highest private R&D investments in AgriFood in Europe.



5. GATEWAY TO EUROPEAN MARKET AND ACCESS TO TALENT

The Netherlands is the ideal gateway to the European market and TopDutch provides access to AgriFood talent at all levels.

- Enjoy direct access to the European market, the second largest economy worldwide in GDP.
- Proximity to market with 170 million customers within a 500 km radius, representing 60% of the EU's purchasing capacity and 244 million consumers within 1,000 km.
- A dense highway and railway network are positioned directly on three out of the nine major corridors of the Trans-European Transport Network and connect the Netherlands to all European market.

**170 million consumers
within 500 km**

**Proximity of European
demand to the
TopDutch region**

**244 million consumers
within 1,000 km**

- **The Netherlands is the ideal trade partner in AgriFood**

- The Netherlands is the second largest exporter of agricultural products worldwide.
- Total value of agricultural exports of the Netherlands amounted to 122.3 billion USD in 2022.
- The Netherlands is one of the largest exporters in seeds, approximately 40% of all vegetable seeds are from the Netherlands.
- The Netherlands is the best overall performer in trade facilitation worldwide, because of our pro-business attitude, and its speedy transshipment of goods with low risk of delays.
- The Netherlands has one of the best VAT regimes in the European Union. Our companies experience a considerable cash flow advantage and low administrative burden because of the Dutch VAT system offering VAT deferment at import.



- **The TopDutch region provides access to talent:**

- The TopDutch region educates excellently, to different levels. A network of the world's best research universities, universities of applied sciences, vocational education institutions and dedicated research and innovation communities educate talent within the region.
- The TopDutch region welcomes international AgriFood talent. The largest global AgriFood companies with production and R&D facilities in the region, and our excellent research and innovation communities attract the best talent from around the globe.



Are you interested in exploring what your business possibilities could be? Connect with **Reinder de Jong**, our **AgriFood expert**.

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JOIN TOPDUTCH

Want to find out more about how the TopDutch region is naturally leading the transition, or view the digital edition? Head over to our website www.topdutch.com

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