



Farming
the
Future

Photography: Dutch Greenhouse Delta

Joining forces for food safety and food security in the Gulf region

Foreword

Dear all,

It is with great pride that I introduce to you the horticulture consortium “HortiRoad2theGulf” from the Netherlands: a consortium that offers **turnkey solutions** for the horticulture sector in the Gulf Region. HortiRoad2theGulf is the result of a public-private partnership by the government of the Kingdom of the Netherlands, and the research and private sectors, and symbolizes the Dutch Approach to the **Globe’s Rising Demand for Self-Sufficiency in Food Security**.

The Netherlands is - and should be - your trusted partner in achieving food security in a sustainable manner, particularly given its long history of experience in the Gulf Region. Our bilateral ties with the Arabian Peninsula go back as much as **150 years** to date with the opening of a first diplomatic mission in Jeddah in 1872 but also our cooperation in agriculture and food production went hand in hand with the so-called agricultural revolution that took place in the Kingdom of Saudi Arabia half a century ago.

For all obvious reasons, recent years have put more emphasis than ever on the urge of speeding up our efforts – both on a national, regional, and global level - in achieving food security. Our approach is a holistic approach: not only do we believe that public, private, and knowledge sectors should bind forces, but we also believe **interlinkage between the sectors of water, energy, and food is crucial** to increase food security in a realistic and sustainable manner. This NEXUS approach was the main theme of the Netherlands pavilion at EXPO 2020, and has been at the base of our cooperation in the Gulf Region.

HortiRoad2theGulf underlines this NEXUS approach by guaranteeing high-quality and healthy fresh produce, that is locally produced in a manner that puts the least necessary pressure on our already scarce resources. The consortium bundles **all segments of the horticultural industry**, and together has the strength to realize **long-term solutions for regional food security agendas**. HortiRoad2theGulf covers starting materials, high-tech technologies, greenhouse building, knowledge implantation, consulting, automation, etc – all that is needed in our region. I would like to tell all our Gulf friends and partners that hortiRoad2theGulf is ready to stay for the long term.

Especially in the past years, since the launch and implementation of the Vision 2030 in Saudi Arabia, our countries have enhanced our cooperation and aligned our goals in the field of agriculture and food security. **Saudi Arabia has been the biggest importer of Dutch agri-food products in the Gulf Region** in most recent years. Also, both our governments feel the need to shift to more local production in line with national as well as global sustainability and climate goals.

The Netherlands is your go-to partner in realizing the goals I mentioned above. By supporting the broader Gulf Region with technology and equipment to enhance local production with the purpose of further strengthening sustainability aspects as well as the region’s food security.



Janet Alberda
*Ambassador of the Kingdom of the Netherlands
to the Kingdom of Saudi Arabia*

Joining forces for food safety and food security in the Gulf region

To achieve food security for a growing and increasingly urbanised world's population, we need to substantially increase our supply of safe, nutritious and tasty food and reduce food loss. Feeding the city requires a whole new ecosystem. We offer sustainable integrated and total solutions in an ecosystem approach. Important parts of the ecosystem are breeding and propagation, growing young plants and vegetables, packaging and logistics, trade, retail and consumer marketing. Through long-term partnerships and by sharing our extensive knowledge and innovative technologies, the Netherlands helps other countries improve their food safety and reach food security.



Photography: Artichino

Saudi Arabia, the United Arab Emirates and Qatar have the ambition to become more self-sufficient and produce more fresh and high-quality fruit and vegetables locally. Currently, much of the food required to feed the population is still imported from abroad, resulting in a considerable food loss because of long transportation chains. Moreover, it also makes Gulf countries vulnerable to fluctuations in the availability of food supplies on the world market, which is strongly impacted by geopolitics, logistics and climate change. COVID-19 only underlined what Gulf governments already knew: food security is a problem of the greatest urgency.

Towards a long-term partnership

We are ready to enter a long-term partnership to address regional food security. The United Arab Emirates, Saudi Arabia and Qatar are frontrunners in this region with their own food security and food safety strategies. The Dutch horticulture sector feeds millions of people around the world. We grow a wide variety of fruit and vegetables using state-of-the-art technology and sustainable techniques. By working together, we can significantly improve sustainable food production, reduce loss of food and develop new strategies and business models.

In the Netherlands, the government, companies, knowledge institutes and R&D centres develop the tools required to farm the future. HortiRoad2theGulf was established to help Saudi Arabia, the UAE and Qatar reach food self-sufficiency. Each cluster member has many years of experience working with Gulf partners, and is dedicated to establish a long-term partnership. In close cooperation with the Consulate General in Dubai and the Dutch Embassies in Riyadh, Abu Dhabi and Doha, we aim to support the Gulf region in growing a competitive local horticulture sector.

Promoting sustainable local production

With our combined knowledge, technology and experience we can accelerate achieving food security and food safety in your country. By adapting our proven technology to local circumstances, we can support you to produce ultra-fresh, safe and sustainable fruit and vegetables. All year round, against fair process, and as close to the point of consumption as possible. By bringing back sustainable food production to the world's largest urban areas, we can address issues such as climate change, biodiversity, food waste and public health.

Our cluster members stand ready to work with local farmers to upscale their business in a sustainable way. Together, we cover all aspects of sustainable horticulture and indoor farming, from breeding and growing to lighting, climate control and crop control. We want to hear from you what challenges you face, and we want to help you sharpen your business model. We can help you restore healthy soil conditions, share good agriculture practice, and assist you with logistics and consumer engagement. We can facilitate your transition from low and mid tech solutions to high tech solutions, and help you take the next step towards making your farm a more sustainable and profitable business.

SDGs

The Sustainable Development Goals (SDGs), also known as the Global Goals, were adopted by the United Nations in 2015 as a universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity.

The Dutch horticultural cluster contributes to the achievement of the following sustainable development goals:



SDG 03 | Good health and well-being:

The aim of the cluster is to increase the availability of fresh, healthy and locally produced food.



SDG 08 | Decent work and economic growth:

Encouraging "fair" and "decent" work and involvement of the local community should promote economic growth.



SDG 11 | Sustainable cities and communities:

The cluster stimulates local and sustainable production through Dutch technology and knowledge transfer, such as reducing CO2 emissions and water.



SDG 12 | Responsible consumption and production:

The current Dutch horticultural technology can serve as an example for the transition towards climate-neutral production systems and already has many circular features.



Coordinators

Dutch Greenhouse Delta is a foundation that aims to promote the Dutch horticultural sector worldwide. Dutch Greenhouse Delta is the one-stop shop for complex, large-scale projects concerning food and floriculture issues in growing megacities. By working together with Dutch state-of-the-art partners in horticulture, they bring an integrated Fork2Farm solution that offers a complete ecosystem consisting of science, enterprise, education, and the government.



InnovationQuarter is the regional economic development agency for the Province of Zuid-Holland, also known as the greater Rotterdam – The Hague area. Their mission is to strengthen the regional economic structure by stimulating the innovation potential of this unique delta region. In close collaboration with all major corporations and many SMEs, research institutes as well as government organisations, Innovation Quarter align the efforts required to design a brighter tomorrow.

Partners



Artechno Growsystems is an engineering company engaged in the development and realisation of modern hydroponic cultivation systems. Among the products Artechno manufacture are robotics, irrigation systems, sowing solutions, harvesting lines and turnkey solutions for vertical farming and greenhouse hydroponics.



Bayer - De Ruiter

De Ruiter, part of the Bayer Crop Science division, specialises in the breeding, production and sale of hybrid seeds for greenhouse production. Together with its growers, the company is dedicated to bringing high-quality, nutritious produce to ensure a balanced plate for its global community.



Bom Group

As a renowned pioneering greenhouse builder for over 50 years, Bom Group has introduced numerous groundbreaking technical innovations. It specialises in greenhouse construction, screen and climate systems, offering customised high-tech greenhouse horticulture across the globe. The projects vary from simple business expansions to complex, large-scale turnkey projects.



Carbyon develops the next generation of equipment to capture CO₂ directly out of ambient air. Our breakthrough technology is characterised by extreme energy efficiency and low manufacturing costs. This turns it into an economically viable and worldwide scalable solution.

Partners

certhon

Certhon develops turnkey, custom-made solutions for the most high-tech horticultural projects, anywhere in the world. Certhon has more than 125 years of experience in horticulture and is based in The Netherlands. With 150 highly trained experts, the company has all the knowledge, know-how and technologies under one roof to enable entrepreneurs all over the world to produce local, fresh food.

Delphy

Delphy stands for Worldwide Expertise for Food & Flowers. Delphy is therefore the company in knowledge and expertise for our partners in the vegetable sectors worldwide. Delphy is active in, among others, China, the Middle East, Turkey, Azerbaijan and South Korea. From Delphy China, Delphy Japan and Delphy Turkey, they work with local experts. In this way, the cultivation knowledge developed in the Netherlands is implemented and applied in and on the local conditions.

 **Grodan**[®]

Grodan is a supplier of innovative and sustainable stone wool growing media solutions for the professional horticultural sector, based on Precision Growing principles. These solutions are, amongst others, applied for the cultivation of vegetables and flowers, such as tomatoes, cucumbers, sweet peppers, egg plants, roses and gerberas. Grodan combines their offer with tailored cultivation advice and innovative and digital tools to support growers in the sustainable production of fresh produce for the consumer.

HAGELONIE
Together

Hagelunie is a leading Dutch insurance company that specialises in glass horticulture. It possesses the necessary cutting-edge expertise for developing agricultural products in Europe and across the world. By working closely with its partners, the company adopts a progressive approach to help develop smarter solutions that focus on growth and continuity. Hagelunie is the proud market leader in Dutch horticultural insurance and internationally operates at the top end of the market.

HATENBOERWATER

Hatenboer-Water
Good water guarantees economical and healthy growth. Hatendoer-Water is specialist in water treatment since 1906. Consequently, they know by experience the importance of excellent/good water quality. Hatendoer-Water can be your partner and solution provider to assure you a maximum crop yield/ROI by providing premier quality water constantly. With thought-out designs that are engineered in-house, they make water with sustainable solutions to the need of your own crop and your specific location.



Hoogendoorn Growth Management

Together with global partners, Hoogendoorn delivers sustainable automation solutions that seamlessly coordinate all processes and systems in your horticultural organisation. The modular software ensures that the available resources such as natural gas, fertilisers and water are used as efficiently as possible. With this, Hoogendoorn helps its clients to minimise (energy) costs and CO2 emissions and to maximise crop profitability.



Horti XS is a lean and customer-oriented firm with lots of experience in the field of development, construction and realisation of high-tech horticultural projects. Their expertise lies in the field of supply and engineering of greenhouse projects and we have developed into a leading provider for global horticulture. Horti XS pictures the greenhouse as the backbone of a turnkey project and decides on the strategy, the layout, and the logistics of the project at the same time.



Koppert Biological Systems produces sustainable cultivation solutions for food crops and ornamental plants. Together with growers and in partnership with nature, Koppert Biological systems work to make agriculture and horticulture healthier, safer, more productive and resilient. They achieve this by using natural enemies to combat pest infestations, bumblebees for natural pollination, and biostimulants that support and strengthen the crops both above and underground.



Logiqs

With more than 45 years of experience and know-how, gained in the field of internal transport and logistics systems for greenhouses, automated warehouses and vertical farms, the industry-leading solutions help the customers to achieve a higher profitability and a stronger competitive position within the worldwide marketplace.



Lumiforte produces smart coating solutions for greenhouse cultivation that help growers protect their crops and greenhouses against too much light and heat. The goal is to safeguard optimal production regardless of local climate conditions. Lumiforte has its own branches in Western- and Southern Europe and in Canada. Together they export to more than 60 countries throughout the world. Lumiforte is a full subsidiary of the Horticoop Cooperative.



Priva is a high-tech company that develops hardware, software and services in the field of climate control, energy saving and optimal reuse of water. Priva does that for horticulture, indoor and city farming, and utility buildings such as offices, retail, hotels and hospitals. With 450 colleagues, 15 local offices in 12 countries and over 400 international installation partners, we deliver our sustainable solutions and services in more than 100 countries.

Partners



Ridder develops innovative climate, irrigation and management systems for horticultural projects worldwide. Operating globally, the company specialises in adaptive systems that seamlessly match the knowledge level and needs of the local market. With a high-level of expertise and commitment, Ridder offers total solutions to horticulture businesses across the world – from mechanical systems to digital services.



Rofianda, a family business, is a developer and producer of lighting solutions. Rofianda approaches each project individually from our organic knowledge, flexibility and short lines of communication. Rofianda has developed a fully sunlight spectral LED lighting system that works from 1 LED chip. With this unique sunlight solution they make it possible to grow crops all year round with 1 recipe for light for all crops, namely sunlight.



Royal Brinkman

With a history of more than 135 years, Royal Brinkman is a global horticultural supplier. Together with its valuable network, they are dedicated to create a better and sustainable future for entrepreneurs in the protected horticulture worldwide. In more than 12 countries, Royal Brinkman is locally based from where, in addition to knowledge and advice, the specialists reliably supply a wide range of around 30,000 products to growers: local-for-local.



Signify is the world leader in lighting. Signify provides professional customers and consumers with quality products, systems and services. And our connected lighting offerings bring light and the data they collect to devices, places and people - redefining what light can do and how people use it. Our innovations contribute to a safer, smarter and more sustainable world.



Svensson

Established in 1887, Ludvig Svensson is a family-owned business with more than 130 years of experience in the textile industry. Svensson's climate screens, which are produced in Sweden and sold around the world under the name Svensson, improve the success of professional greenhouse growers, enhancing the overall greenhouse climate. No matter where in the world the operation is located, Svensson knows how to make the most of your natural climate.



Viscon Group specialises in factory automation for agriculture and food. Their software, machines, and integrated solutions make food and agriculture processes sustainably profitable, scalable and easy.

Let's partner up!

By working together, we can accelerate the transition to more sustainable horticulture and increased food safety and food security in Saudi Arabia, the UAE and Qatar. Together we can unlock the Gulf's full horticulture potential. So, let's exchange information, knowledge, and technology and inspire each other and the rest of the world, how together we can farm the future!



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