

## **Smart farming**

One of sectors frequently mentioned in Korea's policy on the 4<sup>th</sup> industrial revolution is Smart farming. Smart farming for Korea is farming in a smart way using ICT, hi-tech system and machinery. Korean agriculture is still relatively under-developed compared to other industries and has suffered from lack of labor as farmers are getting old and young generation avoids farming. Therefore Korea would like to change old-fashioned agriculture to more efficient smart agriculture, and develop agriculture as another engine for Korean economy.

However Korea doesn't have enough knowledge and experience for smart farming. The Korean government and research institutes are endeavoring to develop their own technology but the level is still far behind that of developed countries in this field.

The Netherlands is a small and densely populated country, but is the 2<sup>nd</sup> largest exporter of agricultural products in the world. This was possible by developing efficient, climate-controlled, sustainable and precision agriculture. Therefore Korea sees the Netherlands as the model country for the development of Korean agriculture.

Out of different sub-sectors of smart farming, Korea focuses on hi-tech greenhouse horticulture and intensive livestock farming.

### **1) Hi-tech greenhouse horticulture**

Korea has a large area of reclaimed land developed for rice paddy field. As rice consumption is going down, Korea would like to change the land to hi-tech greenhouse districts for hi-value vegetables. Over the last years, large greenhouse projects used to be withdrawn due to political opposition of existing farmers who don't like competitive new players. In spite of that, companies from other sectors/industries are increasingly interested in hi-tech greenhouse horticulture as a new business. The Korean government is promoting large-scale greenhouse districts by giving subsidies for greenhouse building.

Dutch companies can play a role in establishing modern greenhouses, climate control system, logistics system, automated nutrition/water control system and biological control system. For large projects, Dutch experts can also support for land-planning/infrastructure for horticultural districts and training/research for farmers.

KIEMSTA (<http://www.kiemsta.co.kr>) and TAMAS (<http://www.tamas.or.kr>) are the two largest horticultural exhibitions in Korea. The next exhibition is KIEMSTA held in November 2018.

### **2) Intensive livestock farming**

Korean livestock industry has innovated quickly over the last 5 years after massive outbreaks of animal diseases such as Foot and mouth disease and Avian influenza. Small farms with old-fashioned facilities were more vulnerable to infection by animal diseases and had to cull their animals when infected. Many farms left the sector. The government started supporting farms with subsidy programs to modernize livestock housings for biosecurity, productivity, food safety and animal welfare.

Dutch companies can play a role in establishing modern livestock housings, climate control system, feeding system, logistics system, meat slaughtering system, milking robot, animal health care system and track/tracing system. Dutch experts can also train or conduct research for livestock farmers.

KISTOCK ([Http://www.kistock.co.kr](http://www.kistock.co.kr)) is the largest livestock exhibition in Korea. The next exhibition is in September 2019.