



Newsletter of DiTECT

WP1 - Project management

The kick-off meeting was held in China. The concept, objectives, goals and implement schemes of all the Chinese organization participants were introduced as well as their research experience. The participation of the Chinese organization partners in the kick-off meeting of the European side was organized, while the following workplan was agreed: the collection of requirements of industry practitioners, standards and regulations in WP2; the collection of data format of Real-time hazards monitoring sensor and equipment in WP3; the establishment of data standards in WP4, and the meeting organization. the meeting of experimental plans in WP5, determined and summarised the experimental plans of all Chinese participant organisations in WP7.



Figure 1. China kick-off meeting

WP2 - Tracking Hazards & Contaminants across Food Chain

With regard to the poultry industry, the current situation of poultry industry was analyzed, and the surveys of chicken production enterprise and consumer were conducted. Then the investigation report entitled “Investigation of the breeding and processing status of broiler” was completed. Meanwhile, innovative research on microbial detection technology and methods were carried out, and the patent “A detection method and an RPA primer for distinguishing *Proteus mirabilis* and *Salmonella*” was authorized.

Concerning the shellfish industry, a monthly voyage survey of physicochemical environmental factors and pollutant levels in a breeding area in Shandong Province was carried out. The physicochemical parameters investigated included temperature, salinity, dissolved oxygen, pH, no₃-n, nitrite, ammonia, nitrogen, phosphate, etc. The level of microbial counts, shellfish toxins, organic pollutants, heavy metals, etc. of *Chlamydomonas farreri* in different breeding cycles were also monitored.



Figure 2. Monthly variation of physicochemical environmental parameters of surface seawater in an aquaculture area



For the beef industry, on May, 2021, researchers from Shandong Agricultural University (SDAU) went to the cooperative enterprise (KERCHIN) to collect carcasses, meat, hide and fecal samples for the detection of biological hazards such as *E.coli* O157:H7, *Salmonella* during processing. More than 120 samples were collected. After the preliminary screening, suspicious colony will be translated to the laboratory in SDAU for the further confirmation and investigation such as the detection of virulence genes and molecular typing.



Figure 3. Sampling in beef industry

For the dairy cow industry, the air quality of cowshed (temperature, humidity, wind speed, wind direction, carbon dioxide, ammonia, PM1/2.5/10/100) was monitored, and the site construction and test of the monitoring system were completed.

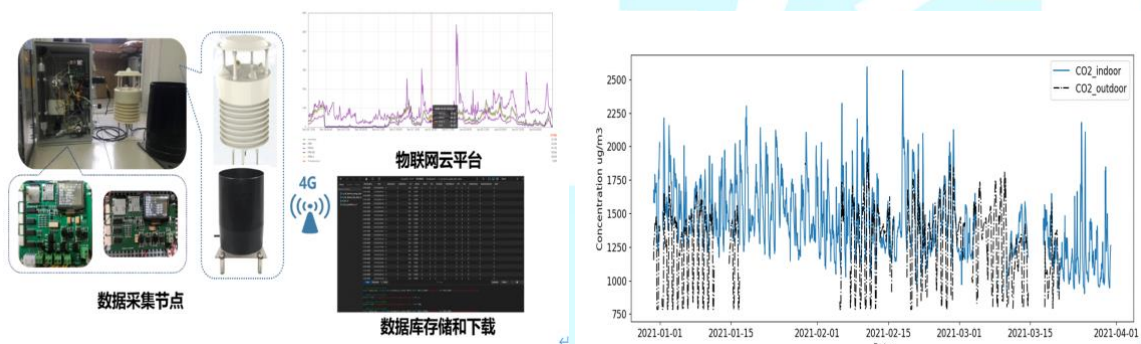


Figure 4. The online information collection system and the information collected (CO₂ in cow house)