TEAP project in the FP7 Marie Curie Actions
(PIRSES-GA-2013-612659)

1. Introduction

Full Title: A Traceability and Early warning system for supply chain of Agricultural Product: Complementarities between EU and China (2013.11-2017.10). Coordinator: Prof. Fernando Bienvenido, UAL and Prof. Xinting Yang, NERCITA.

2.Task

To obtain a better mutual understanding of the state and the possible roadways of agricultural product quality and safety in both the European Union and China

Focuses in four areas:

•1. Good Agricultural Practices and Quality Standards in application;
•2. Alert programs in the production and disease warning models;
•3. HACCP software in the logistics;
•4. Traceability systems for the supply chain of agricultural products"seed-to-plate".

Intellectrual right exchange

·standards·models ·patents·papers ·data sets ·system ·equipment

Staff exchange

•Support longer time visit than normal conferences
•Provide average cost for international living and transportation

Seed new cooperation project

•Ceation of enduring networks of expertise and international research partnerships.
•Seed new research projects

3. Structure

Partner	Organization Name	Short Name	Country	Leader
1	University of Almeria (Co-leader)	UAL	Spain	Prof. Fernando Bienvenido
2	National Engineering Research Center for Information Technology in Agriculture (Co-leader)	NERCITA	China	Prof. Chunjiang Zhao Prof. Xinting Yang Dr. Ming Li Dr. Jianping Qian
3	Agricultural University of Athens	AUA	Greece	Prof. Nick Sigrimis
4	University of Bonn	UB	Germany	Prof. Heinz-W Dehne
5	University of Pisa	UNIPI	Italy	Prof. Alberto Pardossi
6	Polytechnic University of Madrid	UPM	Spain	Prof. Luis Ruiz Garcia
7	China Agricultural University	CAU	China	Prof. Maohua Wang Prof. Minzan Li Prof. Zhanhong Ma Prof. Haiguang Wang
8	Shandong Agricultural University	SDAU	China	Prof. Yan'an Wang Prof. Yurong Zhao
9	Tianjin Climate Center	TJCC	China	Prof. Zhenfa Li
10	Tianjin Pollution-Free Agri-Products (Crop Planting) Management Center	TPFAPMC	China	Mr. Xuezhong Wang Mr. Youfu Li
11	Guangzhou Agricultural Products Quality and Safety Supervisory Institute	GAPQSSI	China	Prof. Jin Lian Mr. Hua Zhang

4. Photos

5. Approved cooperation research project

Period	Type	Name
2017.1-2018.12	China-Germany Agricultural Science and Technology Cooperation Project	High-throughput phenotypic information acquisition and analysis for drought tolerant crops
2017.1-2020.12	General Project of National Natural Science Fund of China	Intelligent flexibility traceability model construction and system validation in continuous and closed-up processing: Taking wheat flour production as an example

6.Introduction to the special section

We have published over 10 journal articles with co-authors between EU and China. The special section of IJABE for TEAP project includes three good papers, with the active editing service of Dr. Ming Li from NERCITA:

Cynthia Giagnocavo's paper proposed a new intelligent traceability system using net-chain analysis with the implementation of Big Data for traceability in the Almeria fruits and vegetable, plus potential use in China. This paper could be a general framework for upgrading the TEAP project and possible extension of IoF 2020.

Xiaolong Li's paper describes a novel and automatic counting system for urediospores of wheat stripe rust pathogen based on image processing;

José Antonio Alvarez-Bermejo and Ming Li proposed a mobile system to analyze the incoming products at the head the processing line using CCD cameras to detect low quality and/or dirty products, both of them showed the progress of phenotyping in production and post-harvest stage in our consortium.

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National Engineering Laboratory for Agri-product Quality Traceability(NELTA)

农产品质量安全追溯技术及应用
国家工程实验室
National Engineering Laboratory for Agri-product Quality Traceability
中华人民共和国国家发展和改革委员会
National Development and Reform Commission, P.R.China

1. Positioning

Realizing the systematization, engineering and industrialization of agricultural product traceability technology
In the overall level of technology, to become Agricultural Products Traceability Technology and application engineering laboratory with the position of national leading and international first-class .

Research fields

- Identification and supply chain information rapid collection
- Quality and safety inspection and real-time monitoring
- Quality and safety smart decision and early warning
- Quality and safety big data mining and traceability
- Integration of traceable agri-product circulation

2. Affiliation

Coordinator:
Beijing Research Center for Information Technology in Agriculture (NERCITA), Beijing Agriculture and Forestry Sciences (BAAFS)
Partners:
Beijing Technology and Business University (BTBU),
Beijing Research Center for Agricultural Standards and Testing (BRCAST)
China International Electronic Commerce Center (CIECC)
Datang Software Technology Co. Ltd (CATTSoft)

3. Technical R&D Management Committee

Prof. Li Chenggui, Board Chairman of NELTA, President of BAAFS

Prof. Sun Baoguo, Director of Technical Committee of NELTA, President of BTBU

Prof. Zhao Chunjiang, Director of NELTA, Director of NERCITA

Prof. Yang Xinting, Executive Deputy Director of NELTA, Vice-Director of NERCITA

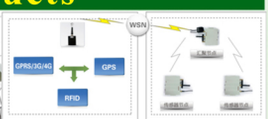
Prof. Zuo Min, Deputy Director of NELTA, Dean of Studies Department of BTBU

Prof. Wang Jihua, Deputy Director of NELTA, Director of BRCAST

Prof. Chen Bin, Deputy Director of NELTA, Vice General Manager of CATTSoft

Prof . Zheng Xiaojun, Deputy Director of NELTA, Vice General Manager of Domestic Trade Information Center, CIECC

4. R&D products



5. Representative Achievements

- One national award, Second prize of National Science and Technology Progress Award: Rapid detection of plant - environment information and IoT real - time monitoring technology and equipment.
- Five provincial and ministerial level awards;
- Ten standards, including a national standard, 3 industry standards;
- 96 patents, including 18 invention patents;
- 151 software copyrights.
- 175 papers, including 83 SCI/EISCI/EI indexed journal papers, some representative papers;
- An adaptive image enhancement method for a recirculating aquaculture system. Scientific Reports, 2017. doi:10.1038/s41598-017-06538-9
- Mathematical modelling of cooling efficiency of ventilated packaging: Integral performance evaluation. International Journal of Heat and Mass Transfer, 2017, 111: 386-397
- A risk management system for meteorological disasters of solar greenhouse vegetables. Precision Agriculture, 2017. doi:10.1007/s11119-017-9514-9.
- Comprehensive and quantifiable granularity: A novel model to measure agro-food traceability. Food Control, 2017, 74: 98-106
- Optimization of QR code readability in movement state using response surface methodology for implementing continuous chain traceability. Computers and Electronics in Agriculture, 2017, 139: 56-64

Monograph :
"Quality Safety Management and Traceability of Agri- Products - Theory, Technology and Practice"
Written by Xinting Yang , Jianping Qian, Chuanheng Sun.
Published by Science Press Ltd. in 2016.
It includes 15 chapters about 48 million words and embodies the Lab's 10 years of agri-product quality traceability technology research and the application of the results.

Contact: Dr. Xinting Yang
Telephone: 010- 51503476
China National Engineering Research Center for Information Technology in Agriculture (NERCITA).
E-mail: yangxt@nercita.org.cn
www.nelta.cn

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