

Wageningen alumni Chapter China organized an online alumni dialogue on China's greenhouse horticulture development on Aug.13<sup>th</sup> 2020. More than 50 alumni registered and participated the event, speeches and questions lasted the event for 3 hours despite planned for 2 hours originally.

In recent years, China has built more and more high-tech greenhouses for horticulture production, be it for vegetable, fruits or flowers, an increasing demand for automatic solutions is notable along with such development. However, when diving deeper into the industry, growers in China often meet challenges all-sided. In response to above trend and challenges, the Wageningen alumni Chapter China hosted an online industry dialogue on the theme of "China's greenhouse horticulture—development and challenges", to position where China's horticulture is and identify where the challenges come from, so to in light the research and career direction of Wageningen alumni on this issue.

The meeting was opened by Denise Spiekerman, contact person for China activities at the Wageningen Alumni Office, in which she said, "At the moment of the Corona-virus outbreak, many visits between Chinese and Dutch companies have been cancelled and many projects have been postponed. At this special time, we hope to provide a platform for Sino-Dutch industrial talk to promote the development of China's horticultural industry. "

Dr. Yang Qichang, Director of the Metropolitan Agricultural Institute of the Chinese Academy of Agricultural Sciences, Dr. Huang Ruiqing, president of Rui xue Global Ltd, Dr. Xu Dan, General Manager of HortiPolaris Agricultural Ltd, and Dr. Qiu Yutong, China business manager of Plant Science Group were the alumni speakers invited to share their experiences and views on China's horticultural industry.

By presenting the history and current overview of facility horticulture of China, Prof. Yang portrayed the China horticulture as low in average yield, low mechanization and automation, small in average production scale per company/farm, lacking of well-educated green-fingers but high in potential with strong support from the government. Looking into the future, prof. Yang said that consumption demand for fresher, cleaner, safer and even functional vegetables/fruits of urban dwellers would pull the fast development of greenhouse horticulture even vertical farming. So it's urgent for knowledge institutes of China to catch up in research and education on fundamental sciences like plant physiology and photobiology, while Chinese enterprises should pay more attention to improve the eco-system which is capable to provide professional services along the value chain of greenhouse horticulture and the like.

Dr. Huang Ruiqing recalled the experience when he just graduated from Wageningen and decided to bring the Dutch greenhouse production to China, while most of his peer by that time didn't have any faith in introducing the expensive

greenhouse into China. As one of China's first all-round horticultural suppliers, Rui Xue Global has built a bridge between Dutch technology and the Chinese horticultural industry to provide tailor-made greenhouse solutions for Chinese companies. Dr. Huang said that China's greenhouse industry has to be improved from 4 aspects: specialization (in-depth understanding of a crop/product), scale (large-scale greenhouses can hedge investment per unit), standardization (products need to meet a high level of uniform standards), marketization (value of high-quality greenhouse products need to be optimized by more professional marketing channels). Meanwhile, Dr. Huang once again stressed the important role of talents in the development of industry, and said that talents with practical experience will be the backbone of the facility horticulture industry in the future.

The HortiPolaris led by Dr. Xu Dan, an alumnus belongs to the generation after 80s, broke the domestic record for the highest yield of cherry tomatoes (31kg/m<sup>2</sup>) and lettuce(60-80kg/m<sup>2</sup> depends on variety), and achieved the localization of the Dutch technologies, scaled planting, as well as the continuous stable supply of European standard products in food safety. Not only HortiPolaris has improved the efficiency of materials, resources and manpower greatly inside the greenhouse, but also contributes a lot to rural employment and poverty alleviation of the district where the plant is located. Nevertheless they are one of the best planting and operation teams in China, Xu Dan honestly said there are too many challenges in the value chain that Dan's company cannot solve by itself, such as lacking of good varieties, professional services, trained labors, well-educated talents, and data supports. But Xu Dan is quite positive for future, as his team is very young (<30 years in average), they have all reasons to believe a better off industry they are fighting for.

The last speaker was Dr. Qiu Yutong, a bio-control expert and business manager from Plant Science Group of Wageningen. Dr. Qiu has chaired several cooperation projects between Wageningen and Chinese companies on biological prevention and control. During the meeting, Dr. Qiu compared the similarities and differences between Sino-Dutch agriculture from cooperation mechanism and knowledge transfer, she also summarized the common defects in bio-control of China: poor quality of bio-control products caused by shipment problems; lack of natural enemy products; delayed use of natural enemies; high cost caused by frequent releases and high lethality of pesticides on nature enemies. Dr. Qu also shared the example of collaboration between Wageningen and LAD Shanghai in PhD training and research, hoping more Chinese companies have the vision to invest on education and innovation.

In the following question-and-answer session, participants and speakers discussed in-depth the practical problems encountered in greenhouse production, the training direction to culture talents, the import/export and quarantine of biological control products, and the establishment of greenhouse horticulture cooperatives. At the end of the meeting, Dr. Huang Ruiqing, on behalf of the Supervisory Board of

Wageningen Alumni Chapter China, concluded that: high-end greenhouse products like vegetables, fruits, flowers are more and more demanded, especially by the consumers from the first and second tier of cities in China; the greenhouse production technology between the Netherlands and China has about 20-30 years' gap, to catch up and to fulfill the market demands, China horticulture will have a golden period for development. We hope that through such alumni talks, knowledge sectors and companies in China could understand precisely of the challenges and bottleneck, thus to be more clear about where to put efforts on. Wageningen Alumni China has plan to hold dialogue session on Wageningen domains to facilitate such discussion and exchange in series.

For more information, please contact Wageningen alumni chapter China:

Han Beizhong (Chairman, member of the supervisory board)

Yan Jie (Secretary, member of the supervisory board)

E-mail: [jie.yan@wur.nl](mailto:jie.yan@wur.nl) Tel: 010-62118002.

Li Tao (Supporter of the event, member of the supervisory board)

E-mail: [litao06@caas.cn](mailto:litao06@caas.cn)

