



# SUMMARY REPORT

on joint international accreditation of the Bachelor  
educational programme

«Horticulture»

delivered by China Agricultural University  
(People's Republic of China)

2019

While preparing this Summary Report we used information from the Self-Evaluation Report and the Report on the External Review of the Bachelor educational programme «Horticulture» delivered by China Agricultural University (People's Republic of China).

The presentation document for the use by the National Accreditation Board.

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## GENERAL INFORMATION ON EDUCATIONAL INSTITUTION

Full name of the educational institution	<i>China Agricultural University</i>
Founders	<i>Ministry of Education of the People's Republic of China</i>
Year of foundation	<i>1905 – Agricultural University under the Imperial University of Peking 1950 – Beijing Agricultural University 1995 – China Agricultural University</i>
Location	<i>No.2, Yuanmingyuan, Haidian District, Beijing, 100193</i>
Vice-President	<i>Sun Qixin, Professor</i>
Number of students	<i>19195 of whom: 11415 are Bachelor and Master students 4486 are postgraduate students 3294 are doctoral students</i>

## CHINA AGRICULTURAL UNIVERSITY

China Agricultural University was founded in 1905 as Agricultural University by Imperial University of Peking. The present university was opened in 1995 by merging Beijing Agricultural University and Beijing Agricultural Engineering University. China Agricultural University is directly subordinated to the Ministry of Education of the People's Republic of China. It is a higher education institution that specializes in agriculture, biology, engineering, veterinary medicine, economy, management, social science and the Humanities. It is one of the universities participating in 2 national programmes for development of higher education in China (211 and 985 Projects).

The University delivers 19 doctoral programmes and 57 Bachelor and Master programmes. The total number of students is 19195, including 11415 Bachelor and Master students, 4486 postgraduate students and 3294 doctoral students. The educational programmes are delivered by the teaching staff that comprises 1800 people, including 5 academicians of the Chinese Academy of Sciences and 7 academicians of the Chinese Academy of Engineering.

Material and technical resources of China Agricultural University include a big research library divided into 2 parts: western and eastern libraries with the stock of more than 2 million units of training, research, methodological, fine and foreign literature. The university has 3 state laboratories, 1 national engineering and technical laboratory, 2 national research centres and 68 provincial and ministerial laboratories (bases and centres). The following facilities are created: the academic and technological demonstration park, 8 work stations in Beijing, Hebei, Shandong, Shanxi, Ningxia, Sichuan and Fujian, and the biggest student facilities for practical training that include more than 20 research institutes and enterprises.

China Agricultural University pays great attention to the development of international exchange programmes and cooperation with foreign universities. By now the educational institution has agreements with 60 leading universities from 20 countries, including the USA, Germany, Canada, Great Britain, the Netherlands, Denmark, Japan, Korea, Thailand, Australia, New Zealand, Russia, Israel, etc. Every year hundreds of leading foreign researchers and experts are invited to deliver lectures and share experience. The international centres established on the basis of the university together with other countries promote research work (German-Chinese Centre for Development of Agriculture, Sino-Japanese Training Centre for Maintenance of Agricultural Machinery, Sino-Israeli International Centre for Research in Agriculture, Sino-Japanese Research Centre for Management of Live-Stock Breeding).

China Agricultural University is listed in the Top-100 of the QS University Rankings: BRICS 2019 and Top-150 of the QS University Rankings: Asia 2019; it also ranks 35<sup>th</sup> in the Top Chinese University Ranking by QS, 2019.

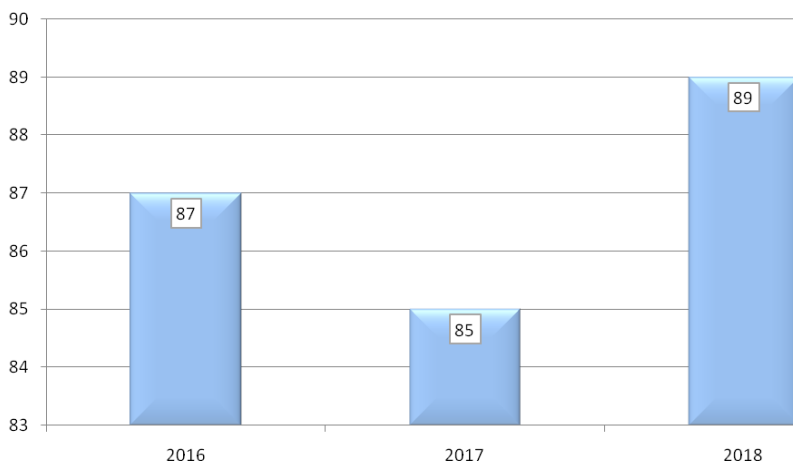
The College of Horticulture was founded in 1923 and comprises three Departments: Department of Fruit Trees, Department of Vegetables and Department of Ornamental Horticulture and Landscape Architecture. The Fruit Trees programme is a key national programme, and the programmes of Horticulture and Vegetables are the key disciplines of Beijing.

The main mission of the College is to train highly qualified experts in horticulture having practical skills and innovation capacity. The great, motivated and qualified teaching staff works at the College. The main goal of the teachers is to provide students with qualitative education and competitive abilities on the modern labour market. The teaching staff comprises 55 people, including 26 Professors and 24 Associate Professors. More than 80% of teachers received training and worked abroad. There are outstanding professors, winners of awards for achievements in higher education, and winners of National competitions on support of outstanding young scientists of the Ministry of Education and the Ministry of Agriculture of the People's Republic of China.

## INFORMATION ON THE STUDY PROGRAMMES UNDERGOING ACCREDITATION

Educational programmes	<i>«Horticulture»</i>
Level of training / Standard period of training	<i>Bachelor Programme / 4 years</i>
Structural subdivision	<i>College of Horticulture</i>
Degree-granting departments	<i>Department of Fruit Trees Department of Vegetables Department of Ornamental Horticulture and Landscape Architecture</i>
Dates of Review	<i>December 04-07, 2018</i>
Person responsible for accreditation	<i>Zhenhai Han, Professor</i>

### REFERENCE DATA ON STUDENT ENROLLEMENT FOR THE EDUCATIONAL PROGRAMME «HORTICULTURE»



## **ACHIEVEMENTS OF THE STUDY PROGRAMMES**

### **Quality of the delivered educational programmes**

The quality of the educational programme is ensured by the highly qualified teachers and their systematic professional development; active research work of teachers and students; international relations and close cooperation with employers; development and continuous improvement of teaching materials and the use of innovative educational technologies in the educational process.

### **Providing up-to-date content of education**

The up-to-date content of education is ensured by regular renewal and correction of the educational programme, curricula and programmes of disciplines. The content of the educational programme corresponds to the present level of development of science, technology, culture, economy and social sphere.

### **Teaching staff**

The teaching staff delivering the programme «Horticulture» comprises 55 people, including 26 Professors (47,3%), 24 Associate Professors (43,6%) and 5 teachers (9,1%) that provides high quality of education. The percentage of Doctors of Sciences is 92,7%. About 85% of teachers received training abroad, 25% of them (14 people) got the degree of Doctor of Sciences in foreign universities. The College pays great attention to the integration of education, science and production. Practitioners, including the foreign ones, are invited to deliver lectures on professional practice and formation of research competences.

### **Employability of graduates**

Every year the percentage of employed graduates is 95%. The majority of graduates continue their education in national and foreign universities. For example, in 2017 92 of 152 graduates (60,52%) of the programme «Horticulture» continued their education, that is 8,77% higher than in the previous year. Every year representatives of more than 100 largest enterprises of the country deliver lectures on employability for graduates.

### **Educational resources**

Classrooms are equipped in accordance with the modern requirements and provide carrying out of all kinds of disciplinary and interdisciplinary training, laboratory, practical and research work of students. The College has its own system and platform for distance learning that unites training of students, graduates, and adults, professional non-academic training.

The university and the College of Horticulture develop different forms of cooperation with national enterprises and institutions to increase



bases for practical training. Currently there are 20 off-site bases for practical training of students.

### Academic mobility of students

China Agricultural University actively develops international exchange programmes and various forms of cooperation with foreign universities in terms of internationalization of higher education. Every year students from other higher education institutions study at the university. The students of the College attend short-term courses at the universities of the USA, Japan, etc.

### International projects

The students participate in the double degree programmes that are delivered together with Cornell University, Purdue University, Auburn University, University of Maryland, University of Connecticut and University of Waterloo (Canada).

## EXTERNAL REVIEW PANEL



**Feng Hu** (China)

Review Chair

*PhD, Professor, Vice-President, Nanjing Agricultural University*

A nominee of the Higher Education Evaluation Centre of the Ministry of Education, HEEC



**Fengwang Ma** (China)

Panel member

*PhD, Professor, Dean of the College of Horticulture, Northwest Agriculture and Forestry University*

A nominee of the Higher Education Evaluation Centre of the Ministry of Education, HEEC



**Xuming Huang** (China)

Panel member

*PhD, Professor, South China Agricultural University*

A nominee of the Higher Education Evaluation Centre of the Ministry of Education, HEEC



**Ivan Vasenev** (Russia)

Panel member

*Doctor of Biological Sciences, Professor, Head of the Department of Ecology, Russian State Agrarian University - Moscow Timiryazev Agricultural Academy*

A nominee of the Guild of Experts in Higher Education



**Konstantin Gorobets** (Russia)

Panel member

*Candidate of Biological Sciences, Associate Professor, Department for Biodiversity and Marine Bioresources, Far Eastern Federal University*

A nominee of the Guild of Experts in Higher Education



**Weiping Song** (China)

Panel member, representative of professional community

*Vice-President, Beijing Dabeí Agricultural Technology Group*

A nominee of the Higher Education Evaluation Centre of the Ministry of Education, HEEC



**Lin Liu** (China)

Panel member, representative of professional community

*General Manager, Ningbo Fengdeng Seed Industry Technology Co., Ltd.*

A nominee of the Higher Education Evaluation Centre of the Ministry of Education, HEEC

## INFORMATION ON THE LEADING TEACHERS OF THE EDUCATIONAL PROGRAMMES

### **Zhenhai Han**

*PhD, Professor, Dean of the College of Horticulture, China Agricultural University, Council Member of the International Society for Horticultural Science (ISHS), Associate Chair of the China Society for Horticultural Science (CSHS), editor-in-chief of the journal «Horticultural Plants»*

### **Yuandi Zhu**

*PhD, Associate Professor, Deputy head of the Department of Pomology, responsible for training of undergraduates*

### **Tianzhong Li**

*PhD, Professor, post scientist of the national modern agriculture industry technical system; winner of the 1 special prize of the Huanai Science and Technology Award of the Chinese Horticultural Society*

### **Huazhong Ren**

*PhD, Professor, academic leader of the Department of Vegetables, College of Horticulture, China Agricultural University, Director of the Cucumber Professional Committee of the China Horticultural Society, Director of the Facilities, Horticulture Committee of the China Agricultural Engineering Society; expert of the Fruit and Vegetable Industrial and Technological System*

### **Xiaolei Sui**

*PhD, Professor, Deputy Head of the Department of Vegetables, in-service scientist from the Beijing Innovation Consortium of the Agriculture Research System, member of the Chinese Society for Horticultural Science, review editor of the journal «Frontiers in Plant Science»*

### **Bo Hong**

*PhD, Professor, Head of the Department of Ornamental Horticulture and Landscape Architecture, College of Horticulture, China Agricultural University, member of the Chinese Society for Horticultural Sciences, Vice-President of the Pressed-Dried Flower Branch of the Chinese Society for Horticultural Sciences, standing member of the Chrysanthemum Branch of the Chinese Society for Landscape Architecture*

### **Changqing Zhang**

*Professor, Deputy Head of the Department of Ornamental Horticulture and Landscape Architecture*

## **Nan Ma**

*PhD, Professor, member of the Chinese Horticultural Society, member of the Young Scholars Association, member of the editorial board of the journal «Applied Ecology»*

## **Chao Ma**

*PhD, Associate Professor of the Department of Ornamental Horticulture, winner of the competition «National Science Fund for Excellent Young Scholars»*

## **Lihong Gao**

*PhD, Professor, Deputy Head of the Department of Vegetables, national scientist of the China Agricultural Research System, Secretary-General of the Professional Committee of Protected Horticulture of the China Agricultural Engineering Institute, council member of the Beijing Society of Agricultural Engineering, council member of the Beijing Vegetable Society*

## **Huolin Shen**

*PhD, Professor, Head of the Department of Vegetables, Executive Director of the Chinese Horticulture Society, Vice-President of the Beijing Vegetable Society, Director of the Chinese Agricultural Biotechnology Society*

## **Tianhong Li**

*PhD, Professor, Doctoral Supervisor, Deputy Dean of the College of Horticulture, China Agricultural University, Executive Director of the China Horticultural Society, Vice-President of the Beijing Pomological Society*

## **Junping Gao**

*PhD, Professor, Deputy Dean of the College of Horticulture, China Agricultural University, Vice-President of the Chinese Society for Horticultural Sciences*

## **Qian Wang**

*PhD, Professor, responsible for field practice course, post expert of the Beijing Innovation Consortium of the Agricultural Research System*

## **Yangdong Guo**

*PhD, Professor, member of the Seed Science and Technology Committee of the Chinese Crop Society, member of the Seed Science and Technology Committee of the Chinese Botanical Society.*

# COMPLIANCE OF THE EXTERNAL REVIEW OUTCOMES WITH THE STANDARDS

## STANDARD 1. Educational objectives

Compliance with the standard: **full compliance**

### Good practice:

The educational programme has clearly defined and reachable goals that correspond to the mission of the university, educational strategy of the national and regional innovative development, strategy of the People's Republic of China. The requirements of the modern labour market and the public are taken into account.

The educational programme «Horticulture» is practice-oriented.

Representatives of the institutions of the Chinese Academy of Agricultural Sciences, Beijing Academy of Agriculture and Forestry Sciences, and representatives of the leading universities of China (Nanjing Agricultural University, Northwest University, etc.) are involved in the review of the goals of the educational programme.

### Areas for improvement:

It is recommended that meetings with employers and graduates should be regularly held to get feedback and to improve the goals of the educational programme.

It is advisable that international component of the educational programme should be enhanced by increasing the number of the programmes of academic mobility for students.

## STANDARD 2. Graduate outcomes

Compliance with the standard: **full compliance**

### Good practice:

The expected learning outcomes fully correspond to the goals of the educational programme.

The graduates are in high demand. The percentage of the employed graduates is 95%.

Employers are satisfied with the quality of graduates' training and their knowledge not only in the sphere of achievements and tendencies in agriculture but in the sphere of information and innovation technologies.

### **Areas for improvement:**

It is advisable that work experience internships, specialized training and exchange programmes with foreign universities should be organized together with other leading agricultural universities of China.

It is recommended that teachers should pay more attention to interactive forms of training (particularly during the seminars, round tables and discussions) in terms of student-oriented training and improvement of communication skills of students.

### **STANDARD 3. Curriculum**

Compliance with the standard: **partial compliance**

#### **Good practice:**

The educational programme is flexible (about 40% of elective courses in the curriculum).

The effective mechanism of cooperation «education-science-production» provides high quality of practical training of students.

A complex system of regular evaluation of curricula with their further review and improvement is in place.

### **Areas for improvement:**

It is recommended that representatives of subject specific departments of the Ministry of Agriculture of China and regional professional associations should be involved in the educational process as the members of examination boards.

It is advisable that electronic online courses and courses on critical thinking should be developed and introduced in the educational process. It is necessary to enhance the content of the educational programme with the theoretical part and analysis of best and negative practices in horticulture at national and international levels.

### **STANDARD 4. Faculty**

Compliance with the standard: **full compliance**

#### **Good practice:**

The teaching staff is motivated, balanced and highly qualified (92,7% of teachers are Doctors of Sciences).

The majority of teachers (85%) worked in foreign universities (25% of them got doctoral degree abroad).

The delivery of the educational programme is consistently financed due to participation of teachers in grant activities and national, provincial and ministerial research projects. The annual budget of the College is more than 4,5 million US dollars.

A complex system of monitoring and evaluation of teachers is in place (self-evaluation, evaluation by students, colleagues and supervisors of the programme).

### **Areas for improvement:**

It is recommended that teachers should actively participate in joint international projects, international conferences in China and abroad, as well as in preparation of joint publications in international journals with high impact factor in Scopus and Web of Science.

## **STANDARD 5. Teaching and Learning Resources**

Compliance with the standard: **full compliance**

### **Good practice:**

The educational programme is fully provided with new material and technical resources, including modern laboratories and the largest research library with the stock of more than 2 million units of educational, research, fine and foreign literature. Satisfaction of students with the material and technical resources is 98,88%.

The total laboratory area is 6800m<sup>2</sup>, and the total value of instruments and equipment is more than 6 million US dollars. The laboratories are 24-hours open and allow students to do research, innovation and graduation works.

The university has 3 training bases provided with modern equipment and new laboratories. There are also places for experiments. Besides, there are 20 off-campus internship bases, and each of them admits 300 students.

### **Areas for improvement:**

It is recommended that living conditions of students in dormitories should be improved. It is advisable that the sports base of the university should be reconstructed.

## **STANDARD 6. Quality assurance**

Compliance with the standard: **full compliance**

### **Good practice:**

An effective and structured system of quality assurance of teaching is in place.

Feedback from teachers, students, graduates and employers is received with the help of questionnaires.

Students are highly satisfied with the quality of teaching (96,91%).

### **Areas for improvement:**

It is recommended that guidelines on writing, execution and defense of the theses should be developed for students and contain the examples of the best practices.

### **STANDARD 7. Student development**

Compliance with the standard: **full compliance**

#### **Good practice:**

Employers are satisfied with the quality of delivery of the educational programme and graduates' training (88%).

Career guidance work is carried out in schools in different provinces of China.

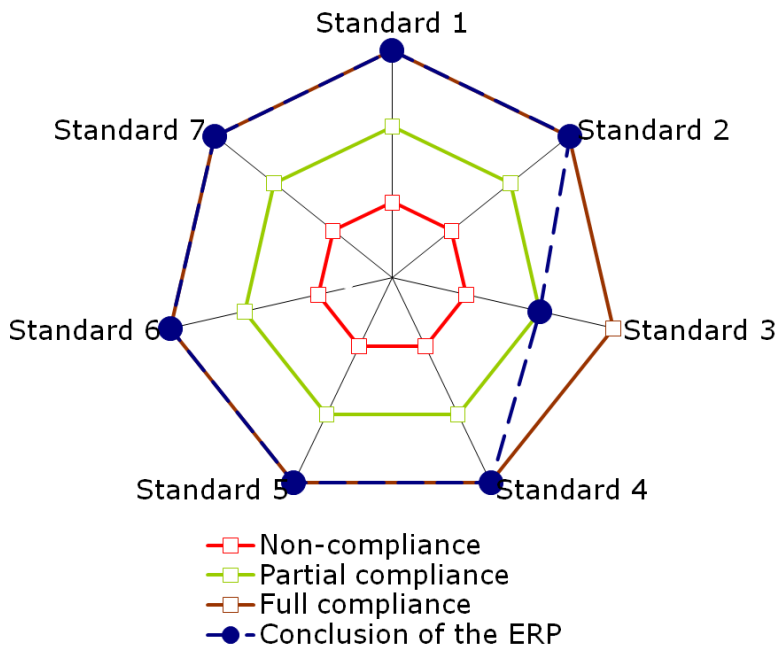
There are scholarship programmes and financial support of students involved in research activities.

### **Areas for improvement:**

It is recommended that students should work more independently during the educational process as it is a key component of self-education and lifelong learning.



## DISTRIBUTION DIGRAM OF THE EXTERNAL REVIEW OUTCOMES



- Standard 1. Educational objectives
- Standard 2. Graduate outcomes
- Standard 3. Curriculum
- Standard 4. Faculty
- Standard 5. Teaching and Learning Resources
- Standard 6. Quality assurance
- Standard 7. Student development

## CONCLUSION OF THE EXTERNAL REVIEW PANEL

Based on the self-evaluation report analysis, documents and data submitted the External Review Panel has come to the conclusion that the Bachelor educational programme «Horticulture» delivered by China Agricultural University **fully** complies with the joint standards and criteria of accreditation of the National Centre for Public Accreditation and the Higher Education Evaluation Centre of the Ministry of Education of the People's Republic of China.

The Panel recommends that the National Accreditation Board accredit the Bachelor educational programme «Horticulture» delivered by China Agricultural University for the period of **six** years.

## SCHEDULE OF THE SITE VISIT OF THE EXTERNAL REVIEW PANEL

Date	Time	Activity
December 4, Tuesday	19:00 -19:30	First meeting of the Panel and coordinators of programmes' review
	19:30 -20:30	Internal meeting of the Panel
December 5, Wednesday	8:30-9:30	Meeting with the university administration and people responsible for accreditation
	10:00-11:00	Excursion
	11:00-12:00	Visiting classes, holding meetings and interviews, work with documents
	12:10-13:00	Lunch
	14:00-18:00	Holding meetings and interviews
	18:30-19:30	Dinner
	19:30-20:30	Internal meeting of the Panel
December 6, Thursday December 7, Friday	8:30-12:00	Visiting classes, holding meetings and interviews, work with documents
	12:10-13:00	Lunch
	14:00-16:30	Holding meetings and interviews
	16:30-17:30	Internal meeting of the Panel
	18:00-19:00	Dinner
	19:30-21:00	Internal meeting of the Panel
	9:00-11:00	Closing meeting of the External Review Panel with the representatives of the university
December 6, Thursday	11:30-13:00	Lunch
	8:30-12:00	Visiting classes, holding meetings and interviews, work with documents