

# A brief introduction of China Farming Systems Research Society (CFSRS), the Farming Systems Branch of the Chinese Association of Agricultural Societies

## **History of the society**

During October 27 to November 1 of 1980, the National Symposium on Farming Systems Research and founding celebration of the China Farming Systems Research Society were jointly held in Beijing after a few years' planning and preparation under the supports from frontier scientists of farming systems research as Qu Sun, Xuenian Shen, Bingquan Jiang, Shijun Ma, Chunfeng Yang, Xinlai Lu, Pu Niu, Shengchao Yuan, Shufu Zhong, et al. The symposium and celebrating were attended by 200 participants working for agricultural departments, research institutions, universities and state-run farms at national or provincial levels from more than 20 provinces, municipalities or autonomous regions. Professor Bingquan Jiang of Beijing Agricultural University (the current China Agricultural University) was elected the first president and Professor Hengjue Hu of Gansu Agricultural University the Secretary General of the society. The founding of the society promoted the development of farming system research organizations in the country.

Currently there are more than 1 500 society members working on agricultural education (34%), research (30%), extension (25%) and administration (6%) in all the provinces of the mainland. Sixty-five percent of the members are senior professional title holders and middle-level professional title holders take another 30%. Forty-four percent of the members hold doctoral degrees, thirty-five percent hold master degrees while the other twenty-one percent are bachelor degree holders. Professional areas covered by the members are quite broad that include agronomy, breeding, soil sciences, ecology, geography, economics, systems methods and approaches, meteorology, extension, etc.

## **History of focus change of farming systems research in China**

In 1950s, the focus was on soil aggregates, crop-pasture rotation, weed control and tillage for improving soil fertility.

In the 1960s, the principle of balancing the utilization and conservation of soil fertility was put forward, and research focus was shifted onto increasing crop solar radiation use efficiency & productivity while improving soil fertility. The importance of multi-cropping in improving crop productivity was paid attention on.

In the 1970s, farming systems reform was carried out in a large scale in the country, intercropping and sequential cropping were paid great attention on in crop production; Agroecological systems perspectives were introduced, and rationale of crop-forest-livestock balanced development was brought forward.

In the 1980s, the discipline of farming systems research adapted to local conditions in China was primarily established, that led the then researches on multi-cropping and dryland farming. The International Symposium on Multi-cropping and the National Symposium on Dryland Framing in Northern China (attended by the then the top leader of

China Mr Yaobang Hu) were organized by the society. The two meetings had been greatly influential in agricultural development in China.

In the 1990s, sustainable agriculture/farming systems were advocated and efforts were put on developing principles and technologies for sustainable and intensive farming systems relevant to Chinese conditions. The studies on regional comprehensive productivity-lifting of low-yielding lands and researches in regional highly-efficient agriculture were organized by the society; Farming systems zoning & planning in China was accomplished; *Advances in Highly-functioning and Highly-efficient Farming Systems Research in China*, *Studies on Reduced & No-till Systems and Mulching Techniques in China* and *Theory and Practices in Sustainable Highly-yielding Highly-profitable Cropping Systems* were published.

Since the beginning of the new century, the society has put its focus on conservation farming technology, modern farming systems research and food security study. Five national symposiums have been organized and the proceedings entitled *Farming Systems Facing the 20<sup>th</sup> Century in China*, *Regional Agricultural Development and Farming Systems*, *Food security and Farming Systems*, *Modern Agriculture and Farming Systems* and *Advances in Farming Systems Research in China 2008* have been published respectively.

## Research Activities

Up to present, the society has organized 50 research activities, including the on-going national key programs of *Research and demonstration of Conservation Tillage*, *Research and demonstration of Key techniques in Recycling Agriculture*, *Productivity Lifting of Food Grain Crops* and *Research on Modern Farming Systems Design and Relevant Technology Development* as well as projects supported by the National Science Foundation and provincial science and technology funds. Focuses of the society's research activities include:

- ✧ Strategies of agricultural development: participate in agriculture and agricultural technology development planning implemented by state ministries and provincial governments. Twenty reports or proposals have been submitted by the society.
- ✧ Research in farming systems management: emphasizes have been put on highly-yielding cropping systems, multiple cropping, winter farming, etc., aiming at improving productivity of various systems. The projects funded by The Ministry of Agriculture are currently conducted in 10 provinces.
- ✧ Research in conservation farming technology: projects have been conducted in arid and semiarid areas, wind-erosion areas, irrigated areas and rice-based cropping areas for more than 10 years. National projects are being implemented in 9 provinces. China Association of Conservation Farming Systems Network (CACFSN) has been established by the society for this purpose.
- ✧ Theory and technology of recycling agriculture: projects are being conducted at 40 sites in 14 provinces.
- ✧ Agricultural systems research: researches on biodiversity in agriculture, climate change, energy analysis, ecological serve of agricultural systems, health of agroecological systems, etc. have been conducted by society members.

### Representative scientists of the society

Name	Duty in the society	Professional position	Research area	Honors and influence
Wangsheng Gao	President	Professor	Conservation farming and recycling agriculture	Leader of key national program; leader of expert group for agricultural science and technology planning; president of CACFSN; director of research center for recycling agriculture of CAU
Xunhao Liu	Honorary president	Professor	Sustainable agriculture	World-known scientist; counselor of the State Council
Qiangji Zhao	Honorary president	Professor	Cropping system	Winner of the special allowance of the State Council
Lixiang Wang	Vice president	Professor	Dryland farming	Director of the national center of dryland farming
Chaoya Zou	Vice president	Professor	Multiple cropping	Winner of the special allowance of the State Council
Xu Cheng	Vice president	Professor	Sustainable agriculture	Winner of the special allowance of the State Council; director of China center of World Sustainable Agriculture Association, CAU
Fu Chen	Vice president	Professor	Farming systems	Leader of key national program; head of agronomy department, CAU
Tianzhi Ren	Vice president	Professor	Farming systems, agricultural zoning & planning	Leader of key national program, vice director of the Institute of Agricultural Zoning & Planning, CAAS
Shengkui Cheng	Vice president	Professor	Agricultural resources management	Vice director of the Institute of Resources and Geography, CAS
Gaobao Huang	Vice president	Professor	Conservation tillage, dryland farming	Vice president, Gansu Agricultural University
Zhanxiang Sun	Vice president	Research Professor	Food security	Vice president, Liaoning Academy of Agricultural Sciences
Yongcheng Liao	Vice president	Professor	Dryland farming	Dean of agronomy faculty, Northwest University of Agricultural & Forestry Sciences
Jianchu Zheng	Vice president	Research Professor	Rice based farming system	Vice president, Jiangsu Academy of Agricultural Sciences
Xianguo Qing	Vice president	Research Professor	Rice industry	Vice president, Hunan Academy of Agricultural Sciences
Weili Liang	Member of directing board	Professor	Farming systems, high-WUE agriculture	