PROGRAM

The 8th International Symposium on Fungal Endophyte of Grasses (ISFEG)

13-16 August 2012

Lanzhou, China
8th ISFEG 2012 Sponsors
We are extremely grateful for support from the following sponsors

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ORGANIZERS

State Key Laboratory of Grassland Agro-ecosystems,
College of Pastoral Agriculture Science and Technology,
Lanzhou University, China

Engineering Research Centre of Grassland Industry,
Ministry of Education, China

Gansu Research and Development Centre for Grassland Industry,
Gansu Provincial Government, China

CO-ORGANIZERS

Agria Cooperation, China

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ORGANIZING COMMITTEE

Chair:
Dr. Zhibiao Nan: Academician, Chinese Academy of Engineering
   Director, State Key Laboratory of Grassland Agro-ecosystems
   Professor, College of Pastoral Agriculture Science and Technology,
   Lanzhou University, China

Vice Chairs:
Dr. Ming Chen: Vice President, Professor, Gansu Academy of Agricultural Sciences,
   and President of Gansu Society of Plant Protection, Lanzhou, China
Dr. Fujiang Hou: Dean, Professor, College of Pastoral Agriculture Science and
   Technology, Lanzhou University, China
Dr. Chunjie Li: Director, Engineering Research Centre of Grassland Industry,
   Ministry of Education, China
   Professor, College of Pastoral Agriculture Science and Technology,
   Lanzhou University, China

Members:
Dr. Yubao Gao: Professor, Nankai University, China
Dr. Zhiwei Wang: Professor, Nanjing Agricultural University, China
Dr. Tingyu Duan: Associate Professor, College of Pastoral Agriculture Science and
   Technology, Lanzhou University, China
Dr. Jiyu Zhang: Associate Professor, College of Pastoral Agriculture Science and
   Technology, Lanzhou University, China
Dr. Yanpei Wu: Executive Editor, Pratacultural Science, China
Mr. Bruce Yang: Senior Project Manager, Agria Cooperation, China
Mr. Chengyong Fan: Head of Administrative Office, College of Pastoral Agriculture
   Science and Technology, Lanzhou University, China
DAILY PROGRAM

Monday, August 13
Registration
Lobby of Xilan International Hotel

Tuesday, August 14
8:30 –10:00 Opening Ceremony
Chair: Professor Zhibiao Nan, Lanzhou University, China

8:30 Welcome and opening speech
Professor Fujiang Hou, Vice President, Chinese Grassland Society, and
Dean, College of Pastoral Agriculture Science and Technology,
Lanzhou University, China
Professor Ming Chen, President, Gansu Society of Plant Protection, and
Vice President, Gansu Academy of Agricultural Sciences, China
Professor Christopher Schardl, Chair of the 7th ISFEG, University of Kentucky, USA

9:20 Introductory presentation
Chunjie Li
An overview of grassland and grass endophytes in China

9:50 Group photo taking

10:00 COFFEE BREAK

10:20 – 12:00 Theme 1: Fungal Endophytes
Chair: Professor Stanley Faeth, University of North Carolina, USA

Invited presentations
10:20 Christopher Schardl
Insights from comparative genomics of plant-pathogenic and plant-symbiotic
Clavicipitaceae

10:50 Carolyn Young
Genotypic and chemotypic diversity of epichloae endophytes

Volunteer presentations
11:20 Wayne Simpson
Progenitor contributors to extant Triticeae endophyte strains

11:40 Juan Pan
Functional characterization of two fungal endophyte genes involved in loline alkaloid modification
12:00  Lunch  Xilan International Hotel

14:30 – 18:00  Theme 1: Fungal Endophytes
Chair:  Dr. Adrian Leuchtmann, Institute of Integrative Biology, ETH Zurich, Switzerland

Invited presentations
14:30   James White
   Endophytes: explorations in diversity
15:00  Zhiwei Wang
   Chinese native grass endophytes - their possible evolutionary origins

15:30  COFFEE BREAK

Volunteer presentations
15:50 Mariusz Tadych
   Horizontal dissemination of *Epichloë* endophytes to grass seedlings via conidia
16:10 Yanzhong Li
   Association and difference of locoweed endophyte and a pathogenic fungus *Embellisia astragali*

16:30  Poster viewing

18:00   Welcome banquet, Xilan International Hotel

Wednesday, August 15

9:00 –12:00   Theme 2: The Role of Endophytes in Ecosystems
Chair:  Dr. David Hume, AgResearch, New Zealand

Invited presentations
9:00  Keith Clay
   Clavicipitaceae fungal symbiosis with non-grass plants
9:30  Jing Wang
   Progress in research on alkaloids from grass-endophyte symbionts in China

10:00  COFFEE BREAK

Volunteer presentations
10:20 Wade Mace
   Inter-tiller vs inter-plant alkaloid variation: a comparison of total alkaloid profile
10:40 Alison Popay
   Endophyte increases tolerance of three tall fescue cultivars to root-feeding grass grub
(Costelytra zealandica)

11:00 Michelle Henry
Effect of feeding endophyte infected perennial ryegrass seed to merino ewe weaners exposed to thermoneutral and heated environments

11:20 Tingyu Duan
Interactions of Neotyphodium endophyte, mycorrhizal and plant pathogenic fungi with perennial ryegrass

11:40 – 13:30 Lunch – Lanzhou beef noodle

13:30 – 18:30 Field trip to Jiuhuagou Loess Plateau landscape and Yuzhong Campus of Lanzhou University

18:30 Dinner, Main Campus of Lanzhou University

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<tr>
<td>9:00 – 12:00 Theme 2: The Role of Endophytes in Ecosystems</td>
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<tr>
<td>Chair: Dr. Chris Pennell, AgResearch, New Zealand</td>
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Invited presentations

9:00 Kari Saikkonen
Endophytes in Agro-ecosystems

9:30 Yubao Gao
Endophytic distribution in the Inner Mongolia steppe and its symbiosis with host grasses

10:00 COFFEE BREAK

Volunteer presentations

10:20 Stanley Faeth
The ecological consequences of hybridization in Neotyphodium endophytes

10:40 Adrian Leuchtmann
The endophytes of the woodland grass Hordelymus europaeus - diversity and ecological significance

11:00 Anzhi Ren
Endophyte-mediated effects on Achnatherum sibiricum are conditional on water and nutrient availability

11:20 Yanling Ji
Biological properties of Neotyphodium stromatolongum - host complexes

12:00 – 14:30 Lunch Dumpling, poster viewing

14:30 – 17:30 Theme 3: Application of Endophyte Technologies
Chair: Dr. Alison Papoy, AgResearch, New Zealand
Invited presentations

14:30 German Spangenberg
    Systems biology of grass-endophyte symbiota

15:00 John Caradus
    The commercial impact of Neotyphodium endophyte science and technology

15:30 Richard Johnson
    Metabolomics meets genomics: solving the puzzle of how multiple cyclic oligopeptides
    are synthesised by endophytes of the Neotyphodium/Epichloë complex via a single
    ribosomally encoded gene, gigA

16:00 COFFEE BREAK

Volunteer presentations

16:20 Chris Pennell
    Novel uses of grass endophyte technology

16:40 Sarah Finch
    Do indole-diterpenes produced by fungal endophytes pose any threat to human health?

17:00–17:30 Closing Ceremony

Chair: Professor German Spangenberg, Victorian Department of Primary Industries, Australia

17:00 James White
    Overview of 8th ISFEG

18:00 Closing Banquet, Hanshuijingting Restaurant
The College of Pastoral Agriculture Science and Technology (CPAST) at Lanzhou University originated from the Gansu Grassland Ecological Research Institute (GGERI) founded in 1981 by Professor Jizhou Ren, who is the member of Chinese Academy of Engineering. The name of “Grassland Ecological Research Institute, Chinese Academy of Agricultural Sciences” also came to use since May 2001. In April 2002, GGERI as a whole was merged with Lanzhou University and CPAST was established. The names of “Gansu Grassland Ecological Research Institute” and “Grassland Ecological Research Institute, Chinese Academy of Agricultural Sciences” remain in use.

CPAST is focused on both fundamental and applied research in the area of grassland sciences, and puts emphasis on the application of scientific research achievements. Graduate research is organized into the following areas:

1. Grassland agroecosystems. The main purpose of this research is to study the structure and function, evolution and regulation of grassland agroecosystems, and management of expert systems.

2. Grassland resource management and remote sensing. The major goal is to study the succession and classification of grasslands, grazing management, improvement of natural grasslands, restoration of degraded grasslands, survey and monitoring of grassland resources, as well as forecast and prediction of natural disasters in pastoral areas.

3. Pasture agronomy. It comprises the optimal combinations of mixed sowing grassland, high yield and quality cultivation techniques for forage production, crop-forage rotation systems.

4. Management of pests in grassland systems and grass endophyte. This focused on integrating management of poisonous plants, weeds, major pests and diseases on grasslands, and interactions of microorganisms, forage and livestock. It also study the diversity of grass endophytes, developing stress tolerance, environmental friendly
novel endophytes to be used in forage breeding.

5. Grassland plant stress physiology and molecular biology. The work is to reveal the physiology and molecular mechanism of grassland plants adapted to the environment with high altitude, low temperature, drought, and high soil salinity in north western China, and screen and transform functional genes.

6. Forage breeding and seed science and technology. The objective is to breed forages with high stress tolerance and high quality and yield, and new varieties of native forage species for those cold, dry, alpine and saline regions, and to investigate the feature, physiological functions and principles of life activities of grassland plant seeds, seed processing, storage and quality controls.

7. Grassland eco-chemistry. The aim is to discover the motion law of substance and energy in pastoral agriculture system under agricultural management, and to probe the mechanisms and routes for efficiency improvement.

8. Ruminant nutrition and feed sciences. This area includes primarily the grassland-livestock interface ecology, nutritional status of ruminants, exploration of grassland feed resources and livestock product safety, molecular nutrition and biotechnology for ruminants.

9. Turfgrass sciences. The target is to design and construct, as well as manage and protect turfgrass for green spaces and sports fields, and to study turf grass, native species, and physiological ecology of turfgrass.

10. Agriculture economics. The purpose is to examine the economic features of grassland agriculture system, forage-livestock trade, rural community development and polices, farmers and herdsmen’s production and decision-making behaviors, animal ethics, and scientific history of grassland agriculture.

The faculty members in CPAST include two members of the Chinese Academy of Engineering in grassland sciences, this is the life long honor and the highest recognition could be awarded to the scientists and engineer in China. There are 17 professors, 15 associate professors, 18 lecturers. Over 89.6% of the faculty members hold Ph.D. degrees, and 71.4% have studied or worked overseas for more than one year. Four professors hold positions in international academic organizations, and
served five times on editorial boards of journals.

The State Key Laboratory of Grassland Agroecosystems, now under construction in CPAST, is the only state key laboratory in the area of grassland sciences in China. In addition, CPAST has five other research platforms including the Key Laboratory of Grassland Agroecosystems sponsored by the Ministry of Agriculture, the Forage and Turfgrass Seed Quality Supervision and Testing Center (Lanzhou) sponsored by the Ministry of Agriculture, the Grassland Agriculture Engineering Center sponsored by the Ministry of Education, and the Western Pastoral Engineering Research Center sponsored by Gansu Province. CPAST operates 15 field stations and demonstration sites, such as the Qingyang Loess Plateau Grassland Farming Systems Experimental Station and the Linze Grassland Ecological Experimental Station.

Over the past five years, CPAST has undertaken 155 research projects, including the first “973” program hosted by Lanzhou University, and in the field of forage science in China, “The fundamental research on inheritance and breeding of forage and native grasses in western China”, two projects of “973” program, two projects of National High-tech Research and Development Program of China (“863” Program), five National Key Technologies R&D Programs, an Agricultural Research Achievements Application Project, a key program of National Natural Science Foundation of China, and six international collaboration projects. CPAST has received a second prize of the State Scientific and Technological Progress Award, which is the 4th State Scientific and Technological Progress Award received by this college. The new *Vicia sativa* L. cultivar “Lanjian 3” was successfully registered by the National Forage and Turfgrass Variety Registration Board. In the past five years, CPAST faculty members have published 7 books and 728 scientific papers, 114 of which were published on international journals included in the SCI, which ranked Lanzhou University top 10 in the field of agricultural sciences among universities in China in 2010.

CPAST has a complete educational and research system that includes one post-doctoral research center for animal science, two PhD programs in grassland sciences, animal science, respectively, 10 master programs in crop science, plant
protection, grassland geographic information system, plant nutrition, turfgrass biology, and agricultural economics and management. The college also offers two agricultural extension master programs, two undergraduate programs in grassland sciences and agricultural economics and management.

Due to the excellent performance in education, CPAST has received the sole outstanding prize of National Teaching Award in the field of grassland sciences, and one doctoral dissertation was awarded Top 100 National Excellent Doctoral Dissertations. The teaching group evaluated as National Level Teaching Team in Grassland Science is in charge of two National Excellent Courses, two Provincial Excellent Courses, In 2008, the animal science discipline in CPAST was ranked number 4 nationally by the Chinese Ministry of Education.

A series of agreements on international educational exchange and scientific research collaboration were signed between CPAST and research institutes, universities and corporations in over 10 countries such as Australia, the United States and New Zealand. Meanwhile, CPAST has built the first base for Introduction of Foreign Intellectual Resources Project (“111” Project) in the field of grassland sciences. The Professor Jizhou Ren Scholarship was funded by Massey University in New Zealand to encourage the exchange of visiting students and scholars between the two countries. Two distinguished foreign experts have received the “Friendship Award” from the Chinese central government.

CPAST hosts two academic journals, *Acata Prataculturae Sinica* and *Pratacultural Science*, both of which are core journals in the Chinese Science Citation Database and source journals of CAB International. The impact factors of the two journals are currently ranked top 1 and 28, respectively, among 1946 scientific journals in China. In addition, *Acata Prataculturae Sinica* has been awarded “Top 100 Outstanding Academic Journals of China” for nine years in a row.
GENERAL INFORMATION

Symposium Venue
The 4th Floor, College of Pastoral Agriculture Science and Technology (CPAST)

Medical service
The Lanzhou University Hospital. Tel: 0931-8911120
The No.1 Hospital of Lanzhou University. Tel: 0931-8625200

Banks
Bank of China: 150 m north of Xilan Hotel
China Construction Bank: Opposite to Xilan Hotel

Taxi
The minimum fee is RMB 7 Yuan for 3 km at the city, RMB 150 Yuan to airport.

Shopping
Wangfujing Commercial Center: 150 m north of CPAST.

Dining time and locations

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<tr>
<td>Breakfast</td>
<td>Xilan Hotel (30th Floor, show your room card for free)</td>
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<tr>
<td>Lunch</td>
<td>Zongheng Restaurant</td>
<td>Xilan Hotel (30th floor)</td>
<td>Beef noodles</td>
<td>Yiwanxiang dumpling</td>
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<tr>
<td>Dinner</td>
<td>Zongheng Restaurant</td>
<td>Xilan Hotel (3rd floor)</td>
<td>Main Campus of Lanzhou University</td>
<td>Hanshuijinting Restaurant</td>
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Notes: Please show your voucher and badge for lunch and dinner.

Useful contacts:
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Registration       Yanzhong Li      13099213884
Presentation       Tingyu Duan      15214095029
Airport and field tour Jiyu Zhang    13893329958
Post symposium tour Binhua Yu        13893292250
Hotel and meal     Zhixin Zhang     13519618801