Italy and China
history of a long friendship
in the name of poplars

STEFANO BISOFFI
Geographic references

45°N
The Valley of the river Po
The fields of the Poplar Research Institute of Casale Monferrato
The *Poplar Research Institute*
The *Poplar Research Institute* of Casale Monferrato
Poplar breeding, the “core business”

Breeding activities in Italy started before 1930:
Giovanni JACOMETTI in Villafranca Piemonte

I-214  Epidemic outbursts of Spring defoliation 
I-154  (Venturia populina) in the late ‘twenties
I-262  suggested a dedicated breeding programme to select
I-455  resistant cultivars
I-476
I-488
Poplar breeding, the “core business”

Jacometti’s clones were widely planted and distributed after the foundation of the Poplar Research Institute in Casale Monferrato in 1937 (1.st Director: Giacomo Piccarolo)

I-214 (still the most widely cultivated in Italy)
I-154 (widespread in Argentina)
I-476 (Chile and Argentina)
I-488 (Chile and Argentina)
Breeding activities continued after the foundation of the Poplar Research Institute in Casale Monferrato (main breeder until 1982: Michele SEKAWIN)

**Poplar breeding, the “core business”**

Harvard (I-63/51)  
Lux (I-69/55)  
Onda (I-72/51)  
San Martino (I-72/58)  
Triplo (I-37/61)

Main attention on *Populus deltoides* (North America) both as individual cultivars and as female parents of hybrids

Seed collections carried out with the coordination of the Int.l Poplar Commission
First Chinese delegation in Casale (1972)

Mr. LIANG Ciangwu
Minister of Forestry

Michele SEKAWIN

Giovanni ARRU

Ettore CASTELLANI
First shipment of poplar clones (1972)

I-214
I-45/51
San Martino (I-72/58)
Lux (I-69/55)
Harvard (I-63/51)
Villafranca (I-58/57)

Ministry of Forestry, Beijing

(County Linyi, Shandong, 1988)
IPC 31st Executive Committee Meeting 1982

Oscar FUGALLI
IPC 31st Executive Committee Meeting 1982

Enzo AVANZO
The Agriculture and Forestry Res. Inst. In Rome
The breeding work of Enzo Avanzo

- Large scale provenance trials with *P. deltoides*
- Extensive progeny trials
- F1 *P. deltoides* x *P. nigra* hybrids

**Main selections:**
- Luisa Avanzo (formerly called Giorgione)
- Cima
- Guardi
- Carpaccio
- Bellini
- **Guariento**
- **Bellotto**
- Tiepolo

(Dadongliu nursery centre: Propagation of Bellotto)
A “very special” colleague: Prof. ZHANG Qiwen

Prof. ZHANG Qiwen spent a few months in Casale Monferrato in 1983, received a training in breeding and selection strategies and methods and brought back to China cuttings of:

- Eridano (I-83/58)
- Villafranca (I-58/57)
- Neva (I-74/76)
- I-114/69
- Guariento
- Bellotto
- Tiepolo

From then on, she was the “Ambassador” of Italian poplar culture in China
Extensive field trials in many Provinces

Plantation of ‘Neva’, 4 years old

Plantation of ‘Bellotto’, 4 years old
Other Chinese scientists in Casale M.

- Prof. WANG Shiji (CAF/RIF Director)
- Prof. XU Meiqing (CAF/RIF, Pathologist)
- Prof. TU Zhongyu (FRI of Jiangsu)
- **Prof. PAN Mingjian** (FRI of Jiangsu, now Forest Academy)
- and many more ...

18/05/2010
Seminars on breeding strategies
Seminars on breeding strategies

**P. deltoides**
- Next cycle
- 95 females
- 148 males
- Intra-specific mating and selection
- Selection
- Selec. tion
- 34 males
- 25 females
- Commercial breeding and clonal selection

**P. nigra**
- Next cycle
- 47 males
- 97 females
- 39 males
- 15 females
- Intra-specific mating and selection
- Selection
- Selec. tion

The Italian breeding programme
- Recurrent selection
- Commercial varieties

SBG5G293
Seminars on selection methods

- single-tree plots
- multiple-tree plots
- multiple-tree plots with guard rows
Exchanges of experience in many fields
Other visits and exchanges of clones

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Materials received from China

Precious breeding material of:

**Poplars**
*Populus simonii*
*P. tomentosa*
*P. koreana*
*P. nigra*
*P. Yunnanensis*

...and Willows
*Salix matsudana*
*S. jessoensis*
*S. sachalinensis*
Gene technology

Prof. Francesco SALA
University of Pavia
Poplar plantations in IPC countries

Superficie a pioppo in Paesi IPC
(sole piantagioni)
Fields for future cooperation

• Joint **breeding programmes** (China has the richest poplar germplasm in the world)
• Coordinated **cultivar selection** (growth, quality, stress tolerance, …)
• Molecular marker assisted selection
• Development of second generation **biofuels** (e.g. ethanol from cellulose)
• Combination of wood production with **phytoremediation**
• Development of new **wood-based products** and biomaterials
• … and more
Beijing 2008: IPC 23rd Session
Beijing 2008: IPC 23rd Session

Mr. ZHANG Jianlong
Vice Minister - SFA
Beijing 2008: IPC 23rd Session

Dr. LUO Fuhe,
Vice Chairman
Chinese People's Political Consultative Conference
Beijing 2008: IPC 23rd Session

Prof. YIN Weilun (BJFU)

Mr. Jim CARLE (FAO)