

**Second Grain Legume Technology Transfer Platform (GL-TTP) Workshop**  
***Integrating Legume Science and Crop Breeding***  
**Novi Sad, Serbia, 27 & 28 November 2008**

## **General Assembly Report**

Master Congress Centre, 28 November 2008, 8.30 h - 10.30 h

### **GL-TTP beginnings and goals.**

GL-TTP was initiated in 2005 by the EU Grain Legumes Integrated Project (GLIP) to ensure the exploitation of the project outputs by the grain legume industry. GL-TTP has been created to facilitate collaborative efforts for carrying out scientific survey and making value of technology for the purposes of applied legume crop breeding. It aimed to facilitate and expedite the genetic improvement of grain legume varieties to suit the needs expressed by the grain legume producers and end-users.

Noel Ellis summarized the origin of GL-TTP as a component of the Grain Legumes Integrated Project (GLIP). This FP6 EU project was founded to help to promote European feed protein production. This project integrated agronomy, genetics, genomics, physiology, crop protection, end use and economics/life cycle assesment of temperate region legumes, especially pea, and faba bean. Its biological activities were built up mainly on the model legume species - *Medicago truncatula* with its extension to crop legumes, mainly pea. The goal of GL-TTP was the transfer of results and applications generated from research activities of GLIP to plant breeders and the grain legume industry.

As an EU project, GLIP and GL-TTP were bound by legal agreements within the consortium and with the European Commission. Moreover, with substantial budget support from GLIP, GL-TTP was managed by full time scientific manager, Catherine Golstein, from its origin till the end of 2007. Currently EC members (e.g. President, Vice-Presidents and Treasurer) undertake all (often time demanding) GL-TTP related activites fully on top of their duties to their host organizations.

In addition to GL-TTP, other international pulse organizations include the International Conference on Legume Genomics and Genetics (ICLGG), the International Food Legume Research Conference (IFLRC), and the European Association for Grain Legume Research (AEP). Noel Ellis asked: Do we have an excessive proliferation of legal entities involved in pulse crop research? Should GL-TTP continue as a legal entity? Its functions could continue under AEP or under an entirely new organization.

Petr Smýkal opened the question on not only grain legumes focus, rather incorporation of all diverse representatives of large *Fabaceae* family, including economically important forage legumes and legume trees. Thus our community could be substantially larger, with all benefiting from model legumes genomics and biological knowledge.

### **GL-TTP founding members.**

Petr Smýkal summarized the list of 11 GL-TTP founding members ([www.gl-ttp.com](http://www.gl-ttp.com)).

- Abdel Bendahmane - URGV, INRA, Evry France

- Gérard Duc - INRA-URLEG, Dijon, France
- Noel Ellis - John Innes Centre, Norwich, UK
- Andy Flavell - University of Dundee at SCRI, Dundee, UK
- Catherine Golstein - Grain Legumes Technology Transfer Platform
- Helge Küster - Hannover University, Germany
- Frédéric Muel - UNIP, France
- Nathalie Munier-Jolain - INRA-URLEG, Dijon, France
- Alvaro Ramos Monreal - Consejería de Agricultura Ganadería, Valladolid, Spain
- Anne Schneider - AEP headquarters, Paris, France
- Peter Winter - GenXPro GmbH, Frankfurt am Main, Germany

Of these, Noel Ellis, Peter Winter and Anne Schneider were in attendance at the General Assembly. All of these 11 members were repeatedly contacted by current GL-TTP EC, being asked for more active participation in further development. Unfortunately, many of them, together with other key GLIP members, such as coordinators of individual work packages, could not, largely due to other running projects and research interest, actively participate in GL-TTP.

#### **GL-TTP current member organizations.**

Aleksandar Mikić summarized the list of the 27 current GL-TTP member organizations. Many new members from eastern European countries joined GL-TTP in the past year. The membership categories were reduced from three to one in the past year, with a membership fee of 250 euros per organization per year (reduced from 5,000 and 1,000 euros respectively, for previous full and associate membership categories). Moreover, 100 euros from the 2008 membership fee of 250 euros, were directly used as registration fee and spent on organization of workshop.

#### **Legume activities and conferences.**

Petr Smykal summarized various current funding opportunities in legume research including the international Generation Challenge Programme, where several largely tropical and subtropical legumes (beans, pigeonpea, cowpea, chickpea) are listed as mandate crops. European FP-7 Cordis for SME's (Small and Medium Size Enterprises) where is currently submitted project: KBBE-2009-1-2-01: *Legumes: key multifunctional legume crops for an energy-efficient and environmentally friendly future European agriculture*, and especially COST (further details below). The IV<sup>th</sup> ICLGG conference in Mexico occurred in December 2008, which was to be attended by several members including Noel Ellis and Petr Smykal, in which poster about GL-TTP goals and activities was prepared and presented by Petr Smykal. A legume research conference will be held in Kanpur, India in February 2009, the Ascochyta 2009 workshop will be held in June 2009 in Pullman, WA, USA and the joint AEP/IFLRC conference will be held in Turkey in April 2010. In the summer of the same year the V<sup>th</sup> ICLGG conference will be held at Asilomar, California, USA. It was also announced that GL-TTP would be promoted at the meetings related to forage crops and other appropriate topics.

### GL-TTP website.

The GL-TTP website ([www.gl-ttp.com](http://www.gl-ttp.com)) is maintained within the AEP ([www.grainlegumes.com](http://www.grainlegumes.com)) webpages, with an expenditure of around 2,000 euro per year for maintenance. A discussion was held, on the possibility to host GL-TTP website on another server. Currently the website is maintained occasionally with help of Anne Schneider.

### AEP (European Association for Grain Legume Research) in brief.

Diego Rubiales, as current AEP president, summarized the characteristics and activities of AEP. Membership in AEP has ranged from 100-250 individuals from 20-30 countries since it began in 1992. Members are primarily from European countries, but several are from abroad. AEP has a database of approximately 4000 contacts in research, industry, and government. Committees are elected every 4 years. These consist of a 5 member executive committee and 15-20 member scientific committee. Anne Schneider served as the executive secretary until June 2008. AEP has organized scientific conferences every 3 years as well as numerous scientific workshops. AEP has played a strong role in promoting pulse crop production and research to the EU. AEP maintains an informative website, which is linked to GL-TTP website. However, from 2008 AEP faces financial problems, linked to cutting off principal funding source, UNIP France, consequently its situation resembles that of the GL-TTP, being unable to sustain several fully devoted persons.

### GL-TTP budget.

Anne-Marie Bochard (as Treasurer) summarized the current financial status of GL-TTP. In summary, the details were as follows (in euros).

#### *Expenditures*

	2007	2008
OVERHEADS	13,499 €	1,444.98 €
PERSONNAL	80,255 €	- €
TRAVELS	14,976 €	- €
WORKSHOP	39,520 €	9,719.70 €
WEB SITE		2,676.95 €
Total	150,257.00 €	15,849.63 €

#### *Receipts*

	2007	2008
MEMBERSHIP	42,528 €	4,750.00 €
VARIOUS	3,904 €	- €
WORKSHOP FEES	15,798 €	1,700.00 €
PREVIOUS RECEIPTS	14,346 €	12,231.00 €
GLIP	83,905 €	- €
Total	162,488.00 €	20,689.00 €

Notes: Approximately 50% of the 2007 receipts arose from GLIP and approximately 50% arose from membership fees. Approximately 75% of the 2007 expenditures were used to pay the salary and expenses of the full time employee, the scientific manager, Catherine Golstein.

**COST action on legumes.** Fred Stoddard, University of Helsinki, summarized a COST action proposal on legumes and sustainability: “*Grain legumes for enhanced sustainability of cropping systems*”, which he is coordinating.

In abstract: The sustainability of European agriculture has declined in recent years. Increased usage of legumes can help to reverse this decline and in addition, provide high quality food and feed along with bioactive food components, reduce the energy and greenhouse gas impacts of agriculture, and improve soil fertility. Europe is a world leader in legume science but relatively poor at growing, marketing and using grain legumes. This Action aims to develop a strategic research agenda that, by consultation among the scientists and stakeholders in the legume economic chain, will identify the causes of that poor performance and develop solutions for it so European agriculture can capitalize on the benefits of legumes. Annual meetings will facilitate coordination of nationally funded projects on the roles of legumes in agroecosystems and in human and animal nutrition along with basic science, ensuring lack of duplication and maximum complementarity in the legume research and development community.

The proposal includes 3 work packages: 1) bioactive compounds and antinutritional factors, 2) ecosystems and nitrogen fixation, and 3) interdisciplinary genomics to economics. A 4<sup>th</sup> work package should be added and it will likely be related to energy and carbon sequestration. The proposal has an approximate budget of 100,000 euros per year for 4 years. Funds are to be used for networking (e.g. workshops, meeting, training), not for research. However in numerous EU countries, national founding agencies, ministries offer special COST-linked founding projects, which could cover research part. Participants should arise from many countries, currently some 90 organizations expressed their interest. The proposal has succeeded to the second round of evaluation, with the deadline of January 16, 2009. Currently the extended version of the full proposal was made ready and numerous workshop attendants were contacted to express their interest which is also essential for action success.

### **Proposal regarding future of GL-TTP.**

A proposal was displayed to the participants of the General Assembly regarding future plans for GL-TTP.

The proposal was as follows: There are numerous organizations both in Europe and in the wider world context that have a long term interest in legume oriented research and development. There are numerous well known and respected reasons to use legumes in agriculture: their unique symbiotic nitrogen fixation, their being a rich source of proteins both for human diet and animal feed, and having beneficial impact on soil fertility. Thus, there is continuous need to have strong well operating organization which could effectively present scientific results to community and funding bodies. Moreover, the original idea of scientific knowledge transfer to end-users remains valid. However taking into account long term European situation on plant derived protein import dependency, paradoxially having negative effect on legume cultivation in Europe (3% versus 30% legumes in

cropping systems in North America), end-users' and especially breeders' interest is steadily declining.

As the result, majority of previous and all current GL-TTP members are in situation of largely expecting to gain funding possibilities, rather than being able to fund. This is obvious as looking at GL-TTP members structure, with only 3 breeding companies out of 27 members, and even those 3 have minimal possibilities to offer external funding.

On the other hand, with the current economic recession and sustainability being one of primary goals in agriculture, the situation might rapidly and dramatically turn much more favourable for legume cultivation in Europe. Thus, we would like to encourage all current GL-TTP members to stay together in contact and be ready to establish new more efficient structure.

Arising from these considerations, the GL-TTP Executive Committee proposed to its members that it should have the power to act to promote the wider interest of grain legumes, including if necessary, the ability to dissolve the GL-TTP as a legal entity with its status defined under French law, so-called "Association loi 1901", legally bound to non-existing GLIP structures. This was put to a vote of members as below:

"Proposal:

That the membership of the GL-TTP empowers its executive committee to negotiate a merger of functions with the European Grain Legumes Association (AEP).

For clarity we anticipate that this could be either as a new legal entity or with the functions of the GL-TTP as an interest group in AEP."

Owing to the above mentioned reasons, based primarily on the legal status of GL-TTP, not reflecting current situation, the Executive Committee has proposed dissolution of GL-TTP to be undertaken in accordance to status by ballot with at least  $\frac{3}{4}$  of the members present at the General Assembly.

Discussion was held regarding the proposal.

Comments included the following. Integration of breeders/end-users and researchers is a good approach for lobbying the EU for funding for legume research. Legumes are 'orphan crops'. Significant legume breeding is conducted by public organizations in North America and Australia, while in most European countries private breeding companies have reduced their focus on legumes, owing to interest shift to more profitable cereals and recently to biofuel crops. This situation is reflected by breeding companies/institutions, which have not supported GL-TTP operations as originally anticipated. The logic for dissolving GL-TTP as a legal entity include its name which was deemed to no longer be relevant, together with the financial liability of founding members.

As the goals of GL TTP are still relevant (transfer between scientists and end-users) and needs are still present, so the objective is to disband a structure which doesn't correspond to the new reality, but not to disband the willingness to work on common projects

### **The results of voting for proposal of GL-TTP potential dissolution:**

A vote was taken, with 21 of 27 members actually present. It must be stated that the official number of 27 members comprises those who have not actually joined yet, as well as those who were granted the membership. The General Assembly participants unanimously supported the proposal, with 21 in favour, and 0 who

opposed, and that was sufficiently enough to confirm the decisions that have been made. No abstentions were registered either. After the vote was counted those present were asked whether there were any objections and none were raised. Furthermore, all current (2008 registered) GL-TTP members which paid 2008 membership fees, will automatically stay members till the end of 2009 without the need of any novel membership payment.

The current GL-TTP executive committee was challenged to implement the proposal by the end of 2009.

As given in status, article 14 (see at [www.gl-ttp.com](http://www.gl-ttp.com)) in case of dissolution, remaining GL-TTP goods and assets shall be donated to other non-profit organization, which promote the exchange of scientific and industry information. In case of successful establishment of a novel legume oriented organization these might be taken as starting capital. Alternatively, the remaining money might be spent for a workshop, meeting devoted to legume research.

### **Proposal for submission of manuscripts from workshop participants.**

Presentation of following international journals was made:

***Czech Journal of Genetics and Plant Breeding***

(<http://journals.uzpi.cz:8050/web/CJGPB.htm>, Editor:)

*Which is indexed at Web of Knowledge and currently under observation for impact factor appointment from Thomson Institute*

***Pisum Genetics*** (<http://pisum.narod.ru/pg/index.htm>, Editor: K.McPhee)

***Journal of Lentil Research*** (Lentil Research Association, Editor: B. Sharma)

***Lathyrus Lathyrism Newsletter*** (<http://www.clima.uwa.edu.au/news/lathyrus>, Editor: Colin Hanbury)

Participants are strongly encouraged to send relevant manuscripts.

### **GL-TTP Executive Committee members.**

Petr Smýkal, Agritec Plant Research Ltd., Šumperk, Czech Republic - President

Noel Ellis, John Innes Centre, Norwich, United Kingdom - Past President

Tom Warkentin University of Saskatchewan, Saskatoon, Canada - Vice-President

Aleksandar Mikić, Institute of Field and Vegetable Crops, Novi Sad, Serbia - Vice-President

Anne-Marie Bochar, Limagrain, Riom, France - Treasurer