

## Yellow Beans! CAS-IP celebrates CIAT's success

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The International Centre for Tropical Agriculture (CIAT), an international agricultural research Center of the Consultative Group on International Agricultural Research (CGIAR), has had a major victory in the US Courts, and the Central Advisory Service on Intellectual Property (CAS-IP) has been a supporting partner to CIAT in this long process.

CIAT has been breeding and distributing beans, (*Phaseolus vulgaris*), since 1972. Beans are the world's most important food legume. They were domesticated more than 7000 years ago in Mesoamerica and the Andean region. Today, the common bean is the basis for not only Andean cuisine, but is the food staple for the world's poor that supplies protein as well as carbohydrates.

Enter "IPRs" - intellectual property rights. On 15 November 1996, approximately two years after he first bought some beans in a Mexican market and planted them back in the US, Larry M. Proctor filed for patent protection. Protection not only over a yellow bean he claimed that he uniquely bred called "Enola" but also for "A field bean variety of *Phaseolus vulgaris* that produces seed having a seed coat that is yellow in color, wherein the yellow color is from about 7.5 Y 8.5/4 to about 7.5 Y 8.5/6 in the Munsell Book of Color when viewed in natural light." US Patent No. 5,894,079, was granted to Proctor on 13 April 1999, and later assigned to POD-NERS, a small company Proctor started.

Over the next five years, on the basis of his patent rights, Proctor challenged other small seed companies in the U.S. and Mexican farmers that sold yellow beans to US consumers and farmers. Trade in yellow beans became too risky unless a farmer or seed company was willing to pay POD-NERS for a license.

CIAT holds more than 27,000 samples of *Phaseolus* seeds, 260 of them yellow in colour, of which six accessions appear to the eye as substantially identical to "Enola" and the beans described in the 8<sup>th</sup> claim of the POD-NERS' patent. Requests for CIAT's bean come in from all over the world, including the US. There were concerns at CIAT that the POD-NERS' Enola patent would limit CIAT's ability to freely distribute yellow beans. So, in 2000, CIAT filed a request for an *ex partes* re-examination of the Enola patent.

The re-examination process took seven years. The patent examiner rejected the claims of the original patent and new claims associated with the re-issue on several grounds. Then one year later, after going through this lengthy and technical process of re-examination and re-issue with subsequent amendment of the claims since 2003, an appeal to the Board of Patent Appeals and Interferences (BPAU) by Proctor ended up affirming the patent examiner's decision to reject all claims.

POD-NERS then appealed to the United States Court of Appeals for the Federal Circuit (CAFC) and, on 10 July 2009, the decision of the Board was **affirmed**. The Court aligned with the rejection on the basis of obviousness when Enola was compared with another bean cultivar, Azufrado Peruño 87.

After 9 long years, the court has simply affirmed that the Enola bean wasn't an invention at all. It was a bean derived from existing seeds, and could be produced with standard agricultural methods such as breeding and selection; something that farmers and breeders have been doing for centuries. These acts could and should not result in the monopolisation of genetic resources. The conclusion of the court that Enola was "obvious" was therefore unsurprising to most scientists and farmers.

## ***Implications for the Future***

What took most scientists by surprise was the time and effort that CIAT has had to expend in this case. Although CIAT was assisted by CAS-IP and received *pro bono* legal support from the Independent Senior Lawyer Project and Morrison & Foerster LLP, the time and incidental costs incurred by CIAT and the world community in this whole process were enormous.

From this experience, it is clear that information and research results produced by public organisations such as the CGIAR should be clearly and easily accessible to patent examiners. In the case of Enola, legal technicalities surrounding the concept of 'prior art' meant knowledge available on similar *Phaseolus* beans, outside the United States, was insufficient as statutory bars to patentability. Apparently the examiners at the USPTO had great difficulty finding printed material in their databases describing yellow beans during the patent application process. On re-examination, however, a previous publication on some yellow beans, that served as 'legal' prior art in this case, together with information on gene typing that was submitted by CIAT scientists, were able to clearly show that these yellow beans and Enola were the same. This highlights the legal utility of making publications more widely accessible, and directly through the databases accessed by patent examiners.

The CGIAR Centers are taking steps to make our information easily accessible to patent examiners. One such step is working with patent offices such as the European Patent Office (EPO). Since 2005, CAS-IP and ICRISAT (one of the CGIAR Centres) have been involved in an initiative to put publications in front of patent examiners. Under a Memorandum of Understanding executed with the EPO, ICRISAT publications are periodically uploaded onto the EPO's own Non-Patent Literature database. This is the in-house database that EPO examiners use. This ensures that prior art searches will immediately include research results and information published by ICRISAT scientists (see: <http://casipblog.wordpress.com/2009/07/01/getting-the-word-in-defensive-publishing-in-the-cgiar/>). CIAT has now signed a similar memorandum with the EPO. CAS-IP is pressing forward to facilitate having other Centers and public agricultural institutes sign up to this program. In addition, CAS-IP is working with other patent offices such as the US Patent and Trademark Office, (USPTO), and ICRISAT is working with the Indian Patent Office to find additional means for easy ways to provide patent examiners with information.

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