

Plant Variety Protection (PVP) Board Meeting Minutes
May 11-12, 2011

USDA Plant Variety Protection Office
Room 4-2223
USDA George Washington Carver Center
5601 Sunnyside Avenue
Beltsville, Maryland 20705

Board Members attending (with affiliation):

June Blalock; USDA, ARS, Office of Technology Transfer
Robert Bowman; Iowa Farmer
Leticia Cabrera; Iowa Western Community College and Northwest Missouri State
University
Steven Callistein; Pioneer Hi-Bred International, Inc.
Jonathan Egilla; Lincoln University of Missouri
John Gardner; Washington State University
Patrick Kole; Idaho Potato Commission
Kristine Mantey; ArborGen
Corinne Marshall; Sakata Seed America, Inc.
Salomon Montano; New Mexico farmer
John Nelsen; RiceTec, Inc.
Katherine White; Wayne State University

USDA and AMS staff:

David Shipman, Associate Administrator, USDA/AMS
Robert Epstein, Deputy Administrator, USDA/AMS/Science and Technology
Alan Post, Associate Deputy Administrator, USDA/AMS/Science and Technology
Robert Ertman, USDA/Office of the General Counsel
Thavann Un, USDA/AMS/Budget Office

Plant Variety Protection staff:

Gwen Adams, PVP Analyst
Chris Apagwu, Information Technology Specialist
David Chalkley, Associate Examiner
Robin Davis, Examiner
Brian Ikenberry, Associate Examiner
James Mantooth, Examiner
Janice Strachan, Examiner
Jeff Strachan, Examiner
Bernadette Thomas, Information Technology Specialist

Toiayna Thompson, Program Analyst
Beretha Thornton, Examiner
Leigh Wiltison, Associate Examiner
Natalie Worku, Program Analyst
Paul Zankowski, Commissioner
Paradigm Technologies
Virginia Cole
Mary Taylor
Visitors:
Steve Ottum, Potandon Produce L.L.C
Sean Clark, Embassy of Canada

Opening remarks were made by Paul Zankowski, Robert Epstein, and David Shipman. The meeting agenda was adopted and the minutes of the December 2008 meeting were approved.

Reports:

Overview of the PVP Act and PVP Office. Paul Zankowski. The mission of Plant Variety Protection (PVP) is to encourage the development of new varieties by providing intellectual property protection to breeders/developers and promote progress in agriculture. In the United States there are three types of intellectual property protection for plants: 1) plant patents for asexually propagated plants, 2) PVP for seed and tuber propagated plants, and 3) utility patents for everything. In order to obtain PVP a variety must be New (available less than 1 year in the U.S. and less than 4 years in a foreign country), Distinct (from all other varieties), Uniform (in that all plants look alike), and Stable (reproduces true to type).

The current cost for obtaining PVP is \$5,150 for filing, examination, and certificate issuance; there are no maintenance fees. The Board asked why there were no maintenance fees and the Office of General Counsel (OGC) replied that in the U.S. all fees are paid up at the time of certificate issuance. Other features of U.S. PVP were introduced and discussed.

The structure of the PVP Office was discussed - current staff includes a Commissioner, five Examiners, a Quality Assurance Examiner, three Associate Examiners, three Program Analysts, two Information Technology Specialists, and a Program Manager on a detail. Under the new Business Process Re-engineering (BPR) structure Examiners, Associate Examiners, and Program Analyst comprise the crop teams which better segments the workflow for PVP application processing.

The number of incoming PVP applications have been greater than 400 per year for the past several years, and in fiscal year (FY) 2010 598 applications arrived. The increases in new applications have caused the pending PVP application backlog to increase from 742 at the end of FY 2007 to 1,102 at the end of FY 2010 . The top ten incoming species in order of occurrence are corn, soybean, wheat, lettuce, potato, cotton, Kentucky bluegrass, fescue, rice, and field bean. Since the PVP Act was put in place in 1970 the PVPO has received over 11,000 applications, and issued over 8,000 PVP certificates, of which 4,900 are still in force.

PVP Office Accomplishment Report -: October 2008 to May 2011. Paul Zankowski. The PVPO hired 2 new Associate Examiners in the past year and a program manager was detailed from January to June 2011 for the Business Process Re-engineering (BPR) project. Additional staff may be required with the increased number of incoming PVP applications.

The PVPO has electronically converted to Adobe pdf format most issued and expired PVP certificates and their corresponding applications; only 71 issued and 452 expired certificates remain to be scanned.

The PVPO has provided domestic outreach both in Beltsville and at applicant's remote locations. International outreach has been accomplished at a Michigan State University intellectual property right course and through visits by delegations from China and India. The PVPO continues to participate in International Union for the Protection of New Varieties of Plants (UPOV) events including the biannual meetings in Geneva, Switzerland as well as the Technical Working Party on Automation and Computer Programs (TWC) in 2009 and the Biochemical and Molecular Techniques and DNA Profiling in Particular Working Party (BMT) in 2010. Two Examiners completed the UPOV Trainer the Trainer course. The PVP Commissioner participated in the Second World Seed Conference in Rome 2009. A PVP Examiner traveled to Indonesia in 2008 to participate in programs of the East Asia Plant Variety Protection Forum.

The PVPO contracted with Paradigm Technologies to perform a Business Process Reengineering (BPR) study on application/certificate processing. The goals were to streamline the PVP process to be as efficient and effective as possible, while continuing PVPO's high standards. The BPR was accomplished in three phases 1) Assessment of the "As-Is" Organization during September 2009 until January 2010, 2) Development of a "To-Be Process Model" during January 2010 until June 2010, 3) Planning for Implementing the "To-Be Model" during June 2010 until December 2010, and 4) Implementation of the BPR on April 25, 2011.

The PVPO continues to evaluate the conversion of the current STAR database to a relational database structure. The estimated cost for conversion is \$2-3 million. In 2004 the database conversion was evaluated and a Functional Design Requirements Specification Document,

System Alternatives Analysis Document (SAAD), and a Recommended Design Document were produced. The phases of the database conversion which still need to occur include 1) conversion of all database tables and entry screens for each crop kind, 2) development of manuals and training, 3) database maintenance, and 4) system enhancements. The cost estimates for these phases are greater than \$1.5 million – finding a funding source is an issue.

The PVPO has advanced its electronic application filing abilities by making Adobe pdf forms fillable for the Objective Description (Exhibit C) of the top species. The PVPO continues to accept electronic payments through credit cards using Pay.gov; the payments arrive by secure fax and are processed by PVP Program Analysts. PVP stakeholders have asked for more capability in electronic applications including: 1) Applicant input should be directly downloadable into the PVPO database, without the need for re-keying the information, 2) Electronic applications could be either sent as email attachment, or directly uploaded using a web-based tool, 3) Ability to batch upload many applications, 4) Establish a fee paying mechanism to follow electronic filing, possibly by having a user debit account, 5) Allow for the acceptance of electronic signature instead of physical signatures, 6) Direct linkage to the seed deposit information at the National Center for Genetic Resources Preservation, 7) Electronic filing capability to be available for every component of PVP application (not only exhibit C), 8) Capability to receive a preliminary electronic filing receipt from the Office, confirming that the application has been submitted and 9) Ability to attach digital image files, data tables, or any other description information files (for exhibit D).

Appeal to the Secretary of Agriculture

The Board heard the cases presented by Petitioner (David Holm) and Attorney for the Commissioner (Robert Ertman) with regard to the appeal to the Secretary filed in Application 200500232.

In accordance with its role under section 97.3(b)(2), the Board provided the Secretary with the following Advisory Opinion.

The Board was provided with the Response to Petition to Revive Abandoned Application, which finds that the deadline for reviving an abandoned application is jurisdictional, and therefore the Commissioner is not authorized to act to revive the case pursuant to 97.22.

While the Board agreed that the 3-month time period for filing a petition to revive an abandoned application is non-extendable, the Board was of the opinion that the issue in this case is whether the Commissioner has the authority to find that the petition for revival was properly and timely provided within the 3-month time period specified in 97.22. The Board is of the opinion that the Commissioner should have the authority to find that the petition was properly and timely provided.

The Board noted an analogy to 35 USC 21(a), the so-called mailbox rule in the patent law, that provides that the “Director [of the US Patent Office] may by rule prescribe that any paper or fee required to be filed in the Patent and Trademark Office will be considered filed in the Office on the date on which it was deposited with the US Postal Service....”

In the present case, the Board noted that the Petitioner’s submission of the required petition document was to the US Postal Service via certified priority mail on October 7th with an expected delivery date of October 9th, well in advance of the October 13th deadline for filing the petition. The Petitioner was informed by the post office that the US Postal Service did not even attempt delivery until October 18, and that it was believed that the US Postal Service had misplaced the package in transit.

Although the US Plant Variety Protection act is silent on the issue addressed in 35 USC 21(a), pursuant to *Chevron USA, Inc. v. NRDC, Inc.* 104 S. Ct 2778 (1984), the Plant Variety Protection Office should be able to make its own interpretation of when a document provided to the US Postal Service has been properly presented to the US Plant Variety Protection Office, and that the agency’s interpretation should be accorded deference by the courts.

The Board was of the opinion that it should be within the Commissioner’s discretion to apply a mailbox rule to the filing of the petition to revive an abandoned application after taking account the specific facts and equities in a given situation, and that it would be reasonable for the Commissioner to find in the present case that the Petitioner’s petition to revive should, *nunc pro tunc*, be accorded a filing date prior to the regulatory deadline of October 13 (See *Sturzinger v. Commissioner*, United States District Court for the District of Columbia, 377 F. Supp. 1284 (1974).

To be clear, the Board fully agreed with the holding in the case of *In re: J.R. Simplot Company*, 62 Agric Dec. 107, 134-135 (2003), which held that the 3-month regulatory deadline for filing a petition for revival could not be waived by the Commissioner. However, the present case is distinguishable from *In re: J.R. Simplot*, in that in *Simplot* there was no request for revival within the 3-month period for revival (See *Simplot* P. 42). In the present case, the Petitioner did request revival within the 3-month period for revival, and the issue is whether the Commissioner has the authority to deem the request to have been properly and timely filed.

PVPO Financial Update. Robert Epstein. The current PVP fee structure is \$518 for Filing, \$3,864 for Search/Examination which are both required when an application is submitted; and \$768 for the Certificate when PVP issuance is allowed for a total of \$5,150. The current fees became effective October 17, 2005 during the last fee increase. The PVP fees have increased three times in the past ten years a 35% increase in 2003 that was necessary to replenish the trust fund, followed by an effective 6.1% increase in supplemental fees in 2004 and an 18.8% general increase in October 2005.

The top obligations for the PVPO continue to be salary, overhead, rent, and contracts. Fiscal year (FY) obligations rose from \$1.6 million in FY2006 to \$2.1 million in FY2010. Revenue during this same period increased from \$1.5 million in FY2006 to \$3.5 million in FY2010. The current PVPO Trust Fund balance is \$3.9 million as of April 2011.

The application backlog of the PVPO was described as having active versus inactive components; those PVP applications requiring an extension because the applicants need to provide more information or to conduct another growing season should go into inactive category.

The Board suggested that the PVPO prepare a forecast with revenue versus the database conversion costs. It was also mentioned that the PVPO should most likely predict increased incoming applications rather than predicting a decrease, as has occurred in the past. The Board commented that there was still a lot of potential for variety development and a great potential for new varieties. It was discussed that incoming application forecasting is difficult because it is hard to know at what point a fee increase will have a negative effect on the number of applications being filed. A key will be to discover what the BPR process accomplishes over the next 6 months in order to give a better idea of PVPO productivity and better predict the office's requirements for a new database.

The Board asked if the PVPO could establish a small entity fee similar to the U.S. Patent and Trademark Office (PTO) to encourage small companies to apply for PVP – OGC commented that the PVP Act doesn't allow distinguishing between big and small companies; the only way to add small entity and maintenance fee issue would be to change the law. The Board wanted to know if the current government fiscal situation would impact the PVPO's ability to ask for a fee increase to fund the database and if the Board should recommend a fee increase now.

The Board discussed the PVPO funding for a new database and suggested that the office look at the ideas proposed by the December 2008 Board. The Board recommended that the PVPO look "outside of the box" with ideas such as having the Agricultural Research Service (ARS) develop the new database using external funding.

Business Process Reengineering (BPR) Project. Virginia Cole and Mary Taylor, Paradigm Technologies. The objective of the BPR included 1) improving PVPO operations, efficiencies and controls; 2) optimizing the PVP certification program's value to its stakeholders, 3) identifying a system to automate decisions and processes; 4) improving the quality and timeliness of PVP examination; 5) standardizing PVP business and management processes; 6) validating the PVPO's mission, and 7) reducing the application backlog. During Phase 1 the "As-Is" organization was assessed by evaluating processes, performing workflow/workload analyses,

uncovering bottlenecks/gaps, and identifying areas of improvement/potential opportunities. In Phase 2, new “To-Be” process models were developed to streamline/standardize PVP processes, integrate best practices, clearly identify staff roles/responsibilities and recommend areas for improvement.

Recommendations of Phase 2 included 1) implementing “Stakeholder Satisfaction” as a key performance metric/measure, 2) reducing the application backlog by increasing the annual disposal requirement, 3) establishing collaborative teams and backups to ensure continuous workflow and realignment of duties for better utilization of staff and manageable workload, 4) establishing time standards at each pivotal point to reduce bottlenecks and constraints, 5) evaluating resource usage reduction for cost savings and benefits, 6) establishing clear delineations of roles and responsibilities/level of authority, and 7) upgrading/replacing the current STAR database.

During Phase 3 an Implementation Plan/Strategy was developed that established milestones and performance monitoring, created Standard Operating Procedures (SOPs), updated the PVPO Office Manual, and refined the “To-Be” process models. Phase 4, pre-implementation activities included pilot testing the new processes on incoming soybean applications, selecting a cross functional implementation team, establishing a backlog reduction inventory/baseline strategy, and implementing a formal change management process.

The expected improvement resulting from the BPR includes 1) policies/protocols for PVP application processing, 2) integration of best industry practices, and 3) increased customer satisfaction by optimizing PVPO’s value to its stakeholders. The standardized/documented processes will promote accountability for work performance, clearly defined roles and responsibilities, improve task-to-skill alignment, and establish realistic performance standards to reduce bottlenecks and constraints.

The key components of the PVPO continuous process improvement are 1) Collaborative Culture, 2) Clear/Focused Communication, 3) Continuous Workflow, and 4) Replacement of Current IT System.

The Board commented that the BPR seemed to focus on improving the PVP examination process – Paradigm commented that during the “As-Is” assessment found that many administrative duties were being performed by PVP Examining staff - the BPR intends to realign the PVP staff to focus specifically on examining versus administrative duties. The Board wanted to know how performance monitoring would be accomplished – Paradigm commented that a performance monitoring tool was developed and would be used by Program Analysts, Associate Examiners, and Examiners.

The Board cautioned the PVPO to not follow the U.S. Patent and Trademark Office (PTO) approach by rewarding Examiners for more application denials. The Board was also interested in Paradigm's corporate background – Paradigm commented that they have assisted other organizations in process improvement. The Board was interested in the proposed 3 point system for Examiners – the Commissioner commented that an Examiner would be given 1 point for sending a request for information (RFI) to an applicant, 1 point for submitting an application to Quality Assurance (QA), or 2 points if no RFI is required/application submitted directly to QA.; and 1 point for passing QA.

The Board also suggested that the PVPO post the new PVP crop teams on the PVP website to improve transparency and improve communication efficiency.

Topics Brought Forward by Board Members. One Board member mentioned the Quaker United Nations Office report on Food, Biological Diversity and Intellectual Property: The Role of the International Union for the Protection of New Varieties of Plants (UPOV).

The Board also discussed the proposed PVP draft form and made suggestions for improvement. The Board mentioned the phrase on the new draft form for Exhibit B and the instructions on choosing the most similar variety "...based on overall morphology," - it was suggested that this phrase be changed to permit the ability to use genetic information for the selection of the comparison variety(ies) as well.

The Board was also concerned about the instructions for the new draft Exhibit A and asking applicants for "characteristics by which the application variety can be distinguished from the direct parents" being indicative of a new requirement to add comparison data of both parents. The PVPO will look into both of these issues for the new draft PVP form. The Board also commented that providing these forms for Exhibits A and B should help guide applicants in providing the correct information instead of relying on applicant narratives to provide the proper information. The Board suggested that other formats than Adobe Acrobat pdf be available for submitting electronic applications – citing laborious data entry into pdf forms and suggesting that a format such as Microsoft Excel might be preferable.

The PVPO discussed the process to improve the certificate issuance; previously the PVP certificate included a copy of the PVP application bound with 3 grommets and tied with a green ribbon. For the new certificate the PVP application copy, grommets, and ribbon will be eliminated. The new certificate will still contain the seal of the PVPO, the Commissioner's signature, and the Secretary's signature. The new process will save time, paper, and reduce a repetitive injury concern caused by the grommeting procedure. Applicants who want a certificate with the application copy, grommet, and ribbon can make a special request and receive this type of certificate after paying the PVP labor cost for processing. Copies of the certificate face and the

issued PVP application will continue to be posted on the PVPO website. The Board recommended that the PVPO inform the public of this new process through the PVPO website.

Another issue discussed by the Board is that the PVP website's Frequently Asked Question (FAQ) section should provide information about the fate of parent seed of a hybrid PVP variety (seed of all parents and the PVP hybrid varieties are required to be deposited and will be made available to the public when that PVP expires). A similar discussion occurred regarding the expiration of PVP, but the parents are PVP or patented varieties with unexpired PVP or patents. The Board indicated that National Center for Genetic Resources Preservation (NCGRP) tries to determine what germplasm can be released upon PVP expiration, however there are often extenuating conditions such as other forms of intellectual property rights (IPR), transgene regulatory issues, and other factors for both the PVP variety and its parents (for hybrids). The Board suggested that applicants who fill out the seed deposit form prior to sending seed to NCGRP disclose all this information so that NCGRP can better assess the germplasm for release upon PVP expiration (this might be difficult or impossible for the depositor to do in some cases - for example, the variety may contain third party licensed technology for which the patents are not known). The Board commented that for utility patents the seed deposit is immediately available for disclosure/enabement through the American Type Culture Collection (ATCC) and that the seed recipient may not be made aware of any IPR or transgenic regulatory issues by the ATCC. OGC commented that the PVP germplasm is released to the public through the NCGRP upon PVP expiration; that the USDA does not make representation to anyone receiving the germplasm; and it's the germplasm recipient's responsibility to check on the IPR or transgenic regulatory issue.

The Board commented that they would like to see the worldwide PVP system develop into a patent cooperation treaty (PCT) like system whereby a breeder could file for PVP anywhere in the world and their rights to file in another country are preserved. Furthermore the Board envisioned the U.S. PVP DUS (distinct, uniform, and stable) assessment be accepted elsewhere in the world without the need for further DUS testing in each country. It was mentioned that updating the PVPO computer system so the examination process becomes more transparent might gain greater trust in the US PVP process by other countries. Some Board members felt that the lack of trust from other countries was due to the U.S. being a breeder based DUS testing system. The Board commented that perhaps the U.S. PVP system could become similar to other countries where the breeder does the trial, and the PVPO visits the trial to interpret the results. OGC commented if a PVP owner voluntarily enters their germplasm into a seed certification process then other countries would respect the PVP process in that state seed certification programs are equivalent to other country's DUS growout trials.

Another topic brought forward was the desire for the PVP Germplasm Resources Information Network (GRIN) database to be more searchable with the capability of downloading the search query results.

The Board commented that the PVPO has done great domestic outreach, but that it needs to continue expanding its international outreach and training. All training was considered critical with the goal of having very good applications submitted to the PVPO so that the required office actions are simple. The Board also discussed 1) the PVP fees, suggesting that the PVP law be amended so that fees are linked to the cost of living and 2) clarifying that information must be received at the PVPO, not just postmarked to avoid permanent abandonment. Regarding fees - the Board discussed that an automatic fee increase is operationally difficult to require, but that maintenance fees might be added to the PVP law so that other application fees could be potentially reduced. It was discussed that due to the current high cost of PVP (greater than \$5,000) some valuable varieties from the USDA and universities may not have intellectual property protection. The cost of PVP may be higher upfront than utility patents based on the costs of conducting DUS trials, data collection, and PVP filing. The Board stressed that the PVPO needs to know how much money it needs for the future.

Future Program Outreach Activities. Janice Strachan. The current PVP outreach audience includes current/future applicants and breeders, applicant representatives and lawyers, other interested persons (students, speakers, writers and reporters), and PVPO staff and management. The PVPO conducts outreach using the website that provides a copy of PVP Act and Regulations, forms, fees, instructions, FAQs, basic information on previously filed applications, scanned images of issued certificates, news, press releases, and staff information.

Live outreach has been conducted through applicant training at external locations in 2005, 2007 (2 different sessions), and 2009 and at 3 different sessions held at the PVPO in 2009. The cost of live outreach is recovered by fees charged in accordance to Section 97.175(r) of the PVP Regulations and Rules of Practice. In Beltsville the PVP classes cost approximately \$300 per person. When PVP classes are held in other locations the cost is \$350 or more per person, depending on how many people attend the training and how costly it is to travel there from Beltsville. (There are cost efficiencies for a group of 25 or more.)

The PVPO is evaluating future outreach using online PVP training that has a registration fee to recover costs of software, equipment, regular updates to content, etc.. The PVPO would use e-Authentication (Level 2) to register, pay, and track progress. Registrants would have access to online modules for a limited time and proceed at their own pace. Quizzes and worksheets could track understanding and progress, and the PVPO might be able to assign a mentor (depending on staff workload) to answer specific questions by email.

Possible online PVP scenarios include 1) an online presentation of a video recording of a one-day training session in front of a live “audience” that is broken into eight 1-hour segments; 2) a

webinar in the form of a slide show with voice over and closed captioning broken into logical segments to cover specific topics, 3) an online class with live sessions, Q&A, homework, etc. (similar to college courses), and 4) online tutorials – reading only, no voice over (similar to a UPOV course). The PVPO would need to evaluate the equipment and resources to make these scenarios possible including hosted web conferencing, content delivery, video camera and camera operator, studio for videotaping, and software to track students.

The Board believed that the efficiency of the PVPO can increase when applicants become more knowledgeable. The Board suggested that some webinar content should be free if it helps the applicants and PVPO improve its examination process. It was suggested that the PVPO develop a training class in association with the American Seed Trade Association (ASTA), especially since the 2012 ASTA Convention will take place in Washington, DC.

For training, the Board said that PowerPoint™ slides and online exercises help; but the PVPO would need to assess if a student has accurately captured the information. The Board commented that short videos broken into 10-15 minute modules are much better than 1 hour modules for asynchronous learning and that interaction with the student is very important. The Board suggested that any videos be in a Youtube type format

US PVP - Molecular Techniques. Paul Zankowski. The PVPO will accept differences using molecular techniques (DNA fingerprinting) only if the molecular marker locus is publicly disclosed and cited (cites to URLs such as Soybase or MaizeGDB are acceptable); the molecular marker locus is clearly identified; the specific differentiating data is cited. If photographic copies are provided, they need to contain sufficient resolution of scientific publishable quality gels or other molecular data with sufficient resolution and labeling to resolve the individual data. Finally the molecular marker locus should be detectable by a third party.

For example, in the case of SNPs - the locus is defined by the SNP sequence showing the substitution or insertion-deletion polymorphisms (InDels), for SSRs - the locus may be defined by primer pairs or sequence, for AFLPs - the locus is defined by primer pairs, and for RAPDs - the locus is defined by primer pairs.

Currently PVP applicants use molecular markers to 1) differentiate a new variety from a few older varieties that are retrieved by the computer search (this is often faster than doing grow-out trials to establish morphological differences) or 2) establish that the application variety is different from the most similar comparison varieties (often done when a gene has been inserted in the new variety and its presence or absence makes the variety distinct from other varieties).

Over the past twenty years, the number of certificates issued with molecular data cited by the examiner as a primary distinguishing trait has increased from about 1% to 7-8% of all PVPs issued.

The PVPO requires that molecular data must be treated the same as other methods used to establish distinctness; the test methodology needs to use published procedures and reagents that are available to everyone who wants to perform the tests. Also the molecular distinct difference must be uniform and stable with the tests, and must be performed on more than one individual over two or more generations.

The PVPO is studying the situation when the molecular difference will be used as the sole basis for distinctness in that it will not be possible to distinguish a new variety from all previously existing varieties. Morphological data will continue to be necessary to differentiate older varieties in the databases from newer varieties. If most older varieties are profiled and that profile is made available to the PVP Office, it is possible that a way can be found to use this data to differentiate older varieties from new varieties. The section of PVP Act that concerns the distinctness criteria is section 42 “.....(2) distinct, in the sense that the variety is clearly distinguishable from any other variety the existence of which is publicly known or a matter of common knowledge at the time of the filing of the application.”

The Board commented that the PVPO needs a new database that is capable of handling molecular data and that some databases may be better at handling morphological versus molecular data. The Board felt that the PVPO is at the forefront of molecular marker usage and that molecular information is a good tool that needs to fit into the PVP process. The Board recommended that the PVPO looks forward to using molecular data in the future, since it will be difficult to characterize old unavailable varieties without it.

UPOV activities and PVP Harmonization Activities with China and Vietnam. Paul Zankowski. The Board was updated on the current UPOV leadership and the role of the U.S. The U.S. delegate to UPOV (Kitisri Sukhapinda from the U.S. Patent and Trademark Office (PTO)) will accede to the president of the UPOV Council. The U.S. will host the UPOV Technical Working Party for Vegetable (TWV) in Monterey, California during July 24-29, 2011 and will have a day for field test site visits that highlights the U.S. breeder based PVP DUS data collection.

The Commissioner traveled to China in April 2011 and made a presentation at the East Asia PVP Forum in Nanjing. He also conducted bilateral meetings at the Chinese Ministry of Agriculture in Beijing to discuss collaboration and harmonization of the U.S. and Chinese PVP systems.

China would like assistance with establishing a crop database similar to the US PVP Office and to learn more about the U.S. PVPO and the U.S. breeder based DUS testing system.

The Chinese PVPO recently proposed a Chinese PVP Examiner exchange and would like to send 2 Chinese PVP Examiners to work beside U.S. PVP Examiners for a period of 3 to 6 months. Unresolved issues for the exchange include - allowing the Chinese to work on pending confidential PVP applications and funding for travel, housing, and meals. Possible solutions include having individual PVP applicants grant waivers to allow the Chinese PVP Examiners the ability to view and work on their pending confidential PVP applications and obtaining external grants to fund their visit/training. The main goals for the Chinese are to 1) comprehend the intellectual property laws of the U.S, 2) study U.S. examination methods using written documents instead of DUS field trials, 3) use the U.S. PVP methods to do examination on live PVP applications, 4) understand the procedure of examination for asexually propagated plants (this would be done by the U.S. PTO), and 5) acquire information on breeding development from American seed companies and universities. The combined U.S./China goal would be to allow the U.S. and China to better harmonize their PVP examination processes.

The Commissioner discussed a proposed memorandum of understanding (MOU) with Vietnam for cooperation in DUS testing. Under this MOU the Vietnam and U.S. PVPOs would independently make decisions on the issuance or denial of plant breeder's rights with or without information from the corresponding PVPO.

The Board indicated that they were impressed with the increased international activity at the PVPO and recommended that these activities continue and be increased.

PVP Strategic and Business Plans. Paul Zankowski. The Board was presented with the PVP 2008-2013 Strategic Plan and its three goals: 1) Optimize PVP Certificate Quality and Timeliness, 2) Achieve Organizational Excellence, and 3) Improve Plant Breeder's Rights and Enforcement Domestically and Abroad. The Board also was presented with the PVPO 2011 Business Plan and its five goals : 1) Ensure fair and competitive agricultural marketing through marketing tools and regulations, 2) Increase Office productivity, 3) Increase communications among employees and other USDA personnel and maintain a culturally diverse workforce, 4) Expand services and program educational outreach activities, 5) Greater use of information technology systems (hardware and software).

The Board commented on the importance of the PVPO's budget forecasting methodology.

Discussion with David Shipman

Mr. Shipman held a follow-up conference call. The Board commented on the importance of getting the PVP database upgraded and the significant funding issues to accomplish this task. Mr. Shipman wanted to know if the Board thought that all the old PVP data needed to be migrated into the new database in that this was one of the greatest challenges. The Board suggested that perhaps only migrating data from the past 5 years and archiving the remainder of the old data; since new varieties are usually developed from recent germplasm/varieties. The Board also commented on the PVP activities with China and Vietnam, and that the U.S. PVP processes and systems should be optimal for efficient PVP examination before having credible influence on other country's PVP systems. The Board indicated that the BPR should set the groundwork for a new PVP system/process, but it is still important to look at how PVP systems work in other countries.

Mr. Shipman asked what should be the timeline for the database conversion- the Board commented that 12 to 24 months would seem reasonable. The Board mentioned Mr. Shipman's comments about the February 2011 Economist article on feeding the world's 9 billion people – Mr. Shipman indicated that he would make the article available to the Board members.

The Board discussed the importance of financial projections using a forecast model with the assumption around revenue and cost such that if the database cost \$1 million the PVPO cash flow would look like X and if the database cost \$2 million the PVPO cash flow would look like Y.

The Board commended the Commissioner and the PVPO staff for their international activities.

The Board commented that even with the BPR - incoming applications will increase and that the PVPO will reach a point when hiring new examining staff will be necessary.

Board Recommendations:

1. Reactivate the PVP Board Extranet site for Board members to share their ideas/comments.
2. Establish a budget forecast model to help assess the costs for the new database project based on different incoming application scenarios.
3. Continue activities on domestic and internal outreach and training.
4. Evaluate a product for the new database that can utilize molecular marker data.
5. Evaluate out of the box methods to fund the new database.
6. The PVPO should consider developing electronic application capabilities that will not limit the ability of applicants to submit bulk applications.