Performance Plants, Feeding and Fueling the World

A Success Story

Performance Plants Inc. (PPI) is focused on developing technologies through its Gene Discovery and Trait Development Program. The Company has validated and patented an array of world-leading second generation, commercial ready technologies to capitalize on the market for innovation in agricultural and bioenergy crop markets.

New technologies are being sought after that can improve the yield, quality and productivity of food and bioenergy crops. Yield is particularly important as demand for grain is projected to increase significantly worldwide. Crop demand is being driven by a variety of factors including: low global grain stocks, the addition of 3.0 billion more mouths to feed by 2050, increasing animal protein demand from the “BRIC” countries (Brazil, Russia, India and China) and growing demand from the bioenergy sector to replace coal, oil and natural gas with renewable fuels made from biological feedstocks.

Global food and energy security concerns combined with climate change realities has brought to the forefront the challenges many countries face with drought and heat-induced agricultural problems. In recent years, governments like China, have made finding solutions to these problems a national priority. With only 7% of the world’s arable land and 6% of its water sources being used to feed more than 20% of the world’s population, part of the solution to this ever pressing concern is through technology. Enter Performance Plants Inc.

Increasing yield has become a main concern for the agricultural food and non-food biotechnology industry. Performance Plants is the first Canadian ag-biotech company to sign licensing agreements with the Chinese, opening new markets and proving itself, once again, as a global leader. Industry insiders see 2012 as a favorable year for crop protection and Performance Plants projects even more success with its weather-proofing, biomass and yield enhancement technologies.

About PPI’s Technologies:

PPI’s Yield Protection Technology® (“YPT®”) is most advanced and enables plants to better tolerate drought conditions and to produce higher seed yield under limited water conditions. In addition, PPI has a series of breakthrough technologies in different stages of development: Heat
& Drought Tolerance Technology (“HDT™”) preserves yield by enhancing plants’ tolerance to heat, drought or combined stresses. Water Use Efficiency Enhancement Technology (“WET™”) allows plants to maintain their high productivity through extended periods of limited available water, Yield Enhancement Technology (“YET™”) is a technology that can boost seed yield under both optimal and stress growth conditions, Biomass Enhancement Technology (“BET™”) is ideally suited for large biomass applications such as biomass feedstock (for cellulosic ethanol and coal replacement) as well as fibre and forage by more biomass by boosting vegetative plant growth, and Enhanced Conversion Technology (“ECT™”) products resolves the second half of the biofuels dilemma – making the plant’s tough cell walls more easily converted to biofuel.

**PPI’s Timeline of Accomplishments:**

In 1998, PPI formed collaboration with the University of Toronto on improved Drought Tolerance & Yield Protection Technology® (YPT®) and later that year executed its first licensing agreement with Dow. This agreement helped to establish PPI as more than a Research and Discovery Trait Company.

In 2003, the company received the Kingston Technology Council’s Pinnacle Award, in recognition of innovation, entrepreneurship and community contribution in the area of technology.

PPI was acknowledged in 2005 by the Canadian Biotechnology Industry as the country’s “Most Promising Canadian Early Stage Biotechnology Company.” This award recognized Performance Plants as a Canadian company with demonstrated leadership and significant achievements.

In 2006, PPI completed a financing round of $12 million, making it the largest private investment in an ag-biotech company in Canada at that time.

In 2007, PPI became the first Canadian Ag-Biotech company to license intellectual property (YPT® in white maize) to Africa for noncommercial purposes. PPI entered into a noncommercial agreement w Africa Harvest Biotech Foundation International (AHBFI). Dr. Florence Wambugu, Chief Executive Officer, AHBFI, a leading proponent of change in modern African agricultural science, is a Kenyan, American and U.K. trained plant pathologist dedicating her life’s work to the belief that biotechnology holds the key to food self-sufficiency for Africa, said "This is not only good work, it's good business."
In 2008, PPI once again secured another successful round of financing completing a $13 million equity round of financing. YPT® was featured in the prestigious Science magazine, The Blue Revolution, Drop by Drop, Gene by Gene, 11 April 2008: 171-173 issue.

In 2009, Natural Resources Minister Lisa Raitt and Vicky Sharpe, SDTC President and Chief Executive Officer, Sustainable Development Technology Canada (SDTC) announced over $5 million dollars in funding to further advance PPI’s trait technologies that improve conversion of cellulose into cost-effective biofuels and biochemical.

In 2010, PPI went on permanent display at Chicago’s Museum of Science and Industry in an exhibit titled Hardy Plants: Engineered to Resist Drought. The exhibit includes a 3D showing of the results of drought resistance tests in canola in a credited time lapse video as well as live plants under different watering conditions.

With the appointment of Dr. Yafan Huang, Ph.D, as President and Chief Scientific Officer, 2011 earmarks PPI’s most successful year, seeing the company’s highest level of research and commercial agreements signed within a one year period. With international focus on climate weather change, maturing ag-biotech markets and expansion into the consumer market, PPI continues to be a global technology leader.

During a mission to Yangling, Shaanxi Province of China, in November 2010, PPI discussed and finalized a framework for a technology transfer and product commercialization partnership with the Shaanxi Hybrid Rapeseed Research Center that would accelerate product development and facilitated entry into China’s canola seed market. This would lead to a Memorandum of Understanding at the Fourth China-Canada-Israel Roundtable on Agri-Innovation at the CAF2011 in Yangling on November 7, 2011.

These deals represent PPI’s strategic business development plan to form global technology and product development alliances for commercialization of the company’s leading technologies.

In July 2011, the Company signed a commercial licensing agreement for corn and a four year R&D agreement for rice and soybean with the Beijing Dabeinong Technology Group Co. Ltd. (DBN). DBN and PPI, will collaborate to develop new corn, rice and soybean varieties with the Drought Tolerance & Yield Protection Technology® (YPT®), Heat & Drought Tolerance Technology (HDT™), Water Efficiency Technology™ (WET™) and Yield Enhancement Technology (YET™) trait technologies. This multi-trait agreement is the company’s first commercial agreement fast tracking product commercialization using PPI’s technologies with one of the largest agricultural company in China. The signing ceremony was graciously hosted by the Kingston Economic Development Corporation (KEDCO) and was held at City Hall in Kingston, Ontario.

Two more significant agreements were signed in November and December 2011, licensing HDT™ in cotton to Biocentury Transgene (China) Co. Ltd. in China, and Bayer CropScience AG, (Monheim, Germany) to produce seeds world-wide excluding China. These agreements signify the company’s expansion into the consumer market and showcases the advantages of PPI’s trait stacking capabilities.

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2012 is no less active, with PPI having signed two separate agreements to allow its North-American commercial partners to continue their evaluation of the licensed PPI technologies. These agreements represent partner confidence in the YPT® technology and signal the good progress in developing the technology into product lines. More commercial agreements are being developed with a series of ‘market gate-keepers’ in different key agricultural regions of the world.

The Company:

Performance Plants Inc. (PPI) is a privately-held Canadian company, headquartered with R&D facilities in Kingston, Ontario. PPI is a global leader in the development of second-generation agricultural biotechnologies. The company's patented technologies weatherproof food and non-food biofuel crops through periods of drought and heat stress resulting in a more abundant, consistent and cost-effective harvests for farmers, and feedstock suppliers.

PPI was founded in 1995, by Dr. David Dennis, FRSC, Professor from Queen's University, Kingston, Ontario, to discover and develop an array of agricultural-biotechnologies to improve the yield and productivity of crops. The company successfully evolved from a research powerhouse to a company focused on developing and commercializing products based on its robust gene-discovery pipeline. PPI has secured licensing and development agreements with several major multinational seed companies including Pioneer Hi-Bred, Bayer CropScience, Syngenta, Stine Seeds, RiceTec, and Scotts Miracle Gro. More recently, PPI has entered into exciting new partnerships with leading Chinese ag-biotech and seed companies: Beijing Dabeinong Technology Group Co., Ltd and Biocentury Transgene (China) Co. Ltd.

“Performance Plants is positioned to be a leading agricultural trait developer and provider of superior ag-biotechnologies for significant improvement in crop performance and productivity world-wide. Through our partnerships, with both multinational seed companies and strong regional partners, farmers around the world will soon be able to benefit from the high-performance superior seed products containing our technologies. ” says Dr. Yafan Huang, President and CSO at Performance Plants.

“For a technology company to be able to play a significant role in the international market, the road to success starts long before the agreement signing ceremonies. Performance Plants has received timely expert assistance in various business areas from organizations such as MaRS, Launch Lab and KEDCO. I believe that they are part of our success story”.

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