

Comments Regarding Agriculture and Antitrust Enforcement Issues in Our 21st Century Economy

Potential Impact of U.S.-Based Seed Company Competition on Access to Seed in the Developing Country Context¹, December 30th 2009

"We have committed to investing \$20 billion in food security -- agricultural development programs to help fight world hunger. This is in addition to the emergency humanitarian aid that we provide. And I should just note... we had agreed to \$15 billion; we exceeded that mark and obtained an additional \$5 billion of hard commitments. We do not view this assistance as an end in itself. We believe that the purpose of aid must be to create the conditions where it's no longer needed -- to help people become self-sufficient, provide for their families, and lift their standards of living."

President Obama
L'Aquila Summit, 10 July 2009²

Introduction

The United States of America is committed to the issue of global food security. President Obama went as far as stating that "wealthier nations have a *moral* obligation as well as a *national security interest*" on this issue³. At the G20 Summit in April 2009, he called upon Congress to double U.S. support for agricultural development in developing countries to more than \$1 billion⁴, to increase U.S. investments annually, and provide at least \$3.5 billion over the next three years.

The organisation we serve - the Consultative Group on International Agricultural Research ('CGIAR') – is the world's single largest publicly funded, non-profit partnership, consisting of

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² http://www.whitehouse.gov/the_press_office/Press-Conference-by-the-President-in-LAquila-Italy-7-10-09/, last accessed 24 December 2009.

³ President Obama, answering a question from Peter Baker, 10 July 2009. Ibid.

⁴ http://www.whitehouse.gov/the_press_office/News-Conference-by-President-Obama-4-02-09/, last accessed 24 December 2009.

64 members that support 15 international agricultural research centres. The CGIAR works in collaboration with hundreds of governments, civil society organisations and private businesses (including many U.S.-based seed companies) around the world. The CGIAR mission is to achieve sustainable food security and reduce poverty in developing countries through scientific research and research-related activities in the fields of agro forestry, biodiversity, food, forage and tree crops, pro-environment farming techniques, fisheries, forestry, livestock, food policies and agricultural research services. The U.S. is our largest country donor⁵, and various U.S.-based philanthropies (including the Bill and Melinda Gates Foundation, the Rockefeller Foundation, the Ford Foundation, the McKnight Foundation and the Kellogg Foundation) support our work⁶.

To achieve global food security through reducing hunger and poverty, increasing the availability, access to, and utilisation of seeds by developing country farmers is critical. Currently, seeds for the world's poorest farmers come mainly from companies based in industrialised countries and developing country parastatal seed companies.

Based on 2007 revenues, the ETC Group⁷ estimates that the top ten global seed companies control 67% of the global proprietary seed market. Of the top 10, three are U.S. based and control 42% of the global proprietary seed market. Monsanto and DuPont account for 23% and 15% of this market, respectively. Discussions about competition and the concentration of intellectual property ('IP') within the U.S. seed industry will likely have an impact on developing country agriculture and global food security.

This document is submitted by the Central Advisory Service on Intellectual Property (CAS-IP) as we provide IP and legal support for the CGIAR and believe that it is important to bring the plight of the developing country farmer into this discussion of agribusiness structure. In two decades of agricultural research devoted to the development and use of improved germplasm and best practices in agriculture, CGIAR research has been the driving force behind increased food production in the poorest areas on the globe. The genebanks of the CGIAR Centres constitute the world's largest source of crop germplasm in the world. Material in these banks is held in trust by the FAO and is available to all, for the asking. The "Green Revolution" of the late 1960's enabled countries from Mexico to India to the Philippines to grow enough food to feed their populace and, in many cases, to grow a surplus that could be exported. It has been shown that for every dollar invested in the CGIAR, \$9 worth of additional food has been produced in the developing world⁸. More recent impact assessments indicate that annual benefits from research and development, based on CGIAR research are in excess of \$1 billion, at a cost of \$540 million in 2008. The CGIAR continues to carry out research and development activities that have a measurable impact on the lives of poor small-holder farmers in developing countries.

⁵ Contributing \$58.0 million in 2008. Source: <http://www.cgiar.org/who/members/funding.html>, last accessed 24 December 2009.

⁶ <http://www.cgiar.org/who/members/index.html>, last accessed 24 December 2009.

⁷ *Who Owns Nature? Corporate Power and the Final Frontier in the Commodification of Life* (November 2008), available at: http://www.etcgroup.org/upload/publication/707/01/etc_won_report_final_color.pdf, last accessed 29 December 2009.

⁸ See http://www.cgiar.org/impact/snapshots_impacts.html for a snapshot of our impact, last accessed 24 December 2009.

With regard to the joint effort of the Department of Justice ('DoJ') and the United States Department of Agriculture ('USDA'): we view this as an important dialogue among interested parties that will foster learning with respect to the appropriate competition, regulatory and economic issues affecting the agriculture industry in the U.S. We urge the DoJ and USDA to not forget the impact that these investigations will certainly have on developing country farmers and the hungry people they are attempting to feed.

U.S.-based Seed Companies and Developing Country Markets

In 2009, approximately 45% of Monsanto's sales revenue originated from legal entities outside the U.S.⁹ Pioneer Hi-Bred Inc. ('Pioneer'), a part of the DuPont Corporation, proudly states on their website that: "Pioneer operates on every crop-producing continent of the world, in nearly 70 countries. The Pioneer International Operations business is growing. Seed sales outside of North America passed the \$1 billion milestone for the first time in 2006"¹⁰. These numbers illustrate that developing country markets are impacted by U.S. seed companies. Hence the business strategies of such companies affect the terms of access to seeds, the affordability of seeds, the diversity of genetic resources on farmer's fields, the income and livelihood of resource-poor farmers, relationships with agricultural research organisations, and ultimately the food security of developing countries.

For emerging economies such as India, China and Brazil, with capacities for research and internal demand, multinational companies have been quick to enter the market, often through joint ventures with many successful local seed companies and, where possible, through mergers and acquisitions. Below are just three examples to illustrate this point:

- a) In 1998, Monsanto acquired a 26% stake in Maharashtra Hybrid Seed Company ('Mahyco'). Before then, Monsanto had already been operating in India since 1949¹¹. The acquisition has been said, at least by one source, to be a successful strategy for Monsanto as, "Mahyco is the leading player in the seed/crop species segment with 16 production centres, a network of 23 sales offices and over 2,500 dealers. The product portfolio of Mahyco comprises over 30 crop species including cereal, pulse, oilseed, fibre, fruit and vegetable crops. On top of this, it markets over 300 hybrids. Thus, the multinational need not set up its own network and gets a ready team to promote its products into the country."¹² It is to be noted that Mahyco is the first seed company in India to produce and market hybrids of cotton, sorghum, pearl millet, sunflower and wheat. It is the company responsible for the commercialisation of India's first transgenic crop - Bt-cotton (Bollgard®) - in 2002¹³.

⁹ This is for fiscal year ended 31 August 2009. See: *Monsanto 2009 Annual Report*, available at: http://www.monsanto.com/pdf/pubs/2009/annual_report.pdf, last accessed 30 December 2009.

¹⁰ <http://www.pioneer.com/web/site/portal/menuitem.062541254e7ac318bc0c0a03d10093a0/>, last accessed 24 December 2009.

¹¹ It currently has at least 16 offices spread across India. See: http://www.monsanto.com/who_we_are/locations/india.asp, last accessed 26 December 2009.

¹² <http://www.indianexpress.com/ie/daily/19980425/11550034.html>, last accessed 26 December 2009.

¹³ <http://www.mahyco.com/index.html>, last accessed 26 December 2009.

- b) In 2008, Monsanto acquired Aly Participacoes Ltda, that owns two other companies, CanaVialis S.A. and Alellyx S.A., both based in Brazil and which are leaders in sugarcane breeding and genetics. With this acquisition, Monsanto effectively entered the sugarcane business and gained access to markets outside the U.S. In the same year, Monsanto also acquired Semillas Cristiani Burkard, a leading Central American hybrid corn seed (also grain sorghum, forage sorghum hybrids and soybean) company based in Guatemala City.
- c) In 2006, Pioneer (DuPont) strengthened its presence in China through a joint-venture with Dunhuang Seed Co. Ltd., forming a new entity known as Dunhuang Seed Pioneer Hi-Bred Company Ltd. Dunhuang is one of the largest corn and vegetable seed production companies in China and has extensive experience in the seed business, with at least 25 wholly owned subsidiaries. Because of regulations in China, Pioneer is only allowed to own 49% of the joint venture¹⁴. This venture follows an earlier, 2002, action whereby Pioneer entered the China corn market through a joint venture with Shandong Denghai Seeds Co. Ltd., forming Shandong Denghai Pioneer Seeds Co., Ltd.

The above developments in emerging nations are reminiscent of the situation in the U.S. about three decades ago. Will the rest of this history repeat itself, wherein most small seed firms in the U.S. began to vanish as mergers and acquisitions created a new seed industry structure dominated by a limited number of large companies? In the U.S., the recent decline in the number of independent seed companies and the emergence of large firms that provide seed as part of an array of agricultural products and services, has triggered concern that anti-competitive practices could result from control of access to germplasm and pricing.

Certain practices in the U.S. seed industry, resulting in the concentration of ownership of IP or vertical integration of seed production, can translate into undesirable effects outside the U.S. such as restricted choice of lines of high quality seed, lack of access to germplasm for breeding, and lack of control over price. We suggest that the analysis and discussions at the upcoming workshop on issues of concern to farmers, to be held on March 12, 2010, consider potential impacts of various practices not only on U.S. farmers, **but also on their counterparts in developing countries especially as regards food security in developing countries.**

Access, Use and Exploitation of Proprietary Germplasm and Agricultural Technologies by Developing Countries

Although IP rights are territorial in nature and use of proprietary germplasm and technologies in a country where no IP rights exist on them should not be problematic, we have seen that recent case law in the U.S. and Europe demonstrates that this may not be a simple proposition for farmers in developing countries. Infringement suits, based on the export of soybean meal originating from a developing country, have been levelled against importers based in Europe. Several European courts saw these actions as representing an indirect way of enlarging the territorial nature of IP rights and thus could serve as a potential back door to threaten collection

¹⁴ <http://www.pioneer.com/web/site/portal/menuitem.85ade100be942ffc81127b05d10093a0/>, last accessed 26 December 2009.

of royalty payments from developing country farmers¹⁵. Recent trends in the pharmaceutical sector, where drugs in transit were seized while in temporary transit storage in the European Union, although destined for locations with no IP rights on the drugs, also clearly illustrate a disturbing trend¹⁶.

Besides the potential constraints posed by IP rights, contracts¹⁷ such as licence agreements, material transfer agreements and collaboration agreements further influence the way in which users in developing countries access and use germplasm and associated technologies. Taylor and Cayford (2002) stated in their study that:

“...researchers typically must enter into material transfer agreements (MTAs) that place tight restrictions on the use of the technology, including prohibitions on commercialization. The leverage to impose strict MTA conditions arises in part from the patent holder’s ability to exercise control over the use of the patented technology. MTA provisions can operate as a de facto extension of the patent to the country where the researcher works: to the extent the researcher was legally free to use the invention outside the United States, that freedom is usually lost in the MTA. The practical impact of U.S. patents on access to biotechnology thus clearly extends beyond the United States.”¹⁸

Technologies, especially in the area of agricultural biotechnology, are often “donated” to developing countries through agricultural research organisations, foundations and non-profit scientific institutions such as the CGIAR, through contracts. These agreements may contain broad confidentiality clauses and restrictions on the use of the technology within certain countries/region and usually only for specific crops, even though IP rights are absent in those jurisdictions. **Seed industry concentration in the U.S. could impact the balance of negotiating power in these situations.** If fewer companies control access to technology needed to assist the development of locally-adapted varieties for poor farmers in developing countries, and if alternative sources¹⁹ are unavailable or strategies to invent around patents are too expensive, the hands of the public sector may be tied and there will be less room to negotiate or disagree with a potential commercial partner for access to “cutting edge” science for the benefit of the poor.

¹⁵ See: *Monsanto Technology LLC v Cargill International SA and Cargill PLC* [2007] EWHC 2257 (Pat) and http://www.guardian.co.uk/science/2006/feb/22/gm_argentina, last accessed 27 December 2009.

¹⁶ See: <http://ipezone.blogspot.com/2009/02/india-brazil-make-wto-issue-of-generics.html>, last accessed 27 December 2009; and <http://casipblog.wordpress.com/2009/03/18/patent-enforcement-the-doha-declaration/>, last accessed 27 December 2009.

¹⁷ Prohibitive clauses in contracts also affect smaller U.S. seed companies and farmers. See: http://www.huffingtonpost.com/2009/12/13/monsanto-squeezes-out-see_n_390354.html, last accessed 29 December 2009.

¹⁸ Taylor, M. and Cayford, J. (2002), *The U.S. Patent System and Developing Country Access to Biotechnology: Does the Balance Need Adjusting?* Resources for the Future. Available at: <http://www.rff.org/RFF/Documents/RFF-DP-02-51.pdf>, last accessed 27 December 2009.

¹⁹ The public sector, with support from private foundations such as the Rockefeller Foundation, has tried to create patent pools and technology-sharing mechanisms for access by developing countries or for purposes of development in the past, through the creation of non-profits such as PIPRA (<http://www.pipra.org/>) and AATF (<http://www.aatf-africa.org/>). It is, however, unclear what impacts these efforts have on the pooling of intellectual assets for use by resource-poor farmers in developing countries.

Competition/Anti-Trust Laws and Developing Country Challenges

Restructuring of developing country economies, and the consequent removal of border barriers to trade and investment have been on-going since the 1980's²⁰. Many developing countries today have liberalised their economies to encourage foreign direct investments as well as to enhance domestic competition. In this process, competition laws and policies have been adopted in developing countries to ensure growth of the private sector and increase efficiency of state enterprises.

In 2007, the United Nations Conference on Trade and Development (UNCTAD) reported that a total of 113 countries and regional groupings had adopted or were in the process of adopting competition legislation. Although some developing countries now have competition/anti-trust laws in place, many challenges remain.

The most obvious challenge is the lack of resources, both financial and skill-based, in implementing and enforcing competition laws and policies. Enforcement is also often confined to national jurisdictions. Stewart, Clarke and Joeques (2007)²¹ state that:

“... if a firm or group of foreign firms engages in anticompetitive conduct that adversely affects competition or consumer welfare in another country, there is no recourse for the authorities in the affected market to discipline those firms. Yet, international cartels – which can arise either in formation and/or scope of action – exist in the global economy and are increasingly targeting countries where there are no competition regimes, or where enforcement is weak... Lack of knowledge and skill in investigating international cartels, combined with the extreme power asymmetries between the governments of some developing countries in relation to large multinational enterprises (MNEs), may also play a role.”

This is a problem that developing countries will need to tackle, hand in hand with competition/anti-trust regulatory bodies from more advanced foreign jurisdictions such as the U.S. and the European Union²². The complexity of investigating cross-border anticompetitive practices, as well as the mere presence of competition laws in developing countries that are often copied from industrialised jurisdictions and hence have limited effectiveness, will serve as real challenges for developing countries in years ahead, due in part to globalisation.

²⁰ Largely under IMF/World Bank Structural Adjustment Programmes.

²¹ Stewart, T., Clarke, J. and Joeques, S. (2007), *Competition Law in Action: Experiences from Developing Countries*. International Development Research Centre (IDRC). Available at: http://www.idrc.ca/uploads/user-S/11781215481Competition_Law.pdf, last accessed 28 December 2009.

²² The efforts of the DoJ and regulatory authorities in the European Union in successfully uncovering many international cartels in the past is testament to the importance and influence of vigilance of authorities in developed countries.

Below, we review how a least-developed country (“LDC”) – Malawi – that has in place a competition law regime²³, intellectual property laws²⁴ and biosafety legislations and policy²⁵, is nevertheless heavily influenced by multinationals in the seed sector that invest in its market. *Our example is only illustrative of one country in Sub-Saharan Africa and is by no means intended to be representative or exhaustive.*

The Case of the Maize Sector in Malawi

Malawi is an example of an LDC²⁶ that has very few local seed companies and where corn (commonly referred to as maize in Malawi) is a major staple crop that is commercialised by the private sector. Currently around 70% of Malawi’s agricultural area is planted with maize. Agriculture in Malawi is predominantly rainfed subsistence agriculture. Food security and self-sufficiency depend upon the output of a large number of small-holder farmers. According to a recent report²⁷, “Malawi currently has a population of 13 million that is expected to triple to around 40 million in the next 30 years.” Developing countries such as Malawi desperately want to develop their own solutions for feeding themselves, rather than being handed emergency food aid by donors.

Until the early 1990’s, seed supply was carried out by a governmental monopoly, through the National Seed Company of Malawi (NSCM) which operated as the production arm of the Malawian Agricultural Development and Marketing Corporation (ADMARC). Market liberalisation in the late 1980’s resulted in Cargill purchasing a controlling interest in the company. In 1998, Monsanto purchased Cargill’s seed business and has been operating in Malawi ever since. Monsanto concentrates on hybrid maize seed production, and seeds of other important small-holder farmer crops such as grains and grain legumes are no longer produced by this facility. Despite the importance of crop diversification to Malawian small-scale farmers in coping with production risks, coupled with the fact that public research has been producing new varieties of beans, cowpeas, cotton and soybean, no vehicle is in place to bring them to farmers. The private sector seems to be uninterested in commercial production and marketing of such crops, which are considered low value and mainly open and self-pollinated²⁸. In Malawi, we can see that choices for the local farmer have been limited as liberalisation of the commercial seed

²³ The Competition and Fair Trading Act of 1998. Available at: <http://www.itu.int/ITU-D/treg/Legislation/Malawi/act43.pdf>, last accessed 29 December 2009.

²⁴ Although Malawi has yet to develop a plant variety protection system, it has all the usual mechanisms in place for main IP rights such as patents, trade marks, copyrights and industrial designs. See: <http://www.wipo.int/about-ip/en/ipworldwide/pdf/mw.pdf>, last accessed 29 December 2009.

²⁵ Biosafety Act of 2002, Biosafety Regulations of 2007 and a standalone National Biotechnology Policy. See: <http://www.africanagricultureblog.com/2008/08/malawi-approves-biotechnology-law.html>, last accessed 29 December 2009; and <http://programs.ifpri.org/pbs/pdf/statuscomesa.pdf>, last accessed 29 December 2009.

²⁶ LDC = Least developed country according to UNCTAD. Please see <http://www.unctad.org/Templates/Page.asp?intItemID=3618&lang=1> for additional details, last accessed 29 December 2009.

²⁷ <http://news.bbc.co.uk/2/hi/business/8363914.stm>, last accessed 28 December 2009.

²⁸ See: *Malawi Maize Sector Stakeholder Workshop Report* (2004), available at: http://www.cimmyt.org/gis/rfseedsafrica/documents/Reports/Stakeholders_workshop-Malawi.pdf, last accessed 29 December 2009.

sector has resulted in a sharp decline in seed demand and in the provision of good quality legume seeds and open-pollinated maize.

Within the hybrid maize market in Malawi, four multinational companies -- Monsanto, SeedCo, Pannar Seed and DuPont-Pioneer HiBred -- control 90% of the market. Monsanto alone now holds more than 50% market share. New seed companies only exist on a very local scale. The effect of this is reduced diversity, even within the hybrid maize market, of material that is adapted to the various agro-ecological conditions of Malawian agriculture. Adoption rates of commercial seeds are stagnating, with around 30% of farmers still growing mostly local varieties. Because of a missing market, international seed companies neither develop seeds locally nor import their best quality materials and technologies. This leaves farmers with seeds that do not contain the latest improvements to deal with drought, pests or nutritional quality of the grain.

The current situation in Malawi is a result of the interaction between the environment created by the policies that Malawi has implemented and the nature of companies that have become established under these conditions. The government has sought to increase the seed supply through non-governmental organisations such as the Association of Smallholder Seed Multiplication Action Group (ASSMAG), founded in 2001. However, seed donors will often turn to Monsanto, Pannar, and SeedCo. for their purchases to supply farmers who are too poor to buy seed²⁹.

Conclusion/Way Forward

The case of Malawi illustrates that foreign direct investments, through ownership of production and sales outlets in the seed industry, can have impacts on poor and small-holder farmers in ways that they are powerless to deal with. Gaining access to high quality and improved seed, at an affordable price, is a problem for many poor small-holder farmers, especially in weak policy environments and where multinationals dominate domestic commercial seed markets.

The effects of U.S. seed companies on developing countries should, especially for a highly internationalised industry, not be overlooked. Even though an evaluation needs to take place against the background of different countries and different conditions, these scenarios must be considered because of the urgent need to provide food security to all. For least-developed countries, competition within the U.S. is important because local domestic environments can be directly influenced by these multinationals over time. Competition among their foreign investors would directly shape their future economies. Strengthening other areas locally, such as improving the efficiency and implementation of regulatory frameworks; building infrastructure such as agricultural storage and processing facilities; enhancing public sector breeding and dissemination of improved varieties; and creating an enabling environment to stimulate local seed enterprises would be essential. For transitional economies such as India, China and Brazil that already have thriving domestic private sectors, U.S. seed industry competition and

²⁹ http://www.cimmyt.org/gis/rfseedsafrica/documents/Reports/Informal_seed_sector_study.pdf, last accessed 29 December 2009.

concentration must be analysed in light of how well the needs of small-holder farmers can be met if local companies must compete against U.S. multinationals.

We urge the DoJ and USDA to take into consideration the developing country farmers in the context of the cases presented above, and to bear in mind that any conclusions reached from these workshops will, both directly and indirectly, impact developing country resource-poor farmers and the food security of those they serve.