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Report Highlights:
Current trends suggest that China will remain a significant importer of products produced with biotechnology and become an exporter of new technology in the medium term. China is currently the sixth largest producer of biotechnology enhanced plants based on total acreage (3.8 million hectares in 2008) and government is actively fostering the agriculture biotech industry as a new strategic sector for the country through research, investment, and public policy. In the past year, China has approved key soy, corn, and sugar beet events for import processing while the regulatory environment remained largely unchanged.

Section I. Executive Summary:
Current trends suggest that China will remain a significant importer of products produced with biotechnology and become an exporter of new technology in the medium term. China is currently the sixth largest producer of biotechnology enhanced plants based on total acreage (3.8 million hectares in 2008) and the central government is actively fostering the agriculture biotech industry as a new strategic sector for the country. Despite a lack of transparency in the development and application of regulations, U.S. biotech soybeans and foods incorporating products produced from

biotechnology are selling at record levels and are forecast to continue doing well in the future. In the past year, China has approved key soy, corn, and sugar beet events for import processing while the overall regulatory environment remained unchanged.

In June 2009, the State Council released policy guidelines to promote the accelerated development of the biotechnology industry. The objectives of the policy initiatives are to consolidate resources for biotechnology innovation and commercialization, developing domestic technologies, and to nurture both a handful of globally competitive biotech giants and SMEs. (See Report CH9061) In July 2008, the State Council approved a special science and technology fund of about US $3 billion (US$ 2.9 billion to US$3.5 billion) for research into new varieties of biotech crops from 2006-2020. Xinhua news agency said that the program aims to "gain genes of great commercial value whose intellectual property rights belong to China and develop high-quality, high-yield, and pest-resistant GM crops." The agency further noted that the council stressed the importance of the program and called upon relevant authorities to "waste no time implementing it".

While China has made notable progress in its regulatory infrastructure, some outdated biotech regulations and a lack of transparency still pose market access impediments. The barriers include requirements that a product must be fully approved in the originating country before an application can be filed for approval in China, redundant testing for products already approved in other countries, inadequate protection for intellectual property rights, and the lack of a low level presence policy.

Several internal and external factors influence China's biotech policy. Despite the emphasis currently given development of this sector, these contradictory and competing political concerns have so far prevented China from commercializing any food and fodder crops. Most experts believe that the two main competing factors are the strong interest in maintaining self-reliance in grains versus uncertainty over consumer reaction.

Section II. Biotechnology Trade and Production:

Biotechnology crop production in China

China has commercialized six genetically modified plants since 1997 (cotton, tomato, sweet pepper, petunia, poplar, and papaya) and, according to an International Service for the Acquisition of Agro-biotech Applications (ISAAA) report, China is now the sixth largest producer of agricultural biotechnology crops in the world by acreage, (behind the United States, Argentina, Brazil, India, and Canada) at 3.8 million hectares in 2008 (unchanged from 2007). Insect-resistant (Bt) cotton is the single largest biotechnologically enhanced product produced in China. It is estimated that nearly 69 percent of the 5.5 million hectares of all cotton planted in China is produced with Bt cotton varieties. Other crops approved for commercial production are either not being produced (a delayed ripening tomato and a virus resistant sweet pepper) or are in relatively small production (a virus resistant papaya on some 3,500 hectares).

Biotechnology crop development in China

The Chinese government has granted safety certificates for commercial production of four biotech food and fiber crops, including insect resistant cotton, virus resistant papaya, virus resistant sweet pepper, and delayed ripening tomato. Transgenic plants like poplar and petunia are also approved for production. China does not regularly publish lists on products ongoing research and development. Among the hundreds of biotech products under development that have been approved for productive testing include: insect resistant rice (Bt63), bacterial blight resistant rice (Xa21), high phytase corn, and high oil content canola. According to a recent publication by the Ministry of Agriculture, other major crops undergoing field trial stage of development include insect resistant corn, high lysine content corn, wheat resistant to pre-harvest germination, and insect resistant soybeans.

According to industry sources, several varieties of biotech food crops are at the final stage of the domestic approval process, clearance by the Joint-Ministerial group. Two of the most commonly cited examples over the past several years are products that have been at the final stage, but are held up over political concerns rather than safety concerns expressed by China's National Biosafety Committee (NBC). One is Bt163 rice, developed by Huazhong Agricultural University. The gene being transferred is cry1ab, a gene also used in Bt cotton. The second variety is Xa21, the disease-resistant transgenic rice mentioned above that uses a wild rice gene developed by the Biotech Research Center of Chinese Academy of Agricultural Science. A third variety, another Bt rice, was developed by the Bureau of Life Science and Biotechnology of the Chinese Academy of Sciences. Two genes, cry1ab and cpti, were transferred to Bt rice. This application was rejected at the last stage several years ago and the developer has not reapplied.

The government has not approved any biotech staple food crops for commercialization, even though it has made significant investment in research and development of agricultural biotechnology in this area. However, the progress of domestic research, slow productivity growth of existing seed varieties, and food inflation have contributed to a renewed interest in permitting the release of a broader array of crops. In July 2008, the State Council approved a special research program on the development of new biotech varieties with an investment that could total as much as US$2.9 billion (funding to be allocated by central and local governments) over the next 15 years. The program, outlined in the "Long and Mid-term National Development Plan for Science and Technology (2006-2020)", will focus on crop research (rice, wheat, corn, and cotton) and animal research (swine, cattle, and sheep). The target is to develop new varieties with traits such as insect and/or disease resistance, stress tolerance, high yields, and high efficiency. Experts suggest that the plan reflects the central government's intention to use biotechnology as one of the key tools to

address food security in China and as a signal that commercialization of staple food crops will be permitted in the near future.

According to the European Union, unauthorized biotech rice (Bt63) has been detected in the rice shipments from China to European countries. This has triggered the European Commission to adopt emergency measures that require imports of rice and rice products originating or consigned from China be certified as free of the unauthorized genetically modified organism "Bt63" as of April 15, 2008.

There is limited private sector research and development in agricultural biotechnology in China. Biotech seed development in China is conducted by public research institutes and universities funded by various parts of the Chinese government, though marketing is often done by affiliated private companies. Foreign investment on research and production of biotech plants, livestock, and aquatic products is prohibited. Foreign investment is allowed in conventional seed production, but is limited to minority shareholders in joint ventures with Chinese companies.

Importation of biotechnology crops

China has approved four biotech crops/products for import as processing materials (soybeans, corn, canola, and cotton) and is a significant importer of U.S. biotech products. In 2008, China imported more than US$8.4 billion soybeans from the United States, the vast majority are biotech varieties. The first batch of safety certificates was granted to imported biotech crops in 2004. The 28 varieties approved for import processing include the following traits: 15 - herbicide tolerant; 3 – reduce the formation of unwanted fatty acids, 5 - insect resistant; and 5 – insect resistant and herbicide tolerant. The current list of biotech events approved for import as processing materials is listed below:

Biotech crops approved for import as processing materials (updated July 15, 2009)

Crop	Trait	Event	Developer	Safety certificate validity
Cotton	Insect resistance	15985 (BollgardII)	Monsanto	07/20/2006-07/20/2011
Corn	Insect resistance and herbicide tolerance	59122	DuPont & Dow AgroSciences	12/20/2006-12/20/2009
Soybean	Herbicide tolerance	GTS40-3-2	Monsanto	12/20/2006-12/20/2009
Canola	Herbicide tolerance	GT73	Monsanto	12/20/2006-12/20/2009

Canola	Herbicide tolerance	Ms1Rf1	Bayer CropScience	12/20/2006-12/20/2009
Canola	Herbicide tolerance	Ms1Rf2	Bayer CropScience	12/20/2006-12/20/2009
Canola	Herbicide tolerance	Ms8Rf3	Bayer CropScience	12/20/2006-12/20/2009
Canola	Herbicide tolerance	T45	Bayer CropScience	12/20/2006-12/20/2009
Canola	Herbicide tolerance	Topas19/2	Bayer CropScience	12/20/2006-12/20/2009
Canola	Herbicide tolerance	Oxy-235	Bayer CropScience	12/20/2006-12/20/2009
Corn	Insect resistance	MON863	Monsanto	12/20/2006-12/20/2009
Corn	Insect resistance	MON810	Monsanto	12/20/2006-12/20/2009
Corn	Insect resistance and herbicide tolerance	Bt11	Syngenta	12/20/2006-12/20/2009
Corn	Insect resistance and herbicide tolerance	Bt176	Syngenta	12/20/2006-12/20/2009
Corn	Herbicide tolerance	GA21	Monsanto	12/20/2006-12/20/2009
Corn	Herbicide tolerance	T25	Bayer CropScience	12/20/2006-12/20/2009
Corn	Insect resistance and herbicide tolerance	TC1507	DuPont & Dow AgroSciences	12/20/2006-12/20/2009
Cotton	Herbicide tolerance	LLCOTTON25	Bayer CropScience	12/20/2006-12/20/2009
Soybean	Herbicide tolerance	A2704-12	Bayer CropScience	12/20/2007-12/20/2010
Corn	Herbicide tolerance	NK603	Monsanto	12/20/2007-12/20/2010
Corn	Insect resistance & herbicide tolerance	MON88017	Monsanto	12/20/2007-12/20/2010
Cotton	Herbicide tolerance	MON88913	Monsanto	12/20/2007-12/20/2010
Cotton	Insect resistance	531	Monsanto	08/28/2008-08/23/2013

Cotton	Herbicide tolerance	1445	Monsanto	08/28/2013
Soybean	Herbicide tolerance	RR2Y (MON89788)	Monsanto	08/28/2008-08/28/2011
Corn	Herbicide tolerance	GA21	Syngenta	08/28/2008-08/28/2011
Corn	Insect resistance	MIR604	Syngenta	08/28/2008-08/28/2011
Sugar beet	Herbicide tolerance	H7-1	Monsanto	05/01/2009-05/01/2012

Section III. New Technologies:

Research and development of genetically engineered animals in China

A few transgenic animals have been or are being developed by public-funded research institutes or universities, but none have yet to be approved for commercial production. The following are examples of ongoing research:

- Heilongjiang Fishery Research Institute of Chinese Academy of Fishery Sciences has developed a transgenic carp utilizing a fish growth hormone gene which is under field trial and mammal feeding study.
- Institute of Hydrobiology of Chinese Academy of Sciences has also developed lines of transgenic triploid carp with genes of another fish that promote fast growth. This transgenic fish has been approved for field trial.
- Transgenic cows have been developed by China Agriculture University with either human lysozyme (hLY) gene/human fucosylated sugar transferase gene expression.
- A transgenic goat with a human lactoferrin gene developed by Shanghai Genon Bio-engineering Co. Ltd has been approved for enlarged field trial and a transgenic goat with human lysozyme gene is under restricted field trial.

Section IV. Biotechnology Policy:

Government Policy on biotechnology

The Chinese government has made biotechnology priority and has allocated significant resources to the research and development of biotechnology, particularly in the pharmaceutical and agricultural industries. The National Development and Reform Commission (NDRC) released *the 11th Five-Year-Plan on the Development of Biotech Industry* in April 2007, which set the goals for the Chinese biotech industry by 2010, including 1) formation of a policy and regulatory framework - technology innovation system and technical standard system that are favorable for biotech development; 2) formation of proprietary IPR biotech products with annual sales value of more than 1 billion yuan; 3) formation of about 10 large biotech enterprises with annual sales value of more than 1 billion yuan and 8 biotech industrial bases with annual production value each exceeding 50 billion yuan in sales; and 4) biotech industry creating an added value to the economy topping 500 billion yuan,

which accounts for about 2 percent of GDP, and significant increases of biotech exports. The long term goal for the biotech industry is to master proprietary IPR in key biotechnology fields creating economic added value over 2 trillion yuan or 4 percent of GDP by 2020 and creating a pillar industry in high-tech fields that lead the national economy.

In order to implement *the 11th Five-Year-Plan on the Development of Biotech Industry*, the State Council issued *Policies to Promote Accelerated Development of Biotech Industry* in June 2009. These policy guidelines require ministries and provincial governments to consolidate technical and financial resources in order to achieve the objectives outlined in the Plan. Highlights include nurturing leading biotech enterprises with strong innovation capacity and international competitiveness through technology transfer and cross-border operation, providing financial support for establishing biotech enterprises, and encouraging investment by overseas companies or individuals for the establishment of research institutions and joint research projects. Local governments are required to increase inputs (financial and technical) for R&D of major transgenic crops and their commercialization/demonstration. A government procurement system will be established to give priority to indigenous innovation biotech products. Governments at all levels should allow 50 percent deduction of taxes for R&D expenses on new biotech products and 15 percent deduction of corporate income tax for biotech companies identified as high-tech enterprises. The central government will also facilitate financing on the capital market for small and medium biotech companies through channels such as IPOs. The document identifies five key areas for development: bio-pharmaceuticals, bio agriculture (ag-chemicals, feed, feed additives, fertilizer, animal vaccines), bio-energy, bio-manufacturing, and bio-environmental protection.

Ministerial Responsibilities

The Joint-Ministerial Conference for Biosafety Management of Agricultural Genetically Modified Organisms (GMOs) is a loose mechanism that meets irregularly to discuss and coordinate major issues in biosafety management of agricultural products of biotechnology. The conference consists of seven government agencies under the State Council, including: Ministry of Agriculture (MOA), National Development and Reform Commission (NDRC), the Ministry of Environmental Protection (MEP), the General Administration on Quality and Supervision, Inspection and Quarantine (AQSIQ), the Ministry of Science and Technology (MOST), the Ministry of Commerce (MOFCOM), and the Ministry of Health (MOH).

MOA is mainly responsible for approval of biotech agricultural crops for import and domestic production. MOA has also taken over from MOST the management of central government funds distributed to Chinese institutes and universities for research and development of biotech crops. MEP (formerly State Administration of Environmental Protection (SEPA)) is the lead agency for negotiation and implementation of the Biosafety Protocol (BSP), which China ratified on April 27, 2005. AQSIQ and their local inspection and quarantine offices (CIQs) are responsible for the nation-wide management of the inspection and quarantine for entry and exit of all biotech products. AQSIQ's Ministerial Decree 62 (CH4017) governs the steps that should be taken at customs when importing or exporting goods that utilize methods of agricultural biotechnology.

China has established a system of technical experts to support the regulatory system on agricultural biotechnology. The National Biosafety Committee (NBC) consists of 74 experts with multidisciplinary backgrounds from nine ministries, nine research institutions, and nine universities.

The Ministry of Agriculture announced that the NBC will increase the number of yearly meetings from two to three a year beginning 2008, likely in March, July, and November, to evaluate applications for safety certificates for biotech products for different uses as submitted by domestic and foreign seed developers. The new arrangement is a significant development that allows applicants to have more flexibility to file their applications prior to NBC meetings. The Committee is divided into three expert groups responsible for: biotech plants, animals and microorganisms, and food and feed.

The National Technical Committee for Standardization of Biosafety Management of Agricultural GMOs consists of 41 experts and administrative officials and is responsible for drafting and revising technical standards for biotech products, including standards for safety assessment, testing, and detection.

There are 49 MOA-authorized centers across the country, which undertake environmental safety testing, food safety testing, and detection of agricultural GMOs.

The agricultural departments at provincial levels are responsible for monitoring field trials of biotech products, facilities processing GMO products, the seed market, and labeling.

Regulatory Framework

The biotechnology regulatory environment for agriculture is outlined in State Council regulations *"Food and Agricultural Import Regulations and Standard"* and *"Agricultural Genetically Modified Organisms Safety Administration Regulations 2001"* (CH1056) and largely implemented by MOA under Ministerial Decrees 8, 9 and 10. These decrees (*Measures on the Safety Evaluation Administration of Agricultural GMOs*, *Measures on the Safety Evaluation Administration of Agricultural GMO Imports*, and *Measures on Agricultural GMO Labeling Administration* (CH7053)) govern domestic approval, import approval, and labeling, respectively.

The Chinese government is currently revising these eight-year-old regulations to cope with the rapidly evolving technology. Details about the revision and timing of publication of the revised regulations are not publically available. The National Biosafety Committee has recently developed a guideline for safety assessment (environment safety and food safety) to streamline the application and safety assessment processes. The guideline can be downloaded at http://www.stee.agri.gov.cn/biosafety/zhbd/t20070913_782803.htm.

The Ministry of Agriculture has added another application window for accepting applications for biotech products for various intended uses. The deadlines to accept the application materials are March 1, July 1, and September 1 of each year. The evaluation decisions will be released 45 days after each deadline. MOA used to have only two windows (deadlines on March 31 and September 30) to accept the applications.

Import approvals

The Ministry of Agriculture is responsible for approving biotechnology products that are intended for import into China. The approval process varies depending on the product's intended use (research, processing material, or production), safety levels, and the potential threat of the organism to human or animal health and the environment. MOA Decree 9 (CH7053) outlines the different

requirements for importing biotech products with different purposes.

For importation of products as processing materials, Decree 9 states that a foreign seed developer must apply for an agricultural biotech safety certificate from MOA's Division of GMO Biosafety and IPR (this office was merged with other offices and was formerly name the Agricultural GMO Biosafety Office). The regulations require applicants to provide a variety of materials and to have certification that the exporting country has allowed use and sale of products in its domestic market and that they have undergone tests there showing no harm to animals, plants, or the environment. MOA also requires authorized domestic institutions to conduct environmental safety (field trials) and food safety (animal feeding) tests to verify data provided by the seed developer. All these documents, including reports generated from verification tests, must be reviewed by the National Biosafety Committee before MOA can issue a safety certificate.

Although the regulation provides that MOA should respond to an application for a safety certificate within 270 days, the approval processes and timelines of issuing a safety certificate vary from crop to crop depending on the product's intended use and potential impact on human or animal health and the environment. In general, the process of getting a safety certificate for imported biotech food crops as processing materials like soybeans will last about two years; it involves steps of varying length, such as importing testing materials, field trials and/or feeding study, and evaluation by the NBC.

Approval for domestic production

To produce biotech crops domestically in China, technology providers must pass a safety evaluation by the National Biosafety Committee and must be issued a safety certificate by the MOA's Division of GMO Biosafety and IPR. As outlined below, the approval process for biotechnology products for domestic cultivation involves five steps: research, intermediary experiment, environmental release, productive testing, and safety certification. Importantly, approvals are sought at the provincial level. After completing the five steps, products are eligible for safety certificates. The Division of GMO Biosafety and IPR delegates' evaluation of the application is sent to the National Biosafety Committee.

In February 2008, the Ministry of Agriculture announced that Bt cotton varieties and their backcross breeding varieties having received safety certificates for commercial production may apply for production in all ecologically suitable areas. For other biotech crops, a safety certificate is good for the province or region where the original application was made.

In addition to a safety certificate for commercial production, biotech seed developers must seek registration of the biotech seed variety at the provincial agricultural department as required by the Seed Law. The process takes another 2-3 years. (Note: in some provinces this process may begin in step 4 of "production testing" and therefore can save one year).

According to a joint notification by NDRC and the Ministry of Finance to the Ministry of Agriculture, a fee charge schedule for safety evaluation and testing of agricultural GMOs is summarized as follows:

- Intermediary experiment (2,500 yuan each)
- Environment release (3,000 yuan each)

- Productive testing (5,000 yuan each or 3,000 yuan for additional imports as processing materials)
- Test of GMO survival and competiveness (83,000 yuan each)
- Test of ecological risk of gene flow (92,000 yuan each)
- Test of GMO impact on non-target organisms and biodiversity (96,000 yuan each)
- Anti-nutrient test (1,000 yuan per item)
- 90-day rat feeding study (120,000 yuan each)

A rough outline of the process of GMO application is listed below. Where available, the names of institutions and contacts are provided.

- MOA open window: accepts applications

Contact: Mr. Lian Qing
Tel: 5919-1811

- Biosafety Management Division at the Center for Science and Technology Development (CSTD): reviews and submits the application to National Biosafety Committee (NBC)

Contact: Mrs. Li Ning
Tel: 5919-5089

- NBC: plenary sessions in March, July and November to hear preliminary views about applications and decides what tests need to be done.
- Division of GMO Biosafety and IPR processes import permit for field trials and feed study based on NBC approvals

Contact: Ms. Sun Junli
Tel: 5919-3059

- Detection and Testing Division at the Center for Science and Technology Development: designates testing institutes and locations for field trials and feed study; works with applicants and designated testing institutes on development of testing methods and positive samples.

Contact: Mr. Song Guiwen
Tel: 5919-5096

- Provincial Agriculture Bureaus: endorse field trials in the province based on approvals from the Division of GMO Biosafety and IPR;
- Testing institutes for field trials and feed study: draft reports after the field trials and feed study are complete.
- Biosafety Management Division of CSTD: reviews the report and submit to NBC
- NBC reviews the reports about field trials and feed study at the three meetings;
- Division of GMO Biosafety and IPR issues safety certificate to applicant based on NBC decision.

Approved biotechnology products

A list of biotech products that have been approved for commercial production in China is available on MOA web site at http://www.stee.agri.gov.cn/biosafety/spxx/. A full list is not provided in this report. Though over 200 varieties are approved, all of the approvals with the exception of those listed on page 3 are various Bt cotton varieties.

Labeling Policy

China's labeling regulations, governed by Ministry of Agriculture Decree 10 (CH7053), require approved agricultural biotech products be labeled and prohibits the importation and sale of any unlabeled or mislabeled products. The types of products subject to mandatory labeling include:

1. Soybean seed, soybeans, soybean powder, soybean oil, and soybean meal;
2. Corn seeds, corn, corn oil and corn powder;
3. Rape seed for planting, rape seeds, rape oil, and rape meal;
4. Cotton seed;
5. Tomato seed, fresh tomato, and tomato paste.

China and the Biosafety Protocol

The State Council ratified the Biosafety Protocol on April 27, 2005 and China participated in MOP-3 discussions in Brazil in March 2006 as a full member.

As the lead authority for the Biosafety Protocol, China's Ministry of Environmental Protection (MEP) is charged with developing implementing regulations. Though MEP has not published any new or revised laws with regard to implementation of the Protocol, MEP has continued to state its intent to develop an overarching Biosafety Law that would take precedence over the Ministry of Agriculture's decrees regulating agricultural biotechnology.

Issues of concerns in biotechnology

Biotechnology Issues

- Asynchronous Approval - Current regulations require that biotech events be fully approved in the country of development before the Ministry of Agriculture (MOA) will accept an application for its registration in China. This requirement creates unnecessary delays in marketing and trade of events approved in exporting countries.

- Re-registration Certificates- MOA biosafety certificates are valid for 5 and 3 years (non-food and food crops). Re-registration is cumbersome and contains certain unnecessary demands.

- Re-registration Seed Samples – MOA requires seed samples for the renewal of biosafety certificates, even for varieties no longer marketed. This requirement is redundant and places unnecessary burden of maintaining seed stocks for products no longer marketed or produced.

- Biosafety Certificates for Imported Products – Importers are required to obtain a MOA GMO safety certificate for all imports with biotech content. Importers of large-volume, bulk commodities routinely obtain certificates, but this practice varies among processed product importers. This costly requirement does not provide additional information to import quarantine officials beyond standard "may contain" shipping documentation.

- Low Level Presence (LLP) – Zero tolerance for unapproved varieties. The lack of an effective LLP policy constrains trade.

- Combined Traits – China has no public policy regarding registration of stacked events, all registrations are considered "case-by-case." The lack of public policy in this area currently facilitates trade, but leaves concern over long-term flexibility to deal with new generations of

technology.

- Event Based Registration –The current biotechnology registration system is a variety based system. Variety based registration systems duplicate past safety evaluations and will result in a less effective use of resources and longer approval process, especially as newer varieties incorporate proven technology and new traits.

- Import Testing for Products Produced with Biotechnology – AQSIQ randomly tests all products for GMO content. Importers have expressed concern with the efficacy of testing, consistency of testing country-wide, and adherence to testing frequency guidelines.

- Proprietary Information in Biosafety Applications – Repeated attempts have been made to require companies to provide sensitive, proprietary information about applicant technology through detection and validation requirements that appears to be beyond the data necessary to test the safety of new events.

- Chinese Biotechnology Development – China will likely soon be a greater domestic developer, user and exporter of agricultural biotechnology. China's biosafety infrastructure will play a bigger role globally in managing this technology and ensuring its safe research, deployment and trade.

Conventional Seed Issues

- Seed Registration – China requires either national or provincial approval of planting seeds intended for sale or distribution nationally or in a specific province. This process is duplicative, non-transparent, and contains conflicts of interest.

- Plant Variety Protection – China has not acceded to UPOV91. Thus, PVP protection in China lacks the more robust protections provided by this agreement.

Cross-Cutting Issues

- Investment Restrictions – China's State Council foreign investment catalogue stipulates that foreign investment in the conventional seed industry is a "restricted" activity (limiting foreign ownership of a joint venture to 49%) and foreign company development, production, or marketing of transgenic plants in China is a "prohibited" activity. (See GAIN Report CH7087)

- Intellectual Property Rights Protection - China's conventional seed and biotechnology regulatory and review mechanisms lack complete IPR protections and contain fundamental conflicts of interest that encourage weak IPR protection. For example, field trials for new products are conducted by Chinese research institutes that sometimes also act as competing seed developers. Legal protections provided to applicants' genetic material appear insufficient to ensure complete confidentiality. Weak enforcement and low penalties for infringement weaken market protection for rights' holders.

Section V. Marketing:

China's consumers are by and large open to and accept biotechnology products. Generally, there does not seem to be the negative stigma attached to biotech foods that exists in some other Asian markets. A recent nation-wide study found 60 percent or more of respondents were willing to purchase biotech foods (including soybeans and rice) without any price discrimination. Twenty percent would only buy biotech food products when a price discount was offered. Twenty percent of respondents to the study would not accept biotech foods (with the exception of biotech rice with enhanced nutritional traits) regardless of any discounts in price.

Another study found that Chinese consumers' awareness to biotech foods was low, with about 75 percent having never heard of biotech foods or having heard of them on an occasional basis. The study found that a large majority of Chinese consumers hold a favorable or neutral attitude toward biotech foods, with only 5-15 percent of urban consumers opposed to biotech foods.

These findings are consistent with a recent study by the Asian Food Information Center's study on communicating with consumers on biotechnology that found that a "majority of consumers hold an open-minded position towards biotechnology foods and did not reject them per se."

Section VI. Capacity Building and Outreach:

The U.S. and Chinese governments are working closely on several fronts to assist China in its capacity to effectively and fairly handle biotechnology. The U.S. - China High-Level Biotechnology Joint Working Group (BWG) was established in July 2002 as a way to address bilateral biotechnology issues of mutual interest. To supplement the policy discussions, a technical subgroup (TWG) was established in July 2003. Together, these fora have become a constructive means to address issues of common concern. The most recent BWG and TWG were held in March 2008 in Washington D.C. with both sides committed to continued dialogue and collaboration on regulatory and technical exchanges on agricultural biotechnology.