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## Korea, Republic of

### Biotechnology

### Agricultural Biotechnology Report

### 2006

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Korea's ratification of the Cartagena Protocol on Biosafety (CPB) has been delayed. Korea is in the process of drafting regulatory guidelines to implement the CPB and is expected to ratify and implement the CPB in 2007. To date, 46 biotech crops have obtained food safety approval and environmental risk assessments for 18 biotech crops have been completed. Korea still maintains a zero-tolerance policy for the inadvertent presence of biotech content in processed organic products.

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## SECTION I. EXECUTIVE SUMMARY

Many Koreans continue to believe that biotechnology is an important frontier for economic development for Korea in the 21<sup>st</sup> century. Proponents have had some success in making the case that biotechnology could be an engine for growth and could solve public health and environmental problems. Accordingly, Korea aspires to become the seventh largest biotech country in the world by 2016. Korea's goal is to expand biotech production to 60 trillion won (approximately \$63 billion dollars) and exports to 25 billion won (approximately \$26 million dollars) by that year. In 2006, the Korean government will increase its investment in the biotechnology sector by 18.9 percent, as compared to last year, to 801.1 billion won (approximately \$843 million dollars). Six hundred forty-eight billion won will be used for research and development while the remaining government assistance will be used for the development of infrastructure.

Despite the Korean government's support for biotechnology research, the Korean public still has a negative perception of crops and foods produced using biotechnology. Consequently, most government funding for biotechnology research is directed toward non-agricultural projects such as biomedicine, stem cell research, cloning, and gene therapy.

A widely publicized human stem cell cloning scandal rocked the Korean biotechnology industry in 2006. Nonetheless, Koreans in general still maintain a positive view towards non-agricultural biotechnology and still believe biotechnology will play an important role in the country's economic development.

Local non-governmental organizations (NGOs) and the media tend to instill a negative perception of biotech agricultural products among Korea's consumers. In general, Korean food processors respond to consumer concerns by not using ingredients produced through biotechnology to avoid having to label them as a "GM Food." However, refined vegetable oils that do not contain recombinant DNA are exempt from the "GM Food" labeling requirement. Consequently, Korea imports substantial amounts of biotech crops and products that are further processed to make products such as soybean oil.

Korea is a signatory to the Cartagena Protocol on Biosafety (CPB) but has not ratified it. Despite Korea's attempt to ratify the CPB before the Meeting of Parties III (MOP III) in March 2006, it failed to complete the ratification on time. However, it is believed that Korea will ratify and implement the CPB in 2007. This would give Korea more time to prepare implementing regulatory guidelines that are consistent with MOP III.

Korea has a fairly extensive regulatory system for biotechnology products. The Ministry of Agriculture & Forestry (MAF) regulates labeling of unprocessed biotech products and conducts environmental risk assessments (ERAs) of biotech crops. The Korea Food & Drug Administration (KFDA) regulates food safety approval of biotech crops and labeling of processed food products containing biotech components. The Ministry of Commerce, Industry, and Energy (MOCIE) is the national competent authority for implementation of the CPB. MOCIE coordinates the efforts of seven ministries that have been drafting regulations and guidelines to implement the CPB. Korea's regulations and guidelines to implement the CPB will have a significant impact on U.S. exports to Korea. Some ministries have already issued draft guidelines and others are expected to issue them in the latter part of 2006.

No crops produced using biotechnology have been commercialized in Korea. Thus, to date, the process for biotech crop and food approval has only been applied to imported products. Korea has two separate systems for obtaining food safety approvals and for conducting ERAs for biotech food and crops. At present, food safety approvals for biotechnology crops are mandatory but ERAs are voluntary. However, ERAs will become mandatory when the Living

Modified Organism (LMO) Act goes into effect. The LMO Act is the Korean legislation that implements the CPB. As of July 6, 2006, 46 biotech "events" (i.e., unique genetic lines produced by genetic engineering) had obtained food safety approval. Eighteen biotech events have completed ERAs. To date, no ERAs for intentional environmental release (i.e., planting) have been completed. Thus, the scope of all ERAs that have been completed so far has been limited to assessing the environmental risk of unintentional release.

Unprocessed biotech soybeans, soybean sprouts, corn, and potatoes intended for human consumption are required to carry GM labels. Three percent adventitious presence of biotech components is allowed. A "GM Food" label is not required as long as identity preserved (IP) documentation is submitted to verify that the product is non-biotech.

For processed products and consumer-ready products, biotech labeling is required for 27 food categories if either of the following two situations apply:

- Biotech soybeans or corn are one or more of the top five ingredients in the final product.
- Foreign protein or DNA inserted into the product using biotechnology is still present in the final product.

Although Korean regulations allow for the sale of biotech foods it is impossible to find products with a "GM Food" label in the marketplace. Retailers explain that they do not want to be singled out for criticism by NGOs or local media for selling biotech products. As a result, the mandatory labeling of GM foods has effectively eliminated the consumer choices it was supposed to facilitate.

## SECTION II. BIOTECHNOLOGY TRADE AND PRODUCTION

### A. Commercial Production of Biotechnology Crops

Korea has yet to commercially produce any biotech crops. However, Korea is investing substantial resources in the development of such crops. In 2006, MAF invested 116.6 billion won (approximately \$122 million dollars) to promote biotechnology including activities to develop new biotech crops and organs from animals that can be transplanted into humans.

### B. Biotechnology Crops Under Development

The development of biotechnology crops is being led by government agencies. The National Institute of Agricultural Biotechnology (NIAB) under MAF's Rural Development Administration (RDA) is currently developing 45 separate biotech traits among 18 crops and five traits in two animals. Herbicide tolerant rice, pepper, perilla seed, and virus resistant potatoes are expected to become the first domestically developed biotech crops to become commercially produced in Korea. Korea's first biotech crops are currently undergoing environmental risk assessments and could be produced commercially in three to four years. No official statistics on the development of biotechnology crops by private entities are available. Rough industry estimates indicate that approximately 60 varieties are under development although they are all still at the laboratory stage.

### C. Imports of Biotechnology Crops/Products

Korea imports biotechnology crops and products. Foods for human consumption containing biotech events must undergo a complete safety assessment conducted by the KFDA. Biotechnology crops/products that contain unapproved events are not allowed to be imported or sold on the Korean market. To date, 46 events have completed KFDA's assessments. (See Section III-B for a list of approved events.) The most important biotech crops imported from the United States are soybeans and corn, which are used for further processing and animal feed in Korea. Biotech crops and products destined for human consumption must carry a biotechnology label. Non-GMO corn and soybeans must have IP documentation or official government certification of the non-biotech status of the shipment.

In Marketing Year 2004/2005 (MY 2004/2005: October 2004 through September 2005) the United States supplied 2,492,590 metric tons (MT) of corn, accounting for 28 percent of Korea's total bulk corn imports. Of that, 2,302,740 MT was used for animal feed, and the rest was used for processing purposes. Bulk corn imports destined for animal feed are not segregated for biotech corn events. All corn imported for human consumption was IP-handled, non-biotech corn. According to the Korean Food & Drug Administration, no biotech corn has been imported for food purposes since June 2002.

In MY 2004/2005, the United States supplied 826,739 MT of soybeans, accounting for 67 percent of Korea's total soybean imports. Soybeans imported from the United States consisted of 569,928 MT of soybeans used for crushing and 256,811 MT for food processing. Since vegetable oil is exempted from labeling, soybean imports from the United States for crushing purposes are bulk general soybeans that contain biotech events. All soybeans imported for food processing such as soybeans for tofu, bean paste, bean sprouts, etc. are IP-handled non-biotech products.

**D. Food Aid**

South Korea is not a food aid recipient and is not likely to become a food aid recipient in the future.

**E. Production of Biotechnology Crops That Were Developed Outside of the United States**

At present, Korea does not commercially produce biotechnology crops of any origin.

## SECTION III. BIOTECHNOLOGY POLICY

### A. Regulatory Framework for Agricultural Biotechnology

The Act on Transboundary Movement of Living Modified Organisms (LMO Act) and its Presidential Decree and Ministerial Ordinance (Korea's LMO legislation and primary regulations to implement the CPB) were drafted by MOCIE and finalized and announced on March 28, 2001, September 30, 2005, and March 10, 2006, respectively. The legislation and regulations will become effective 90 days after Korea's ratification of the CPB. Guidelines for ERAs were drafted by MAF and finalized on January 9, 2002. Currently, MAF operates a voluntary ERA program. However, ERAs will become mandatory when the CPB goes into effect in Korea. It is expected that Korea will ratify the CPB in 2007.

The relevant ministries are currently in the process of issuing implementing guidelines that will apply to the development, production, import, export, sale, transportation, storage, etc. of LMOs after the CPB is ratified. MAF issued the draft implementing guidelines "Safety Controls for the Export/Import, etc. of LMOs Intended for Agricultural Use" in December 2005, notified it to the WTO, and gathered comments from its foreign trading partners. The final draft of these guidelines are still pending. Other ministries including the Ministry of Health & Welfare (MHW), etc. have already issued or will issue draft guidelines in the future. It is expected that all guidelines will be drafted and notified to the WTO by the end of 2006.

The Agricultural Product Quality Control Act is the legal basis for MAF's labeling requirements for unprocessed soybeans, corn, bean sprouts, and potatoes for human food use. Labeling guidelines for unprocessed biotech crops were finalized on April 22, 2000 and entered into force on March 1, 2001. MAF does not require that biotechnology products used for animal feed be labeled.

The Food Sanitation Act is the legal basis for safety assessments of products of agricultural biotechnology for human consumption and labeling of processed food products containing biotech ingredients. MHW has delegated the authority to draft guidelines and conduct safety assessments of biotech crops for human consumption and to draft guidelines for the labeling of processed food products containing biotech ingredients to KFDA. KFDA issued safety assessment guidelines and biotech labeling guidelines that are based on Korea's Food Sanitation Act. The KFDA guidelines for safety assessments of biotech crops for human consumption were finalized on August 29, 1999. A voluntary safety assessment program, in effect since August 29, 1999, became a mandatory program for soybeans, corn, and potatoes on February 27, 2004 and for all other biotech crops on February 27, 2005. Labeling guidelines for processed food products containing biotech soybeans and corn as ingredients were finalized on August 30, 2000 and enforced from July 13, 2001.

### Ministries Involved with Agricultural Biotechnology with Their Responsibilities

Ministry of Commerce, Industry and Energy: National competent authority for the CPB and responsible for the LMO Act and issues related to the development, production, import, export, sales, transportation, storage, (hereafter referred to as trade) etc. of LMOs for industrial use

Ministry of Foreign Affairs & Trade: National focal point for the CPB

Ministry of Agriculture & Forestry: Responsible for ERAs for biotechnology crops including LMOs for food, feed, and processing, labeling of unprocessed biotechnology crops, and issues related to the trade of agriculture, forestry, and livestock LMOs

National Institute of Agricultural Biotechnology, Rural Development Administration, MAF: Responsible for ERAs for biotechnology crops and leading developer of biotechnology crops in Korea

Ministry of Health & Welfare: Responsible for monitoring and/or enforcing regulations pertinent to the Food Sanitation Act and issues related to trade of LMOs used for health and pharmaceutical purposes including human risk assessments of such LMOs

Korea Food & Drug Administration (KFDA comes under the oversight of the Ministry of Health & Welfare): Responsible for the issuance of food safety approvals of biotechnology crops and the enforcement of labeling requirements for processed food products containing biotech ingredients

Ministry of Environment: Responsible for issues related to the trade of LMOs that are used for the purpose of environmental purification or release into the natural environment (this does not include agricultural LMOs for planting) including risk assessments for such LMOs

Ministry of Science & Technology: Responsible for issues related to the trade of LMOs that are used for testing and research including risk assessments for such LMOs

Ministry of Maritime Affairs & Fisheries: Responsible for issues related to the trade of fishery and maritime LMOs including risk assessments for such LMOs

### **Role and Membership of the Biosafety Committee and Its Political Implications**

In accordance with Article 31 of the LMO Act, a Biosafety Committee (Committee) was established under the Prime Minister to review the following factors relevant to the import and export of LMOs:

- Factors relevant to the implementation of the protocol
- Establishment and implementation of the safety management plan for LMOs
- Notification of a list of LMOs that pose no harm in accordance with the provisions of Article 15
- Re-examination in accordance with the provisions of Article 18 of appeals by an applicant who fails to get import approval, etc.
- Factors relevant to legislation and notification pertinent to the safety management, import, and export, etc. of LMOs
- Factors relevant to the prevention of damage caused by LMOs and measures taken to mitigate damage caused by LMOs
- Factors requested for review by the Chair of the Committee or the head of competent national authority.

The Committee (including the Chair) is composed of 15 or more members but cannot exceed 20 members. The Prime Minister is the Chair. Committee members will include ministers from nine ministries (the seven relevant ministries noted above plus the Ministry of Finance and Economy and the Ministry of Education). Private sector specialists can also be members of the Committee. The Committee may have subcommittees and technical committees. The Presidential Decree designates necessary factors relevant to the formation, function, operation, etc. of the Committee, subcommittees, and technical committees. The Committee will be formed when the CPB goes into effect in Korea.

The most important role of the Committee is to reconcile different positions among the relevant ministries. As each relevant ministry holds authority and responsibility in its

respective areas, it may not be easy to reach consensus on some issues. In such cases, the Prime Minister as the Chair of the Committee can be called upon to resolve matters lacking consensus.

## **B. Approval of Biotechnology Crops**

To date, there has been no commercial production of biotechnology crops in Korea. Thus, up until now, the approval process has only been applied to imported products. Korea has two separate approval systems for biotechnology crops: approvals for human consumption (food safety approval) and environmental risk assessments (ERAs). At present, food safety approvals for biotechnology crops are mandatory while ERAs are voluntary. However, ERAs will become mandatory when the LMO Act, Korea's legislation to implement the CPB, goes into effect. Implementation of the LMO Act is expected to occur in 2007.

As of July 6, 2006, food safety approvals have been given to 46 events and 18 events have completed ERAs. The scope of ERAs so far has been limited to approval of biotechnology crops for unintentional release into the environment. No ERAs have been completed for intentional release (i.e., planting). Thus, to date, no product has been approved for commercial production. (Please refer to Section IV, Appendix A for the status of approval of biotechnology crops in Korea.)

## **C. Field Testing**

MAF and RDA have not decided which agricultural biotechnology products will be subject to in-country field tests. It is expected, though, that MAF and RDA will require in-country field tests for LMOs used for planting seed and exempt LMOs to be used for food, feed, and processing from in-country field tests. However, specifics regarding in-country field tests have not yet been decided.

For biotechnology crops being developed by RDA, field trials must follow the "Guidelines for Research and Handling of Recombinant Organisms Related to Agricultural Research." Voluntary guidelines entitled "Guidelines for Research of Recombinant Organisms" issued by the Ministry of Health & Welfare exist for biotechnology crops under development by private entities including universities. However, in accordance with the LMO Act, the relevant ministries are in the process of establishing guidelines that biotech developers and laboratories will have to comply with when the CPB goes into effect in Korea.

## **D. Stacked Events**

KFDA does not require additional approval for stacked events if they meet the following criteria:

- Traits that are being combined were already approved individually.
- There is no difference in the given traits, intake amount, edible part and processing method in the stacked event and the conventional non-biotech counterpart.
- There is no crossbreeding among subspecies.

With regard to ERAs, MAF has not set its policy on the treatment of stacked events. When MAF sets its policy, FAS/Seoul will prepare a voluntary GAIN report explaining the policy.

## **E. Coexistence**

Although many Korean consumers have negative sentiments about biotech crops and products, Korean regulation provides for the production, import, use and consumption of

biotech crops and products. Similarly, regulations exist in Korea that provide for organic agricultural production. At present, however, Korean regulations for organic processed products are mainly focused on the components of the final product rather than on the production process. Accordingly, the Korean Food & Drug Administration maintains a zero-tolerance policy for the inadvertent presence of GM content in processed organic products.

## F. Labeling

Both unprocessed biotech crops for human consumption and processed food products containing biotech ingredients must carry "GM Food" labels. Unprocessed biotech soybeans, soybean sprouts, corn, and potatoes intended for human consumption are required to carry "GM Food" labels. KFDA regulations for processed products, including consumer-ready products, require biotech labeling for 27 categories of foods if biotech soybeans or corn are one or more of the top five ingredients in the finished product or if a foreign protein or foreign DNA is present in the finished product.

MAF allows for a three percent adventitious presence of biotech components in unprocessed non-biotech products. MAF's threshold is the default threshold for processed food products that are subject to biotech labeling requirements. KFDA also allows for a three percent adventitious presence of biotech components in raw soybeans and corn destined for human consumption. Intentional mixture of biotech ingredients triggers the labeling requirement even if the final level of biotech presence is within the three percent threshold.

### Contents of Label Texts

Shipments that consist of 100 percent unprocessed biotech crops for human consumption should carry labels stating "GM 'commodity'" (e.g. "GM soybeans"). Shipments that contain some biotech-enhanced crops should carry labels stating that the product "contains GM 'commodity'" (e.g. "contains GM soybeans"). Shipments that may contain biotech-enhanced crops should carry labels stating that the product "may contain GM 'commodity'" (e.g. "may contain GM soybeans").

Processed products containing biotech ingredients should be labeled as follows:

- Products that contain biotech corn or soybeans composing less than 100 percent of the product ingredients should be labeled as "GM food" or "food containing GM corn or soybeans."
- Corn or soybean products that are 100 percent biotech products should be labeled "GM" or "GM corn or soybeans."
- Products that may contain biotech corn or soybeans should be labeled "May contain GM corn or soybeans."

### Use of Labels Such as "Biotech-Free", "Non-Biotech", "GMO-Free", or "Non-GMO"

Concerning unprocessed biotech crops for human consumption, MAF allows a voluntary "non-GMO" label if the product is composed of 100-percent non-biotech enhanced material. For products with "non-GMO" labels, the maximum GMO threshold allowance is zero. Unprocessed bulk crops in which there is an adventitious presence of biotech components are not permitted to carry a "non-GMO" label. Importers must keep the relevant documents that support a "non-GMO" claim for "non-GMO"-labeled products. Such documents can include a testing certificate stating that there is no presence of GMO components. With regard to processed food products, however, KFDA does not permit "non-GMO" or "GMO-free" labeling even if products do not contain any biotech components.

At the retail level, it is very rare to find products that carry any sort of "GM Food" label as retailers tend to avoid placing biotech products on their shelves. Retailer behavior in this regard is the result of a widely held perception that Korean consumers hold negative views about biotech products. (See Attaché Reports KS1004 and KS1046 for more details.)

### **G. Biosafety Protocol**

Korea signed the Cartagena Protocol on Biosafety (CPB) but has not ratified it to date. After repeated delays, Korea is now thought likely to ratify and implement the CPB in 2007. However, the exact timing for ratification remains unclear. Regulations to implement the CPB (i.e., the Presidential Decree and Ministerial Ordinance of the LMO Act) were finalized September 30, 2005 (the Presidential Decree) and March 10, 2006 (the Ministerial Ordinance). Since these regulations were finalized, implementing guidelines from some relevant ministries have been issued and other ministries will issue them shortly. The timing of final entry into force of the CPB and the related guidelines will depend on whether Korea chooses a simultaneous or consecutive process for the ratification and implementation of regulatory guidelines. In order to avoid a disruption of trade in biotech products when the CPB is implemented, it is essential that ERAs be completed before the CPB and implementing regulations go into effect. To date, 18 of the 27 biotech crops currently in use have completed ERAs. Treatment of stacked events could be problematic as Korea has not set its policy for conducting ERAs for stacked events. After implementation of the CPB, sales and imports of biotechnology crops will not be allowed unless their ERAs have been completed.

### **H. Biotechnology-Related Trade Barriers**

Recently, KFDA revised its labeling guidelines in order to formalize its policy regarding the zero tolerance for biotech components in organic products. Exporters from any country where biotech crops are produced could face difficulty in exporting organic products to Korea because of Korea's zero-tolerance policy.

A StarLink-free certificate and StarLink-free statement are still required to accompany shipments of corn intended for food use and corn-based processed food products from the United States.

### **I. Pending Legislation**

As noted in paragraph G above, the relevant ministries have been issuing regulatory guidelines that elaborate on the requirements established in the LMO Act. The guidelines define in detail how the LMO Act will be implemented and, therefore, have the potential to affect U.S. exports. Because some regulatory guidelines have trade implications, the relevant ministries have notified them to the WTO and have collected comments from foreign trading partners. Future relevant guidelines will also be notified to the WTO. Finalization of draft guidelines is expected before the end of 2006 or early 2007.

### **J. Technology Fees**

Korea does not commercially produce biotechnology crops, neither does it have legislation in place to collect technology fees.

## SECTION IV. MARKETING ISSUES

### A. Market Acceptance

Contradictory views about biotechnology characterize the Korean marketplace. Koreans hold positive views about the use of biotechnology in human and animal research, bio-medicine, and in the treatment of disease. On the other hand, Koreans feel negatively about use of biotechnology to produce food. Polls indicate that Koreans are willing to pay extra for non-biotech products.

Non-governmental organizations and the media have reinforced negative consumer perceptions surrounding the use of biotechnology to produce food. Concerns about negative reactions from NGOs, media, and individual consumers severely limit retailers' willingness to stock products with a "GM Food" label. Nonetheless, Korea imports substantial amounts of food ingredients produced using biotechnology for further processing into vegetable oil, corn syrup, and other products that are exempt from "GM Food" labeling requirements.

### B. Korean Market Survey on Biotechnology Products

#### Post Survey

The Agricultural Trade Office in Seoul conducted two market surveys on biotechnology products. The first survey was conducted in 2001 and targeted consumers. The survey resulted in responses from 1,500 regular shoppers. The second survey polled 100 professors in 2003.

Results of the two surveys revealed that both professors and consumers had concerns about biotech food products although the degree of concern was different. Fifty-two percent of the professors agreed that biotech foods were safe for consumers, whereas only 21 percent of consumers did. Only 14 percent of consumers stated that they would ever purchase food with biotech contents and 51 percent of consumers thought that biotech food would be bad for their health. Only 5 percent of professors thought that biotech foods would be bad for their health. In the 2003 survey of professors, 81 percent supported the use of biotechnology in food and agriculture mainly as a means to increase production. However, a large percentage of the professors felt that biotech foods should be segregated in the market and 57 percent were willing to pay more for non-biotech agricultural products.

#### **Korea Biosafety Clearing House Survey**

In November 2005, the Korea Biosafety Clearing House conducted a survey of 700 consumers residing in six major cities in Korea to identify consumer perceptions on biotechnology and LMOs. The survey showed that only six percent of the respondents had not heard of biotechnology. Forty-seven point seven percent and 1.9 percent of the respondents knew about biotechnology and LMOs "somewhat" or "well." With regard to preferences for the use of biotechnology, 40.4 percent of respondents preferred application of biotechnology in the pharmaceutical sector and 32.9 percent preferred application in the agriculture and food sectors. Seventy point four percent and 64.9 percent of respondents thought that LMOs would be harmful to human health and the environment, respectively. Sixty-eight percent of the respondents thought LMOs were "slightly" or "very" beneficial to humans while 45.1 percent of the respondents said that they would purchase biotech products. Fifty-five point three percent of the respondents said that they had an overall positive outlook on LMOs. The survey revealed that responses by different demographic groups did not vary significantly. Ninety-five percent of respondents said that labeling of

biotech products should be mandatory. Overall, compared to the survey conducted in the previous year (please refer to the November 2004 survey below), except for perceptions regarding the human safety aspect, overall perceptions regarding LMOs have improved.

In October 2004, the Korea Biosafety Clearing House conducted a survey of 240 companies nationwide (not limited to biotech-related companies) to determine industry's perception of biotechnology and LMOs. The survey showed that most companies thought that the commercial application of biotechnology was desirable and that biotechnology could improve human life. Seventy-two percent of the companies thought that the biotech product market would expand rapidly. Seventy-five percent of all companies thought that the development of biotech products would be beneficial to their company. Forty-four percent of the companies indicated that they might develop or deal with biotech products in the future. Seventy-six percent of all companies thought that society would recognize the need for biotech products over time.

In November 2004, the Korea Biosafety Clearing House conducted a survey of 1,518 people nationwide to identify consumer perceptions regarding biotechnology and LMOs. The survey showed that 84 percent of respondents were aware of biotechnology. Sixty-five percent and 67 percent of respondents expressed concern that LMOs might be harmful to human health and environment, respectively. Six percent of the respondents thought that LMOs were greatly beneficial to humans whereas 49 percent thought they were not beneficial. Sixty-seven percent of the respondents said that they would not purchase biotech products whereas only 2 percent were willing to purchase them. Consumer acceptance of LMOs was very low; only 3.5 percent of the respondents had a positive outlook on LMOs in terms of what they believed would be consumer acceptance. The survey also revealed that housewives showed the least willingness to purchase biotech products.

## **SECTION V. CAPACITY BUILDING AND OUTREACH**

### **A. U.S. Government or USDA Funded Outreach Activities**

A number of activities have been organized and funded to provide biotechnology outreach in Korea:

- Biotech press mission to the United States consisting of six reporters in 2000 sponsored by the USDA
- Cochran Fellowship Program for three Korean biotechnology regulators in 2002
- Inclusion of biotech briefings for participants in the State Department's International Visitors Program since 1999
- Video conference sponsored by the USDA for professors and media in 2002
- Speakers from the USDA, the State Department, and other agencies/organizations for various local symposiums organized by Korean government agencies including KFDA, RDA, the Korea Research Institute for Bioscience and Biotechnology, etc.
- U.S. Grains Council's annual biotech program for media, NGOs, scientists, etc.

### **B. Country Specific Needs**

Additional efforts should be made to increase Koreans' understanding of U.S. second-generation biotechnology products. This would encourage the adoption of science-based regulatory systems and would help garner support for U.S. biotech products imports. In order to increase the Korean public's understanding of biotech products, post would like to arrange an activity in which a group of reporters and CEOs from large food manufacturing companies will be brought together with a U.S. food biotechnology company to discuss the U.S. food safety system. If possible, the group will also meet with U.S. policy makers, regulators, agricultural producers and processors at the federal, state and local levels. It is anticipated that the group will return to Korea and begin to publish positive stories in the press about second-generation U.S. biotech crops. In addition, it is hoped that the CEOs will develop a greater interest in using U.S. biotech food products in their manufacturing processes. Funding, sponsorship and timing of this project have not been identified.

## SECTION VI. REFERENCE MATERIAL

## APPENDIX A. TABLE OF APPROVED BIOTECHNOLOGY PRODUCTS AS OF JULY 2006

\* FA: Food approval

\* ERA: Environmental Risk Assessments (not for planting)

Crop	Event	Trait Category	Applicant	Approval
Soybean	GTS40-3-2	Herbicide Tolerance (HT)	Monsanto	FA* and ERA*
Corn	Mon810	Insect Resistance (IR)	Monsanto	FA and ERA
Corn	TC1507	HT, IR	Dupont	FA and ERA
Corn	GA21	HT	Monsanto	FA and ERA
Corn	NK603	HT	Monsanto	FA and ERA
Corn	Bt 11	HT, IR	Syngenta	FA and ERA
Corn	T25	HT	Aventis / Bayer	FA and ERA
Corn	MON863	IR	Monsanto	FA and ERA
Corn	Bt176	IR	Syngenta	FA and ERA
Corn	DLL25	HT	Monsanto	FA
Corn	DBT418	HT, IR	Monsanto	FA
Corn	MON863 X NK603	Ht, IR	Monsanto	FA
Corn	MON863 X MON810	IR	Monsanto	FA
Corn	MON810 X GA21	HT, IR	Monsanto	FA
Corn	MON810 X NK603	HT, IR	Monsanto	FA
Corn	MON810 X MON863 X NK603	HT, IR	Monsanto	FA
Corn	1507 X NK603	HT, IR	Dupont	FA
Corn	Das-59122-7	HT, IR	Dupont	FA and ERA
Corn	Mon88017	HT, IR	Monsanto	FA
Corn	Das-59122-7 X 1507 X NK603	HT, IR	Dupont	FA
Corn	1507 X Das-59122-7	HT, IR	Dupont	FA
Corn	Das-59122-7 X NK603	HT, IR	Dupont	FA
Corn	Bt11 X GA21	HT, IR	Syngenta	FA
Corn	MON88017 X MON810	HT, IR	Monsanto	FA
Cotton	531	IR	Monsanto	FA and ERA
Cotton	757	IR	Monsanto	FA and ERA
Cotton	1445	HT	Monsanto	FA and ERA
Cotton	15985	IR	Monsanto	FA and ERA
Cotton	15985 X 1445	HT, IR	Monsanto	FA
Cotton	531 X 1445	HT, IR	Monsanto	FA
Cotton	281/3006	HT, IR	Dow Agro	FA

			Science	
Cotton	Mon88913	HT	Monsanto	FA
Cotton	LLCotton 25	HT	Bayer	FA and ERA
Cotton	Bollgard II 15985 X Roundup Ready Flex MON88913	HT, IR	Monsanto	FA
Cotton	BG2XLL (Bollgard II 15985 X LLCotton 25)	HT, IR	Bayer	FA
Canola	GT73	HT	Monsanto	FA and ERA
Canola	Ms8/Rf3	HT	Bayer	FA and ERA
Canola	T45	HT	Bayer	FA and ERA
Canola	MS1/RF1	HT	Bayer	FA
Canola	MS1/RF2	HT	Bayer	FA
Canola	Topas1912	HT	Bayer	FA
Potato	SPBT02-05	IR	Monsanto	FA
Potato	RBBT06	IR	Monsanto	FA
Potato	Newleaf Y	IR, Virus Resistance (VR)	Monsanto	FA
Potato	Newleaf Plus	IR, VR	Monsanto	FA
Sugar beet	H7-1	HT	Monsanto	FA