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Planting Seeds Annual

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Planting Seeds

Approved By:
William Westman
Prepared By:
Chanda Beckman and Zhang Lei

Report Highlights:
China's planting seed supply for its main crops, including grain (corn, wheat, and rice), oilseeds (soybeans, rapeseed, and peanut), and cotton in MY 2009/10 is expected to be sufficient with surpluses for hybrid corn and rice varieties. China's imports of grass seeds, sunflower seeds, and vegetable seeds are forecast to increase in MY 2009/10 driven by strong market demand. China's seed exports are forecast to continue growing in MY 2009/10 due mainly to China's low cost structure for seed breeding operations. In November 2009, local media reported that the Chinese government issued its first biosafety certificate for genetically engineered rice and corn, which is a ground-breaking event in Chinese agriculture.

Production:

General situation

China remains one of the world's largest seed producers, and is self-sufficient in planting seeds for its main crops including grains (corn, wheat, and rice), major oilseeds (soybeans, rapeseed, and peanut), and cotton. As reported in our last report, this trend is likely to continue throughout this marketing year (MY July-June) and into the

future. An official from the Ministry of Agriculture (MOA) noted China's annual seed consumption/use is 12 million metric tons (MMT), of which, six million MMT are commercial seeds. The official also stated that China's commercial seed rate has reached 50 percent. Hybrid corn and rice seeds account for the largest share of China's commercial seed market. China's total seed market value is estimated at $7.3 billion (RMB 50 billion) in calendar year 2009, with corn, rice, GE cotton, fruit, vegetable, and flower seeds accounting for over 80 percent. Hybrid corn, hybrid rice, vegetable, and GE cottonseed are all commercially produced in China.

The seed self-sufficiency rates for rice, corn, wheat, and soybeans remain close to 100 percent with abundant stocks. China produces a steady 85 percent of its required cotton seeds, with the remaining 15 percent likely to be met by international joint ventures (JVs) that develop seeds in China, and produces 95 percent of its required vegetable and fruit/melon seeds. The traditional practice of farmer-saved seeds for major crops continues to decline due to a government subsidy program that encourages the use of new, higher quality seeds. According to MOA, in MY 2008/09, high quality seed varieties represented 95 percent of the total seed market in China, a drop of one percent from last year, and that rate is as high as 98 percent in Heilongjiang, one of China's major grain and oilseed producing provinces. China's continuing low labor costs enable it to produce hybrid seeds for overseas markets at a lower cost compared to its competitors.

Seed production and supply expected to be stable for MY 2009/10

Maintaining a stable supply of high quality seeds for major grain crops continues to be a stated priority for the government of China. Year upon year, industry sources tell Post they expect seed production for all major crops in MY 2009/10 to meet domestic demand with surpluses for corn and rice.

In November 2009, the Ministry of Agriculture (MOA) released its survey report on domestic seed quality, based on four attributes: cleanliness, germination percentage, moisture content, and variety purity. The survey revealed 79 percent of the sample seeds were qualified: the qualified percentage was 84 percent for corn, 88 percent for rice, 100 percent for cotton, and 60 percent for fruit and vegetable, all slightly lower than the results in 2007. In addition to seed quality, this year's survey also inspected seed labeling. The results showed that 90 percent of the samples were accurately labeled, but corn and rice seeds were better labeled than cotton and fruit/vegetable seed labels. The major problems for seed labeling were: 1) label content was illegal; 2) label content was incomplete; and, 3) label content was not in the correct format.

Rice

According to MOA, China's 2009 hybrid rice seed area is estimated at 91,000 Hectares (Ha) with production at 237,000 MT. Together with the 47,000 MT of carry-over stocks, total supply will likely reach 284,000 MT during MY 2009/10. Hybrid rice acreage is forecast at 16.7 million hectares (MHa) in MY 2009/10 with seed demand at 250,000 MT, and ending stocks of 34,000 MT. However, at the annual seed trade fair in China in November 2009, MOA's seed officials alerted industry to a short supply of early rice seed due to production decline in Jiangxi and Hunan Provinces as a result of drought conditions. Two-line hybrid rice seed is expected to keep balance between supply and demand, while three-line hybrid rice seed will meet domestic demand with a slight surplus. Sichuan, Hunan, Guangxi, Jiangsu, and Hainan Provinces are China's major hybrid rice seed producers. China's northeast (Heilongjiang, Liaoning, and Jilin Provinces) generally plants conventional single crop japonica varieties due to the colder climate.

Corn

The hybrid corn seed area in 2009 totaled 223,000 Ha with production at 1.12 MMT, according to MOA. Together with the 450,000 MT of carry-over stocks, total supply will likely reach 1.57 MMT by MY 2009/10. Hybrid corn acreage is forecast at 30 million Ha in MY 2009/10 with seed demand at 1.05 MMT, and ending stocks of 520,000 MT. Gansu and Xinjiang Provinces now account for about 2/3 of China's total hybrid corn seed production. Hybrid corn varieties dominate China's seed corn use. MOA believes that the varieties that are density-tolerant and fast drying will maintain popularity in China as these varieties require less management and therefore less labor.

The average price of hybrid corn seeds in 2009 increased 5-8 percent over 2008; while hybrid rice seed prices increased 10-15 percent. MOA attributed the price increase to higher production costs, coupled with increasing transportation, processing, and packaging costs. These higher seed prices are forecast to continue in 2010. Along with the expectation of higher grain purchase prices, both hybrid corn and rice seed prices are expected to continue increase in 2010, with an anticipated slight increase for hybrid corn seeds, and an increase of over 20 percent for hybrid rice seed prices.

Wheat

The majority of wheat seeds are conventional varieties, most of which are produced in China's northern provinces. As China's largest wheat producer, Henan Province is also one of the major players in China's wheat seed market. According to Henan seed officials, in 2009, Henan's wheat seed acreage totaled 260,000 hectares with production at 1.56 MMT. Commercial seed production is estimated at 1.2 MMT. Local seed companies and research institutes are major players in China's wheat seed research and development, unlike hybrid corn seed, which attracts a large amount of foreign investment. Industry sources reported that about 70 percent of China's wheat farmers purchased commercial seeds as a result of the national seed subsidy program.

Cotton

The cotton seed subsidy was expanded to cover all cotton planted area in MY 2009/10 and is likely to remain in place for the foreseeable future. On March 5, 2009, MOA and the Ministry of Finance published No. 20 Announcement on Guidance on the 2009 Seed Subsidy. The Announcement indicated that seed subsidies for cotton will expand to cover China's entire cotton planted area. The subsidy continues to be allocated to large seed producers/traders for selected "high quality varieties" through an open bidding process. The rate remained unchanged at approximately $32 per hectare (RMB 15 per Mu). The coverage of Bt cotton varieties in MY 2009/10 is expected to increase further in MY 2009/10 mainly supported by a cotton seed subsidy with full national coverage. In Xinjiang, Bt varieties are reportedly not planted due to fewer outbreaks of diseases/pests. Some experts believe that Bt variety coverage reached 100 percent in Henan, Hebei, Shandong, and Anhui Provinces. Other Chinese sources, however, claim that Bt cotton varieties are losing their advantage in terms of yields or pest-resistance due to variety deterioration and gene limitation. In addition, Bt cotton quality is generally considered to be of poorer quality than conventional cotton seeds in China.

Agricultural Planted Area and Yields

As reported last year, the total sown area for all crops is generally stable at more than 150 million hectares. Grains and oilseeds continue to represent the largest share, and the planted area for vegetables and other horticultural products continues to increase. Total sown area for all crops is unlikely to fluctuate dramatically because of the limited and decreasing availability of arable land in China. However, the planted area designated for individual crops may vary slightly from year to year in response to the market situation.

The table below indicates China's grain targets by 2020 according to China's National Framework for Medium-to-Long-Term Food Security (2008-2020), which was released by the State Council in November 2008.

Table 1. China's Grain Targets by 2020

	2007 (MHa)	2010 (MHa)	2020 (MHa)
Cultivated land area	122	>=120	>=120
- for grain plantation	74.7	>73.3	>73.3
*Grain sown area	106	105	105
- for **cereal	85.9	84.6	84
Oilseed sown area	11.3	12	12
Grain yield (kg/ha)	4,743	4,875	5,250
Total grain production (MMT)	501.6	>=500	>540

- of which, cereal	456.3	>=450	>=475

(** cereal includes rice, wheat, corn, sorghum, millet, etc; grain includes cereal, soybean, and tubers)

Table 2. Agricultural Crop Sown Area in Million Hectares

Year/Crop	Rice	Wheat	Corn	Soybeans	Cotton	Rapeseed	Tubers	Peanut	Vege-tables	Sugar
2002	28.2	23.9	24.6	9.6	4.2	7.1	9.9	4.9	17.4	N/A
2003	26.5	22.0	24.0	9.5	5.1	7.2	9.7	5.1	18.0	N/A
2004	28.4	21.6	25.4	9.6	5.7	7.3	9.5	4.7	17.6	N/A
2005	28.8	22.8	26.4	9.6	5.1	7.3	9.5	4.7	17.7	1.6
2006	28.9	23.6	28.5	9.3	5.8	6.0	7.9	4.0	16.6	1.8
2007	28.9	23.7	29.5	8.7	5.9	5.6	8.1	3.9	17.3	1.8
2008	29.2	23.6	29.9	9.1	5.8	6.6	8.4	4.2	17.9	2.0

Table 3. Agricultural Crop Yields in Metric Tons per Hectare

Year/Crop	Rice	Wheat	Corn	Soybeans	Cotton	Rapeseed	Peanut
2002	6.2	3.8	4.9	1.7	1.17	1.48	3.01
2003	6.1	3.9	4.8	1.6	0.95	1.58	2.65
2004	6.3	4.3	5.1	1.8	1.11	1.81	3.02
2005	6.3	4.3	5.3	1.7	1.13	1.79	3.08
2006	6.2	4.6	5.4	1.7	1.29	1.83	3.25
2007	6.4	4.6	5.2	1.6	1.29	1.87	3.30
2008	6.6	4.8	5.5	1.7	1.30	1.83	3.36

Trade:

China imported 28,937 MT of planting seeds in MY 2008/09, valued at $149 million, an increase of seven percent by volume and 10 percent by value over the previous year. Vegetable/fruit, grass (rye grass, fescue, clover, and Kentucky grass), and sunflower seeds still rank in the top three categories of China's seed imports. In MY 2008/09, China's seed exports totaled 36,610 MT, and were valued at $140 million, a 14 percent decrease in volume but 24 percent increase in value from the previous year. The high export prices of rice and vegetable/fruit are major reason for volume decline and value increase, because rice and vegetable/fruit seeds accounted for the largest share of China's seed exports.

Grass seed imports are expected to increase in MY 2009/10

China's grass seed (rye grass H.S. code 120925, fescue H.S. code 120923, clover H.S. code 120922, and Kentucky grass H.S. code 120924) imports are forecast to increase eight percent to 19,000 MT in MY 2009/10, driven by the strong domestic demand from pastureland restoration projects in the western provinces and landscaping in China's burgeoning cities. In addition, the central government's tremendous investment in infrastructure construction will also generate great demand for grass seed.

China maintains tariff-rate quotas for seed wheat, rice, corn, and a few other non-grain commodities *[1]* . In-quota wheat, corn, and rice seed is subject to a one-percent tariff rate, while all other planting seeds enter tariff free. Out-of-quota tariffs for seed corn are 20 percent, while out-of-quota tariffs for wheat and rice are 65 percent.

The VAT-free policy on seed imports took effect in 2006, and will remain in place during China's "11th Five-Year Plan" (2006-2010) period. The VAT exemption procedure, however, lacks transparency and efficiency. Industry contacts claim that, under the current VAT-free regime, within each year of the plan (usually during July or August but even as late as October as was seen in 2009), the relevant government offices (MOA and the State Forestry Administration) send circulars or other internal notices to customs officials confirming the products and companies have VAT-free status. Importers and the companies they represent are required to pay a

VAT deposit (usually 13 percent of import value) to customs officials before the above-mentioned VAT Exemption Circular/Notice is released, then the eligible importers receive their deposit refund. This confusing system leads to an unstable market because it is difficult for importers to set sale prices as they do not know if/when their deposit will be refunded. For example, the total quota for rye grass (H.S. code 120925) in 2009 is 6,000 MT, however, China's imports in January-September totaled 6,369 MT, which means there must be some importers that do not receive deposit refunds. In many cases, importers have sold their seeds without using VAT-free prices, simply to avoid the hassle. The table below presents China's seed import quota.

H.S. code	Commodity	MOA Quota (MT)	SFA Quota(MT)	Total
120922	Clover	400.5	1000	1400.5
120923	Fescue	3500	3000	6500
120924	Kentucky	1358.9	1400	2758.9
120925	Rye Grass	4000	2000	6000
	Bean seed	1500	N/A	1500
10019010	Wheat seed	2.5	N/A	2.5
100510	Corn seed	150	N/A	150
10089010	Other cereals seed	25	N/A	25
120720	Cotton seed	2.5	N/A	2.5
	Oil seed	2500	N/A	2500
12091000	Sugar seed	1000	N/A	1000
120991	Vegetable seed	9000	N/A	9000

Sunflower seed imports are expected to increase in MY 2009/10

China's sunflower planting seed imports increased 57 percent in MY 2008/09 over the previous year, and this increase is expected to continue into MY 2009/10 because of the popularity of imported hybrid food sunflower seeds. Industry contacts revealed that sunflowers used for human consumption account for about 60 percent of China's total sunflower acreage, while sunflower used for oil production accounts for the remaining 40 percent. Hybrid seeds dominate China's sunflower oil seed market, while the traditional practice of farmer-saved seeds for sunflowers going into production for human consumption is declining in response to the good performance of imported hybrid seeds in disease resistance and yield. Industry contacts forecast China's oil sunflower acreage will decrease in MY 2009/10 due to unfavorable returns, while the acreage of sunflowers destined for human consumption will increase in MY 2009/10 as a result of good prices. Industry sources revealed that the current (November 2009) price for sunflower oil seeds is $0.23/lb (RMB3.5/kg), and food sunflower seeds is $0.46/lb (RMB7/kg). Sunflower is usually planted on marginal land with much fewer inputs than major row or other cash crops, the return however, is quite competitive, especially for sunflower seeds bound for eventual human consumption. The industry believes China's total sunflower acreage will not decline in the near term, despite the central government's measures aimed at ensuring self sufficiency and food security.

Vegetable seed imports are forecast to increase in MY 2009/10

Vegetable and fruit/melon seeds are produced throughout China, which enables them to be bred and marketed to suit local preferences and requirements. However, imports of various vegetables and fruit/melon seeds are also expected to continue growing to meet the diversified demands of consumers. Export-oriented vegetable seed production is concentrated in the eastern China provinces, mainly in Shandong. Seed breeding is outsourced to China by foreign companies from Japan, the EU, and the United States because of comparatively lower production and labor costs.

China's vegetable seed imports for MY 2009/10 are forecast to increase slightly over the previous year, driven by the strong growth of China's vegetable exports. China continues to be the world's largest vegetable

exporter. Japan is the largest market for China's vegetables, importing $837 million in MY 2008/09, distantly followed by the United States, importing $331 million over the same period. China's vegetable exports are expected to continue increasing because of competitive prices and increasing quality. Japan continued to be the largest supplier of vegetable seeds to China with a total export value of $19 million in MY 2008/09, followed by Denmark at $6.6 million and the United States at $6.5 million. Thailand ranked the highest among seed exporter to China in terms of volume, selling 1,427 MT in MY 2008/09.

Seed exports are expected to rise in MY 2009/10

Total seed exports in MY 2008/09 rose rapidly to $140.5 million, compared with $113.5 million in MY 2007/08. Vegetable, rice, and fruit/melon seed export values continue to rank the highest, accounting for 41, 33, and 10 percent, respectively. Seed exports are forecast to continue growing in MY 2009/10 mainly attributed to China's low cost structure for seed breeding operations.

China's hybrid rice seed (Rice Long Grain, H.S. 10061011) exports in MY 2008/09 totaled 15,759 MT, valued at $30.3 million. This represents a 20 percent decrease in volume and 14 percent increase in value from the previous year. The mean price in MY 2008/09 increased 44 percent to $1.93/kg over MY 2007/08. The decrease in exports to Vietnam, China's largest market for exports of hybrid rice seed, is the major cause for the decline in total export volume. Industry also attributed the decline to soaring prices. For many years, rice seed exported to Vietnam has been lower priced in order to expand the market. Exporters, however, cannot offer this lower price in MY 2008/09, which resulted in the export decline. Industry contacts reported that hybrid rice seed exports to other Asian countries are likely to increase steadily over the next five years due to China's technical advantages and the successful adaptability of hybrid rice to the local climate and environment. In addition, China views hybrid rice as one way to address food security concerns, especially in Southeast Asian countries.
[1] This is allowed under China's WTO accession agreement.

Policy:

Seed subsidy has been expanded in 2009

On March 5, 2009, MOA and the Ministry of Finance published No. 20 Announcement on Guidance on the 2009 Seed Subsidy. The Announcement indicated that seed subsidies for rice, wheat, corn, and cotton will expand to cover the entire planted area in 2009, and included soybean acreage in Liaoning, Jilin, Henlongjiang and Inner Mongolia. In 2008, only rice acreage was fully covered, 58-percent of wheat acreage, 47-percent of corn acreage, and 39-percent of cotton acreage were covered by this seed subsidy. The subsidy continues to be allocated to large seed producers/traders for selected "high quality varieties" through an open bidding process. The rate for early rice, wheat, corn, and soybeans is $32 per hectare (RMB 10 per Mu); for middle and late season rice, and cotton is $48 per hectare (RMB15 per mu).

Seed industry reform and consolidation continues

Seed production and marketing continues to be fragmented in China, but the trend for restructuring the sector is quickly accelerating. MOA indicated that by the end of 2008, all state-owned seed entities have segregated from agricultural administrative agencies. MOA officials stated that by October 2009, China has over 8,700 licensed seed trading entities, and over 70 entities have foreign investment. The top 10 seed companies have taken about 15 percent of total seed market share.

No new amendments to China's Seed Law

In August 2004, China published changes to Articles 17 and 33 of its Seed Law (GAIN CH4063 and CH0031). The Seed Law Implementation Measures (CH1052) and the Interim Articles from Crop Seed (seedling) Import and Export (CH4060) were not affected. Nevertheless, MOA stated problems surfaced along with the rapid development of the seed sector. Industry sources indicate the problems focus on the "new variety approval structure," the "market access mechanism," and the "market management system." In addition, industry feels these changes do not extend protection to essentially derived varieties (EDVs). As a member of UPOV

1978, China does not formally grant protection to EDVs, which is considered one of the reasons for China's lack of break-through development in the seed industry. Industry has proposed that MOA amend the Seed Law to include protection of EDVs. The most optimistic opinion is that the related articles will be amended in 2010.

Labeling
China's National Standard "General Directive for Labeling of Agricultural Seeds" took effect on November 1, 2006 and there have been no major changes to report over the past year. In general, the standard is a combination of the existing rules and regulations. As of this report, FAS/Beijing is not aware of any complaints by seed traders on the enforcement of the standard.

Agricultural commodity import regulations remain in place, unchanged
China's Animal and Plant Quarantine Law (CH1051), its Implementation Regulations (CH3110), the Administrative Measures (CH2039), and the "Items on Handling Review and Approval of Entry Animal and Plant Quarantine" (CH4020) establish procedures for importers wishing to purchase propagating material, including seed. Essentially, importers must apply for a Quarantine Import Permit (QIP) before signing any contract. Only with a QIP (valid for six months), is it permissible to sign a contract to import seeds.

Planting seed phytosanitary and licensing restrictions remain unchanged
Corn and soybean seed imports from certain countries including the United States are still prohibited because of quarantine restrictions on "Stewart's Wilt" and "Phytophthera Megasperma." As for other planting seeds, both the requirements for "main crops" variety approval, as well as licensing requirements for seed production and marketing, place arbitrary restrictions on seed
trade.

Exporter
s of U.S. planting seeds should contact the USDA Foreign Agriculture Service, China Desk (http://www.fas.usda.gov/contactlookup/ContactLookup.asp), APHIS officers (www.aphis.usda.gov/is/tst/RegionThree.html), the American Seed Trade Association (www.amseed.com/) and the Oregon Seed Council (forages.oregonstate.edu/organizations/seed) to understand the process and regulations for planting seed exports to China. Exporters should be aware, however, that final import approval of any product is subject to the importing country's rules and regulations as interpreted by border officials at the time of product entry. Therefore, it is particularly valuable to ensure that importers are familiar not only with published rules but also the customary practices.

Plant variety protection (PVP) background and development
China became the 141st member of International Plant Protection Commission (IPPC) on October 20, 2005. The official liaison office is affiliated with MOA. China has legally recognized the 1978 version of the International Convention for the Protection of New Varieties of Plants (UPOV) effective October 1, 1997 (CH7023). MOA and SFA are responsible for reviewing PVP applications. China's UPOV membership obligates China to honor, sui generis, the breeders' rights for registered and approved novel, distinct, uniform and stable (DUS) seeds.

Government Offices Responsible for PVP Applications and Development	
Ministry of Agriculture PVP Office	State Forestry Administration's PVP Office
No. 11 Nongzhanguannanli	No. 18 Hepingli Dong Jie
Chaoyang District	Chaoyang District
Beijing, China 100026	Beijing, China 100714
Tel: 86-10 64193029/65927554	Tel: 86-10 84238883
Fax: 86-10 64194661 E-mail:chenhong@agri.gov.cn	Fax: 86-10 64213084 E-mail:webmaster@cnpvp.net
Web: www.cnpvp.cn	Web: www.cnpvp.net

Web2: www.stee.agri.gov.cn	

MOA reports that from the time it began accepting applications in 1999 through October 31, 2009, the PVP office received 6,180 applications for new PVP. At present, 2,644 applications have been completely reviewed and approved. The greatest number of applications and approvals are for major field crops including corn, rice, wheat, soybeans, and rapeseed (in this order). See table 5 below for details on PVP applications and approvals from MOA. Agricultural research institutes and universities/colleges filed 57 percent of the applications as compared to the 37 percent by domestic seed enterprises and individuals. Additionally, 51 out of the 333 foreign applications received for new PVP were reviewed and approved. Until now, the Netherlands has applied for 149 new plant varieties in China, followed by the South Korea at 47 and United States at 44.

Table 5. MOA PVP Applications and Approvals (updated from previous report)

Plant	Application	Approval
Rice	1,814	906
Corn	2,231	1,060
Wheat	568	246
Cotton	219	60
Soybean	244	70
Other major crops	311	104
Vegetable	279	90
Flower	329	60
Fruit	167	48
Others (pasture and tea)	18	0
Total	5,441	2,644

Biotechnology Policy:

On November 21, 2009, Beijing-based Origin Agritech announced that it is the first company to receive de-regulated status for genetically engineered corn for planting in China. Confirmed by MOA, Origin's phytase corn product recently received the final biosafety certificate that permits its domestic sale and marketing. The deregulation of this product is a ground-breaking event in Chinese agriculture. Though Chinese leaders have long stated that the technology can be safely used given the proper safety evaluation and precautions, no large-scale commercially viable food crops have ever been granted a safety certificate. Please refer to GAIN CH9091 for more information about this new development.

Local media (Reuters China) reported on November 30, 2009 that the government of China issued the first biosafety certificate to insect-resistant rice and permits its commercial production. Industry believes the large scale commercial production will start in two to three years. The link below gives the original report in Chinese from Reuters China.

http://cn.reuters.com/article/commoditiesNews/idCNnCN076272320091130?pageNumber=2&virtualBrandChannel=0&sp=true

On June 2, 2009, China issued a strategy for biotechnology industries. The biotechnology industries being promoted include: agriculture, pharmaceutical, energy, manufacturing, and environmental protection. The State Council released this policy guidance to promote the accelerated development of biotech industry and increase its overall economic contribution. 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 small and medium-sized enterprises. Please refer to GAIN CH9061 for unofficial translation of the document.

The Chinese government has made biotechnology a priority and allocated significant resources to the research and development of biotechnology, particularly in the pharmaceutical and agricultural industries. Please refer to GAIN CH9060 for more information about China's biotechnology.

Marketing:

Market Entry and Promotion

China's onerous investment, import, and marketing laws and regulations for the planting seed sector remain unchanged again this year. The national policy on foreign investment in the seed sector (CH2012 and CH7048) still prevents any investment by foreign enterprises in the GE planting seed sector, while investment for "main crop" varieties is limited to a minority share. Many foreign seed companies, however, have established representative offices in China. They normally work with a few importers, but establish vast networks and relationships with seed wholesalers and vendors in regions or markets with the best potential. When introducing new varieties to China, companies usually demonstrate seed quality in trial plots before they decide which varieties to market to farmers. Demonstration trials are the best way to showcase farmers the advantages of newly developed varieties. This is commonly done by domestic seed enterprises. Local officials/experts and farmers are usually invited and briefed, especially during harvest season. Another effective tool is to provide free seeds to farmers or farmer cooperatives for trial planting. For instance, seed traders in China's western provinces introduced several sunflower varieties from the United States and other countries for trial planting before they decided to select which varieties to import. For the most part, farmers purchase seeds from local county or village level seed stations. In recent years farmer cooperatives have facilitated the dissemination and trade of BT cotton seeds. Cooperatives will also help farmers become more self-sufficient and market-oriented.

Trade shows are another way to expose farmers to new varieties. For example, China's National Agriculture Technology Extension Center/MOA and the China Seed Association both sponsor an annual national seed fair with support from the leading (mainly domestic) seed companies. The fair principally focuses on main crops but also include vegetable and fruit seeds/varieties. The 2009 fair was held in Chengdu, Sichuan Province, in November. Shouguang in Shandong Province, is the largest vegetable producer in China, and it is also the origin of greenhouse in China. Shouguang has hosted "China (Shouguang) International Vegetable Sci-tech Fair" since 2000. The Fair opens April 20 each year, the largest vegetable fair in China, presents great opportunity for vegetable/melon seed traders. More information on the fair is available at: http://www.intvegetable-fair.com/

Trade Tables:

Table 1 China's Imports from the World in Volume & Value

	MY(Jul-Jun)	Volume (KG)			Value (US$)		
HS Code	Planting Seeds	MY06/07	MY07/08	MY08/09	MY06/07	MY07/08	MY08/09
	Total	26,609,876	27,114,422	28,937,044	122,373,000	135,875,000	149,357,000
10019010	Wheat	0	0	0	0	0	0
10020010	Rye	0	0	0	0	0	0
10030010	Barley	0	0	0	0	0	0
10040010	Oats	0	0	0	0	0	0
100510	Corn	97,732	102,840	122,057	1,758,000	1,963,000	2,248,000
10061011	Rice,long grain	18	999,012	12	0	316,000	0
10061019	Rice, other	200	93	30	3,000	1,000	1,000

10070010	Sorghum	2,487	15,355	952	4,000	27,000	2,000
10089010	Other cereals	0	0	0	0	0	0
12010010	Soybean seeds	135	157	123	1,000	1,000	2,000
12021010	Peanuts	0	0	0	0	0	0
12051010	Rape/Colza,low erucic acid	0	0	0	0	0	0
12059010	Rape/Colza,nes	0	0	0	0	0	0
12060010	Sunflower	1,669,078	1,183,593	1,855,203	16,181,000	12,092,000	18,315,000
120720	Cotton	9,280	525,102	246,081	23,000	112,000	52,000
12091000	Sugar beet	894,949	1,256,166	898,996	8,483,000	10,820,000	8,519,000
120921	Alfalfa	65,005	38,530	179,906	258,000	166,000	494,000
120922	Clover	1,009,733	1,485,703	1,846,985	2,690,000	5,534,000	7,294,000
120923	Fescue	6,437,681	5,158,273	5,986,816	11,876,000	10,127,000	9,339,000
120924	Kentucky	3,427,141	2,379,097	2,608,655	8,256,000	7,193,000	9,585,000
120925	Rye grass	4,440,496	5,722,787	5,680,994	5,040,000	7,241,000	6,922,000
120930	Herbaceous	67,720	29,669	28,439	4,303,000	5,639,000	4,598,000
12092990	Other Forage	1,756,577	903,856	799,493	4,424,000	4,018,000	1,798,000
120999	Fruit, Melon and Other	1,229,736	1,103,197	2,183,679	6,249,000	6,741,000	11,948,000
120991	Vegetable	5,501,908	6,210,992	6,498,623	52,824,000	63,884,000	68,240,000

Source: World Trade Atlas

Table 2 China's Imports from the U.S. in Volume & Value

		Volume (KG)			Value (US$)		
HS Code	Planting Seeds/MY(Jul-Jun)	MY06/07	MY07/08	MY08/09	MY06/07	MY07/08	MY/08/09
	Total	14,416,567	13,166,705	14,336,018	50,653,000	48,056,000	48,982,000
10019010	Wheat	0	0	0	0	0	0
10020010	Rye	0	0	0	0	0	0
10030010	Barley	0	0	0	0	0	0
10040010	Oats	0	0	0	0	0	0
100510	Corn	20	17	1	0	0	0
10061011	Rice, long grain	0	0	0	0	0	0

10061019	Rice, other	0	0	0	0	0	0
10070010	Soghum	0	0	0	0	0	0
10089010	Other cereals	0	0	0	0	0	0
12010010	Soybean	0	0	0	0	0	0
12021010	Peanut	0	0	0	0	0	0
12051010	Rape/Colza,low erucic acid	0	0	0	0	0	0
12059010	Rape/Colza, nes	0	0	0	0	0	0
12060010	Sunflower	1,344,049	723,085	1,098,837	13,762,000	7,706,000	10,966,000
12072010	Cotton	0	0	76	0	0	1,000
12091000	Other sugar beet	205	0	0	3,000	0	0
120921	Alfalfa	5,000	2,530	1,926	23,000	15,000	4,000
120922	Clover	19,958	130,159	76,318	79,000	551,000	363,000
120923	Fescue	5,525,689	4,490,889	5,166,721	10,336,000	8,921,000	8,132,000
120924	Kentukey	2,791,115	2,164,347	2,426,480	7,137,000	6,696,000	9,057,000
120925	Rye grass	2,386,029	3,865,600	4,116,431	2,486,000	4,520,000	4,520,000
120930	Herbaceous	2,413	2,281	2,531	2,610,000	3,200,000	2,224,000
12092910	Sugar beet	200	0	1,493	20,000	0	53,000
12092990	Other forage	1,405,873	790,203	141,218	3,994,000	3,629,000	944,000
120999	Fruit, Melon & Other	484,585	610,433	1,079,683	2,676,000	3,187,000	6,238,000
120991	Vegetable	451,431	387,161	224,303	7,527,000	9,631,000	6,480,000

Source: World Trade Atlas

Table 3 China's Major Seed Imports and Major Countries of Origins

Clover Imports Volume and Major Origins (in KG) 120922				
Country	MY05/06	MY06/07	MY07/08	MY08/09
Australia	1,535,800	377,400	601,411	367,128
Argentina	107,500	193,500	376,580	20,000
Denmark	122,250	98,875	176,900	193,275
Canada	148,000	320,000	137,800	298,137
United States	24,947	19,958	130,159	76,318
New Zealand	209,259	0	62,853	892,127
Others	43	0	0	0
Total	2,147,802	1,009,733	1,485,703	1,846,985

Fescue Seeds Imports Volume and Major Origins (in KG) 120923				
Country	MY05/06	MY06/07	MY07/08	MY08/09
United States	4,722,736	5,525,689	4,490,889	5,166,721
Canada	267,964	200,826	511,982	566,397
Denmark	426,111	677,165	144,945	158,698
Netherlands	0	34,001	10,457	5,000
Others	66	0	0	0
Total	5,416,877	6,437,681	5,158,273	5,896,816
Kentucky Seeds Import Volume and Major Origins (in KG) 120924				
Country	MY05/06	MY06/07	MY07/08	MY08/09
United States	1,804,908	2,791,115	2,164,347	2,426,480
Denmark	201,575	635,550	214,750	182,175
Total	2,026,502	3,427,141	2,379,097	2,608,655
Rye Grass Imports Volume and Major Origins (in KG) 120925				
Country	MY05/06	MY06/07	MY07/08	MY08/09
United States	2,006,901	2,386,029	3,865,600	4,116,431
Canada	175,946	1,256,563	1,224,137	1,366,838
Denmark	264,725	643,828	548,125	180,400
Netherlands	75,975	134,051	39,925	0
New Zealand	50,000	0	23,000	6,325
Germany	22,009	20,000	22,000	11,000
Others	75,000	25	0	0
Total	2,670,556	4,440,496	5,722,787	5,680,994
Herbaceous Imports Volume and Major Origins (in KG) 120930				
Country	MY05/06	MY06/07	MY07/08	MY08/09
United States	7,087	2,413	2,281	2,531
Netherlands	12,996	63,498	21,888	8,240
Germany	364	388	1,416	1,513
India	25	0	0	10,000
Honduras	0	0	0	1,500
Poland	44,000	354	713	1,256
Others	107,466	1067	3371	3,399
Total	171,938	67,720	29,669	28,439
Other Forage Imports Volume and Major Origins (in KG) 12092990				
Country	MY05/06	MY06/07	MY07/08	MY08/09
United States	615,267	1,405,873	790,203	141,218
Korea, South	0	0	0	220,000
Denmark	125,894	30,000	65,000	48,700
Argentina	0	188,000	0	179,800
Canada	1,305,531	79,539	48,453	84,225
India	0	0	0	125,550
Others	291,507	53,165	200	0
Total	2,338,199	1,756,577	903,856	799,493
Sunflower Planting Seed Imports Volume and Major Origins (in KG) 12060010				

Country	MY05/06	MY06/07	MY07/08	MY08/09
United States	1,238,036	1,344,049	723,085	1,098,837
Chile	37,458	92,213	287,223	265,079
India	64,202	94,732	78,397	248,308
Australia	140,387	83,605	83,265	92,013
Argentina	13,613	33,178	9,711	81,950
France	1,100	20,938	1,086	65,985
Others	98,049	363	826	3,031
Total	1,592,845	1,669,078	1,183,593	1,855,203
Fruit, Melon and Other Import Volume and Major Origins (in KG) 120999				
Country	MY05/06	MY06/07	MY07/08	MY08/09
United States	627,722	484,585	610,433	1,079,683
Canada	73,097	43,577	10,175	296,961
Argentina	0	0	53	179,000
Australia	68,151	147,230	34,104	165,987
Denmark	0	32,960	32,000	161,520
Taiwan	220,277	145,763	78,714	99,213
South Africa	7,450	339	710	41,293
Japan	11,045	174,086	126,905	33,748
Others	166,986	201,196	120,103	126,274
Total	1,174,728	1,229,736	1,013,197	2,183,679
Vegetable Import Volume and Major Origins (in KG) 120991				
Country	MY05/06	MY06/07	MY07/08	MY08/09
Thailand	2,399,937	1,638,425	2,842,932	1,427,122
Indonesia	404,223	284,793	103,476	1,382,755
Denmark	421,522	718,067	1,104,255	1,051,435
Italy	71,744	110,855	240,494	873,316
Japan	791,999	923,490	488,696	443,796
Australia	783,013	660,814	415,942	355,208
United States	479,564	451,431	387,161	224,303
New Zealand	256,979	128,701	169,507	215,853
Netherlands	82,674	96,439	64,893	114,453
Others	808,096	488,893	393,636	410,382
Total	6,499,751	5,501,908	6,210,992	6,498,623

Table 4 China's Exports to the World in Volume & Value

	MY(Jul-Jun)	Volume(KG)			Value(US$)		
HS Code	Planting Seeds	MY06/07	MY07/08	MY08/09	MY06/07	MY07/08	MY08/09
	Total	35,307,375	42,623,347	36,610,174	88,260,000	113,497,000	140,468,000
10019010	Wheat	0	0		0	0	
10020010	Rye	0	0		0	0	
10030010	Barley	0	0		0	0	

10040010	Oats	0	0		0	0	
100510	Corn Seed	108,758	250,200	292,119	185,000	324,000	521,000
10061011	Rice Long Grain	14,846,429	19,781,090	15,758,819	15,676,000	26,466,000	30,347,000
10061019	Rice Other	1,872,141	4,482,999	7,927,006	3,329,000	6,640,000	15,464,000
10070010	Sorghum	15,410	39,860	40,231	22,000	73,000	92,000
10089010	Other Cereals	2,674	0	1,520	1,000	0	1,000
12010010	Soybeans	316,791	78,155	37,230	120,000	64,000	117,000
12021010	Peanuts	256,550	6,000	18,750	161,000	4,000	19,000
12051010	Rape/Colza, low erucic acid	7,128	10,000	48,571	10,000	54,000	218,000
12059010	Rape/Colza,nes	7,823	2,780	124	18,000	3,000	0
12060010	Sunflower Planting	84,749	276,511	530,682	77,000	112,000	1,351,000
12072010	Cotton Planting	484,592	149,142	106,225	1,637,000	817,000	741,000
12092910	Other Sugar Beet	440	78	2,798	2,000	0	7,000
120921	Alfalfa	4,650,825	3,853,594	701,771	6,724,000	7,148,000	1,397,000
120922	Clover	2,120	210	255	7,000	1,000	2,000
120923	Fescue	0	0	0	0	0	0
120925	Rye Grass	415	873	12,718	2,000	2,000	87,000
120930	Herbaceous	745,651	584,468	824,018	5,641,000	7,323,000	11,562,000
120926	Timothy	0	0	0	0	0	0
12091000	Sugar Beet	631	35	1,258	3,000	4,000	3,000
12092990	Other Forage	4,379,067	5,960,250	4,532,659	5,299,000	7,634,000	6,788,000
120999	Fruit, Melon and Other	975,105	2,825,760	1,678,793	9,209,000	11,418,000	14,182,000
120991	Vegetable	6,550,076	4,321,342	4,094,627	40,137,000	45,410,000	57,569,000

Source: World Trade Atlas

Table 5 China's Exports to the U.S. in Volume and Value

	MY(Jul-Jun)	Volume (KG)			Value (US$)		
HS Code	Planting Seeds	MY06/07	MY07/08	MY08/09	MY06/07	MY07/08	MY08/09
	Total	1,448,723	761,918		14,470,000	13,608,000	
10019010	Wheat	0	0		0	0	
10020010	Rye	0	0		0	0	
1003001	Barley	0	0		0	0	

0							
10040010	Oats	0	0		0	0	
100510	Corn	0	0		0	0	
10061011	Rice Long Grain	0	0		0	0	
10061019	Rice Other	0	0		0	0	
10070010	Sorghum	0	0		0	0	
10089010	Other Cereals	0	0		0	0	
12010010	Soybeans	0	0		0	0	
12021010	Peanuts	0	0		0	0	
12051010	Rape/Colza, low erucic acid	0	0		0	0	
12059010	Rape/Colza,nes	0	0		0	0	
12060010	Sunflower	1,983	0	55,319	1,000	0	223,000
12072010	Cotton	15,655	16,000	0	39,000	64,000	0
12092910	Other Sugar Beet	0	15	0	0	0	0
120921	Alfalfa	118,150	13,994	1	288,000	41,000	0
120922	Clover	0	0	0	0	0	0
120923	Fescue	0	0	0	0	0	0
120925	Rye Grass	0	105	1,875	0	1,000	24,000
120930	Herbaceous	336,285	52,078	102,672	658,000	706,000	1,543,000
120930	Timothy	0	0	0	0	0	0
12091000	Sugar Beet	0	0	0	0	0	0
12092990	Other Forage	23,857	0	65,001	47,000	0	187,000
120999	Fruit, Melon and Other	35,622	224,334	48,444	1,052,000	1,539,000	2,300,000
120991	Vegetable Seeds	917,171	455,392	455,039	12,385,000	11,257,000	12,482,000

Source: World Trade Atlas

Table 6 China's Major Seed Exports and Major Countries of Origins

Other Forage Exports Volume and Major Destinations (in KG) 12092990			
Country	MY06/07	MY07/08	MY08/09
Korea, South	3,703,611	4,285,072	3,666,802
Japan	286,919	415,378	410,723
United States	23,857	0	65,001
Taiwan	108,930	260,500	272,030
Germany	141,720	78,050	74,470
Italy	63,000	857,000	21,500
Canada	0	43,000	21,500
Others	51030	21,250	633
Total	4,379,067	5,960,250	4,532,659

Rice, Long Grain Exports Volume and Major Destinations (in KG)			
Country	MY06/07	MY07/08	MY08/09
Vietnam	10,571,987	11,606,505	6,136,220
Bangladesh	3,237,582	3,444,931	3,754,337
Indonesia	126,000	2,700,000	3,275,365
Pakistan	909,218	1,539,014	1,939,532
Philippines	1,300	454,000	625,000
Others	342	36,640	28,365
Total	14,846,429	19,781,090	15,758,819
Vegetable Seed Exports in Volume and Major Destinations (in KG)120991			
Country	MY06/07	MY07/08	MY08/09
Netherlands	450,239	930,406	614,131
Japan	383,863	388,384	574,279
United States	917,171	455,392	455,039
Korea, South	1,493,564	522,734	451,428
Taiwan	263,851	276,525	328,232
Vietnam	86,087	147,796	283,229
Thailand	137,283	234,060	193,551
Hong Kong	103,790	99,463	179,790
Italy	111,131	360,021	179,523
France	183,482	176,042	152,564
Malaysia	115,341	110,891	129,859
Korea, North	4,000	300	122,480
Bangladesh	13,284	65,707	102,626
Others	237,712	553,621	327,896
Total	4,500,798	4,321,342	4,094,627
Fruit, Melon & Other Exports in Volume and Major Destinations (in KG) 120999			
Country	MY06/07	MY07/08	MY08/09
Korea, South	375,292	1,607,738	656,766
Japan	294,259	341,425	306,794
Indonesia	21,600	259,803	169,775
Pakistan	32,135	26,124	123,964
Netherlands	45,251	44,169	84,998
India	25,273	11,826	71,371
United States	35,622	224,334	48,444
Laos	1,000	75,000	48,033
France	45,140	37,008	36,185
Taiwan	28,002	12,940	20,955
Hong Kong	4,606	8,908	20,872
Germany	410	305	20,759
Bangladesh	6,408	9,502	11,840
Costa Rica	276	18,000	11,630
Others	59,831	148,678	46,407
Total	975,105	2,825,760	1,678,793

Source: World Trade Atlas