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## China, Peoples Republic of

### Planting Seeds

### Annual

### 2004

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**Report Highlights:**

U.S. seed exports to China continue growing as demand for non-cereal seeds, (vegetable, forage, turf, etc.) remains strong. Consolidation of seed research remains a priority for the government. Numerous production and trade policy issues remain with the Seed Law, its supporting regulations, and the procedures and requirements for seed trade. This reports updates information from the previous planting seed annual report (CH3133).

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## Executive Summary

China remains the world's largest agricultural producer by volume and as such has a crucial role in the world's planting seed market. The Ministry of Agriculture (MOA) estimates annual nationwide planting seed demand at 12.5 million metric tons (MMT), primarily grains and oilseeds. There remain between 7,000 – 8,000 licensed seed distribution and breeding enterprises whose sales value exceeded \$1.6 billion in 2003. These figures do not include unlicensed seed retailers nor farmers who sell or exchange seed or act as brokers and middlemen.

Satisfying demands for grains and oilseeds planting seeds remains MOA's priority, as food security remains politically important. As incomes rise, consumers across the country are increasingly accustomed to a varied diet including year-round demand for vegetables and fruits; sharply increasing demand for fruit and vegetable seeds for use under plastic and greenhouses. Additionally, as consumer's diets include more dairy and animal protein, planting seed demand for the forage and feed sector could increase by volume and in quality.

Growers and farmers, especially affluent growers in eastern China and those near large metropolitan areas, increasingly realize the value of hybrid seeds versus conventional or farm-saved seeds. Less-affluent farmers are typically slowest adopters of the newest seed varieties, and maintain a practice of using farm-saved seed and seed exchange with other farmers every couple of years.

Marketing year (July to June) 2003/04 seed imports and exports expanded by 17 percent and 7 percent respectively to \$84.3 million and \$49.5 million. Demand for imported vegetable and forage/turf seeds remains strong and should grow over the coming year. It is, nevertheless, possible that forage and turf demand growth could temporarily slow if raising food and feed grain crop planted area takes priority. Exports of rice seed and vegetable seeds should expand as long as China remains a low-cost supplier of planting seeds. If hybrid seed production expands, exports could see phenomenal growth. Detailed trade data is available in this past September's GAIN report CH4034.

The March 11, 2002 restrictions on foreign investment in China's seed sector issued by the Ministry of Commerce and the National Development and Reform Commission (NDRC) remain in force. China's "Foreign Investment Guidance Catalog" (CH2012) and the "Provisions on Examination, Approval, Registration and Administration for Establishing Crop Seed Enterprises" (CH7048) continue placing restrictions on levels and types of foreign seed company investment. The 2002 restrictions prevent any new investment by foreign enterprises in the transgenic planting seed sector while investment for "major crop" varieties is limited to a minority share.

Numerous problems remain with the nation's Seed Law (CH0031), Seed Law Implementation Regulations (CH1052), and the Interim Measures for Seed Trade (CH4060). MOA's June 2004 Circular 30 (CH4061) highlights many of the problems the government wants to address in the seed market over the coming years.

Despite numerous problems, domestic and international seed companies remain optimistic and actively involved in the seed business. Both government and private sector seed enterprises want accelerated and transparent seed sector reforms that will bring order to the marketplace.

## Production

Better integration of seed breeding and distribution enterprises remains a goal for China's policy makers, seed industry association, and academic institutes. Presently, most seed breeding takes place at state- and provincial-sponsored agricultural academies, universities and crop research centers through grants from the Ministry of Science and Technology, Ministry of Education, and MOA. Sources report it remains the government's goal to reduce the number of crop seed breeding institutes by about two-thirds. Agricultural policy researchers and economists are examining the best means to accomplish this goal through policy recommendations on consolidating or eliminating publicly-funded research institutes in order to gain economies of size and scope. Additionally, foreign and domestic seed companies' seed breeding and production work with farmers and growers (E.g. importing germplasm or parent lines and breeding out seeds for sale in China) continues growing in several remote areas of western China.

Government and industry seed specialists report no significant changes to China's planting seed production in 2004. Hybrid seed production continues expanding as domestic growers demand high-quality trait-specific seeds. Low labor costs ensure China's ability to be a global leader in hybrid seed production as commercial scale seed enterprise management improves and researchers develop seeds for more diverse climatic growing conditions.

## Agricultural Planted Area and Crop Yields

Total sown area of all crops exceeds 150 million hectares. Grain and oilseed takes the largest share, but vegetable and other horticultural product planted area is rising. Multiple cropping, although declining, results in enormous year-round seed demand.

Agricultural Crop Sown Area in Million Hectares									
Year/Crop	Rice	Wheat	Corn	*Soybeans	Cotton	*Rapeseed	Tubers	*Peanut	Vegetables
1999	31.3	28.9	25.9	8	3.7	6.9	10.4	4.3	13.3
2000	30	26.7	23.1	9.3	4	7.5	10.5	4.9	15.2
2001	28.8	24.7	24.3	9.5	4.8	7.1	10.2	5	16.4
2002	28.2	23.9	24.6	9.6	4.2	8.5	9.9	5	17.4
2003	26.5	22	24	9.5	5.1	8	9.7	5.4	18
*2004	28.4	21.8	24.3	9.5	5.8	8.2	9.7	5.4	18.5

Source: State Statistics Bureau. \*Estimates by USDA and FAS/China.

Despite new hybrids and innovations in the planting seed sector, crop yields remain stagnant. Some experts suggest that as farmers leave the land, reduced labor input negates the benefit of genetic improvement. As not only food self-reliance but also rural development remains policy priorities, new seed technology and better hybrids must inevitably be adopted.

Agricultural Crop Yields in Metric Ton per Hectare							
Year/Crop	Rice	Wheat	Corn	Soybeans*	Cotton	Rapeseed*	Peanut*
1999	6.3	3.9	4.9		1		
2000	6.3	3.7	4.6		1.1		
2001	6.2	3.8	4.7		1.1		
2002	6.2	3.8	4.9	1.9	1.2	1.5	3
2003	6.1	3.9	4.8	1.6	1	1.6	2.7
*2004	6.3	4.1	4.9	1.8	1.1	1.5	2.9

Source: State Statistics Bureau. \*Estimates by USDA and FAS/China.

**Market Entry and Promotion**

Despite onerous investment, import, and marketing laws and regulations for the planting seed sector, many foreign seed companies have established representative offices in China (see CH2012 and CH7048). Most companies locate in Beijing as easy access to regulators can help ensure smoother trade. Foreign seed companies typically work with only a few importers, but establish vast networks and relationships with seed wholesalers and vendors across the country in regions or markets offering the best potential.

Retailers and seed vendors often contract agents to import seed for them; indirect purchases can lead to commercial disputes. U.S. seed exporters are encouraged to develop close relationships with retailers and vendors. Traditional trade missions, reverse trade missions, and sales award programs facilitate good relations. Providing training programs and Chinese-language marketing materials also are valuable tools to help vendors communicate information to customers.

**Planting Seed Purchasing and Demonstration**

Although farmers willingly purchase newly developed seeds from companies, institutes, or through MOA's extension agency and local seed stations, to ensure adoption, it is necessary to convince buyers and local agricultural bureaus of the commercial benefits (e.g. higher yield, size, color, intrinsic features of product, drought tolerance, waxiness etc.) through demonstration plots or trials. Universities and agriculture bureaus conduct trials cooperatively with both domestic and foreign companies.

**Trade**

MY2003/04 planting seed imports rose 17 percent in value to \$84.3 million while exports climbed 7 percent to \$49.5 million. Thorough trade data for each of the past three marketing years for 28 seed categories/types is in GAIN report CH4034 "Planting Seeds MY2003/04 Trade Data." The United States remains China's largest supplier of planting seeds accounting for 51 percent of volume and 36 percent of value owing to its strong presence in the grass seed, vegetable seed, and sunflower seed markets. China's planting seed exports remain strong for rice and vegetable seed to Southeast Asia.

**China's Seed Law Undergoes Minor Revision**

On August 28, 2004 China issued changes in the Seed Law (CH0031). The changes impacted Articles 17 and 33. The Seed Law Implementation Measures (CH1052) and the Interim Measures for Crop Seed (Seedling) Import and Export (CH4060) are not affected. The Seed Law changes are:

1. Article 17 Para 2 is amended to read, "Forest varieties which required an examination, but did not pass the examination, can not be managed or extended. However, if production of such varieties is crucial, the forest variety examination commission should approve the varieties."
2. Article 33 now reads "In the absence of approval from the forestry authorities at the people's governments of the provinces, autonomous regions and municipalities, no precious tree seeds and any other seeds prohibited for purchase by the corresponding people's governments can be procured."

### **Agricultural Commodity Import Regulations**

China's Animal and Plant Quarantine Law (CH1051), its Implementation Regulations (CH3110), the Administrative Measures (CH2039), and the recently issued "Items on Handling Review and Approval of Entry Animal and Plant Quarantine" (CH4020) establish procedures for importers wishing to purchase plant propagating material: including seed. Essentially, importers must apply for a Quarantine Import Permit (QIP) before signing any contract. Only with a QIP (which is valid for 6 months), it is permissible to sign a contract and import seed.

### **Planting Seed Phytosanitary and Licensing Restrictions**

Corn and soybean seed from the United States and several other countries are prohibited from import into China because of quarantine restrictions on Stewart's Wilt and *Phytophthora Megasperma*. As for other planting seeds, both the requirements for "major crop" variety approval, as well as licensing requirements for seed production and marketing, place arbitrary restrictions on seed trade.

Industry sources indicate importers of certain seeds (e.g. grass seed) have been asked to submit an annual import plan to MOA and SFA offices, although the statutory requirement for such plans is unclear. Government offices reportedly use the information when deciding how to award VAT-free import approvals.

Exporters of U.S. planting seeds should contact the USDA Foreign Agriculture Service Planting Seeds Division ([www.fas.usda.gov/cots/seeds.html](http://www.fas.usda.gov/cots/seeds.html)), APHIS officers ([www.aphis.usda.gov/is/tst/RegionThree.html](http://www.aphis.usda.gov/is/tst/RegionThree.html)), and the American Seed Trade Association ([www.amseed.com/](http://www.amseed.com/)) and the Oregon Seed Council ([forages.oregonstate.edu/organizations/seed/osc/](http://forages.oregonstate.edu/organizations/seed/osc/)) to understand more about the issues facing 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 make certain importers are familiar not only with published rules but customary practices.

### **Seed Tariffs and the Value Added Tax (VAT)**

China institutes tariff-rate quotas for seed wheat, rice, corn, and a few other non-grain commodities. In-quota wheat, corn, and rice seed are subject to a 1 percent tariff while all other planting seeds are 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 Value Added Tax collection process lacks transparency and efficiency. A five-year plan valid from 2001 through 2005 allows various agricultural commodities and inputs to enter China VAT-free. Industry sources report within each year of the plan, around April or May, government offices send circulars or other internal notices to Customs officials confirming what specific products (e.g. grass seed) companies may bring into China VAT-free. The lack of transparency makes it impossible to determine whether the system operates as a de facto quota.

Under the VAT collection system, companies pay the 13 percent VAT as a deposit for imports during the first few months of the year. Only in April or May do companies find out whether they received VAT-free status. If the company is granted the right to import seeds VAT-free, the deposit is returned. If not, the deposit is kept and future shipments for the year require the 13 percent VAT.

This confusing system leads to an instable market as some importers and the companies they represent try to book seeds for shipment near the end of the year while they retain VAT-free status. Likewise, market confusion reigns when companies do not receive an expected VAT-free entitlement, increasing costs for importers and the distributors they represent. This results in cost increases that erase the profitability of trade leading to cancellations, shipment redirection, and even default.

### Plant Variety Protection (PVP) Background and Development

China has legally recognized the 1978 version of the International Convention for the Protection of New Varieties of Plants (UPOV) effective from October 1, 1997 (CH7023). MOA and the State Forestry Administration (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 seeds.

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	Tel: 86-10 84238715
Fax: 86-10 64194661	Fax: 86-10 64213084
Web: <a href="http://www.cnvpvp.cn">www.cnvpvp.cn</a>	Web: <a href="http://www.cnvpvp.net">www.cnvpvp.net</a>
Web2: <a href="http://www.stee.agri.gov.cn">www.stee.agri.gov.cn</a>	

USDA GAIN report CH4059 includes five MOA and four SFA decrees listing protected genera and species of agricultural and forestry plants. Combined, the lists include 119 species (MOA: 41, SFA: 78) of agricultural and forestry plants eligible for PVP application. The greatest number of applications and approvals are for major field crops including corn, rice, soybeans, wheat and rapeseed.

### Intellectual Property Rights (IPR) Issues for Planting Seed Enterprises

GAIN report CH2049 provides information on how to access UNOFFICIAL English translations of China's Copyright Law, Trademark Law, and Patent Law along with the Implementation Regulations or Enforcement Measures for each of the aforesaid.

Several planting seed companies report problems with IPR infringement in China, yet many companies experiencing problems had not registered their trademarks or copyrights in China. Without registration the company has little legal recourse if products are counterfeited or IPR otherwise infringed. However, several companies that have registered their product's brand name, trade name, and logo nevertheless report that although they may receive favorable court rulings, it is very difficult to receive compensation from the offending party. Industry sources currently report China's IPR offices are accepting neither domestic nor international companies' planting seed trademark applications.

Seed sold in counterfeit packages identical to legitimate brand name is the most frequent problem for seed companies. Other IPR crimes include theft of seed/germplasm from production fields or facilities, then bred and marketed by other companies. Seed companies also report demands for restitution for "inferior quality" seed sold by counterfeiters. Local courts also can award damages to growers even when poor crop management or weather borne problems, not seed quality, reduce yield.

**Biotechnology and Planting Seeds**

Transgenic crops and seeds need to be approved by the National Biosafety Committee (NBC) after environmental and food safety evaluations by the MOA and government affiliated institutes. The next NBC meeting is scheduled for early December 2004 where the applications for commercialization of four types of transgenic rice reportedly are on the agenda. China's investment in transgenic seed technology is more than any other country outside of the United States. In 2002, research institutes reported development of over 141 GM crops with at least 65 already in field trials. Although Bt cotton has been planted widely, China has yet to approve any major food crops for environmental release. MOA has approved two soybeans, six canolas, and seven corn varieties for import and processing, but not for environmental release and therefore not for seed planting.

If granted MOA safety approvals, transgenic seeds must undergo examination for distinctness, uniformity, and stability (DUS) by PVP examiners. China's PVP office drafted new DUS testing guidelines for corn and rice pending legislation that should allow transgenic events to receive safety approval, the process for PVP testing for those seeds can move quickly and transparently.

The approval process so far has proved cumbersome and lacking in transparency. China's biotechnology regulations require foreign introduced transgenic events to first receive approval abroad and then undergo subsequent evaluation in China. This asynchronous process creates difficulties not only for commercial shipments containing transgenic commodities but for adoption of future transgenic seed in countries that export to China.

Official news reports indicate China's 2003 transgenic crop planted area was near 3 million hectares, almost entirely Bt cotton. Events approved for environmental release include cotton, tomato, sweet and chili pepper, and petunia. Release is restricted by province, although farmers have planted far more widely than the Seed Law and transgenic crop regulations permit. Acreage is mostly in Anhui, Beijing, Hebei, Henan, Fujian, and Jiangsu. MOA is drafting 40 transgenic crop testing and safety evaluation standards, in anticipation of increased transgenic crop development. Trials of many non-commercialized events already are underway.

Many scientists and economists recognize the benefits to consumers and farmers of commercializing release of transgenic planting seeds. Analysts point out that not only will state-sponsored research institutes benefit from licensing technology to seed companies, but also farmers would benefit both from lowering direct and hidden costs, increasing yields, and lower pesticide applications. Official studies highlighted not only economic benefits, but also environmental benefits, including elimination of hundreds of accidental pesticide poisonings.

**Grass Seeds and Nursery Seedlings**

China's demand for grass seeds and nursery seedlings remains strong as efforts to beautify urban areas have intensified, and planting of grass and nursery product in parks, zoos, and alongside roads has expanded. The long-term outlook for urban beautification/green space design includes planting more trees, shrubs, and grasses not only in the biggest metropolitan areas like Beijing, Shanghai, Guangzhou, and Dalian but also smaller cities. News accounts cite the government's goal for 70 percent of China's 662 municipalities to increase their urban forestry coverage rate from the present 30.2 percent in 2004 to 45 percent by the year 2050.

Urban Green Space	1990	1995	2000	2002	2003
Public Green Areas (10,000 Ha)	47.5	67.8	86.5	107.2	121.2
Public Green Areas per 10,000 people in sq.m	1.8	2.5	3.7	5.4	6.5
Area of Parks and Zoos (10,000 Ha)	3.9	7.3	8.2	10	11.3
Number of Parks and Zoos (unit)	1970	3619	4455	5178	5832
Source: NSB 2004 Yearbook Table 11-5					

The future of urban beautification and the nursery sector remains bright as Chinese cities clamor to host international events e.g. the Beijing Olympics, the 2010 World Expo in Shanghai, and other events that will draw tourists and businesses from around the world. Constraints to expanding domestic floriculture and sod farms include inadequate water supply, rising water costs, and competition with food crops (less marginal land planted with grass and nursery products). Nursery vendors remain optimistic, however, with a growing interest in importing grass seed, shrub, and tree seedlings.

Nationwide Horticultural Planting Area (Ha)			
	2000	2002	2003
Cut Flowers, Vines, and Potpourri	10,750	18,834	28,842
Potted Plants	18,841	39,122	46,626
Ornamental Trees	65,588	163,766	233,111
Food and Medicinal Flowers	14,801	28,468	51,325
Industrial Flowers	29,479	34,870	28,314
Grass Sod	11,120	34,107	26,083
Flower Seed	1,819	4,381	2,463
Young Plants/Seedlings	2,824	8,221	9,415
Flower Bulbs	1,281	2,685	3,936
Source: Ministry of Agriculture Statistical Abstract			

After years of steady decline, grain planted area rose in 2004 as government policies re-emphasized food self-reliance, significantly reducing demand for forage and reclamation grass seed. Given China's scarcity of arable land, food grain policy will determine the area devoted to forage crops or higher value horticultural commodities. Both domestic and internationally-funded programs support planting barren lands with trees and grasses; including the Grains for Greens Project and the Projects on Harnessing the Sources of Sand and Dust in Beijing and Tianjin.

### China Customs and Quarantine Inspection of Planting Seeds

Customs and Quarantine officials require a series of examinations for product entry and exit. The following are required for planting seeds.

China's Planting Seed Entry and Exit Requirements by Government Agency			
HS Code	Planting Seeds	Customs	AQSIQ
10019010	Wheat	A/B	M.P./N.Q.
10020010	Rye	A/B	P/Q
10030010	Barley	A/B	M.P./N.Q.
10040010	Oats	A/B	P/Q
100510	Corn	A/B	P/Q
10061011	Rice, long grain	A/B	P/N.Q
10061019	Rice, other	A/B	P/N.Q
10070010	Sorghum	A/B	P/N.Q
10089010	Other Cereals	A/B	P/N.Q
12010010	Soybeans	A/B	M.P./N.Q.
12021010	Peanut	A/B	P/N.Q
12051010	Rape/Colza, low erucic acid	A/B	P/N.Q
12059010	Rape/Colza, nes	A/B	P/N.Q
12060010	Sunflower	A/B	P/N.Q
12072010	Cotton	A/B	P/N.Q
12091000	Sugar Beet	A/B	P/Q
120921	Alfalfa	A/B	P/Q
120922	Clover	A/B	P/Q
120923	Fescue	A/B	P/Q
120924	Kentucky	A/B	P/Q
120925	Rye Grass	A/B	P/Q
120926	Timothy	A/B	P/Q
12092910	Other Sugar Beet	A/B	P/Q
12092990	Other Forage	A/B	P/Q
120930	Herbaceous	A/B	P/Q
120991	Vegetable	A/B	P/Q
12999910	Watermelon Seeds	A/B	P/Q.S
12099920	Sweet Melon	A/B	P/Q.S
12099990	Other Fruit Seeds	A/B	P/Q

Source: AQSIQ Commodity Inspection Guide

A: Subject to Customs Entry Inspection and Quarantine

B: Subject to Customs Exit Inspection and Quarantine

M: Subject to Entry Commodity Inspection by AQSIQ port office

N: Subject to Exit Commodity Inspection by AQSIQ port office

P: Subject to Entry Animal, Plant and their Products Quarantine by AQSIQ port office

Q: Subject to Exit Animal, Plant and their Products Quarantine by AQSIQ port office

S: Subject to Exit Food Hygiene Monitoring and Inspection by AQSIQ port office