II-2 Chemical treatment

Table II-2.1 Comparison of chemical treatment technologies

Methods	Main components	Effect	Application Cost	Sustainable time
Seed soaking	XX	XX	XX	XX
Seed dressing	XX	XX	XX	XX
Seed coating	XX	XX	XX	XX
Seed sealing	XX	XX	XX	XX

Source: CCM International

III Seed treatment market in major crops

China consumed about XX tonnes agrochemicals in seed treatment with total value of USDXX million in 2009. There is no doubt that wheat and corn are the most important crops in seed treatment market as they accounted for XX% of total seed treatment market value.

Table III-2.1 Chemicals consumption volume in seed treatment, 2009,

No.	Crop	Seed coating agent, tonne	Pesticide, tonne	Fertilizer, tonne	Total, tonne
1	Wheat	XX	XX	XX	XX
2	Corn	XX	XX	XX	XX
3	Rice	XX	XX	XX	XX
4	Cotton	XX	XX	XX	XX
5	Soybean	XX	XX	XX	XX
6	Peanut	XX	XX	XX	XX
7	Rapeseed	XX	XX	XX	XX
8	Vegetable	XX	XX	XX	XX
9	Sugar beet	XX	XX	XX	XX
10	Flower	XX	XX	XX	XX
11	Chinese medicinal materials	XX	XX	XX	XX
12	Watermelon	XX	XX	XX	XX
13	Tobacco	XX	XX	XX	XX
14	Others	XX	XX	XX	XX
	Total	**XX**	**XX**	**XX**	**XX**

Source: CCM international

Table III-2.2 Chemicals consumption value in seed treatment, 2009

No.	Crop	Seed coating agent, '000 USD	Pesticide, '000 USD	Fertilizer, '000 USD	Total, '000 USD
1	Wheat	XX	XX	XX	XX
2	Corn	XX	XX	XX	XX
3	Rice	XX	XX	XX	XX

4	Cotton	XX	XX	XX	XX
5	Soybean	XX	XX	XX	XX
6	Peanut	XX	XX	XX	XX
7	Rapeseed	XX	XX	XX	XX
8	Vegetable	XX	XX	XX	XX
9	Sugar beet	XX	XX	XX	XX
10	Flower	XX	XX	XX	XX
11	Chinese medicinal materials	XX	XX	XX	XX
12	Watermelon	XX	XX	XX	XX
13	Tobacco	XX	XX	XX	XX
14	Others	XX	XX	XX	XX
	Total	**XX**	**XX**	**XX**	**XX**

Source: CCM international

III-2 Seed treatment market in major crops

III-2.1 Wheat

Planting situation

China planted xx million ha. wheat in 2009 which consumed about xx tonnes seeds. Wheat is mainly planted in Henan, Shandong, Hebei, Anhui and Jiangsu, totally accounting for about xx % of China's total in 2009.

Table III-2.1.1 Planting situation of wheat, 2005~2009

Year	Planting area, '000 ha.	Total yield, '000 tonnes	Unit yield, kg/ha.
2005	xx	xx	xx
2006	xx	xx	xx
2007	xx	xx	xx
2008	xx	xx	xx
2009est	xx	xx	xx
CAGR, 05~09	xx	xx	xx

Source: Ministry of Agriculture of P.R.C., China National Grain and Oils Information Center

V-4 MNC's investment and activities

In 1990's, most of the crop seeds market had been open except some hybrid seeds controlled by government. Seed companies in different types grew very rapidly, especially foreign companies. At present, more than xx foreign companies have entered Chinese seed market, mainly including Pioneer from Dupont, Dow Agrosciences, Syngenta Biotechnology China, Bayer Cropscience and Monsanto, etc.

The entering of foreign companies brings out fierce competition in Chinese market, and some foreign companies with good breeding technologies have occupied Chinese high end seed market. For instance, about xx % market share of vegetable seeds with high added value was taken up by foreign seed companies in China in 2009.

Table V-4.1 Seed coating agents developed by foreign companies

Foreign companies	Main seed coating agent	Trade name	Crop	Diseases and pests	
	xx	xx	xx	xx	
xx	xx	xx	xx	xx	xx
	xx	xx	xx	xx	xx
	xx	xx	xx	xx	xx
xx	xx	xx	xx	xx	xx
	xx	xx	xx	xx	xx
xx	xx	xx	xx	xx	xx
xx	xx	xx	xx	xx	xx
xx	xx	xx	xx	xx	xx

Source: CCM International

VI-1 Warnings and proposals for avoiding investment risks

Compared with foreign developed countries, Chinese seed treatment industry has developed slowly in the past decades, and Chinese seed coating companies have weak competitiveness in international markets currently. With the improvement of seed treatment rate for main crops, seed treatment agents are expected to witness growth both in market volume and value in the future. But some potential threats are still existing in the seed treatment industry.

Table VI-1.2 Risk assessment of Chinese seed treatment industry

Risk		Risk level		Proposal
	xx	xx	xx	
xx	xx	xx	xx	
	xx	xx	xx	
xx		xx	xx	
xx		xx	xx	
xx		xx	xx	

Source: CCM International