

Country report presented to  
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## PROMOTION OF AGRICULTURAL MECHANIZATION IN P.R.CHINA

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1

### 1. Basic Information About China (2004)

Population: 1.3 billion  
GDP: US \$ 1.648 trillion;  
US \$ 1268 / capita  
Cereal Sown areas: 101.6 million ha  
Total grain output: 469.47 million tons  
Per capita output of meat: 56 kg  
Per capita output of aquatic products: 37.4 kg



**China has to use 9 % of global cultivated land to  
feed 21 % populations in the world**

2

### 2. The New Strategy for Agriculture & Rural Development

- ◆ Giving top priority to solve problems relating to agriculture, rural areas and farmers and balance development of urban and rural areas; more efforts to build a harmonious society
- ◆ Speeding up strategic re-adjustment of agriculture and rural economy
- ◆ Focusing on pursuing a combination of high yield, good quality, high competition & efficiency with ecology improvement instead of simply seeking high yields;
- ◆ Keeping sustainability based on conservation of energy, water, land, material consumption and recycle resources utilization become prior policy

3

### Three key approaches for Rural Development:

- ◆ *Enhancing agricultural infrastructure construction*
- ◆ *Speeding up advances of agricultural science and technology*
- ◆ *Increasing capability of agricultural comprehensive Production*

4

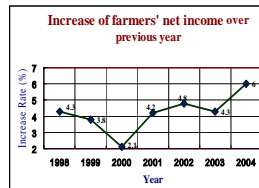
### 3. Adopting a series measures to improving farmers' income:

**2004:** Reducing farmer's tax: 36 bil. US \$  
Subsidies for grain producers, seeds and farm machinery: 18 bil. US \$

**2005:** 28 provinces fully exempted agricultural tax, other 3 reduced the tax into 2%

Farmers' income turned over from many years' low;

Annual increase of farmers income in 2004: 6.8 %



5

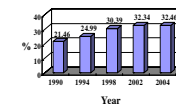
### 4. A TURNING PERIOD FOR PROMOTION AGRICULTURAL INDUSTRIALIZATION AND MECHANIZATION

#### 1). The agricultural mechanization level (2004):

Mechanization level:

Tillage: 48.9 %;  
Sowing: 28.8 %;  
Harvesting: 20.4 %

Comprehensive Mechanization Level (%)



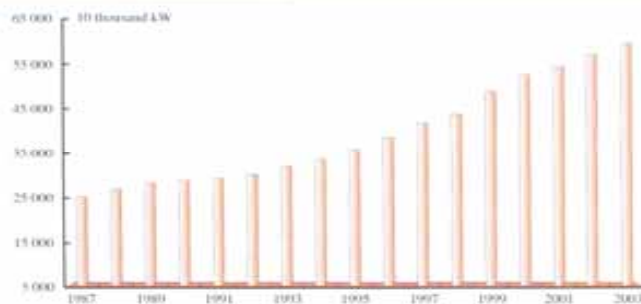
Mechanization level by crops (2004):

Sowing / planting      Harvesting

Winter wheat	82 %	77 %
Paddy Rice	5.08 %	26 %
Corn	48.2 %	2.03 %

6

### The advances of power capacity of farm machinery in 1987 -2003



The total farm power in 2004 was 64,000 thousand kW

7

#### 2) A series of new policies to encourage Agri. Mechanization have been implemented and investigated

Subsidies for buying farm machinery:

2004: 8.4 mil./49.4 mil./360 mil. US\$

2005: 37 mil. /100 mil. /1.85 bil. US\$

(Central Gov./Local Gov./farmers' input)

- ◆ Publish catalogs on subsidizing farmers to purchase farm machinery
- ◆ Exemption of fee to passing through the public road for trans-regional harvesting and rice planting machinery services.
- ◆ Some other subsidies policies to promote agricultural mechanization are preparing, such as: farming used Diesel oil; preferential tax for agricultural manufacturers; R & D on advanced farm machinery; financial & credit policy, etc.

8

### 3). Some new machines were developed and fast extended in farming practice:

- ◆ Rice harvesting & transplanting machinery on paddy fields are matured and fast extended, appropriate rice nursery technology has been improved
- ◆ Fast extension of conservation tillage technology and a series of machinery are available in use.
- ◆ Corn harvester development has got a good progress
- ◆ Potato, peanut, sugar beet, sugarcane, forage harvesting and horticultural machinery have started use in practice.
- ◆ Machinery for straw incorporation into soil, treatment, correction, packing are popular in use, etc.
- ◆ Take more attention to value-added pre- & post harvest treatment & processing mechanization

9



### 4). Rapid development of mechanization trans-regional services (2004)

- ◆ 350 thousand of combine harvesters, 7600 services teams for trans-regional wheat harvesting
- ◆ Extend the trans-regional services for rice to transplanting and other farming process
- ◆ 32.14 million of organizations for mechanization services,  
38.36 mil. Farmers involved in trans-regional services  
30 bil. US \$ income from the services

11

### 5. FOCUS POINTS OF AGRICULTURAL MECHANIZATION BETWEEN 2006/2010

- 1). Soil conservation in Northern arid farming areas
- 2). Achieving full mechanization for rice production in the south area
- 3). A national high-quality grain project "Modern Agricultural Equipment Promotion" needs for Sustainable improvement of mechanization level for grain maize harvesting
- 4). Removing the "Bottleneck" restricting rapeseed production
- 5). Emergence of new manufacturing and processing machines for economically important crops

12

## 6). Expanding agricultural mechanization services

- Mechanization to meet the requirement of agro-industry structure adjustment: *Facility horticulture, forage production; vegetables; gardens, etc.*
- New intelligent technologies & equipment need to be developed to meet the food safety & traceability
- ICT for improvement agricultural mechanization system management
- Enhance development strategic research on promotion of agricultural mechanization

13

**China is starting a new period featured with industry supports agriculture and urban supports rural development !**

**The Agricultural Mechanization entered into a new favorable development circumstances.**

14

## 6. The Trend of Agricultural Machinery Industry Development

- ◆ The large- & middle – scale tractors will meet increasing market demand
- ◆ The small-scale tractors will keep stable demand level
- ◆ The estimated market of large-scale tractors in 2005 will be: **10.5 – 11.0 thousand units**
- ◆ The estimated market of small-scale tractors in 2005 will be: **1.60 – 1.70 Million units**

15

## 1). The output of main agricultural machinery in 2004 & in 2005 (Jan-Aug)

Product Name	The Output in 2004	The output in 2005 (Jan—Aug.)
Big-mid-size tractor (set)	98,268	102,217
Small-size tractor (set)	1,778,232	1,277,411
Diesel engine (Mil. kW)	434.00	184.42
Harvesting machinery (set)	216,577	128,895
Farm transportation machinery (set)	2,202,633	1,160,085
Grain processing machinery (set)	984,280	594,475
Feed processing machinery (set)	123,099	83,106
Pump (set)	28,984,178	17,839,907

Source: China Association of Ag. Mac. Manufacturers

16

## 2). Recent ownership of farm machinery enterprises

Enterprise type	Units	Total assets		Sale income	
		Assets value (100 Mil.Yuan)	Ratio (%)	Income value (100 Mil.Yuan)	Increase rate (%)
Scale enterprises	1,466	701	100	859	100
State-owned or state-owned holding enterprises	340	320	45.7	298	34.7
Nongovernmental enterprises	1,040	341	48.6	512	59.6
Joint venture, cooperative business & exclusively foreign-owned enterprises	86	40	5.7	48.6	5.7

Source: China Association of Ag. Mac. manufacturers <sup>17</sup>

## 3). The trend of production, sale & profit for the scale-agri. machinery enterprises in recent years

Year	The total output value of industry		Sale income		The total profit	
	Output value (100 mil. Yuan)	Increase rate (%)	Income value (100 mil. Yuan)	Increase rate (%)	Total amount (100 mil. Yuan)	Increase rate (%)
2002	634.8	18	551.8	16	9.9	53
2003	753.4	22	695.9	26	16.3	61.7
2004	896	22.7	858.6	26.54	24.49	32.95
2005 (Jan-Aug)	687.5	28.27	658.7	34	23.10	60.56

Source: China Association of Ag. Mac. Manufacturers <sup>18</sup>

## 4). The importation & exportation of farm machinery in recent years

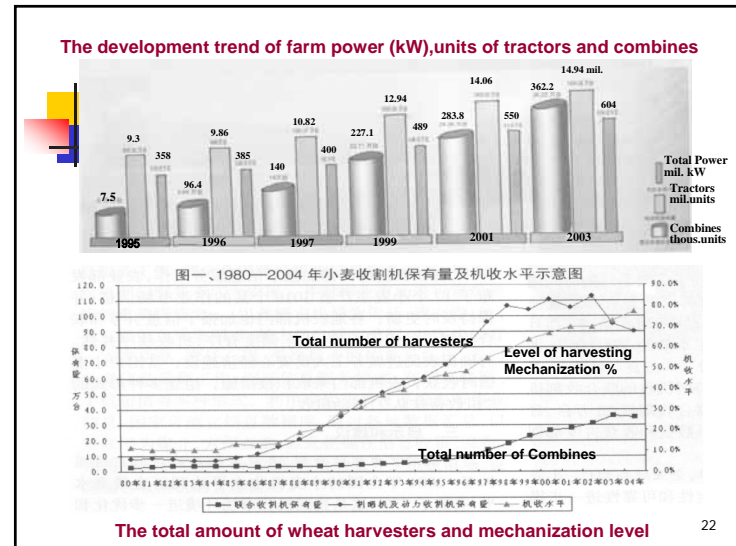
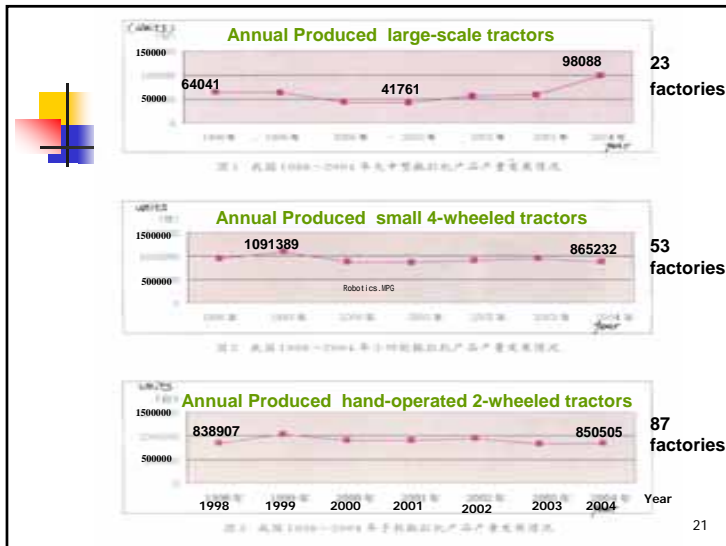
Year	Export value 100 mil. USD	Import value 100 mil. US\$
2002	15.21	19.55
2003	21.31	42.19
2004	33.44	61.92
2005 (Jan-Aug)	33.29	37.86

Source: China Association of Ag. Mac. Manufacturers <sup>19</sup>

## 5). The forecast of average annual demand for the agri. Machinery in 2006-2010

Product Name	Average demand (X 10,000 units)
Big mid-size tractor	12 ~ 15
Small-size tractor	170
Diesel engine	30,000 ~ 40,000
Big-mid-size cultivating machinery	25 ~ 30
Small-size cultivating machinery	170 ~ 200
Motorized plant protection machinery	30
Self-propelled grain combine	5
Animal husbandry machinery	105
Processing machinery for agro-product & by-products	60
Irrigation & Drainage machinery (water pump & sprinklers)	230
Farm vehicles	150

Source: China Association of Ag. Mac. Manufacturers <sup>20</sup>



**7. Enhanced International Joint Venture And Cooperation**

More than 70 AM sub-companies or joint-venture enterprises were established in China:

*John-Deere, New Holland, Yanmar,*  
*Kubota, Tong Yang, Jinzi,*  
*Valtra, Claas, etc*

*Products from these Famous manufacturer started to be accepted by Chinese customers.*

23

**Special Advisory Project of Chinese Academy of Engineering**

**(2005-2006)**

**Study on Mid-Long Term Development Strategy on Agricultural Mechanization**

24

## Sub-projects

### ◆ Agricultural mechanization –

- North region
- South Region
- North-east region and state agricultural reclamation areas
- Northwest Grassland and pasturing region

- ◆ Agricultural manufacturing industry development
- ◆ Mechanization promotion in other agro-industries
- ◆ Ensuring measures for promotion of agricultural mechanization

25

## Summary

The first two decades of this century is of great importance in China's development, and the period from 2006 to 2010 is especially crucial. Promotion of Agricultural mechanization will much faster than before in realizing its new development strategy. Balancing domestic development and opening wider to the outside world is of great important policy. To promotion of mutually beneficial cooperation of the Asia-pacific regional strategic partnership in agricultural engineers & machinery manufacturers will be full of vigour in the future!

26

*Thank you!*



27