Fertilizers in China

Industry Study with Forecasts for 2015 & 2020

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Table of Contents

EXECUTIVE SUMMARY

MARKET ENVIRONMENT
General .................................................. 4
Economic Overview .................................. 4
Recent Economic Performance ................... 5
Economic Outlook .................................... 7
Demographic Overview ............................. 11
Currency Exchange Rates ........................... 15
Agricultural Sector Outlook ....................... 17
Sown Land Outlook .................................. 19
Crop Output .......................................... 21
Agricultural Value Added .......................... 22
Rural Residents’ Income & Expenditures ....... 24
Crop Price Trends, 2000-2010 ..................... 26
Policies & Regulations .............................. 27
The Twelfth Five-Year Plan ......................... 29

FERTILIZER OVERVIEW
General .................................................. 32
Nutrient Content in Fertilizers ...................... 34
Pricing .................................................. 36
Foreign Trade ......................................... 38
Exports ................................................ 40
Imports ............................................... 42
World Overview ....................................... 43

SINGLE-NUTRIENT FERTILIZERS
General .................................................. 46
Nutrient Content ....................................... 49
Potassium Fertilizers ................................. 51
Supply & Demand ..................................... 52
Demand by Type ..................................... 53
Urea .................................................... 54
Ammonium Bicarbonate ............................. 56
Ammonium Sulfate ................................... 57
Ammonium Nitrate ................................... 58
Other Nitrogen Fertilizers ......................... 60
Demand by Crop ..................................... 61
Nitrogen Fertilizers ................................. 62
Supply & Demand ..................................... 63
Demand by Type ..................................... 64
Superphosphates ..................................... 65
Other Phosphates .................................... 67
Demand by Crop ..................................... 68
Potash Fertilizers ..................................... 69
Supply & Demand ..................................... 70

FERTILIZER NUTRIENT DEMAND BY CROP
General .................................................. 91
Vegetables ............................................. 93
Rice ..................................................... 94
Corn .................................................... 95
Wheat ................................................... 96
Fruits .................................................... 98
Soybeans ............................................... 99
Other Crops .......................................... 100

REGIONAL TRENDS
General .................................................. 102
Regional Demographic/Economic Trends ....... 104
Population Patterns ................................... 105
Economic Outlook .................................... 107
Regional Crop Production .......................... 108
Regional Sown Land ................................ 110
Regional Demand for Fertilizers ................. 111
Central-North ........................................ 113
Overview ............................................. 113
Fertilizer Demand .................................... 115
Northeast ............................................. 117
Overview ............................................. 117
Fertilizer Demand .................................... 119
Central-East ........................................... 121
Overview ............................................. 121
Fertilizer Demand .................................... 123

Other Nutrient Fertilizers ......................... 75
Demand by Crop ..................................... 76
Potassium Chloride .................................. 72
Potassium Sulfate ..................................... 73

MULTI-NUTRIENT FERTILIZERS
General .................................................. 78
Nutrient Content ....................................... 80
Nitrogen-Phosphate-Potash Fertilizers ......... 82
Supply & Demand ..................................... 82
Demand by Crop ..................................... 83
Nitrogen-Phosphate Fertilizers ................... 84
Supply & Demand ..................................... 85
Demand by Crop ..................................... 86
Other Multi-Nutrient Fertilizers ................. 87
Supply & Demand ..................................... 88
Demand by Crop ..................................... 89

Central-South ........................................ 124
Overview ............................................. 124
Fertilizer Demand .................................... 126
Southwest ............................................ 127
Overview ............................................. 127
Fertilizer Demand .................................... 129
Northwest ............................................. 131
Overview ............................................. 131
Fertilizer Demand .................................... 132

INDUSTRY STRUCTURE
General .................................................. 134
Industry Composition ................................ 135
Market Share ......................................... 137
Marketing & Distribution ........................... 139
Manufacturing ........................................ 141
Foreign Participation in China ....................... 143
Legal & Regulatory Issues .......................... 143
Joint Ventures ........................................ 145
Wholly Owned Foreign Enterprises ............... 147
Representative Offices .............................. 148

COMPANY PROFILES
China BlueChemical .................................. 150
China Petroleum & Chemical ....................... 152
Guizhou Kailin Group ............................... 153
Hubei Newyangfeng Fertilizer ..................... 154
Hubei Sanonda ........................................ 155
Hubei Yihua Group .................................... 156
Luxi Chemical ........................................ 157
Nanjing Redsun ........................................ 158
Qinghai Salt Lake Potash ............................ 159
Shandong Lianmeng Chemical .................... 160
Shandong Lubei Enterprise ......................... 161
Shanxi Lanhua Sci-Tech Venture ................... 162
Shanxi Tianji Coal Chemical ....................... 163
Sichuan Chemical Industry ......................... 164
Sichuan Hongda ....................................... 165
Sinochem Group ....................................... 166
Tonghua Group ........................................ 168
Wengfu Group ......................................... 169
Xiyang Fertilizer Industry ......................... 170
Yankuang Group ...................................... 171
Yunnan Coal Chemical ............................. 172
Yunnan Yuntianhua ................................ 173
Other Companies Mentioned in Study ......... 174

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Industry Study with Forecasts for 2015 & 2020

List of Tables/Charts

EXECUTIVE SUMMARY
1 Summary Table .................................... 3

MARKET ENVIRONMENT
1 Gross Domestic Product of China .......... 11
2 Population of China ......................... 14
Cht Population of China by Age, 2000-2010 .... 14
3 Currency Exchange Rates, 2000-2010 .... 16
Cht Chinese Currency Exchange Rates, 2000-2010 .. 17
4 Sown Land in China By Crop .............. 20
5 Selected Crop Output in China .......... 22
6 Agricultural Value Added in China ....... 24
7 Rural Resident Income & Expenditures in China, 2000-2010 .......... 25
8 Crop Prices in China, 2000-2010 .......... 27

FERTILIZER OVERVIEW
1 Fertilizer Supply & Demand in China by Type .......... 34
2 Fertilizer Nutrient Demand in China ........ 36
3 Selected Fertilizer Pricing in China ........ 38
4 Chinese Foreign Trade in Fertilizers ... 40
5 Fertilizer Exports in China by Type & Destination, 2006-2010 .... 42
6 Fertilizer Imports in China by Type & Source, 2006-2010 ...... 43

SINGLE-NUTRIENT FERTILIZERS
1 Single-Nutrient Fertilizer Supply & Demand in China .......... 48
Cht Single-Nutrient Fertilizer Demand in China by Type, 2010 .... 49
2 Single-Nutrient Fertilizer Nutrient Demand in China .......... 50
Cht Single-Nutrient Fertilizer Nutrient Demand in China by Type, 2010 .... 51
3 Nitrogen Fertilizer Supply & Demand in China ........ 53
4 Nitrogen Fertilizer Demand in China by Type ........ 54
5 Urea Fertilizer Supply & Demand in China .......... 55
6 Ammonium Bicarbonate Fertilizer Supply & Demand in China .... 57
7 Ammonium Sulfate Supply & Demand in China .......... 58

FERTILIZER NUTRIENT DEMAND BY CROP
1 Fertilizer Nutrient Demand in China by Crop .......... 92

8 Ammonium Nitrate Fertilizer Supply & Demand in China .......... 59
9 Other Nitrogen Fertilizer Supply & Demand in China .......... 61
10 Nitrogen Fertilizer Nutrient Demand in China by Crop .......... 62
11 Phosphate Fertilizer Supply & Demand in China .......... 64
12 Phosphate Fertilizer Demand in China by Type .......... 65
13 Superphosphate Fertilizer Supply & Demand in China .......... 66
14 Other Phosphate Fertilizer Supply & Demand in China .......... 67
15 Phosphate Fertilizer Nutrient Demand in China by Crop .......... 69
16 Potash Fertilizer Supply & Demand in China .......... 71
17 Potash Fertilizer Demand in China by Type .......... 72
18 Potassium Chloride Fertilizer Supply & Demand in China .......... 73
19 Potassium Sulfate Fertilizer Supply & Demand in China .......... 75
20 Other Potash Fertilizers Supply & Demand in China .......... 76
21 Potash Fertilizer Nutrient Demand in China by Crop .......... 77

MULTI-NUTRIENT FERTILIZERS
1 Multi-Nutrient Fertilizer Supply & Demand in China .......... 80
2 Multi-Nutrient Fertilizer Nutrient Demand in China .......... 81
3 Nitrogen-Phosphate-Potash Fertilizer Supply & Demand in China .......... 83
4 Nitrogen-Phosphate-Potash Fertilizer Nutrient Demand in China by Crop .......... 84
5 Nitrogen-Phosphate Fertilizer Supply & Demand in China .......... 86
6 Nitrogen-Phosphate Fertilizer Nutrient Demand in China by Crop .......... 87
7 Other Multi-Nutrient Fertilizer Supply & Demand in China .......... 89
8 Other Multi-Nutrient Fertilizer Nutrient Demand in China by Crop .......... 90

REGIONAL TRENDS
1 Population of China by Region .......... 106
2 Gross Domestic Product of China by Region .......... 108
3 Crop Output in China by Region .......... 109
4 Sown Land in China by Region .......... 111
5 Fertilizer Demand in China by Region .......... 112
Cht Fertilizer Demand in China by Region, 2010 .......... 113
Cht Central-North Region of China .......... 115
6 Central-North Region of China: Fertilizer Demand .......... 116
Cht Northeast Region of China .......... 119
7 Northeast Region of China: Fertilizer Demand .......... 121
Cht Central-East Region of China .......... 122
8 Central-East Region of China: Fertilizer Demand .......... 124
Cht Central-South Region of China .......... 125
9 Central-South Region of China: Fertilizer Demand .......... 127
Cht Southwest Region of China .......... 129
10 Southwest Region of China: Fertilizer Demand .......... 130
Cht Northwest Region of China .......... 132
11 Northwest Region of China: Fertilizer Demand .......... 133

INDUSTRY STRUCTURE
1 Fertilizer Sales by Company in China, 2010 .......... 136
Cht Fertilizer Market Share in China by Company, 2010 .......... 137

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Demand for fertilizers in China will be supported by a growth in the amount of sown areas, the rise in income levels for rural farmers, and government subsidies to encourage additional use.

Demand to grow 3.3% per annum through 2015

Demand for fertilizers in China is forecast to increase 3.3 percent per annum through 2015 to 262 million metric tons. Sales of fertilizers will be supported by healthy expansion of agricultural activities as the amount of sown areas continues to grow and rural income levels rise. Farmers will continue to register steadily increasing incomes, the result of growing crop prices and government subsidies designed to supplement their revenues and reduce their material costs. Subsidies aimed directly at cutting the cost of fertilizers will encourage additional use. In addition, rising crop prices have encouraged farmers to invest in fertilizers to further boost crop yields. Advances will also be driven by increases in the hectarage of sown land dedicated to growing cash crops. However, increasing demand for organic food and improved understanding of the correct application of fertilizers will prevent demand from rising at a faster pace.

In value terms, fertilizer demand is expected to grow 6.0 percent per year to 548 billion yuan, outpacing gains in volume terms. Faster value growth will be driven by strong demand for higher-value multi-nutrient fertilizers. In addition, advances will be supported by continued growth in fertilizer prices as the cost of natural gas, oil, coal, and other raw materials continues to increase.

Fertilizer nutrients to rise 4.4% yearly through 2015

Demand for fertilizer nutrients in China is projected to grow 4.4 percent annually through 2015 to 98.1 million metric tons. Nutrient demand will be stimulated by increasing use of higher nutrient level products as income levels grow in rural areas in China. In addition, government efforts to promote multi-nutrient fertilizers will also support gains in fertilizer nutrient demand. Accounting for more than three-fourths of total fertilizer demand in 2010, single-nutrient fertilizers will remain the larger product type through 2015, despite a relatively low growth rate of 2.1 percent per year. Sales of single-nutrient fertilizer demand will post a strong annual growth rate of 7.3 percent through 2015, fortified by government efforts to promote their utilization.

Central-South, Central-East regions to remain largest

The size, growth and composition of fertilizer demand in the six regions that make up China vary considerably. The Central-South and Central-East will remain the two largest regional fertilizer markets. Due to the comparatively high income levels in the Central-South and Central-East -- which enable residents to afford more expensive food items -- demand for cash crops such as fruits and vegetables will rise in these regions, which in turn will fuel demand for fertilizer. Sales in the Northeast and Northwest regions will outpace the average through 2015, benefiting from the Great Western Development Strategy, the Northeast Revitalization Policy, and increasing income levels for farmers.

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Phosphate Fertilizer Supply & Demand

Phosphate fertilizer demand is less steady than that for other fertilizers, as phosphate is removed from the soil at a slower rate than nitrogen and thus does not require yearly replenishment. Single-nutrient phosphate fertilizer demand is projected to increase 2.6 percent per year to 40 million metric tons in 2015. In value terms, phosphate fertilizer demand will grow 5.9 percent annually through 2015 to ¥38 billion. Rising sales will be driven by government policies to support agricultural production, such as direct subsidies for grain planting. However, growth will be restrained by phosphate’s immobility, prolonging the length of time each application remains in the soil. In addition, the use of multi-nutrient fertilizers continues to increase, reducing consumption of single-nutrient phosphate.

Phosphate fertilizers are highly immobile in soils due to their ability to form slowly soluble compounds with a number of common soil elements, and therefore are quickly fixed. Thus, only about 20 percent of the applied phosphate is utilized by planted crops in the year of fertilization. The remaining phosphate is mixed into the soil and is available for subsequent crops. The overapplication of phosphate fertilizer creates a “bank” of reserves in the soil which may be drawn upon in years where prices are not favorable for farmers.

Demand for phosphate fertilizers contracted in 2009 due to the slowdown in the global economy, dampening farmers’ desire to purchase fertilizers such as phosphate. The price of phosphate fertilizer is expected to grow through 2015 as the government enacts policies to set a benchmark price. In addition, growth in phosphorus ore prices will support rises in phosphate fertilizer prices.

Leading phosphate fertilizer suppliers in China include Guizhou Kailin, Hubei Newyangfeng Fertilizer, Hubei Yihua, Luxi Chemical,

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### Table V-6

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<td>174.2</td>
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<td>Other</td>
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<td>695</td>
<td>965</td>
<td>1270</td>
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</tbody>
</table>

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**Sample Chart**

FERTILIZER DEMAND IN CHINA BY REGION, 2010 (222.5 million metric tons)
Yunnan Yuntianhua Company Limited
Shuifu
Zhaotong, Yunnan 657800
China
86-87-966-2006
http://www.yyth.com.cn

Sales: ¥37.7 billion [US$5.6 billion] (as reported by company, 3/11)
Employment: 11,500 (as reported by company, 3/11)

Key Products: urea, ammonium nitrate and compound fertilizers

International Contact: Mr. Jiaqing Zhang, Sales Manager

Yunnan Yuntianhua, the second largest fertilizer supplier in China in 2010, accounted for 4.9 percent of domestic sales, with related revenues of ¥20.1 billion. Yunnan Yuntianhua is engaged in the manufacture and distribution of fertilizers and organic chemicals. The Company also has fiber glass and commercial trade businesses. Yunnan Yuntianhua operates from a site in Yunnan that encompasses 126,000 square meters of space.

The Company is part of the Chinese fertilizer industry through the production and marketing of fertilizers under the JINSHAJIANG brand name. Yunnan Yuntianhua’s JINSHAJIANG fertilizers include urea types, which are available in standard and granulate varieties. The Company also makes JINSHAJIANG ammonium nitrate fertilizers.

Furthermore, Yunnan Yuntianhua makes and sells JINSHAJIANG compound fertilizers through its Zhaotong Tianhe Company Limited subsidiary. Zhaotong Tianhe’s compound fertilizers include sulfur-
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Page 7
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