

# **Outlook for China Glyphosate Market 2023–2027**

**The Fourteenth Edition**

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**Researched & Prepared by:**

**Kcomber Inc.**

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## 1. Introduction

*Outlook for China Glyphosate Market 2023–2027* is a preliminary report on China's glyphosate market finished by CCM in May 2023. This report attaches importance to the following parts:

- Key factors influencing China's glyphosate industry
- Key raw materials of glyphosate technical including glycine, DEA, IDAN, paraformaldehyde, and PMIDA
- Supply of glyphosate technical (capacity, output, by producer and by production route) in China
- Key producers of glyphosate technical in China
- Supply and demand of glyphosate formulation by specification in China
- China's export of glyphosate technical, various glyphosate formulations and PMIDA, by key destination and by key exporters, 2020–2022
- Price of glyphosate technical and future trend
- Production technology & technology level of glyphosate technical in China
- Breakdown of glyphosate consumption by crop in China, 2018–2022

## 2. Approach for the report

The research for the report is carried out by the following steps:

### - Desk research

The sources of desk research are various, including published magazines, journals, government statistics, industrial statistics, customs statistics, association seminars as well as information from the Internet. A lot of work went into compiling and analyzing the information obtained. Where necessary, checks were made with the Chinese suppliers regarding market information such as production, demand, use, competition, etc.

### - Telephone interview

The interviewees cover:

- Producers
- Agricultural experts
- Traders
- Local governments
- Researchers
- Associations
- Raw material suppliers

CCM carried out extensive telephone interviews with all manufacturers of glyphosate technical and PMIDA producers as well as some producers of glyphosate formulations. Detailed production information and market situation were sourced and verified. Furthermore, players' comments on glyphosate industry were obtained.

For directly analysing the imports and exports of glyphosate technical, its formulations and PMIDA, many importers and exporters were contacted whenever the verification was needed.

Raw material (glycine, DEA, IDAN, PMIDA, etc.) suppliers were also contacted to help understand the price, supply as well as governmental policies on raw materials and their impact on the glyphosate industry.

### - Export analysis

Analysis of export data (HS code 29313910, 29313990, 38089311 and 38089319) from the China Customs helps work out China's exports of glyphosate (glyphosate technical, glyphosate formulations and PMIDA) by producer, trader and destination.



#### - **Data processing and presentation**

The data collecting and compiling are sourced from:

- Published articles from Chinese periodicals, magazines, journals, the third-party database
- Government statistics & customs statistics
- Telephone interviews with Chinese producers, traders, governments and farmers
- Comments from industrial experts
- CCM's database
- Professional database in other sources
- Information from internet

The data from various ways have been combined to make this report as precise and scientific as possible. Throughout the process, a series of internal discussions took place in order to analyse the data and draw conclusions from it.

#### - **Report generation**

Logical analysis and scientific ratiocination were conducted to generate the report, such as supply & demand analysis and cross-checking of all data. All the data and findings obtained through the above methods will be presented in the report clearly.

### 3. Executive summary

Glyphosate, the key active ingredient of Roundup, is one of the most commonly sold herbicides on the market today. With rapidly increasing demand, glyphosate has shared about 30% of the global herbicide market in terms of sales volume.

#### - Position of Chinese glyphosate in the world

China is the largest production base of glyphosate technical in the world and has been supplying over XXX% of the global production of glyphosate. The output of glyphosate TC was about XXX tonnes in 2022 (converted to 95% technical), over 45% of which was exported.

#### - Production

The domestic output of glyphosate technical increased greatly from XXX tonnes in 2013 to XXX tonnes in 2016, and since 2017, it has fluctuated around XXX tonnes.

Glyphosate production adopting the AEA pathway remains dominant in China, with its output reaching XXX tonnes and taking up XXX% of national total in 2022.

In the past few years, the domestic production of glyphosate technical tended to transfer from East China to Central China (Hubei Province) and Southwest China (Sichuan Province), and North China (Inner Mongolia Region). The output of glyphosate technical in Sichuan, Hubei, and Inner Mongolia increased from less than XXX tonnes before 2012, to over XXX tonnes in 2022.

The number of glyphosate technical producers in China (both active and idle are included) declined from over XXX in 2014 to only XXX in 2022, which was caused by stricter environmental protection requirements and fierce competition.

Chinese glyphosate industry is dominated by the companies that own the latest technology, large-scale production capacity, strong financial and sales strength and a complete industrial chain, etc. Leading producers of glyphosate technical in the country include Fuhua Tongda (XXX t/a), Hubei Trisun (XXX t/a), Zhejiang Wynca (XXX t/a), Nantong Jiangshan (XXX t/a), Jiangsu Good Harvest (XXX t/a), Leshan Hebang (XXX t/a glyphosate technical, XXX t/a PMIDA), Jiangsu Yangnong (XXX t/a), etc.

#### - Export

Glyphosate is one of the largest export commodities in the pesticide sector in China regarding both volume and value, China's glyphosate industry highly depends on the overseas market. Besides, China is the largest exporter of glyphosate in the world.

The major export destinations of Chinese glyphosate technical are Argentina, the US, Brazil,



Malaysia, Indonesia, Australia, and Russia, and the major destinations of glyphosate formulations are Australia, Vietnam, the US, Ghana, Nigeria, Russia, Brazil, Uruguay, the Philippines, Japan, Mexico, Indonesia, Ukraine, etc.

The main exporters of glyphosate formulation in China include Xingfa (Shanghai) International Trade Co., Ltd., Shandong Weifang Rainbow Chemical Co., Ltd., Zhejiang Wynca Chemical Industrial Group Co., Ltd., etc. The main exporters of glyphosate technical in China include Fuhua Tongda Agro-Chemical Technology Co., Ltd., Nantong Jiangshan Agrochemical & Chemicals Co., Ltd., etc.

#### **- Demand**

Glyphosate has taken an irreplaceable position in the control of weeds in China, and its consumption grew at a CAGR of XXX% in 2013–2022, reaching about XXX tonnes (converted to 95% technical) in 2022.

In China, glyphosate is quite important for the weeding in orchards, vegetables, wasteland reclamation and traditional crop fields in the period of pre-seeding. Orchard is the largest consumption field of glyphosate, with a demand share of about XXX% in 2022, followed by vegetables, corn, rice, wheat, tea, rubber, etc.

#### **- Production technology**

The IDA pathway had been developing rapidly in 2005–2009, and many domestic companies set up glyphosate technical production lines adopting the IDA pathway, especially the IDAN route. After that, the DEA route showed a downtrend with the number of producers decreasing from XXX in 2009 to only XXX in 2022 because of the strong competitiveness of the IDAN route stemming from its advantages such as low cost, sufficient IDAN supply, etc.

The AEA pathway is widely adopted in China's glyphosate industry. In 2022, the capacity of glyphosate technical by this pathway was about XXX t/a, accounting for XXX% of China's total capacity.

#### **- Price**

The annual average ex-works price of 95% glyphosate technical kept decreasing, from USD XXX /t in 2018 to USD XXX /t in 2020, and then rebounded significantly, reaching USD XXX /t in 2022.

#### 4. What's in this report?

**Note: Key data/information in this sample page is hidden, while in the report it is not.**

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Table 2.2-1 Raw material consumption and unit cost of the chloroacetic acid ammonolysis process for glycine production in China, May 2023

No.	Raw material	Purity, %	Unit consumption, t/t	Price, USD/t	Unit cost, USD/t
1	Chloroacetic acid	XXX	XXX	XXX	XXX
2	Liquid ammonia	XXX	XXX	XXX	XXX
3	Urotropine	XXX	XXX	XXX	XXX
4	Methanol	XXX	XXX	XXX	XXX
<b>Total</b>		<i>/</i>	<i>/</i>	<i>/</i>	XXX

Source: CCM

Table 2.2-2 Capacity and output of glycine in China, 2018–2022

Year	Capacity, t/a		Output, tonne	
	Industrial grade	Other grade	Industrial grade	Other grade
2018	XXX	XXX	XXX	XXX
2019	XXX	XXX	XXX	XXX
2020	XXX	XXX	XXX	XXX
2021	XXX	XXX	XXX	XXX
2022	XXX	XXX	XXX	XXX

Source: CCM

**Table 2.2-3 Producers of tech-grade glycine in China, 2018–2022**

No.	Producer	Capacity 2021, t/a	Output, tonne				
			2018	2019	2020	2021	2022
1	XXX	XXX	XXX	XXX	XXX	XXX	XXX
2	XXX	XXX	XXX	XXX	XXX	XXX	XXX
3	XXX	XXX	XXX	XXX	XXX	XXX	XXX
...	...	XXX	XXX	XXX	XXX	XXX	XXX
<b>Total</b>	XXX	XXX	XXX	XXX	XXX	XXX	XXX

Source: CCM

**Table 2.2-4 Consumption of glycine in glyphosate production in China, 2018–2022**

Item	2018	2019	2020	2021	2022
Output of glyphosate tech. (AEA pathway), tonne	XXX	XXX	XXX	XXX	XXX
Consumption of glycine, tonne	XXX	XXX	XXX	XXX	XXX

Source: CCM

...

**Table 3.1-1 Registrations of glyphosate in China, as of Oct. 2016, Aug. 2017, Oct. 2018, Dec. 2019, Feb. 2021, March 2022 and March 2023**

Specification		Number of registration						
		Oct. 2016	Aug. 2017	Oct. 2018	Dec. 2019	Feb. 2021	March 2022	March 2023
Single formulations	SL	XXX	XXX	XXX	XXX	XXX	XXX	XXX
	SP	XXX	XXX	XXX	XXX	XXX	XXX	XXX
	SG/WSG	XXX	XXX	XXX	XXX	XXX	XXX	XXX
Mixed formulations		XXX	XXX	XXX	XXX	XXX	XXX	XXX
Technical		XXX	XXX	XXX	XXX	XXX	XXX	XXX
<b>Total</b>		XXX	XXX	XXX	XXX	XXX	XXX	XXX

Source: Institute for the Control of Agrochemicals, Ministry of Agriculture (ICAMA) & CCM



Table 3.2.1-1 Capacity and output of glyphosate technical in China, 2013–2022

Item	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Output, tonne	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
Capacity, t/a	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX

Source: CCM

3.2.3-1 Capacity and output of glyphosate technical in China by region, 2018–2022

Province/region	Capacity, t/a					Output, tonne				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
Sichuan	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
...	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
<b>Total</b>	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX

Source: CCM

**Table 3.2.4-1 Capacity of glyphosate technical in China by production route, 2013–2022**

Production route		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
AEA	Capacity, t/a	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	
	Number of producers	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	
IDA	DEA route	Capacity, t/a	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
		Number of producers	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
	IDAN route	Capacity, t/a	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
		Number of producers	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
	PMIDA route	Capacity, t/a	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
		Number of producers	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
Total	Capacity, t/a	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	
	Number of producers	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	

Source: CCM

**Table 3.2.4-2 Output of glyphosate technical in China by production route, 2013–2022**

Production route		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
AEA	Output, tonne	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
	Growth rate	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
	Operation rate	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
IDA	DEA route	Output, tonne	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
		Growth rate	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
		Operation rate	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
	IDAN route	Output, tonne	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
		Growth rate	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
		Operation rate	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
Total	<b>Output, tonne</b>	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
	<b>Growth rate</b>	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
	<b>Operation rate</b>	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX

Source: CCM



**Table 3.3.1-2 Output of key glyphosate formulations in China, 2018–2022, tonne**

Year	30% SL (41% IPA mainly)	51% SL (51% IPA)	62% SL (62% IPA)	68% SG (75.7% WSG)	Others
2018	XXX	XXX	XXX	XXX	XXX
2019	XXX	XXX	XXX	XXX	XXX
2020	XXX	XXX	XXX	XXX	XXX
2021	XXX	XXX	XXX	XXX	XXX
2022	XXX	XXX	XXX	XXX	XXX

Source: CCM

...

**Table 4.3-2 Export volume of PMIDA from China to main destinations in 2022, tonne**

Exporters	Argentina	India	The US	Mexico	Egypt	Hong Kong, China	Total
XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
Others	XXX	XXX	XXX	XXX	XXX	XXX	XXX
<b>Total</b>	XXX	XXX	XXX	XXX	XXX	XXX	XXX

Source: China Customs & CCM



Table 4.3-10 China's exports of glyphosate technical to major destinations, 2020–2022

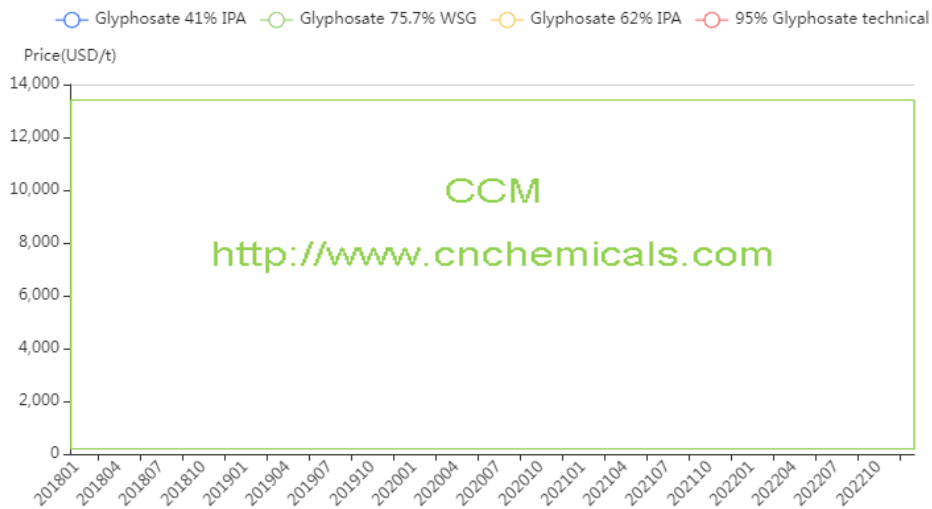
2022			2021			2020		
Destination	Volume, tonne	Price, USD/kg	Destination	Volume, tonne	Price, USD/kg	Destination	Volume, tonne	Price, USD/kg
XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
Others	XXX	XXX	Others	XXX	XXX	Others	XXX	XXX
<b>Total</b>	XXX	XXX	<b>Total</b>	XXX	XXX	<b>Total</b>	XXX	XXX

Source: China Customs & CCM

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Figure 5.1-1 Monthly ex-works price of glyphosate technical and key formulations in China, Jan. 2018–Dec. 2022



Source: CCM

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Table 6.1-1 Raw material cost of AEA pathway for glyphosate technical production in China, March 2023

Item	Unit consumption, t/t	Price, USD/t	Unit cost, USD/t
Glycine (industrial grade)	XXX	XXX	XXX
Dimethyl phosphite (DMP)	XXX	XXX	XXX
Paraformaldehyde (96%)	XXX	XXX	XXX
Triethylamine (99.5%)	XXX	XXX	XXX
Methanol (95%)	XXX	XXX	XXX
Hydrochloric acid (31%)	XXX	XXX	XXX
Methyl chloride (99%)	XXX	XXX	XXX
<b>Total</b>	<b>/</b>	<b>/</b>	<b>XXX</b>

Source: CCM

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**Table 7.3.1-1 Consumption of glyphosate formulations in China, 2018–2022**

Year	Consumption volume, tonne			Market share (converted to glyphosate technical)		
	30% SL	62% IPA	Others	30% SL	62% IPA	Others
2018	XXX	XXX	XXX	XXX	XXX	XXX
2019	XXX	XXX	XXX	XXX	XXX	XXX
2020	XXX	XXX	XXX	XXX	XXX	XXX
2021	XXX	XXX	XXX	XXX	XXX	XXX
2022	XXX	XXX	XXX	XXX	XXX	XXX

Source: CCM

**Table 7.3.2-3 Consumption of glyphosate (calculated by 95% technical) in China by crop, 2018–2022, tonne**

Crop	2018	2019	2020	2021	2022
XXX	XXX	XXX	XXX	XXX	XXX
XXX	XXX	XXX	XXX	XXX	XXX
XXX	XXX	XXX	XXX	XXX	XXX
XXX	XXX	XXX	XXX	XXX	XXX
Others	XXX	XXX	XXX	XXX	XXX
<b>Total</b>	XXX	XXX	XXX	XXX	XXX

Source: CCM

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**If you want more information, please feel free to contact us**

Tel: +86-20-37616606 Fax: +86-20-37616968

Email: [econtact@cnchemicals.com](mailto:econtact@cnchemicals.com)