

Outlook for China Glyphosate Market 2021–2025

The Twelfth Edition

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Researched & Prepared by:

Kcomber Inc.

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1. Introduction

Outlook for China Glyphosate Market 2021–2025 is a preliminary report on China's glyphosate market finished by CCM in March 2021. This report attaches importance to the following parts:

- Key factors influencing China's glyphosate industry
- Key pstream products 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 trader, 2016–April 2020
- Price of glyphosate technical and future trend
- Production technology & technology level of glyphosate technical in China
- Breakdown of glyphosate consumption by crop in China, 2015–2019

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 analysing 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 29310000, 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

- 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. Its output of glyphosate was about XXX tonnes in 2020 (converted to 95% technical), over 80% of which was exported.

- Production

The domestic output of glyphosate technical increased greatly from XXX tonnes in 2015 to XXX tonnes in 2016, and maintained somewhere about XXX tonnes annually in 2017–2020, attributed to the stable global demand.

Glyphosate production adopting the AEA pathway remains dominant in China, with its output reaching XXX tonnes and taking up XXX% of national total in 2020.

In the past few years, the domestic production of glyphosate technical tended to transfer from East China to Central China (Hubei) and Southwest China (Sichuan), and North China (Inner Mongolia). The output of glyphosate technical in Sichuan, Hubei, and Inner Mongolia increased from less than XXX tonnes before 2012, to over XXX tonnes in 2014–2015, around XXX tonnes in 2016, and over XXX tonnes in 2017–2020.

The number of glyphosate technical producers in China (both active and idle are included) declined from over XXX in 2014 to only XXX in 2015, less than XXX in 2016–2017, and XXX in 2018–2020 caused by stricter environmental protection requirements and fierce competition.

Chinese glyphosate industry is dominated by the companies who own the latest technology, large-scale production capacity, strong financial and sales strength and 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 Weien (XXX t/a), Leshan Hebang (XXX t/a glyphosate technical, XXX t/a PMIDA), Jiangsu Yangnong (XXX t/a), etc.

- Export

Glyphosate is the largest export commodity in the pesticide sector in China in terms of both volume and value. China's glyphosate industry highly depends on overseas market, with over XXX% of its output exported every year. Besides, China was the largest exporter of glyphosate in the world, and its export volume (glyphosate technical and formulations included and converted to 95% technical) reached over XXX tonnes in 2019.



China's glyphosate export value increased from over USDXXX billion in 2015–2016 to over USDXXX billion in 2017 and over USDXXX billion in 2018. Yet it decreased to about USDXXX billion in 2019.

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 Thailand, Australia, Vietnam, the US, Ghana, Nigeria, Russia, Brazil, Uruguay, the Philippines, Japan, Mexico, Indonesia, Ukraine, Colombia, Chile, etc.

- Demand

Glyphosate has taken an irreplaceable position for the control of weeds in China, and its consumption grew at a CAGR of XXX% in 2016–2020, reaching about XXX tonnes (converted to 95% technical) in 2020.

In China, glyphosate is quite important for the weeding in orchard, 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 2019, followed by vegetables, corn, rice, wheat, tea, rubber, etc.

- Production technology

There are two pathways for glyphosate production in China including the iminodiacetic acid (IDA) pathway and the aminoethanoic acid (AEA) pathway. According to the starting raw material, the former can also be subdivided into two routes, namely the diethanolamine (DEA) route and the iminodiacetonitrile (IDAN) route.

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 2018–2020 because of the strong competitiveness of the IDAN route stemming from its advantages such as low cost, sufficient IDAN supply, etc.

Because of the mature technology and the sufficient raw material supply in China, the AEA pathway is widely adopted in China's glyphosate industry. In 2020, 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 USDXXX/t in 2013 to USDXXX/t in 2016, recovered to USDXXX/t in 2017 and USDXXX/t in 2018, and then decreased to USDXXX/t in 2019 and USDXXX/t in 2020.

4. What's in this report?

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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, Feb. 2021

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
Total		/	/	/	XXX

Source: CCM

Table 2.2-2 Capacity and output of glycine in China, 2016–2020

Year	Capacity, t/a		Output, tonne	
	Industrial grade	Other grade	Industrial grade	Other grade
2016	XXX	XXX	XXX	XXX
2017	XXX	XXX	XXX	XXX
2018	XXX	XXX	XXX	XXX
2019	XXX	XXX	XXX	XXX
2020	XXX	XXX	XXX	XXX

Source: CCM

Table 2.2-3 Producers of industrial grade glycine in China, 2016–2020

No.	Company	Abbreviation	Capacity 2019, t/a	Output, tonne				
				2016	2017	2018	2019	2020
1	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
2	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
3	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
...	...	...	XXX	XXX	XXX	XXX	XXX	XXX
Total			XXX	XXX	XXX	XXX	XXX	XXX

Source: CCM

Table 2.2-4 Consumption of glycine in glyphosate production in China, 2016–2020

Year	2016	2017	2018	2019	2020
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 and Feb. 2021

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

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

Figure 3.2.2-1 Capacity and output of glyphosate technical in China, 2011–2020



Source: CCM

Table 3.2.3-2 Capacity and output of glyphosate technical by producer in China, 2016–2020

No.	Enterprise	Capacity 2020, t/a	Output, tonne				
			2016	2017	2018	2019	2020
1	Hubei Trisun	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
Others		XXX	XXX	XXX	XXX	XXX	XXX
Total		XXX	XXX	XXX	XXX	XXX	XXX

Source: CCM

Table 3.2.5-1 Capacity of glyphosate technical in China by production route, 2011–2020

Year/pathway		2011	2012	.....	2019	2020	
AEA	Capacity, t/a	XXX	XXX	XXX	XXX	XXX	
	Number of producers	XXX	XXX	XXX	XXX	XXX	
IDA	DEA route	Capacity, t/a	XXX	XXX	XXX	XXX	XXX
		Number of producers	XXX	XXX	XXX	XXX	XXX
	IDAN route	Capacity, t/a	XXX	XXX	XXX	XXX	XXX
		Number of producers	XXX	XXX	XXX	XXX	XXX
	PMIDA route	Capacity, t/a	XXX	XXX	XXX	XXX	XXX
		Number of producers	XXX	XXX	XXX	XXX	XXX
Total		Capacity, t/a	XXX	XXX	XXX	XXX	XXX
		Number of producers	XXX	XXX	XXX	XXX	XXX

Source: CCM

Table 3.2.5-2 Output of glyphosate technical in China by production route, 2011–2020

Year/pathway		2011	2012	.....	2018	2019	2020
AEA	Output, tonne	XXX	XXX	XXX	XXX	XXX	XXX	
	Growth rate	XXX	XXX	XXX	XXX	XXX	XXX	
	Operation rate	XXX	XXX	XXX	XXX	XXX	XXX	
IDA	DEA route	Output, tonne	XXX	XXX	XXX	XXX	XXX	XXX
		Growth rate	XXX	XXX	XXX	XXX	XXX	XXX
		Operation rate	XXX	XXX	XXX	XXX	XXX	XXX
	IDAN route	Output, tonne	XXX	XXX	XXX	XXX	XXX	XXX
		Growth rate	XXX	XXX	XXX	XXX	XXX	XXX
		Operation rate	XXX	XXX	XXX	XXX	XXX	XXX
Total		Output, tonne	XXX	XXX	XXX	XXX	XXX	
		Growth rate	XXX	XXX	XXX	XXX	XXX	
		Operation rate	XXX	XXX	XXX	XXX	XXX	

Source: CCM



Table 3.3.1-2 Output of key glyphosate formulations in China, 2016–2020, tonne

Year	30% SL (41% IPA mainly)	51% SL (51% IPA)	62% SL (62% IPA)	68% SG (75.7% WSG)	Others
2016	XXX	XXX	XXX	XXX	XXX
2017	XXX	XXX	XXX	XXX	XXX
2018	XXX	XXX	XXX	XXX	XXX
2019	XXX	XXX	XXX	XXX	XXX
2020	XXX	XXX	XXX	XXX	XXX

Source: CCM

...

Table 4.1.3-1 Major overseas buyers of China's PMIDA, 2019, tonne

No.	Buyer	Argentina	India	The US	Others
1	XXX	XXX	XXX	XXX	XXX
2	XXX	XXX	XXX	XXX	XXX
3	XXX	XXX	XXX	XXX	XXX
...	XXX	XXX	XXX	XXX	XXX
...	XXX	XXX	XXX	XXX	XXX
Others		XXX	XXX	XXX	XXX
Total		XXX	XXX	XXX	XXX

Source: China Customs & CCM

Table 4.1.3-12 China's exports of glyphosate by destination, 2019

No.	Destination	41% IPA		51% IPA		62% IPA		75.7% WSG		Tech.		Total value, USD
		Volume, tonne	Price, USD/kg	Volume, tonne	Price, USD/kg	Volume, tonne	Price, USD/kg	Volume, tonne	Price, USD/kg	Volume, tonne	Price, USD/kg	
1	XXXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
2	XXXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
....	XXXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
29	XXXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
30	XXXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
Others		XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
Total		XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX

Source: China Customs & CCM

...

Table 5.2.3.1-1 Consumption of glyphosate formulations in China, 2016–2020

Year	Consumption volume, tonne			Market share		
	30% SL	62% IPA	Others	30% SL	62% IPA	Others
2016	XXX	XXX	XXX	XXX	XXX	XXX
2017	XXX	XXX	XXX	XXX	XXX	XXX
2018	XXX	XXX	XXX	XXX	XXX	XXX
2019	XXX	XXX	XXX	XXX	XXX	XXX
2020	XXX	XXX	XXX	XXX	XXX	XXX

Source: CCM

Table 5.2.3.2-2 Consumption of glyphosate (calculated by 95% technical) in China by crop, 2015–2019, tonne

Crop	2015	2016	2017	2018	2019
XXXX	XXX	XXX	XXX	XXX	XXX
Beans	XXX	XXX	XXX	XXX	XXX
Cotton	XXX	XXX	XXX	XXX	XXX
...	XXX	XXX	XXX	XXX	XXX
Total	XXX	XXX	XXX	XXX	XXX

...

Table 6.1.3-1 Raw material cost of AEA pathway for glyphosate technical production in China, Feb. 2021

Raw material	Unit consumption, t/t	Unit price*, USD/t	Unit cost, USD/t
Glycine (Industrial grade)	XXX	XXX	XXX
Paraformaldehyde (37%)	XXX	XXX	XXX
Triethylamine (99.5%)	XXX	XXX	XXX
Methanol (95%)	XXX	XXX	XXX
DMP	XXX	XXX	XXX
Hydrochloric acid (30%)	XXX	XXX	XXX
Total			XXX

Source: CCM

...

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

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

Email: econtact@cnchemicals.com