

Atrazine Market and Production in China

The Eighth Edition

May 2022

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1. Introduction

Atrazine, a triazine herbicide, is widely used worldwide, due to its good herbicidal effect, safety to crops and economical price. China's atrazine is export-oriented, with annual export volume of atrazine technical and formulations accounting for a large share of the domestic annual output every year. In China, atrazine formulations, mainly including 38% SC, 50% SC, 80% WP and 90% WDG, are for domestic application.

In order to help industry players find more opportunities in China's atrazine market, CCM has carried out a comprehensive analysis on atrazine industry, including registration, production, producers, export, consumption, price change, as well as its competing products in China. This report can guide investments and business movements for players who pay close attention to the atrazine industry.

This is CCM's eighth edition report on China's atrazine industry and it attaches importance to the following parts:

- ✓ Position of atrazine in Chinese herbicide industry, 2016 - 2020
- ✓ Registration of atrazine in China, as of 15 March, 2022
- ✓ Capacity and output of atrazine technical in China, 2018 - 2021
- ✓ Capacity and output of major atrazine technical producers in China, 2018 - 2021
- ✓ Price of atrazine in China in 2021
- ✓ Export analysis of atrazine products in China, 2018 - 2021
- ✓ Apparent consumption of atrazine in China, 2018 - 2021
- ✓ Actual consumption volume of major atrazine formulations in China, 2019 - 2021
- ✓ Comparison among atrazine and its major substitutes in China, 2021

2. Approach for this report

Methodology and source

Desk research

Sources of desk research are various including published magazines, journals, government statistics, industrial statistics, customs statistics, associated seminars as well as information from the Internet. A lot of work has been done to compile and analyze the information obtained. When necessary, checks were made with Chinese market players regarding market information such as production, demand, and competition.

Telephone interviews

CCM carried out extensive telephone interviews with major participants in the industry chain of the products mentioned in this report throughout upstream to downstream. The interviewees cover:

- Manufacturers
- Traders
- Industrial associations
- Local governments
- Researchers and experts
- Farmers

Data processing and presentation

The data collected and compiled are sourced from:

- Published articles from Chinese periodicals, magazines, and journals
- Government statistics & customs statistics
- Telephone interviews with Chinese manufacturers, traders, government and farmers
- Comments from industrial experts
- CCM's database
- Information from the Internet
- Third-party databases

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

Definition and glossary

In this report, when "atrazine" is mentioned, it includes both atrazine technical and atrazine formulations.

Apparent consumption equals production + import - export, which is one of the factors reflecting demand. Assuming the inventory stays the same every year, the apparent consumption also equals to the actual consumption.

Unit

USD: US dollar, currency unit in the US

RMB: currency unit in China, also named Renminbi

Tonne: ton equals to metric ton in this report

/t: per tonne

t/a: tonne per year, tonne/annum

Table 1 Main abbreviation and their full names in the report

Abbreviation	Full name
AI	Active ingredient
ICAMA	The Institute for the Control of Agrochemicals, Ministry of Agriculture and Rural Affairs
SC	Suspension concentrate
SE	Suspension emulsion
WDG	Water dispersible granule
WP	Wettable powder
AS	Aqueous solution
EC	Emulsifiable concentrate
OD	Oil dispersion
CAGR	Compound annual growth rate

Source: CCM

Table 2 USD/CNY exchange rate, Jan. 2016–Dec. 2021

Year	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
2016	6.5527	6.5311	6.5064	6.4762	6.5315	6.5874	6.6774	6.6474	6.6715	6.7442	6.8375	6.9182	6.6425
2017	6.8918	6.8713	6.8932	6.8845	6.8827	6.8019	6.7772	6.7148	6.5909	6.6493	6.6300	6.6067	6.7662
2018	6.5079	6.3045	6.3352	6.2764	6.3670	6.4078	6.6157	6.8293	6.8347	6.8957	6.9670	6.9431	6.6070
2019	6.8482	6.7081	6.6957	6.7193	6.7344	6.8896	6.8716	6.8938	7.0883	7.0726	7.0437	7.0262	6.8826
2020	6.9614	6.9249	6.9811	7.0771	7.0690	7.1315	7.0710	6.9980	6.8498	6.7796	6.7050	6.5921	6.9284
2021	6.5408	6.4623	6.4754	6.5584	6.4895	6.3572	6.4709	6.4660	6.4680	6.4604	6.4192	6.3693	6.4615

Source: The People's Bank of China

3. Executive summary

Atrazine, a triazine herbicide, is widely used worldwide, due to its good herbicidal effect, safety to crops and cost-effectiveness. China is not only a big atrazine consumer, but also a key supplier.

- Production

During 2020–2021, the capacity of atrazine technical remained at XXX t/a. The output of atrazine technical recovered in 2020, but dropped slightly in 2021. The output was about XXX tonnes in 2021, up by XXX compared with that in 2019.

- Import & export

China's atrazine is export-oriented. Export volume of atrazine technical and formulations (converted to 100% technical) usually takes large proportion to the domestic annual output; the figure was some XXX in 2020–2021. In 2021, the export volume of atrazine (converted to 100% technical) in China was XXX tonnes, down by XXX year on year. And Brazil was the largest importer of China's atrazine products in 2019–2021.

- Price

The ex-work price of atrazine technical increased since H2 2020, resulting from higher cost of its intermediates like XXX, XXX and XXX. Along the journey to recovery, it first climbed quietly then shot up in late 2021. The annual average price in 2021 was about XXX higher than the 2020 average.

- Consumption

In 2021, the actual consumption volume of atrazine formulations in China had a big jump, in response to some XXX yearly expansion of corn-growing area. Atrazine 38% SC plays the dominant role in the market; its usage accounted for about XXX of the total domestic consumption in 2021.

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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1 Overview of atrazine industry in China

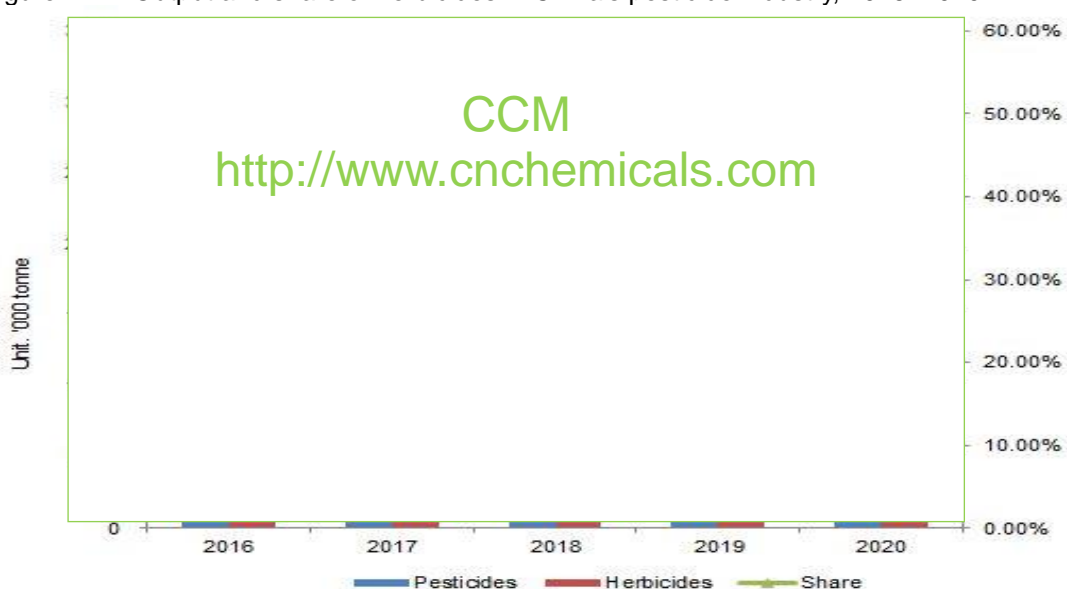
1.1 Brief introduction to pesticide industry in China

- Supply and demand

China is now the world's largest exporter of pesticides, and herbicides is an important pesticide category. In recent years, amid the rising labor cost and the pursuit of higher efficiency and cost-effectiveness, herbicides have been widely used in agricultural production. However, the abuse of herbicides can easily lead to destruction of ecological environment and soil fertility. Therefore, with multiple environmental protection policies rolled out, the output of herbicides in China showed a general downward trend in recent years. In 2020, China's herbicide output was XXX tonnes (converted to 100% technical, the same hereinafter), decreasing by XXX year on year.

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Figure 1.1-1 Output and share of herbicides in China's pesticide industry, 2016–2020



Note: All the volumes are calculated by 100% technical.
Source: National Bureau of Statistics of China

- Import and export

Table 1.1-1 China's imports and exports of pesticides, 2017–2020

Year	Pesticides				Herbicides				Share			
	Import		Export		Import		Export		Import		Export	
	Volume, tonne	Value, million USD	Volume, tonne	Value, million USD	Volume, tonne	Value, million USD	Volume, tonne	Value, million USD	Volume	Value	Volume	Value
2017	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
2018	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
2019	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
2020	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX

Source: National Bureau of Statistics of China

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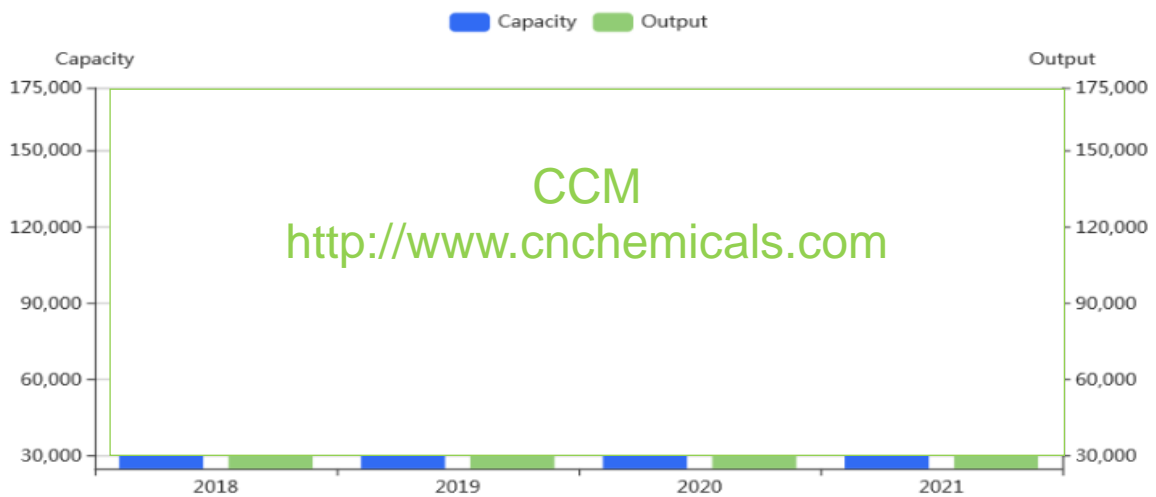
3 Supply of atrazine in China, 2018–2021

3.1 Summary of atrazine technical production

During 2020–2021, the capacity of atrazine technical remained at XXX t/a in China. As to the output of atrazine technical, it fluctuated—XXX greatly in 2020, but XXX slightly in 2021. Due to strong overseas demand, domestic atrazine output surged with a yearly XXX of XXX in 2020. In 2021, the output was about XXX tonnes, still XXX higher than that in 2019. Restriction on pesticide production in East China in Q4 led to the slight XXX.

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Figure 3.1-1 Capacity and output of atrazine technical in China, 2018–2021



Source: CCM

Figure 3.1-2 Distribution of capacity of atrazine technical in China by region, 2021



Source: CCM

3.2 Key atrazine technical manufacturers

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Table 3.2-1 Capacity and output of major atrazine technical producers in China, 2018–2021

No.	Producer	Abbreviation	Location	Status, as of the end of 2021	2021		2020		2019		2018	
					Capacity, t/a	Output, tonne	Capacity, t/a	Output, tonne	Capacity, t/a	Output, tonne	Capacity, t/a	Output, tonne
1	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
2	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
3	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
4	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
5	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
6	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
7	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
8	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
9	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
10	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
Total					XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX

Source: CCM

...

4 Circulation of atrazine in China

4.1 Price of atrazine in China, 2021

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In 2021, monthly ex-works price of 97% atrazine technical fluctuated around XXX/t from Jan. to Aug. From Sept. onwards, it jumped quickly and landed at XXX /t in Dec.—an increase of XXX from the Aug. price and up by XXX year on year. Regarding atrazine 50% SC, its monthly ex-works price in China hovered around XXX /t before Sept. and climbed to XXX /t in Dec., which is XXX higher from a year earlier.

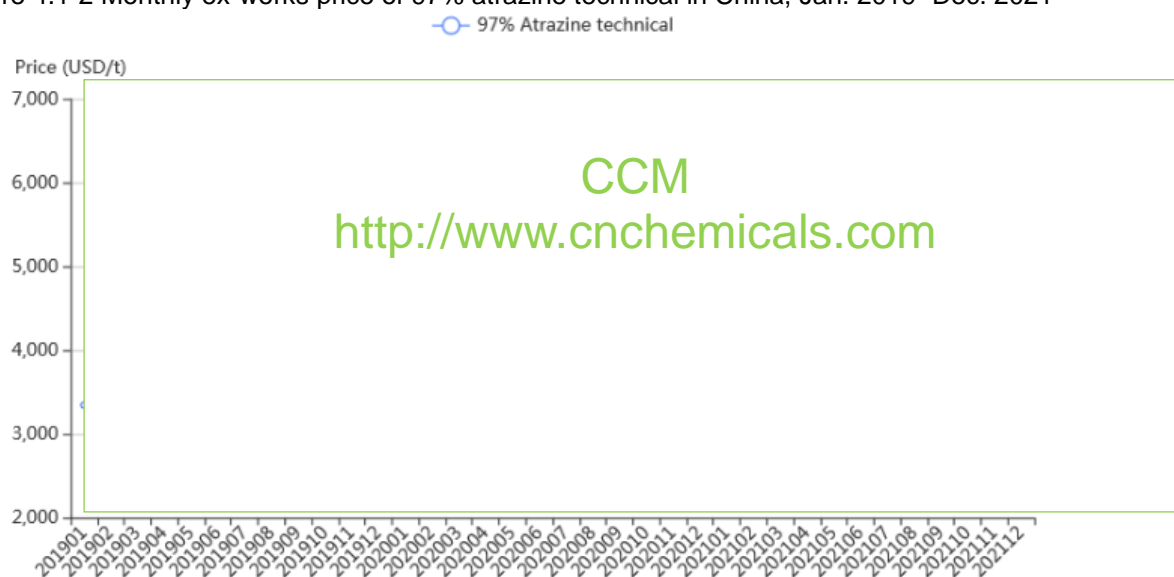
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Figure 4.1-1 Annual ex-works prices of atrazine technical and cyanuric chloride in China, 2018–2021



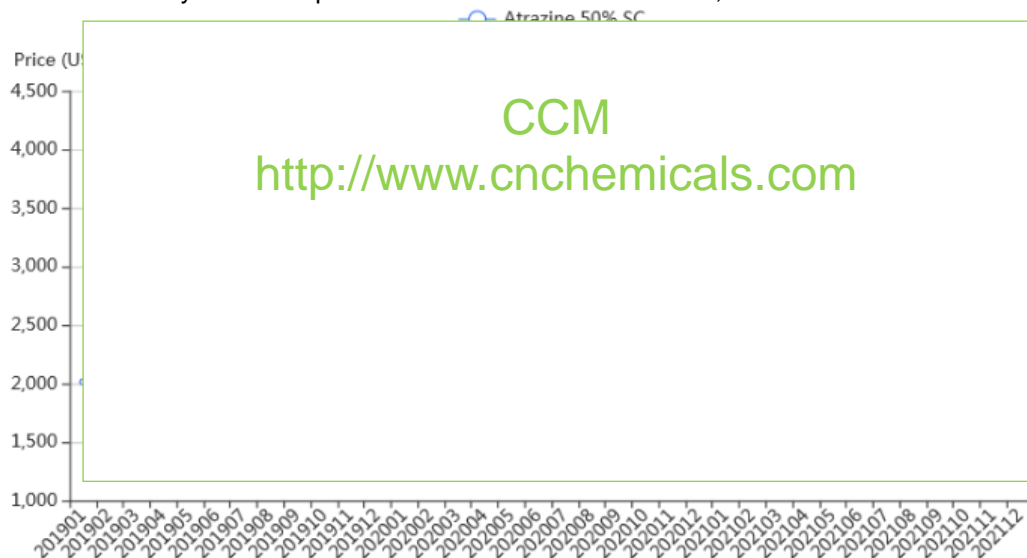
Source: CCM

Figure 4.1-2 Monthly ex-works price of 97% atrazine technical in China, Jan. 2019–Dec. 2021



Source: CCM

Figure 4.1-3 Monthly ex-works price of atrazine 50% SC in China, Jan. 2019–Dec. 2021



Source: CCM

...

4.2 Import and export of atrazine, 2018–2021

4.2.1 Circulation status of atrazine in 2021

With abundant supply, China imports small quantity of atrazine products. In fact, China is a big atrazine exporter, with annual export volume of atrazine technical and formulations (converted to 100% technical, the same below) accounting for about XXX of domestic output since 2008, except a less-than- XXX in 2018 resulting from sluggish overseas demand. In 2020 and 2021, the share was over XXX.

...

By month

Table 4.2.1-1 China's exports of atrazine by month, 2021

Month	38% SC	50% SC	80% WP	90% WDG	95% Tech.	97% Tech.	98% Tech.	Total volume (converted to 100% technical, tonne)
January	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
February	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
March	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
April	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
May	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
June	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
July	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
August	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
September	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
October	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
November	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
December	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
Total	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX

Source: Tranalysis

By destination

...

Table 4.2.1-2 China's exports of atrazine by destination in 2021, tonne

No.	Destination	38% SC (t)	48% WP (t)	...	97% Tech. (t)	Total volume (converted to 100% technical)
1	XXX	XXX	XXX	...	XXX	XXX
2	XXX	XXX	XXX	...	XXX	XXX
3	XXX	XXX	XXX	...	XXX	XXX
4	XXX	XXX	XXX	...	XXX	XXX
5	XXX	XXX	XXX	...	XXX	XXX
...	XXX	XXX	XXX	...	XXX	XXX
13	XXX	XXX	XXX	...	XXX	XXX
14	XXX	XXX	XXX	...	XXX	XXX
...	XXX	XXX	XXX	...	XXX	XXX
Total		XXX	XXX	...	XXX	XXX

Source: Tranalysis

By exporter

...

Table 4.2.1-3 China's exports of atrazine by exporter in 2021, tonne

No.	Exporter	38% SC (t)	48% WP (t)	...	97% Tech. (t)	Total volume (converted to 100% technical)
1	XXX	XXX	XXX	...	XXX	XXX
2	XXX	XXX	XXX	...	XXX	XXX
3	XXX	XXX	XXX	...	XXX	XXX
4	XXX	XXX	XXX	...	XXX	XXX
5	XXX	XXX	XXX	...	XXX	XXX
6	XXX	XXX	XXX	...	XXX	XXX
7	XXX	XXX	XXX	...	XXX	XXX
8	XXX	XXX	XXX	...	XXX	XXX
9	XXX	XXX	XXX	...	XXX	XXX
10	XXX	XXX	XXX	...	XXX	XXX
11	XXX	XXX	XXX	...	XXX	XXX
12	XXX	XXX	XXX	...	XXX	XXX
...	XXX	XXX	XXX	...	XXX	XXX
Total		XXX	XXX	...	XXX	XXX

Source: Tranalysis

...

By Manufacturer

Table 4.2.1-4 China's exports of atrazine by manufacturer in 2021, tonne

No.	Manufacturer	38% SC (t)	48% WP (t)	...	97% Tech. (t)	Total volume (converted to 100% technical)
1	XXX	XXX	XXX	...	XXX	XXX
2	XXX	XXX	XXX	...	XXX	XXX
3	XXX	XXX	XXX	...	XXX	XXX
4	XXX	XXX	XXX	...	XXX	XXX
5	XXX	XXX	XXX	...	XXX	XXX
6	XXX	XXX	XXX	...	XXX	XXX
7	XXX	XXX	XXX	...	XXX	XXX
...	XXX	XXX	XXX	...	XXX	XXX
Total		XXX	XXX	...	XXX	XXX

Source: China Customs & CCM

...



5 Consumption of atrazine in China, 2018–2021

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Table 5-1 Apparent consumption of atrazine (converted to 100% technical) in China in 2018–2021, tonne

Year	Output	Export	Import	Apparent consumption
2018	XXX	XXX	XXX	XXX
2019	XXX	XXX	XXX	XXX
2020	XXX	XXX	XXX	XXX
2021	XXX	XXX	XXX	XXX

Note: Apparent consumption volume = Output - Export + Import
Source: CCM

Table 5-2 Actual consumption volume of major atrazine formulations in China in 2019–2021, tonne

Year	Consumption volume, tonne				
	38% SC	...	80% WP	90% WDG	Total
2019	XXX	XXX	XXX	XXX	XXX
2020	XXX	XXX	XXX	XXX	XXX
2021	XXX	XXX	XXX	XXX	XXX

Source: CCM

Figure 5-1 Actual consumption structure of atrazine formulations (converted to 100% technical) by crop in China, 2019–2021, tonne



Source: CCM

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