

# 2,4-D Survey in China 2024

**Researched & Prepared by:**

**Kcomber Inc.**

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## 1. Introduction

## 2. Approach for this report

This report aims to demonstrate the development of X,X-D industry in China and analyses the factors behind it. There are almost complete records and comments about technology, production, price, exports and consumption of this product in the report.

Region: China

Time scope: XXXX–XXXX

### Methodology

The report is drafted by diverse methods as follows:

#### X. 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 has gone into the compilation and analysis of the obtained information. When necessary, checks have been made with Chinese suppliers regarding market information such as key producers, key end users, production and demand.

#### X. Telephone interview

CCM has carried out extensive telephone interviews in order to survey the actual market situation of X,X-D industry in China.

Interviewees cover:

- Key producers
- Key traders
- Associations
- Experts

#### X. Network research

CCM adopted network to contact with players in the industry through BXB websites and software. CCM also obtained registration information via network.

### Data processing and presentation

The data collected and compiled are sourced from:

- CCM's database
- Published articles from periodicals, magazines and journals, and third-party databases
- Statistics from governments and international institutes
- Telephone interviews with domestic producers, service suppliers, governments, etc.
- Third-party data providers
- Customs statistics
- Comments from industrial experts
- Professional databases from other sources
- Information from the internet

The data from various sources have been combined and cross-checked 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 them.

#### Unit

USD: currency unit in the US

RMB: currency unit in China, also called Yuan

Tonne: ton, equal to metric ton in this report

t/a: tonne/annual or tonne/year

/t: per tonne

*Source: The People's Bank of China*

### 3. Executive summary

X,X-D products, with a history of production and application exceeding XX years in China, enjoy a stable market demand. Farmers prefer to use X,X-D as a herbicide in wheat-, corn- and rice-growing fields or as a plant growth regulator applied on eggplant, tomato, pumpkin, watermelon, etc. However, the production of X,X-D butylate products has been banned in China since late Jan. XXXX.

In XXXX, it is expected that China's X,X-D production capacity will reach XXX,XXX t/a, with the output (converted to XXX% purity) forecasted to decline to XX,XXX tonne. The ex-works price of X,X-D technical, which started to fall from the high levels at the end of XXXX, continued to decline through XXXX and XXXX, and remains low in XXXX.

Most X,X-D products, including XX% X,X-D technical, XX% X,X-D technical, XXX g/L X,X-D amine salt SL and XXX g/L X,X-D amine salt SL, are for export. Although X,X-D butylate products were withdrawn from Chinese market from Jan. XXXX, demand of the replacements (such as X,X-D-ethylhexyl) still allows X,X-D to enjoy a promising prospect in China. In XXXX, the expansion of new crop-growing area in China and North American markets is expected and the demand for X,X-D is likely to increase at home and abroad in the coming future.

## 4. What is in the report?

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

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### 2.1 Technology

Currently, there are mainly two methods for synthesizing X,X-D technical. The first method is chloridizing phenol by chlorine and then through condensation with chloroacetic acid; the second method is condensation and then followed by chlorination process.

At present, the first method is still widely adopted by most X,X-D producers in China, which is probably going to change as the government becomes stricter on environmental protection. The process in the second method is more reasonable in theory and generates less pollutant, although there are still some technology problems that need to be solved during this process. In XXXX, Jiangxi Tianyu Chemical Co., Ltd. put its new production line (capacity: XX,XXX t/a) into operation in use of the second method.

The problems in the first method include: difficulty in controlling the completion time of phenol-chlorination, the intermediate compound (X,X-dichlorophenol)'s high content of phenol and byproducts, such as chlorophenol and trichlorophenol, as well as low product content.

Major domestic X,X-D technical producers like Changzhou Wintafone Chemical Co., Ltd. and Shandong Weifang Rainbow Chemical Co., Ltd. have been engaged in the research of X,X-D synthesis technology for many years and have made great progress in improving the purity of X,X-dichlorophenol and optimizing the production process of X,X-D, etc., which makes the production process more environment-friendly and cost-effective.

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### 2.3 Registration

As of July XXXX, the number of registered X,X-D products reached XXX.

On X Sept., XXXX, the Ministry of Agriculture (nowadays the Ministry of Agriculture and Rural Affairs) of the People's Republic of China issued the No. XXXX Announcement, which illustrates that from the time this announcement was issued, field test, registration application, and registration renewal application of X,X-D butylate (including TC, TK, single formulations and mixed formulations) for domestic use are no longer accepted and approved. This marks that the production of X,X-D butylate for domestic use was banned in China after the expiry dates of their registrations. Along with the registration certificate XX% acetochlor ·

atrazine · X,X-D butylate SE (registration code: PDXXXXXXXX) expired on XX Jan., XXXX, supply of X,X-D butylate products completely stopped in China ever since; operation and use of such products were also stopped in domestic market upon the two-year validity period since XX Jan., XXXX. It also means that all the X,X-D butylate products, which are sold in the domestic market and labeled as manufactured after the banned date, should be identified as fake or illegal pesticides.

But X,X-D butylate TC producers can still register the product for overseas use, and they can change the registration to export-oriented registration when they apply for registration renewal. Overseas market plays a very important role in consuming the X,X-D products made in China.

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## 2.5 Key producers

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Table 2.5-1 Production of major 2,4-D technical producers in China, 2020–2024E

No.	Producer	Location	Status, as of Dec. 2023	Capacity, t/a					Output, tonne				
				2024E	2023	2022	2021	2020	2024E	2023	2022	2021	2020
X	XXX XXXXXXXX XXXXXXXX XXXX XXXX	XXXXXXXX XXXXXXXX X	XXXX XX	XXXXX X	XXXX XX	XXXX XX	XXXX XX	XXXX XX	XXXXX	XXXX XX	XXX	XXXX XX	XXXX XX
X	XXXXXXXX XXXXXXXX XXXXXXXX XXXX XXXX	XXXXXXXX XXXXXXXX X	XXXX XX	XXXXX X	XXXX XX	XXXX XX	XXXX XX	XXXX XX	XXX	XXX	XXX	XXXX X	XXXX X
X	XXXXXXX XXXXXX XXXXXXXX XXXX XXXX	XXXXXXXX XXXX XXXXXXXX XXX XXXXXX	XXXX XX	XXXXX X	XXXX XX	XXXX XX	XXXX XX	XXXX XX	XXXXX X	XXXX XX	XXXX XX	XXXX XX	XXXX XX
X	XXXXXXX XXXXXX XXXX XXXXXXXX XXXX XXXX	XXXXXXXX XXX XXXXXXXX XXX XXXXXX	XXXX XX	XXXXX X	XXXX XX	XXXX XX	XXXX XX	XXXX XX	XXXXX	XXXX X	XXXX X	XXXX X	XXXX X
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X	XXXXX XXXXXXX XXXXXXXXX X XXXX XXXX	XXXXX XXXXXXXXX X	XXXX XX	XXXXX X	XXXX XX	X	X	X	XXXXX	XX	X	X	X
X	XXXXXX XXXXX XXXXXXXXXX XX XXXXXXXXXX XXXX XXXX	XXXXXXXXX X XXXXXXXXX X	XXXX XX	XXXXX X	XXXX XX	XXXX XX	XXXX XX	XXXX XX	XXXXX	XXX	XXXX X	XXXX X	XXXX X
XX	XXXXX XXXXXXX XXXXXXXXXX XXX XXXX XXXX	XXXXX XXXXXXXXX X	XXXX XX	XXXXX X	XXXX XX	X	X	X	XXXXX	XXXX X	X	X	X

Source:CCM

### Potential capacity of China's X,X-D

On July XX, XXXX, Tangshan Shenghong Chemical Co., Ltd. (Tangshan Shenghong) initiated the public announcement for the EIA of its XX,XXX t/a X,X-dichlorophenoxyacetic acid (X,X-D) expansion project. The project will utilize the reserved space of the original workshop that was designed for XX,XXX t/a X,X-D, to construct a production line with XX,XXX t/a X,X-dichlorophenoxyacetic acid and supporting auxiliary facilities. Upon completion, the project will have XX,XXX t/a X,X-D TC, X,XXX t/a X,X-D isoctyl ester, and X,XXX t/a X,X-D dimethylamine salt and Tangshan Shenghong's production capacity of X,X-D TC will reach XX,XXX t/a.

In August XXXX, the Inner Mongolia LingSheng Crop Science Co., Ltd. successfully filed its XXX,XXX t/a X,X-D technical project, with a planned investment of USDXX.XX million (RMBXXX million), to construct a

XXX,XXX t/a production facility for X,X-dichlorophenoxyacetic acid and supporting public utilities. As of July XXXX, the project is under construction and is scheduled to be completed by mid-XXXX.

By the end of January XXXX, Hubei Xingchen Technology Co., Ltd. (Hubei Xingchen), a subsidiary of Hubei Xingfa Chemicals Group Co., Ltd., received government approval for the EI report of its XX,XXX t/a X,X-D project and is currently under construction. Another project, with XX,XXX t/a X,X-D, X,XXX t/a MCPA, and supporting preparations, was completed in December XXXX. As of July XXXX, this project is still in the trial production phase and has not been completed and accepted. After the completion and acceptance of these two projects, Hubei Xingchen's capacity for X,X-D TC will reach XX,XXX t/a.

On XX Nov. XXXX, Shandong Weifang Rainbow Chemical Co., Ltd. (Weifang Rainbow) announced that its plan to raise fund through share issuance had been approved by China Securities Regulatory Commission. According to Weifang Rainbow's plan, the fund will mainly be invested in the construction of four pesticide projects, including X,X-D TC and X,X-D-ethylhexyl TC project (capacity expansion by XX,XXX t/a and XX,XXX t/a, respectively) of its wholly-owned subsidiary Ningxia Hanrun Biotechnology Co., Ltd.

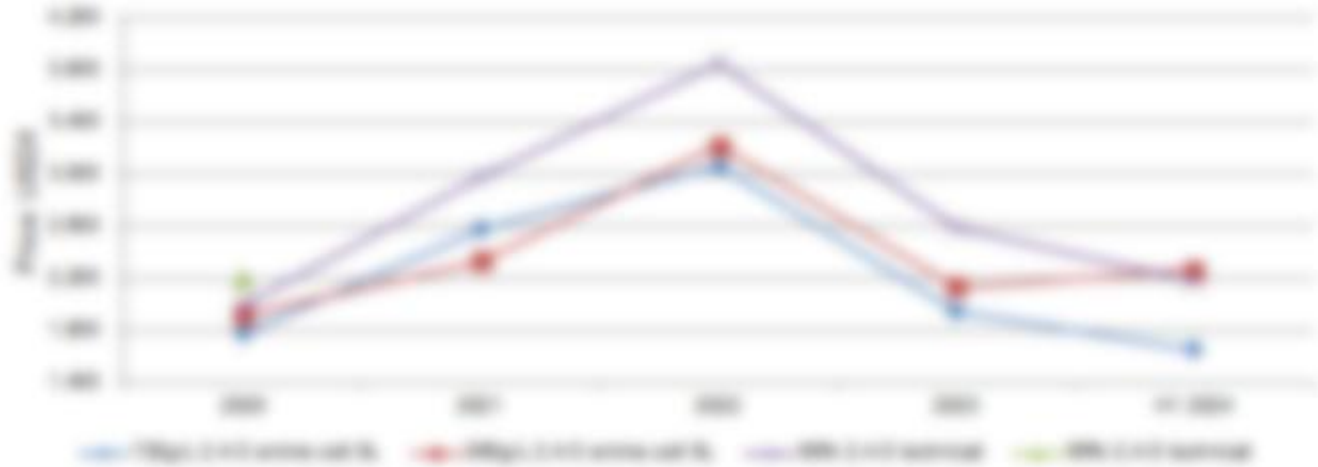
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### 3.2 Exports status

Chinese pesticide suppliers answer to about XX% of global demand. During XXXX–June XXXX, export prices in XXXX were the lowest; the export price of all X,X-D products peaked in XXXX—prices for XXX g/L X,X-D amine salt SL, XXX g/L X,X-D amine salt SL and XX% technical on average were USDX,XXX/t, USDX,XXX/t and USDX,XXX/t, separately, thanks to the easing global COVID-XX pandemic, China's domestic economy has continued to recover from the production disruption in early XXXX.

However, China's pesticide production grew steadily in XXXX–XXXX, resulting in excessive supply in the industry, with the price downturn on weak demand witnessed in XXXX. Exports of XX% technical and X,X-D amine salt formulations (XXX g/L SL and XXX g/L SL) dropped greatly in Jan.–Sept., each registering XX%, XX% or XX% of decrease in average price compared with the same period of XXXX. And in XXXX, the prices continued to follow the downward trend of XXXX. In XXXX, the export unit prices for XX% TC and X,X-D amine salt formulations (XXX g/L SL and XXX g/L SL) decreased from January to June. The average prices were USDX,XXX/t, USDX,XXX/t, and USDX,XXX/t, respectively, which is a decrease of XX.XX%, X.XX%, and XX.XX% YOY. As for overseas demand, in HX XXXX, the export volume of XX% technical material (calculated by actual volume) increased by XX.XX% YOY, accounting for XX.XX% of the total volume in XXXX. In contrast, the export volume of X,X-D amine salt formulations (XXX g/L SL and XXX g/L SL) (calculated by actual volume) decreased by XX.XX% and X.XX% YOY, respectively.

Figure 3.2-1 Annual export price of main specifications of 2,4-D technical and formulations in China, 2020–H1 2024



Note:1. Since April 2020, China's export data are sourced from data of the customs of various destinations. 2. The annual export price and volume of 96% 2,4-D technical had been calculated by other type of technical like 98% TC since 2021.  
Source:Tranalysis

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### 3.2.1 Details in 2022–H1 2024

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**Table 3.2.1-1 Monthly exports of 2,4-D technical and formulations in China, 2022**

Month	600g/L 2,4-D Amine salt SL		720g/L 2,4-D Amine salt SL		80% 2,4-D Amine salt SG		860g/L 2,4-D Amine salt SL		27% 2,4-D SL		304 g/L 2,4-D SL		98% 2,4-D TC		Value, million 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	Volume, tonne	Price, USD/kg	Volume, tonne	Price, USD/kg	
XXXX	XXXXXX	XXX X	XXXXXX XXX	XXX X	XXXX X	XXX X	XXXXXX	XXX X	XXXX XX	XXX X	XXXXXX	XXX X	XXXXXX XXX	XXX X	XX
XXXX	XXXXXX X	XXX X	XXXXXX X	XXX X	XXXX X	XXX X	XXXXXX	XXX X	XXXX X	X	XXXXXX	XXX X	XXXXXX XXX	XXX X	XX
XXXXX	XXXXXX X	XXX X	XXXXXX XXX	XXX X	XXXX X	XXX X	XXXXXX	XXX X	XXXX X	X	XXXXXX X	XXX X	XXXXXX XXX	XXX X	XX
XXXXXX	XXXXXX X	XXX X	XXXXXX X	XXX X	XXXX XXX	XXX X	XXXXXX X	XXX X	XXXX X	X	XXXXXX X	XXX X	XXXXXX XXX	XXX X	XX
XXX	XXXXXX X	XXX X	XXXXXX XXX	XXX X	XXXX X	XXX X	XXXXXX	XXX X	XXXX X	X	XXXXXX	XXX X	XXXXXX XXX	XXX X	XX
XXXX	XXXXXX X	XXX X	XXXXXX XXX	XXX X	XXXX X	XXX X	XXXXXX X	XXX X	XXXX X	X	XXXXXX X	XXX X	XXXXXX XXX	XXX X	XX
XXXX	XXXXXX	XXX X	XXXXXX XXX	XXX X	XXXX X	XXX X	XXXXXX X	XXX X	XXXX X	X	XXXXXX X	XXX X	XXXXXX XXX	XXX X	XX
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XXXX	XXXXXX X	XXX X	XXXXXX XXX	XXX X	XXXX X	XXX X	XXXXXX X	XXX X	XXXX X	X	XXXXXX X	XXX X	XXXXXX XXX	XXX X	XX
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Note:1. Since April 2020, China's export data are sourced from data of the customs of major destinations.

2. Unless indicated "100% AI", all the volumes in the table are calculated by actual volume.

Source:Tranalysis

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Table 3.2.1-2 Export volume of 2,4-D technical and formulations from China by destination in H1 2024,

tonne

No.	Country	600g/L 2,4-D Amine salt SL	720g/L 2,4-D Amine salt SL	860g/L 2,4-D Amine salt SL	96% 2,4- D Amine salt SG	304 g/L 2,4-D SL	95% 2,4-D TC	96.5% 2,4-D TC	98% 2,4-D TC	XXXXX (100% AI 2,4-D)
X	XXXXXX	XXXXX	XXXXXXXXX X	XXXXXXXXX X	XXXXX	XXXXXX	XXXXX	XXXXX	XXXXX	XXXXXXXXX X
X	XXXXXXXX XX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXXX	XXXXXXXXX X	XXXXXXXXX X
X	XXX XX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXXXXXX X	XXXXXXXXX X
X	XXX XXXXXXXX XXXX	XXXXXX X	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXXX	XXXXXX
X	XXXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXXX	XXXXXX
X	XXXXXX	XXXXX	XXXXXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXXX
X	XXXXXXXX X	XXXXX	XXXXXX	XXXXXX	XXXXXX X	XXXXX	XXXXX	XXXXX	XXXXXX	XXXXXX
X	XXXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXXX	XXXXXX
X	XXXX	XXXXX	XXXXXXXXX X	XXXXXX	XXXXX	XXXXXX	XXXXX	XXXXX	XXXXX	XXXXXX
XX	XXXXXX	XXXXX	XXXXXXXX	XXXXXXXX	XXXXX	XXXXXX	XXXXX	XXXXX	XXXXXX	XXXXXX
XX	XXXXXXXX X	XXXXX	XXXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXXX
XX	XXXXX XXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXXX	XXXXX	XXXXXX	XXXXXX

XX	XXXXXXXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
XX	XXXXXXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
XX	XXXXXXX	XXXXXXXXX	XXXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXXX	XXXXXX
XX	XXXXXXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
XX	XXXXXXXXXX	XXXXX	XXXXXX	XXXXXX	XXXXX	XXXXX	XXXXXX	XXXXX	XXXXXX	XXXXXX	XXXXXX
XX	XXXXXX	XXXXX	XXXXXX	XXXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXXX	XXXXXX
XX	XXXXXXXXXX	XXXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXXX	XXXXXX
XX	XXXXXXXXX	XXXXX	XXXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXXX	XXXXXX
XXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXX	XXXXX	XXXXXX	XXXXXX	XXXXXX

Note:1. Since April 2020, China's export data are sourced from data of the customs of major destinations.

2. Unless indicated "100% AI", all the volumes in the table are calculated by actual volume.

Source:Tranalysis

Table 3.2.1-3 Export volume of 2,4-D technical and formulations from China by destination in 2023, tonne

No.	Country	600g/L 2,4-D Amine salt SL	720g/L 2,4- D Amine salt SL	80% 2,4-D Amine salt SG	860g/L 2,4-D Amine salt SL	96% 2,4-D Amine salt SG	27% 2,4-D SL	304 g/L 2,4-D SL	98% 2,4-D TC	XXXXX (100% AI 2,4-D)
X	XXXXXX	XXXXX	XXXXXXXXXX	XXXXXX	XXXXXXXXXX	XXXXXX	XXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
X	XXX XX	XXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXXXXXX	XXXXXXXXXX
X	XXXXXXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXXXXXX	XXXXXXXXXX
X	XXXXXX	XXXXXX	XXXXXXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXXXXXX	XXXXXXXXXX
X	XXXXXXXXXX	XXXXXXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXXXXXX	XXXXXXXXXX
X	XXX	XXXXXXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX

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X	XXXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXXXXX X	XXXXXXXX X
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X	XXXXXXXX	XXXXX	XXXXXXXX	XXXXX	XXXXXX	XXXXX X	XXXXX	XXXXXX	XXXXXXXX	XXXXXXXX
XX	XXXXXXXX X	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXXXXX	XXXXXXXX
XX	XXXXXX	XXXXX	XXXXXXXX X	XXXXX	XXXXXXXX	XXXXX	XXXXX	XXXXXXXX	XXXXX	XXXXXXXX
XX	XXXX	XXXXX	XXXXXXXX	XXXXX	XXXXXXXX	XXXXX	XXXXX	XXXXXX	XXXXXXXX	XXXXXXXX
XX	XXXXXXXX	XXXXX	XXXXX	XXXXX	XXXXXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXXXXX
XX	XXXXX XXXX	XXXXX	XXXXXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXXXXX
XX	XXXXXXXX X	XXXXXX	XXXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXXXXX	XXXXXXXX
XX	XXXXXXXX	XXXXXX	XXXXXX	XXXXX	XXXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXXXXX
XX	XXXXX	XXXXX	XXXXXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXXXXX
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XX	XXXXXXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX
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XX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX
XX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX
XXXXXX	XXXXXXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX

Note:1. Since April 2020, China's export data are sourced from data of the customs of major destinations.  
 2. Unless indicated "100% AI", all the volumes in the table are calculated by actual volume.  
 Source:Tranalysis

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Table 3.2.1-4 Export volume of 2,4-D technical and formulations from China by exporter in H1 2024, tonne

No.	Exporter	600g/L 2,4-D Amine salt SL	720g/L 2,4-D Amine salt SL	860g/L 2,4-D Amine salt SL	96% 2,4-D Amine salt SG	304 g/L 2,4-D SL	95% 2,4-D TC	96.5% 2,4-D TC	98% 2,4-D TC	Total (100% AI 2,4-D)
X	XXXXXXXXXX XXXXXXXXXX XXXXXXXXXX XX XXXX XXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXXXXXX X	XXXXXXXXXX X
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X	XXXXXXXXXX XXXXXXXXXX XXXXXXXXXX XXXX XXXX XXXX	XXXXXX	XXXXXX	XXXXXXXXXX	XXXXXX	XXXXXXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXXXXX
X	XXXXXX XXXXXX XXXXXXXXXX XX XXXX XXXX	XXXXXX	XXXXXXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXXXXX
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XX	XXX XXXXXXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXXX	XXXXXXX
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XXXXXX	XXXXXX XX	XXXXXXXXXX XX	XXXXXXXXXX XX	XXXXXX XX	XXXXXX XX	XXXXXX XX	XXXXXX X	XXXXXX X	XXXXXXXXXX XXX	XXXXXXXXXX XXX	

Note:1. Since April 2020, China's export data are sourced from data of the customs of major destinations.

2. Unless indicated "100% AI", all the volumes in the table are calculated by actual volume.

Source:Tranalysis

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Table 3.2.1-5 Export volume of 2,4-D technical and formulations from China by producer in H1 2024,  
tonne

No.	Producer	600g/L 2,4-D Amine salt SL	720g/L 2,4-D Amine salt SL	860g/L 2,4-D Amine salt SL	96% 2,4-D Amine salt SG	304 g/L 2,4-D SL	95% 2,4-D TC	96.5% 2,4-D TC	98% 2,4-D TC	Total (100% AI 2,4-D)
X	XXXXXXXX XXXXXX XXXXXXXX X XXXX XXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXXXXXX X	XXXXXXXXXX X
X	XXX XXXXXXXX XXXXXXXX X XXXX XXXX	XXXXXX	XXXXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXXXXXX	XXXXXXXX
X	XXXXXXXX X XXXXXXXX XXXXXXXX XXXXXXXX X XXXX XXXX	XXXXXX	XXXXXXXX	XXXXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXXXX	XXXXXXXX
X	XXXXXX XXXXXX XXXXXXXX XXXX XXXXXXXX X XXXX XXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXXXXXX	XXXXXXXX
X	XXXXXXXX XX XXXXXXXX XXXXX XXXX XXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXXXX	XXXXXX	XXXXXXXX	XXXXXX

X	XXXXXXXX XX XXXXXXXX XXXX XXXX	XXXXX	XXXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXXX
XXXXXXXX	XXXXXX X	XXXXXXXXX X	XXXXXXXXX X	XXXXXX X	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXXXXX X	XXXXXXXXX XX	
XXXXXX	XXXXX XX	XXXXXXXX XX	XXXXXXXX XX	XXXXX XX	XXXXX XX	XXXXX X	XXXXX X	XXXXXXXX XX	XXXXXXXX XX		

Note:1. Since April 2020, China's export data are sourced from data of the customs of major destinations.

2. Unless indicated "100% AI", all the volumes in the table are calculated by actual volume.

Source:Tranalysis

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## 4.1 Consumption overview, 2020–2024

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Table 4.1-1 Production, export, import and apparent consumption of 2,4-D in China, 2020–2024E

Year	Capacity of 2,4-D technical, t/a	Output of 2,4-D technical, tonne (converted to 100% technical)	Import volume, tonne (converted to 100% technical)	Export volume, tonne (converted to 100% technical)	Apparent consumption volume, tonne
XXXX	XXXXXXXX	XXXXXX	X	XXXXXX	XXXXXX
XXXX	XXXXXXXX	XXXXXX	X	XXXXXX	XXXXXX
XXXX	XXXXXXXX	XXXXXX	X	XXXXXX	XXXXXX
XXXX	XXXXXXXX	XXXXXX	X	XXXXXX	XXXXXX
XXXXX	XXXXXXXX	XXXXXX	X	XXXXXX	XXXXXX

Note:The output and export for 2024 are estimated.

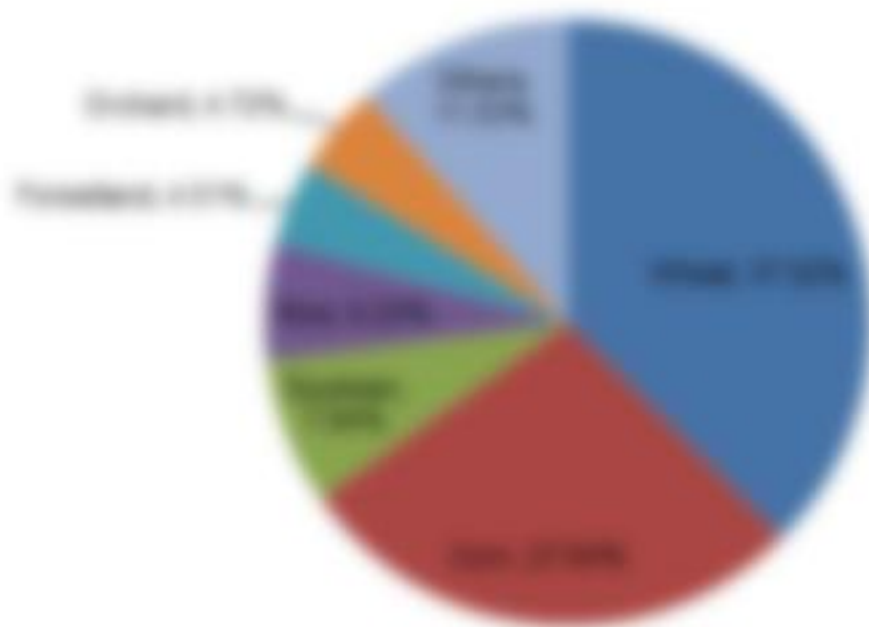
Source:China Customs & CCM

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## 4.2 Share by crop, 2024

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Figure 4.2-1 Consumption of 2,4-D formulations (converted into 100% technical) by crop in China, 2024E



Note: Due to rounding, the total may not equal 100.00%.  
Source: CCM

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## 5.1 Key influencing factors

### - Policy on environmental protection

In recent years, most of the unqualified X,X-D technical enterprises have stopped production, owing to their failure in reaching the standard of pollutant treatment. As sewage discharge of X,X-D technical production would disrupt the environment, the supervision over X,X-D technical production is very strict in China, and relevant policies have been rolled out, such as the *Environmental Protection Laws of the People's Republic of China* issued on Xst Jan., XXXX, which prohibits the capacity expansion of X,X-D technical unless the manufacturer undertakes a technological reform.

At present, X,X-D is a widely-used herbicide, featuring good solubility, which will cause pollution to groundwater and surface water. The product and its metabolic products with biotoxicity, like X,X-dichlorophenol, pose a tangible threat to human health and natural environment.

### - Production cost

Production cost of X,X-D technical grows in China. Continuous high interest rates over the recent two years, slower-than-expected economic growths after the COVID-XX pandemic and increasing extreme

weather across the world have posed a certain impact on international trade, undermining the pesticide industry and the development of Chinese pesticide enterprises. Besides, uncertainties around the world, especially escalating geopolitical tensions in East Europe and Middle East, may engender inflation, supply chain disruption, sky-high crude oil price and higher shipping cost, along with some aftermaths. There will be difficulties at all levels for China's pesticide industry to fare well in the near future.

#### - Demand

By now, there is still an oversupply of X,X-D technical in China. Most X,X-D products, including XX% TC, XXX g/L X,X-D amine salt SL and XXX g/L X,X-D amine salt SL, are for export. In XXXX and XXXX, with increasing soybean-growing areas in China, the domestic demand for pesticides, including X,X-D went up apparently. In XXXX, with the frequent occurrence of extreme weather events globally, the domestic demand for pesticides in China, including X,X-D, is expected to see a reduced increase or remain similar to that of XXXX.

The overseas market provides an important outlet for the consumption of China's superfluous output. With the completion of the digestion of the international market inventory, it is expected that a recovery of overseas demand will come forth in HX XXXX and the performance of China's pesticide imports and exports will improve. However, since the Indian competitors are providing pesticide products with lower prices, it will place a challenge on China's pesticide exports.

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## 6 Conclusion

In order to meet stricter environmental protection requirements, China's X,X-D enterprises have been moving towards an energy-saving production process since July XXXX. By gaining advantages in ecological protection, well-qualified producers have better survived the fierce competition, and put more efforts on product quality improvement. For example, Jiangxi Tianyu Chemical Co., Ltd. (Jiangxi Tianyu), a subsidiary of CAC Nantong Chemical Co., Ltd., took part in the revision of *FAO Specifications and Evaluations for Agricultural Pesticides X,X-D* in Feb. XXXX and completed safety facilities acceptance inspection of its safety and environmental protection technology upgrading project on XX June XXXX.

In China, with the popularisation of minimum- and non-tillage techniques, chemical weeding is expected to gain more traction with farmers. Therefore, more X,X-D products will be needed in wheat-, corn-, and rice-growing areas. In addition, weed's gradual resistance to X,X-D's competitors, such as glyphosate, provides



X,X-D products with a broader space for development.

What's more, in spite of severe overcapacity and stricter environmental protection policies, there is still development space for the X,X-D producers in China, which is related to technological innovation and environmental protection in the next few years, including:

- Technological development of pollutant treatment
- R&D and promotion of environmental-friendly formulations
- Domestic and overseas market exploration
- Increasing planting area of GM crops

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