

# Survey of Acetochlor in China

The Ninth Edition

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**Researched & Prepared by:**

**Kcomber Inc.**

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## Executive summary

Acetochlor is mainly used to control weeds in the fields of corn, soybean, peanut and other crops in China. As of 8 Sept., 2022, the number of registrations of acetochlor in China increased to 688, including 29 registration entries for acetochlor technical, 250 for single formulations and 409 for mixed formulations.

### - Production

In recent years, acetochlor industry in China has experienced overcapacity. In 2022, domestic capacity of acetochlor technical is 89,000 t/a; the output is expected to stand at 25,600 tonnes, or 23,552 tonnes (100% AI volume). It is unlikely to see a capacity expansion of acetochlor technical in China in the next five years, and the capacity may even go down further in the long run.

### - Export

According to export data of acetochlor technical and formulations updated by Tranalysis on 29 Sept., 2022, some 1,800 tonnes, or 1,636 tonnes (100% AI volume) of acetochlor products were exported to Vietnam, Pakistan, the US, Mexico, Nigeria, Thailand, Chile and Tanzania in H1 2022. Of these countries, Vietnam was the largest export destination.

### - Consumption

Acetochlor can be used for pre-emergent control of annual weeds and some broadleaf weeds. In 2022, the apparent consumption (calculated by 100% AI, the same below) is estimated at about 16,170 tonnes, down by some 1.20% year on year, and the actual consumption of acetochlor technical at about 16,190 tonnes. In 2022, corn, soybean and vegetables will remain the top three major end users of acetochlor, estimatedly accounting for about 53%, 16%, 7%, respectively. Currently, 50% EC and 90% EC are the major acetochlor single formulations applied in China; mixed formulations of acetochlor with bensulfuron-methyl, prometryn or 2,4-D butylate are also popular in domestic market.

It is estimated that the supply and demand of acetochlor technical in China will go down. Domestic demand for acetochlor technical may decrease from 2023 for reduced unit consumption of pesticides on crops and competition from its substitutes.

## **Methodology and source**

This report is drafted by diverse methods as follows:

### **Desk research**

The sources of desk research are various, including published journals, government statistics, industrial statistics, customs statistics, as well as information from the Internet. Information obtained has been compiled and analysed. When necessary, checks will be made with players in China's acetochlor industry regarding market information such as key producers, production situation, and trend of product price.

### **Telephone interview**

Extensive telephone interviews have been carried out in order to grasp the actual market situation of acetochlor in China.

Interviewees cover:

- Producers
- Traders

### **Internet search**

CCM contacted with the players in the acetochlor industry through B2B websites and software.

### **Data processing and presentation**

The data collected and compiled were sourced from:

- Published articles from periodicals, magazines and journals
- Statistics from local governments and international institutes
- Telephone interviews with domestic suppliers, traders, industrial experts
- Third-party data providers
- Information from the Internet

Data obtained 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 were made in order to analyse the data and have conclusions drawn.

### **Abbreviation**

AI: active ingredient

EC: emulsifiable concentrate

EW: emulsion oil in water

OD: oil dispersion

SC: suspension concentrate

SE: suspo-emulsion

TC: technical material

WP: wettable powder

CAGR: compound annual growth rate

CCPIA: China Crop Protection Industry Association

ICAMA: Institute for the Control of Agrochemicals, Ministry of Agriculture and Rural Affairs of the People's Republic of China

## Unit

Tonne: equals to metric ton in this report

/t: per tonne

t/a: tonne/annum, tonne per year

USD: US dollar, currency unit in the US

RMB: currency unit in China, also named yuan

Table USD/CNY exchange rate, Jan. 2017–Oct. 2022

Year	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
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
2022	6.3794	6.3580	6.3014	6.3509	6.5672	6.6651	6.6863	6.7467	6.8821	7.0992	-	-	-

Source: The People's Bank of China

## 1 Industry overview

### 1.1 Brief introduction to pesticide industry in China

China is now the world's largest exporter of pesticides, and herbicide is an important pesticide category. In recent years, amid rising labor cost as well as 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 deterioration of ecological environment and soil fertility. Therefore, in recent years, multiple environmental protection policies have been rolled out and the output of herbicides in China showed a general downward trend. But in 2021, China's herbicide output resumed growth, standing at 1,109,000 tonnes (converted to 100% technical, the same below) and increasing by 10.46% year on year.

In terms of export, in 2021 China exported 2,202,000 tonnes of pesticides, a year-on-year drop of 12.41%. Yet the export volume of herbicides in 2021 stood at 1,390,000 tonnes, up 12.46% year on year; and it accounts for more than 63% of total pesticide exports, the share nearly 14 percentage points higher than that in 2020). The total value of herbicide exports rocketed by some 60% year on year to USD4.9 billion.

With the structural adjustment of the pesticide industry and development of products with higher added value and efficacy, structure of pesticide output in China has improved. China's output proportion of herbicides showed a general uptrend in 2017–2020. In 2021, the proportion of herbicides (calculated by 100% technical) was around 44.40%, which means that herbicide still predominates in pesticides produced in China.

Figure 1.1-1 Output and share of herbicides in China's pesticide industry, 2017–2021



Note: All the volumes are calculated by 100% technical.

Source: National Bureau of Statistics of China

Table 1.1-1 China's imports and exports of pesticides and herbicides, 2018–2021

Year	Pesticides				Herbicides				Share of herbicides/pesticides			
	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
2018	79,000	489	1,405,400	8,073	23,000	149	989,900	4,355	29.11%	30.47%	70.44%	53.95%
2019	90,000	762	1,468,000	4,860	14,000	100	992,000	2,715	15.56%	13.12%	67.57%	55.86%
2020	110,000	911	2,514,000	7,624	14,000	78	1,236,000	3,069	12.73%	8.56%	49.16%	40.25%
2021	104,000	917	2,202,000	8,010	17,000	100	1,390,000	4,900	16.35%	10.91%	63.12%	61.17%

Source: National Bureau of Statistics of China

## 1.2 Position of acetochlor in China's herbicide industry

As a herbicide, acetochlor plays an important role in China's farming. It can be used for pre-emergent control of annual weeds and some broadleaf weeds in the fields of corn, cotton, peanut, soybean, etc. In 2021, acetochlor output made up 2.21% of the total herbicide output in China; in general, its share declined quickly during 2017–2021.

Table 1.2-1 Output volume and output share of acetochlor in herbicides industry in China, 2017–2021

Year	Herbicide output, tonne	Acetochlor output, tonne	Share
2017	1,012,000	32,844	3.25%
2018	1,006,000	27,968	2.78%
2019	1,011,000	24,748	2.45%
2020	1,004,000	26,220	2.61%
2021	1,109,000	24,564	2.21%

Note: The output is based on content of 100%.

Source: CCM



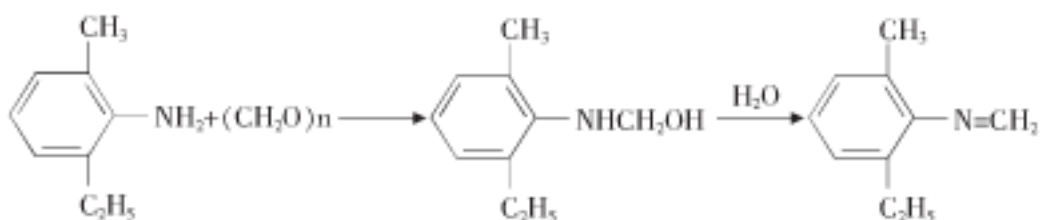
## 2 Supply

### 2.1 Production technology

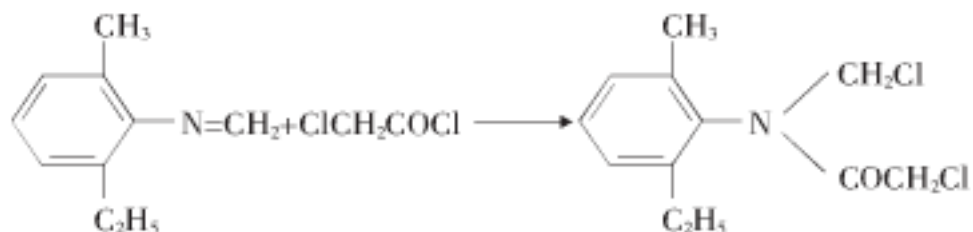
Currently, there are two main routes for producing acetochlor technical in China, namely the methylene route and the ether route. The former, which is listed and supported in the *Plan for Promotion of Cleaner Production Technology in the Pesticide Industry* issued by the Ministry of Industry and Information Technology of the People's Republic of China, is adopted by an increasing number of producers, while the latter is listed as a technology with serious pollution and high environmental risks.

Figure 2.1-1 Methylene route for producing acetochlor technical in China

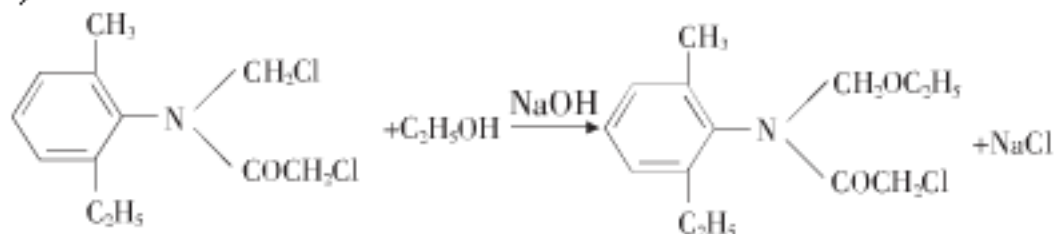
#### 1) Methylene aniline generation



#### 2) Addition reaction



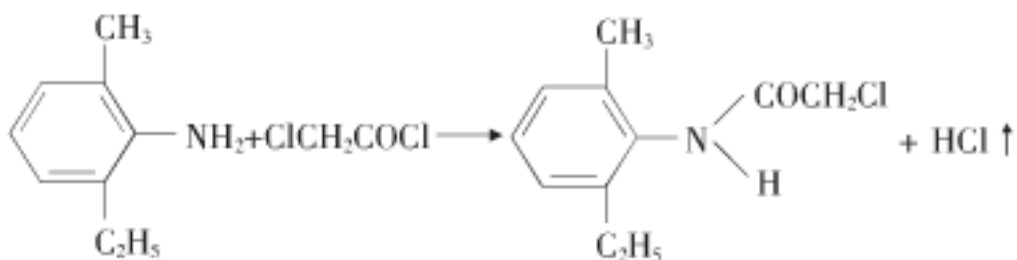
#### 3) Condensation reaction



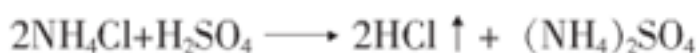
Source: Standard for Discharge of Industrial Water Pollution in Production of Amide Pesticides

Figure 2.1-2 Ether route for producing acetochlor technical in China

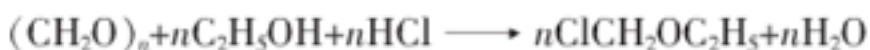
1) Acylation



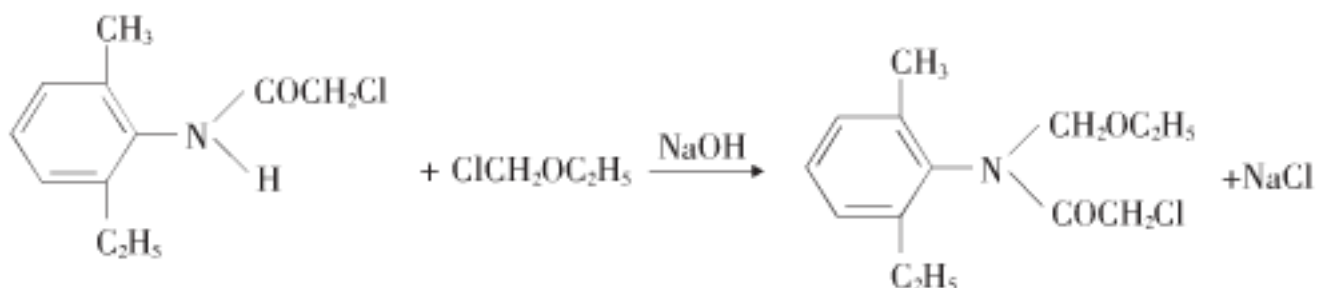
2) Hydrochloric acid gas generation



3) Etherification



4) Condensation reaction



Source: Standard for Discharge of Industrial Water Pollution in Production of Amide Pesticides

Table 2.1-1 Comparison on quality of acetochlor technical between the two production routes adopted in China

Item	Methylene route	Ether route
Content of active ingredient	≥ 96%	92%–95%
Yield coefficient	95%–98%	92%–95%

Source: The China Crop Protection Industry Association (CCPIA)

## 2.2 Registration

Acetochlor is mainly used to control weeds in the fields of corn, soybean, peanut and other crops in China. As of 8 Sept., 2022, the number of registrations of acetochlor in China increased to 688 from 673 in Oct. 2021. And the number of registrations of acetochlor technical in China decreased to 29 from 30 in Oct. 2021. As for acetochlor formulations, there were 250 registration entries for single formulations and 409 for mixed formulations as of Sept. 2022, the amounts increasing slightly from the numbers registered in Oct., 2021.

Table 2.2-1 Registrations of acetochlor technical in China, as of 8 Sept., 2022

No.	Registration number	Content	Registrant	Expire date
1	PD20070260	93%	Labor (Kaifeng) Technology Co., Ltd.	2027/9/3
2	PD20070142	93%	Hangzhou Nutrichem Co., Ltd.	2027/5/29
3	PD20110830	97%	Zhongnongfa Henan Agrochemical Co., Ltd.	2026/8/31
4	PD20060128	93%	Shandong Vicome Greenland Chemical Co., Ltd.	2026/6/26
5	PD20101705	95%	Jiangsu Laike Crop Protection Co., Ltd.	2025/6/28
6	PD20097512	93%	ADAMA Anpon (Jiangsu) Co., Ltd.	2024/11/4
7	PD20097059	93%	Shandong Eshung Industrial Co., Ltd.	2024/10/11
8	PD20096400	93%	Shandong Dacheng Bio-chemical Co., Ltd.	2024/8/4
9	PD20096271	93%	Inner Mongolia Zhonggao Chemical Co., Ltd.	2024/7/22
10	PD20096089	90%	Lianyungang Liben Crop Science and Technology Co., Ltd.	2024/6/18
11	PD20094256	93%	Shandong Dehao Chemical Co., Ltd.	2024/3/31
12	PD20083132	95%	Shandong Binnong Technology Co., Ltd.	2023/12/10
13	PD20082135	93%	Shangyu Nutrichem Co., Ltd.	2023/11/25
14	PD20082083	93%	Dalian Songliao Chemical Industry Co., Ltd.	2023/11/25
15	PD20081593	93%	Shandong Huayang Technology Co., Ltd.	2023/11/12
16	PD20081193	93%	Jiangsu Changlong Agrochemical Co., Ltd.	2023/9/11
17	PD20080888	94%	Heilongjiang Jixiang Agrochemical Co., Ltd.	2023/7/9
18	PD20080745	93%	Jilin Lvsheng Agrochemical Co., Ltd.	2023/6/11
19	PD20080635	92%	Shoujian Technology Co., Ltd.	2023/5/13
20	PD20130949	95%	Fuhua Tongda Agro-chemical Technology Co., Ltd.	2023/5/2
21	PD20130623	95%	Jiangsu Huifeng Technology Co., Ltd.	2023/4/3
22	PD20080363	93%	Guangdong Greatchem Biotech Co., Ltd.	2023/2/28
23	PD20080359	93%	Jilin Jinqiu Pesticide Co., Ltd.	2023/2/28
24	PD20080344	93%	Shandong Zhongshi Pesticide Co., Ltd.	2023/2/26

No.	Registration number	Content	Registrant	Expire date
25	PD20080268	93%	Taizhou Bailly Chemical Co., Ltd.	2023/2/20
26	PD20080174	93%	Nantong Jiangshan Agrochemical & Chemicals Co., Ltd.	2023/1/4
27	PD20080106	93%	Shenyang Liansheng Chemical Industry Co., Ltd.	2023/1/4
28	PD20080116	93%	Inner Mongolia Bailing Technology Co., Ltd.	2023/1/3
29	PD20080087	95%	Shandong Weifang Rainbow Chemical Co., Ltd.	2023/1/3

Source: The Institute for the Control of Agrochemicals, Ministry of Agriculture and Rural Affairs of the People's Republic of China (ICAMA)

Table 2.2-2 Registrations of acetochlor formulations in China, as of 8 Sept., 2022

Item	Type of formulation	Specifications	Number of registration
Single formulation	EC	50%, 900g/L, 81.50%, 89%, etc.	211
	EW	40%, 50%, 48%, 900g/L	18
	WP	20%, 40%	16
	Others	/	5
	Subtotal	/	250
Mixed formulation	EC	40%, 50%, 82%, 78%, 45%, etc.	144
	WP	20%, 14%, 40%, 18%, 30%, 25%, etc.	117
	SE	40%, 42%, 66%, 52%, 55%, etc.	107
	OD	42%, 40%, 52%, etc.	17
	Others	/	24
	Subtotal	/	409
<b>Total</b>			<b>659</b>

Source: ICAMA

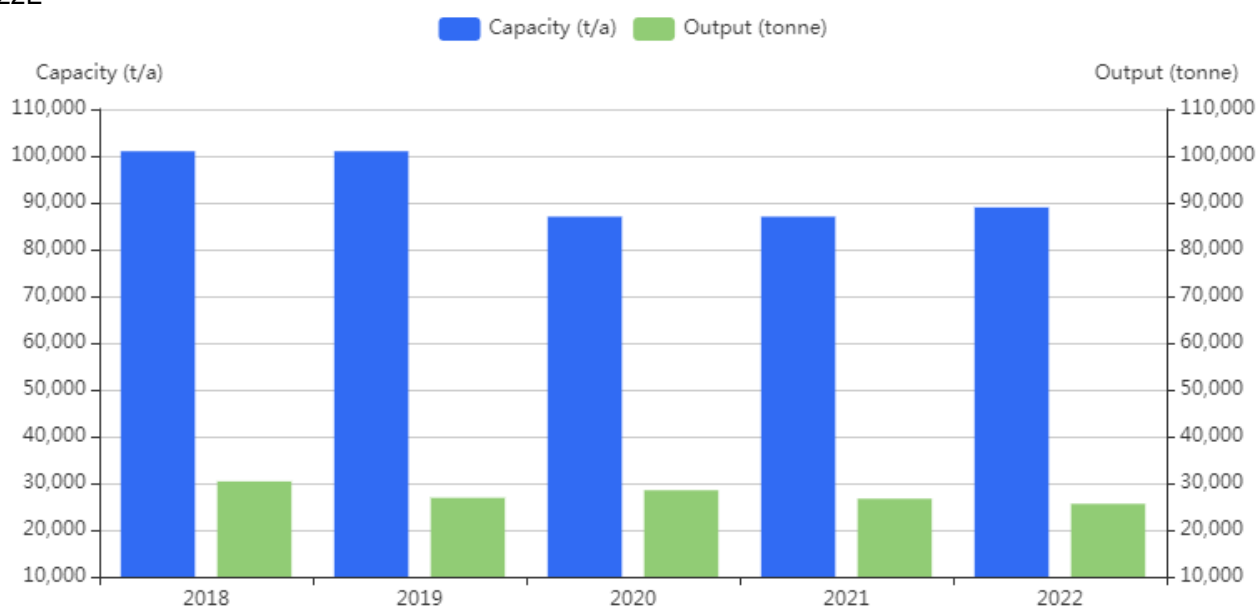
### 2.3 Production, 2018–2022E

In recent years, acetochlor industry in China has experienced overcapacity—total capacity of acetochlor technical has remained much larger than the output. In 2022, domestic capacity of acetochlor technical is 89,000 t/a; the output is expected to stand at 25,600 tonnes, or 23,552 tonnes (100% AI volume), which means a decrease of 4.12% year on year.

During 2018–2021, some producers suspended their production. In 2019, Shandong Qiaochang Chemical Co., Ltd. and Jilin Jinqiu Pesticide Co., Ltd. (Jilin Jinqiu) suspended their production of acetochlor technical. In 2020, Jiangsu Lulilai Co., Ltd. stopped its production lines. In 2021, Zhongnongfa Henan Agrochemical Co., Ltd. (Henan Zhongnongfa), with 10,000 t/a capacity of acetochlor technical, suspended its production lines.

In 2022, Henan Zhongnongfa resumed operation of its production lines, and has become one of acetochlor technical suppliers to Jilin Jinqiu. It is worth noting that Jilin Jinqiu, with 3,000 t/a production capacity of acetochlor technical, has halted the lines in recent years, due to a lack of the intermediate 6-ethyl-o-toluidine (MEA), and an increase in production costs. Now it mainly focuses on the acetochlor formulation business.

Figure 2.3-1 Capacity and output of acetochlor technical (calculated by 92% technical) in China, 2018–2022E



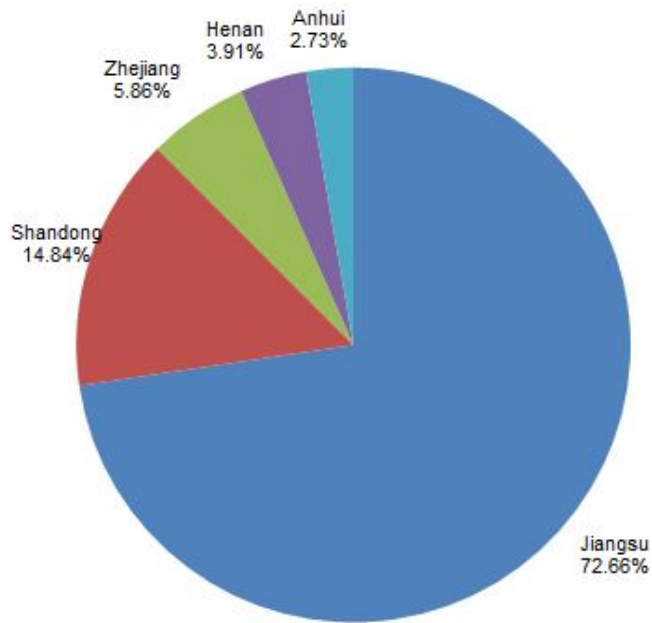
Source: CCM

Table 2.3-1 Capacity and output of key acetochlor technical producers in China, 2020–2022E

No.	Producer	Status, 2022	Capacity, t/a			Output, tonne		
			2022	2021	2020	2022E	2021	2020
1	Nantong Jiangshan Agrochemical & Chemicals Co., Ltd.	Active	22,000	22,000	22,000	8,000	9,500	12,000
2	Shandong Zhongshi Pesticide Co., Ltd.	Active	20,000	20,000	20,000	3,000	4,000	3,000
3	Jiangsu Changlong Agrochemical Co., Ltd.	Active	10,000	10,000	10,000	7,800	7,400	7,500
4	Zhongnongfa Henan Agrochemical Co., Ltd.	Active	10,000	10,000	10,000	1,000	0	3,000
5	Jiangsu Laike Crop Protection Co., Ltd.	Active	5,000	5,000	5,000	2,800	2,000	200

Source: CCM

Figure 2.3-2 Distribution of active acetochlor technical producers in China by output, 2022E



Source: CCM

### 3 Circulation

#### 3.1 Price, 2017–2022

The annual ex-works price of acetochlor technical in China declined in 2019 and 2020, but it soared to USD4,972/t in 2021, up by over 60% year on year. Though the monthly ex-works price of acetochlor technical saw a decrease in 2022, the semi-annual ex-works price in H1 2022 still stood at a high level of USD7,221/t, and it is expected that the annual price in 2022 will be higher than that in 2021.

In 2022, the monthly price of acetochlor technical in China started with a month-on-month fall. Though it saw a slight increase from Feb. to March, the price continued to drop in Q2–Q3. In Sept., the price came to USD5,921/t, which still marks a 27.66% year-on-year jump. Some producers revealed that supply of the raw material MEA had been tight recently. That may prop up the price of acetochlor technical in Q4.

Reasons for the price drop in Q2–Q3 2022 are as follows:

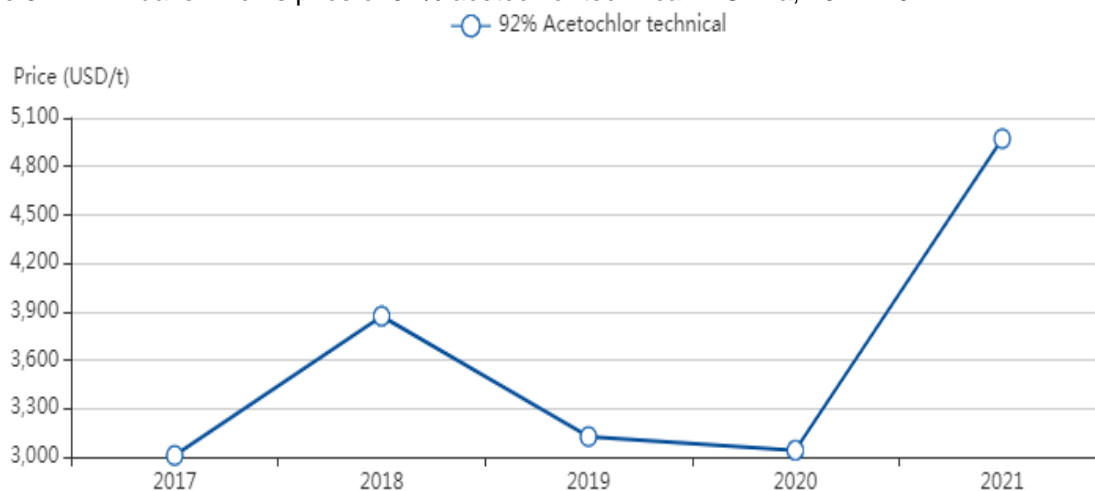
- The supply of acetochlor technical went up as some major manufacturers resumed production, such as Henan Zhongnongfa.
- In the low season from May to Aug., the price of acetochlor usually goes down in China.

Figure 3.1-1 Monthly ex-works price of 92% acetochlor technical in China, Jan. 2020–Sept. 2022



Source: CCM

Figure 3.1-2 Annual ex-works price of 92% acetochlor technical in China, 2017–2021



Source: CCM

## 3.2 Export, 2017–2020

### 3.2.1 By month

According to the export data from Tranalysis, in 2020, China exported some 7,267 tonnes of acetochlor products. Major acetochlor products for export in 2020 were 50% EC, 90% EC, 92% TC, 93% TC, 95% TC and 97% TC.

Table 3.2.1-1 China's exports of acetochlor technical and formulations by month, 2020

Month	50% EC		90% EC		92% Tech.		93% Tech.		95% Tech.		97% Tech.	
	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg
1	119.920	2.09	947.667	2.94	0.000	/	115.200	2.77	91.975	2.68	0.000	/
2	26.000	2.07	195.790	3.09	0.000	/	112.000	2.63	0.000	/	0.000	/
3	110.880	2.04	122.554	3.07	0.000	/	230.200	2.68	195.000	2.76	28.800	2.71
4	88.260	2.15	86.214	3.00	0.000	/	162.600	2.75	79.750	2.74	0.000	/
5	69.000	2.16	0.000	/	48.000	2.83	362.120	2.83	165.000	2.80	48.000	2.97
6	272.000	2.03	255.420	2.88	0.000	/	158.880	2.82	91.320	2.89	0.000	/
7	80.000	2.03	228.750	3.89	0.000	/	16.000	2.80	27.720	2.91	0.000	/
8	80.000	2.03	464.775	2.83	0.000	/	18.600	2.82	0.000	/	0.000	/
9	0.000	/	63.184	3.25	32.000	3.24	16.000	3.85	0.000	/	0.000	/
10	62.766	3.10	330.000	2.67	0.000	/	16.350	3.58	198.120	2.80	0.000	/
11	32.000	2.86	220.002	2.85	0.000	/	255.360	2.87	136.500	2.85	0.000	/
12	16.000	2.05	315.213	2.75	0.000	/	330.160	2.91	145.400	2.88	0.000	/
<b>Total</b>	<b>956.826</b>	<b>2.16</b>	<b>3,229.569</b>	<b>2.96</b>	<b>80.000</b>	<b>2.99</b>	<b>1,793.470</b>	<b>2.82</b>	<b>1,130.785</b>	<b>2.81</b>	<b>76.800</b>	<b>2.87</b>

Note:

1. Nuances in some data are mainly caused by rounding.

2. The export data of acetochlor technical and formulations in 2020 are incomplete.

Source: China Customs & CCM



Table 3.2.1-2 China's exports of acetochlor technical and formulations by month, 2019

Month	20% WP		50% EC		81.5% EC		90% EC		92% Tech.		93% Tech.		94% Tech.		95% Tech.		97% Tech.	
	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg
1	0.000	/	484.340	2.54	0.000	/	725.762	3.55	0.000	/	85.400	3.17	0.000	/	199.200	3.32	0.000	/
2	0.000	/	153.430	2.55	0.000	/	782.698	3.47	0.000	/	34.000	3.01	64.000	3.13	83.600	3.09	0.000	/
3	0.000	/	548.665	2.39	0.000	/	131.940	3.46	0.000	/	161.600	3.20	0.000	/	175.000	3.15	16.000	3.35
4	0.000	/	224.370	2.31	0.000	/	49.080	4.78	0.000	/	47.600	2.82	0.000	/	120.000	3.02	0.000	/
5	0.000	/	581.939	2.32	101.191	3.37	70.138	3.98	0.000	/	64.000	2.99	0.000	/	270.225	2.87	0.000	/
6	0.000	/	223.680	2.12	0.000	/	278.107	3.83	13.200	2.91	154.200	3.07	0.000	/	259.200	2.90	0.000	/
7	0.000	/	420.316	2.16	0.000	/	162.349	3.86	0.000	/	119.000	2.88	0.000	/	6.075	3.03	0.000	/
8	0.000	/	51.971	2.25	0.000	/	333.328	3.62	0.000	/	51.200	2.99	0.000	/	99.000	2.79	0.000	/
9	3.000	1.91	44.800	2.20	0.000	/	316.295	3.46	0.000	/	0.000	/	0.000	/	67.600	2.92	0.000	/
10	0.000	/	92.586	2.19	0.000	/	212.346	3.18	0.000	/	16.000	2.70	0.000	/	112.180	2.84	0.000	/
11	0.000	/	73.104	2.14	0.000	/	356.650	3.45	0.000	/	16.000	2.83	0.000	/	36.950	2.73	0.000	/
12	0.000	/	111.520	1.98	1.500	4.31	1,205.460	2.89	0.000	/	229.400	2.94	0.000	/	61.000	2.74	0.000	/
<b>Total</b>	<b>3.000</b>	<b>1.91</b>	<b>3,010.721</b>	<b>2.33</b>	<b>102.691</b>	<b>3.69</b>	<b>4,624.153</b>	<b>3.49</b>	<b>13.200</b>	<b>2.91</b>	<b>978.400</b>	<b>3.02</b>	<b>64.000</b>	<b>3.13</b>	<b>1,490.030</b>	<b>2.95</b>	<b>16.000</b>	<b>3.35</b>

Note: Nuances in some data are mainly caused by rounding.

Source: China Customs & CCM

Table 3.2.1-3 China's exports of acetochlor technical and formulations by month, 2018

Month	50% EC		81.5% EC		90% EC		92% Tech.		93% Tech.		94% Tech.		95% Tech.		97% Tech.	
	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg
1	482.080	3.63	0.000	/	198.149	3.84	0.000	/	1,318.220	3.64	0.000	/	16.000	3.89	0.000	/
2	343.544	3.52	0.000	/	318.848	3.43	0.000	/	470.680	3.35	0.000	/	44.000	3.58	0.000	/
3	261.840	2.92	0.000	/	362.973	4.15	0.000	/	104.800	4.49	0.000	/	244.500	3.75	32.000	3.86
4	182.393	2.94	0.000	/	91.900	4.06	0.000	/	45.400	3.96	13.000	3.71	373.900	3.80	16.000	3.73
5	529.860	2.75	0.000	/	203.185	4.10	0.000	/	76.120	3.89	15.200	3.92	71.280	4.08	37.000	3.68
6	191.432	2.83	0.000	/	301.840	4.28	17.600	3.65	59.720	3.68	0.000	/	198.000	3.78	5.050	4.50
7	94.264	2.90	0.000	/	531.329	4.62	0.000	/	36.300	4.02	0.000	/	65.000	3.66	0.000	/
8	114.816	2.82	0.000	/	305.226	4.67	0.000	/	17.600	3.66	0.000	/	372.430	3.98	16.000	3.95
9	39.472	2.90	71.670	4.24	492.532	4.02	0.000	/	421.600	3.32	0.000	/	82.000	3.42	32.000	3.95
10	59.408	2.53	0.000	/	556.008	3.77	0.000	/	322.200	3.28	0.000	/	38.000	3.26	0.000	/
11	222.400	2.58	65.506	4.12	1,286.776	3.63	0.000	/	437.000	3.24	96.000	3.20	109.200	3.20	0.000	/
12	443.783	2.50	0.000	/	529.821	3.43	0.000	/	506.079	3.24	0.000	/	0.000	/	0.000	/
<b>Total</b>	<b>2,965.292</b>	<b>2.97</b>	<b>137.176</b>	<b>3.96</b>	<b>5,178.588</b>	<b>3.76</b>	<b>17.600</b>	<b>3.65</b>	<b>3,815.719</b>	<b>3.52</b>	<b>124.200</b>	<b>3.28</b>	<b>1,614.310</b>	<b>3.67</b>	<b>138.050</b>	<b>3.84</b>

Note: Nuances in some data are mainly caused by rounding.

Source: China Customs & CCM

Table 3.2.1-4 China's exports of acetochlor technical and formulations by month, 2017

Month	20% WP		50% EC		90% EC		92% Tech.		93% Tech.		94% Tech.		95% Tech.		97% Tech.	
	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg
1	0.000	/	540.240	1.92	2,111.492	2.97	32.000	2.60	543.400	2.48	32.000	2.39	94.200	2.96	65.600	3.12
2	0.000	/	519.480	1.92	675.202	2.85	0.000	/	384.550	2.57	0.000	/	2.400	3.47	17.600	2.57
3	0.000	/	813.274	2.07	604.485	3.10	84.800	2.61	223.780	2.55	0.000	/	198.000	2.69	33.400	2.78
4	0.000	/	569.896	1.98	194.554	2.98	0.000	/	323.995	2.83	0.000	/	82.000	2.63	37.200	2.62
5	16.000	1.82	463.355	2.08	291.750	2.93	0.000	/	242.340	2.60	0.000	/	329.640	2.70	0.000	/
6	0.000	/	172.390	2.25	693.999	3.09	0.000	/	168.800	2.39	0.000	/	116.000	2.56	0.000	/
7	0.000	/	230.101	2.21	794.048	3.42	0.000	/	65.100	2.64	0.000	/	330.850	2.80	0.000	/
8	0.000	/	32.475	7.20	337.487	3.50	0.000	/	96.000	2.75	0.000	/	94.650	2.63	0.000	/
9	0.000	/	46.560	2.62	440.976	3.49	0.000	/	109.200	2.60	0.000	/	160.000	2.96	32.000	3.48
10	0.000	/	171.280	2.49	197.760	3.56	0.000	/	251.100	2.82	0.000	/	0.000	/	0.000	/
11	0.000	/	228.770	2.60	143.020	3.75	0.000	/	216.200	3.51	0.000	/	37.000	3.52	0.000	/
12	0.000	/	39.600	3.18	1,075.678	3.98	0.000	/	279.400	3.68	0.000	/	290.000	3.64	24.000	4.00
<b>Total</b>	<b>16.000</b>	<b>1.82</b>	<b>3,827.421</b>	<b>2.13</b>	<b>7,560.451</b>	<b>3.16</b>	<b>116.800</b>	<b>2.62</b>	<b>2,903.865</b>	<b>2.74</b>	<b>32.000</b>	<b>2.39</b>	<b>1,734.740</b>	<b>2.92</b>	<b>209.800</b>	<b>3.12</b>

Note: Nuances in some data are mainly caused by rounding.

Source: China Customs & CCM

### 3.2.2 By destination

Ukraine, Pakistan, Vietnam, Argentina and Thailand were the top five destinations of acetochlor exported from China in 2020.

Table 3.2.2-1 China's exports of acetochlor technical and formulations by destination, 2020

No.	Destination	50% EC		90% EC		92% Tech.		93% Tech.		95% Tech.		97% Tech.		Total quantity, tonne
		Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	
1	Ukraine	35.200	3.10	2083.177	2.85	0.000	/	0.000	/	70.400	2.89	0.000	/	2,188.778
2	Pakistan	21.000	2.51	0.000	/	32.000	3.24	987.390	2.80	446.000	2.79	0.000	/	1,486.390
3	Vietnam	528.000	2.08	9.190	3.25	48.000	2.83	207.120	2.82	366.385	2.83	0.000	/	1,158.695
4	Argentina	0.000	/	523.000	2.85	0.000	/	0.000	/	100.000	2.77	0.000	/	623.000
5	Thailand	333.060	2.06	3.136	2.06	0.000	/	80.000	2.71	128.000	2.72	40.800	2.71	584.996
6	The US	0.000	/	0.000	/	0.000	/	293.760	2.85	0.000	/	0.000	/	293.760
7	Chile	0.000	/	263.707	3.77	0.000	/	0.000	/	0.000	/	0.000	/	263.707
8	South Africa	0.000	/	90.350	3.04	0.000	/	35.200	2.95	0.000	/	36.000	3.05	161.550
9	Israel	0.000	/	0.000	/	0.000	/	128.000	3.00	0.000	/	0.000	/	128.000
10	Russia	0.000	/	123.200	3.21	0.000	/	0.000	/	0.000	/	0.000	/	123.200
11	Bolivia	0.000	/	38.282	3.12	0.000	/	0.000	/	0.000	/	0.000	/	38.282
12	Singapore	0.000	/	0.000	/	0.000	/	38.000	2.65	0.000	/	0.000	/	38.000
13	Guatemala	0.000	/	36.424	3.10	0.000	/	0.000	/	0.000	/	0.000	/	36.424
14	The Dominican Republic	27.566	3.10	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	27.566
15	Mexico	0.000	/	0.000	/	0.000	/	0.000	/	20.000	3.10	0.000	/	20.000
16	Egypt	0.000	/	17.448	3.10	0.000	/	0.000	/	0.000	/	0.000	/	17.448
17	The UK	0.000	/	16.895	3.24	0.000	/	0.000	/	0.000	/	0.000	/	16.895
18	Uruguay	0.000	/	15.360	2.83	0.000	/	0.000	/	0.000	/	0.000	/	15.360
19	Colombia	0.000	/	0.000	/	0.000	/	13.000	3.07	0.000	/	0.000	/	13.000
20	Guinea	12.000	2.84	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	12.000
21	Bangladesh	0.000	/	0.000	/	0.000	/	11.000	2.65	0.000	/	0.000	/	11.000
22	Zambia	0.000	/	7.200	3.73	0.000	/	0.000	/	0.000	/	0.000	/	7.200
23	Mozambique	0.000	/	2.200	3.77	0.000	/	0.000	/	0.000	/	0.000	/	2.200
<b>Total</b>		<b>956.826</b>	<b>2.16</b>	<b>3,229.569</b>	<b>2.96</b>	<b>80.000</b>	<b>2.99</b>	<b>1,793.470</b>	<b>2.82</b>	<b>1,130.785</b>	<b>2.81</b>	<b>76.800</b>	<b>2.87</b>	<b>7,267.451</b>

Note:

1. Nuances in some data are mainly caused by rounding.

2. The export data of acetochlor technical and formulations in 2020 are incomplete.

Source: China Customs & CCM

Table 3.2.2-2 China's exports of acetochlor technical and formulations by destination, 2019

No.	Destination	20% WP		50% EC		81.5% EC		90% EC		92% Tech.		93% Tech.		94% Tech.		95% Tech.		97% Tech.		Total quantity, tonne
		Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	
1	Ukraine	0.000	/	0.000	/	0.000	/	3,064.775	3.18	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	3,064.775
2	Thailand	0.000	/	1,838.312	2.30	0.000	/	41.296	2.22	0.000	/	64.000	2.93	0.000	/	162.200	3.04	0.000	/	2,105.808
3	Vietnam	3.000	1.91	785.725	2.24	0.000	/	18.725	2.79	13.200	2.91	184.200	3.01	0.000	/	519.950	2.82	0.000	/	1,524.800
4	South Africa	0.000	/	0.000	/	22.519	3.15	502.788	3.64	0.000	/	17.600	3.14	0.000	/	130.355	3.09	0.000	/	673.262
5	Pakistan	0.000	/	38.688	2.45	0.000	/	0.000	/	0.000	/	250.800	3.00	64.000	3.13	211.200	2.98	0.000	/	564.688
6	Argentina	0.000	/	0.000	/	0.000	/	47.434	3.14	0.000	/	38.000	2.86	0.000	/	413.000	3.02	0.000	/	498.434
7	The US	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	336.600	3.06	0.000	/	0.000	/	0.000	/	336.600
8	North Korea	0.000	/	254.150	2.37	0.000	/	18.520	3.09	0.000	/	13.200	3.08	0.000	/	1.125	2.79	0.000	/	286.995
9	New Zealand	0.000	/	0.000	/	0.000	/	199.857	4.22	0.000	/	16.000	2.95	0.000	/	0.000	/	0.000	/	215.857
10	Uruguay	0.000	/	0.000	/	0.000	/	179.400	3.17	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	179.400
11	Mozambique	0.000	/	0.000	/	0.000	/	127.682	3.43	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	127.682
12	Chile	0.000	/	0.000	/	0.000	/	113.310	4.85	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	113.310
13	Egypt	0.000	/	46.296	3.67	0.000	/	63.627	3.33	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	109.923
14	Venezuela	0.000	/	0.000	/	78.672	3.59	18.445	3.16	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	97.117
15	Iran	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	58.000	3.28	0.000	/	16.000	3.14	16.000	3.35	90.000
16	Zambia	0.000	/	0.000	/	0.000	/	66.750	3.77	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	66.750
17	Tanzania	0.000	/	0.000	/	0.000	/	42.680	3.50	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	42.680
18	Russia	0.000	/	0.000	/	0.000	/	32.960	3.74	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	32.960
19	Bolivia	0.000	/	16.000	2.16	0.000	/	16.500	3.50	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	32.500
20	Israel	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	32.000	3.45	0.000	/	32.000
21	The Democratic Republic of the Congo	0.000	/	0.110	5.15	0.000	/	22.000	3.41	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	22.110
22	Cambodia	0.000	/	15.440	2.72	0.000	/	4.080	3.13	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	19.520
23	Bangladesh	0.000	/	16.000	2.39	0.000	/	2.910	6.08	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	18.910
24	Zimbabwe	0.000	/	0.000	/	0.000	/	16.300	3.81	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	16.300
25	The Dominican Republic	0.000	/	0.000	/	0.000	/	7.700	2.99	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	7.700

No.	Destination	20% WP		50% EC		81.5% EC		90% EC		92% Tech.		93% Tech.		94% Tech.		95% Tech.		97% Tech.		Total quantity, tonne
		Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	
26	Malawi	0.000	/	0.000	/	0.000	/	6.000	3.09	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	6.000
27	Angola	0.000	/	0.000	/	0.000	/	4.840	3.38	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	4.840
28	Myanmar	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	4.200	3.20	0.000	/	4.200
29	Nigeria	0.000	/	0.000	/	0.000	/	4.000	2.82	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	4.000
30	Moldova	0.000	/	0.000	/	1.500	4.31	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	1.500
31	Kenya	0.000	/	0.000	/	0.000	/	1.100	4.20	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	1.100
32	Honduras	0.000	/	0.000	/	0.000	/	0.474	4.43	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	0.474
<b>Total</b>		<b>3.000</b>	<b>1.91</b>	<b>3,010.721</b>	<b>2.33</b>	<b>102.691</b>	<b>3.69</b>	<b>4,624.153</b>	<b>3.49</b>	<b>13.200</b>	<b>2.91</b>	<b>978.400</b>	<b>3.02</b>	<b>64.000</b>	<b>3.13</b>	<b>1,490.030</b>	<b>2.95</b>	<b>16.000</b>	<b>3.35</b>	<b>10,302.195</b>

Note: Nuances in some data are mainly caused by rounding.  
Source: China Customs & CCM

Table 3.2.2-3 China's exports of acetochlor technical and formulations by destination, 2018

No.	Destination	50% EC		81.5% EC		90% EC		92% Tech.		93% Tech.		94% Tech.		95% Tech.		97% Tech.		Total quantity, tonne
		Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	
1	Ukraine	564.344	3.75	0.000	/	2,749.008	3.64	0.000	/	324.000	3.28	0.000	/	12.320	4.45	0.000	/	3,649.672
2	Thailand	1,739.979	2.72	0.000	/	51.200	2.59	0.000	/	403.280	3.24	0.000	/	751.680	3.58	0.000	/	2,946.139
3	Israel	0.000	/	0.000	/	0.000	/	0.000	/	1,312.000	3.46	0.000	/	0.000	/	0.000	/	1,312.000
4	South Africa	0.000	/	72.700	3.69	960.410	3.90	0.000	/	168.920	3.78	0.000	/	106.000	4.10	0.000	/	1,308.030
5	Pakistan	48.000	2.55	0.000	/	24.800	3.18	17.600	3.65	505.600	3.48	96.000	3.20	246.000	3.39	0.000	/	938.000
6	Vietnam	221.481	2.70	0.000	/	11.590	5.29	0.000	/	190.419	3.36	16.000	3.74	402.580	3.75	42.050	3.89	884.120
7	The US	0.000	/	0.000	/	0.000	/	0.000	/	614.900	3.78	0.000	/	0.000	/	0.000	/	614.900
8	Uruguay	0.000	/	17.440	4.07	381.366	3.70	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	398.806
9	New Zealand	0.000	/	0.000	/	233.274	4.99	0.000	/	0.000	/	0.000	/	15.000	4.31	0.000	/	248.274
10	Egypt	39.800	7.62	0.000	/	138.530	3.92	0.000	/	54.000	3.52	0.000	/	0.000	/	0.000	/	232.330
11	Guatemala	8.784	3.40	0.000	/	46.587	3.41	0.000	/	32.000	3.39	0.000	/	0.030	7.40	96.000	3.87	183.401
12	North Korea	156.820	2.63	0.000	/	12.080	3.75	0.000	/	2.000	3.11	0.000	/	1.000	3.75	0.000	/	171.900
13	Venezuela	0.000	/	0.000	/	162.000	3.85	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	162.000
14	Australia	0.000	/	0.000	/	0.000	/	0.000	/	158.400	4.52	0.000	/	0.000	/	0.000	/	158.400
15	Chile	0.000	/	0.000	/	130.768	5.10	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	130.768
16	Cambodia	113.564	2.73	0.000	/	10.000	5.16	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	123.564
17	Mozambique	0.000	/	0.000	/	83.600	4.32	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	83.600
18	Tanzania	0.000	/	3.960	4.62	52.140	4.26	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	56.100
19	Malawi	0.000	/	40.876	4.35	11.000	3.77	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	51.876
20	Argentina	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	50.000	3.82	0.000	/	50.000
21	Bangladesh	10.000	3.59	0.000	/	0.000	/	0.000	/	38.500	3.45	0.000	/	0.000	/	0.000	/	48.500
22	Russia	17.600	4.00	0.000	/	17.600	4.00	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	35.200
23	Zimbabwe	0.000	/	0.000	/	26.404	4.67	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	26.404
24	Iran	0.000	/	0.000	/	0.000	/	0.000	/	11.700	3.85	12.200	4.03	0.000	/	0.000	/	23.900
25	Myanmar	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	23.700	3.49	0.000	/	23.700
26	Bolivia	17.600	3.86	0.000	/	5.500	4.28	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	23.100

No.	Destination	50% EC		81.5% EC		90% EC		92% Tech.		93% Tech.		94% Tech.		95% Tech.		97% Tech.		Total quantity, tonne
		Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	
27	Congo (Kinshasa)	0.000	/	0.000	/	23.100	4.07	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	23.100
28	Zambia	0.000	/	2.200	4.88	15.409	4.98	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	17.609
29	South Korea	15.440	2.75	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	15.440
30	Guinea	11.880	4.38	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	11.880
31	The Dominican Republic	0.000	/	0.000	/	8.724	3.51	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	8.724
32	Nicaragua	0.000	/	0.000	/	6.600	3.49	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	6.600
33	Colombia	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	6.000	3.72	0.000	/	6.000
34	El Salvador	0.000	/	0.000	/	5.465	4.25	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	5.465
35	Iraq	0.000	/	0.000	/	5.460	2.84	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	5.460
36	Moldova	0.000	/	0.000	/	3.300	4.25	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	3.300
37	Panama	0.000	/	0.000	/	1.353	4.72	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	1.353
38	Angola	0.000	/	0.000	/	0.660	4.90	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	0.660
39	Honduras	0.000	/	0.000	/	0.419	5.38	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	0.419
40	Madagascar	0.000	/	0.000	/	0.220	4.77	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	0.220
41	Togo	0.000	/	0.000	/	0.020	8.65	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	0.020
<b>Total</b>		<b>2,965.292</b>	<b>2.97</b>	<b>137.176</b>	<b>3.96</b>	<b>5,178.588</b>	<b>3.76</b>	<b>17.600</b>	<b>3.65</b>	<b>3,815.719</b>	<b>3.52</b>	<b>124.200</b>	<b>3.28</b>	<b>1,614.310</b>	<b>3.67</b>	<b>138.050</b>	<b>3.84</b>	<b>13,990.935</b>

Note: Nuances in some data are mainly caused by rounding.  
Source: China Customs & CCM



Table 3.2.2-4 China's exports of acetochlor technical and formulations by destination, 2017

No.	Destination	20% WP		50% EC		90% EC		92% Tech.		93% Tech.		94% Tech.		95% Tech.		97% Tech.		Total quantity, tonne
		Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	
1	Ukraine	0.000	/	0.000	/	4,316.312	3.08	0.000	/	3.200	2.69	0.000	/	144.000	3.37	0.000	/	4,463.512
2	Thailand	0.000	/	1,523.654	2.20	26.467	3.15	0.000	/	746.100	2.58	0.000	/	651.000	2.74	0.000	/	2,947.221
3	Vietnam	16.000	1.82	1,156.226	2.14	0.000	/	0.000	/	320.740	2.52	0.000	/	149.250	3.09	0.000	/	1,642.216
4	Argentina	0.000	/	0.000	/	940.235	3.15	0.000	/	328.000	2.43	0.000	/	252.000	2.79	0.000	/	1,520.235
5	Pakistan	0.000	/	349.141	1.92	0.000	/	81.600	2.60	756.270	2.77	32.000	2.39	96.000	3.17	70.400	2.56	1,385.411
6	South Africa	0.000	/	0.000	/	863.720	3.34	35.200	2.63	147.860	3.29	0.000	/	62.800	3.24	0.000	/	1,109.580
7	North Korea	0.000	/	577.570	1.99	38.706	2.87	0.000	/	0.675	2.60	0.000	/	0.000	/	14.400	2.61	631.351
8	Uruguay	0.000	/	0.000	/	479.700	3.13	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	479.700
9	Israel	0.000	/	0.000	/	0.000	/	0.000	/	256.000	2.91	0.000	/	0.000	/	0.000	/	256.000
10	Guatemala	0.000	/	0.000	/	132.657	3.81	0.000	/	0.000	/	0.000	/	0.000	/	120.000	3.54	252.657
11	New Zealand	0.000	/	0.000	/	201.420	3.32	0.000	/	0.000	/	0.000	/	19.040	2.57	0.000	/	220.460
12	Myanmar	0.000	/	0.000	/	1.100	3.93	0.000	/	0.000	/	0.000	/	212.850	2.64	0.000	/	213.950
13	Chile	0.000	/	0.000	/	132.789	3.44	0.000	/	59.400	3.14	0.000	/	0.000	/	0.000	/	192.189
14	Senegal	0.000	/	136.045	2.87	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	136.045
15	The US	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	124.400	3.76	0.000	/	124.400
16	Egypt	0.000	/	16.955	9.59	84.599	3.46	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	101.554
17	Australia	0.000	/	0.000	/	0.000	/	0.000	/	99.000	3.80	0.000	/	0.000	/	0.000	/	99.000
18	Mozambique	0.000	/	0.000	/	77.550	3.20	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	77.550
19	Peru	0.000	/	0.000	/	0.000	/	0.000	/	63.200	2.53	0.000	/	0.000	/	0.000	/	63.200
20	Cambodia	0.000	/	59.830	2.19	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	59.830
21	Tanzania	0.000	/	0.000	/	52.804	3.51	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	52.804
22	Singapore	0.000	/	0.000	/	0.000	/	0.000	/	49.940	2.44	0.000	/	0.000	/	0.000	/	49.940
23	Iran	0.000	/	8.000	4.01	0.000	/	0.000	/	35.880	3.09	0.000	/	0.000	/	5.000	2.41	48.880
24	Hungary	0.000	/	0.000	/	36.300	2.95	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	36.300
25	Russia	0.000	/	0.000	/	35.200	3.09	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	35.200
26	Bangladesh	0.000	/	0.000	/	0.000	/	0.000	/	17.600	2.43	0.000	/	16.000	2.51	0.000	/	33.600

No.	Destination	20% WP		50% EC		90% EC		92% Tech.		93% Tech.		94% Tech.		95% Tech.		97% Tech.		Total quantity, tonne
		Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	
27	Ghana	0.000	/	0.000	/	32.400	3.72	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	32.400
28	Zambia	0.000	/	0.000	/	20.800	3.73	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	20.800
29	The UK	0.000	/	0.000	/	17.280	2.79	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	17.280
30	Malawi	0.000	/	0.000	/	12.100	2.65	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	12.100
31	Guinea	0.000	/	0.000	/	12.000	2.88	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	12.000
32	Zimbabwe	0.000	/	0.000	/	12.000	3.44	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	12.000
33	Taiwan Province	0.000	/	0.000	/	0.000	/	0.000	/	10.000	2.55	0.000	/	0.000	/	0.000	/	10.000
34	The United Arab Emirates	0.000	/	0.000	/	0.000	/	0.000	/	10.000	2.87	0.000	/	0.000	/	0.000	/	10.000
35	Greece	0.000	/	0.000	/	9.900	3.00	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	9.900
36	El Salvador	0.000	/	0.000	/	6.549	2.99	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	6.549
37	Honduras	0.000	/	0.000	/	6.274	4.00	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	6.274
38	Mauritius	0.000	/	0.000	/	5.500	3.26	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	5.500
39	Indonesia	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	4.000	3.00	0.000	/	4.000
40	Moldova	0.000	/	0.000	/	4.000	3.31	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	4.000
41	Venezuela	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	2.400	3.47	0.000	/	2.400
42	The Dominican Republic	0.000	/	0.000	/	1.159	6.22	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	1.159
43	The Philippines	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	1.000	2.50	0.000	/	1.000
44	Angola	0.000	/	0.000	/	0.930	3.30	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	0.930
<b>Total</b>		<b>16.000</b>	<b>1.82</b>	<b>3,827.421</b>	<b>2.13</b>	<b>7,560.451</b>	<b>3.16</b>	<b>116.800</b>	<b>2.62</b>	<b>2,903.865</b>	<b>2.74</b>	<b>32.000</b>	<b>2.39</b>	<b>1,734.740</b>	<b>2.92</b>	<b>209.800</b>	<b>3.12</b>	<b>16,401.077</b>

Note: Nuances in some data are mainly caused by rounding.  
Source: China Customs & CCM

### 3.2.3 By exporter

Table 3.2.3-1 China's exports of acetochlor technical and formulations by exporter, 2020

No.	Exporter	50% EC		90% EC		92% Tech.		93% Tech.		95% Tech.		97% Tech.		Total quantity, tonne
		Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	
1	Hangzhou Nutrichem Co., Ltd.	0.000	/	1,627.123	2.80	0.000	/	72.000	2.79	0.000	/	0.000	/	1,699.123
2	Nantong Jiangshan Agrochemical & Chemicals Co., Ltd.	138.000	2.05	0.000	/	16.000	3.85	427.470	2.82	35.200	2.76	0.000	/	616.670
3	Shandong Binnong Technology Co., Ltd.	21.000	2.45	21.960	2.82	0.000	/	0.000	/	450.400	2.82	0.000	/	493.360
4	Shandong Weifang Rainbow Chemical Co., Ltd.	48.240	2.28	78.812	2.99	0.000	/	0.000	/	359.000	2.77	0.000	/	486.052
5	DAI Company Ltd.	0.000	/	485.000	2.85	0.000	/	0.000	/	0.000	/	0.000	/	485.000
6	Eastchem Co., Ltd.	208.000	2.14	0.000	/	0.000	/	7.000	2.78	189.725	2.80	0.000	/	404.725
7	Nanjing Bodao Logistics Co., Ltd.	0.000	/	0.000	/	0.000	/	400.000	2.76	0.000	/	0.000	/	400.000
8	Yangzhou Pioneer Chemical Co., Ltd.	0.000	/	0.000	/	0.000	/	333.200	2.86	0.000	/	0.000	/	333.200
9	Jiangsu Changlong Agrochemical Co., Ltd.	102.880	1.98	0.000	/	0.000	/	160.000	2.87	0.000	/	0.000	/	262.880
10	Jiangsu Sinamyang International Group Co., Ltd.	160.000	2.03	0.000	/	0.000	/	16.000	2.84	0.000	/	0.000	/	176.000
11	Honbor Chemical Co., Ltd.	160.000	2.05	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	160.000
12	Shenzhen Iprochem Co., Ltd.	50.880	2.76	97.460	3.27	0.000	/	0.000	/	0.000	/	0.000	/	148.340
13	Nutrichem Company Limited	0.000	/	0.000	/	0.000	/	141.000	3.01	0.000	/	0.000	/	141.000
14	China Jiangsu International Economic and Technical Cooperation Group, Ltd.	0.000	/	65.120	3.03	0.000	/	12.000	2.91	0.000	/	36.000	3.05	113.120
15	Shanghai KJ Import and Export Co., Ltd.	0.000	/	105.600	3.09	0.000	/	0.000	/	0.000	/	0.000	/	105.600
	Others	67.826	2.64	748.495	3.30	64.000	2.78	224.800	2.75	96.460	2.91	40.800	2.71	1,242.381
	<b>Total</b>	<b>956.826</b>	<b>2.16</b>	<b>3,229.570</b>	<b>2.96</b>	<b>80.000</b>	<b>2.99</b>	<b>1,793.470</b>	<b>2.82</b>	<b>1,130.785</b>	<b>2.81</b>	<b>76.800</b>	<b>2.87</b>	<b>7,267.451</b>

Note:

1. Nuances in some data are mainly caused by rounding.

2. The export data of acetochlor technical and formulations in 2020 are incomplete.

Source: China Customs & CCM

Table 3.2.3-2 China's exports of acetochlor technical and formulations by exporter, 2019

No.	Exporter	20% WP		50% EC		81.5% EC		90% EC		92% Tech.		93% Tech.		94% Tech.		95% Tech.		97% Tech.		Total quantity, tonne
		Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	
1	Hangzhou Nutrichem Co., Ltd.	0.000	/	0.000	/	0.000	/	2,308.420	3.03	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	2,308.420
2	Shandong Binnong Technology Co., Ltd.	0.000	/	145.344	2.69	0.000	/	1,037.080	3.48	0.000	/	16.000	2.93	0.000	/	290.200	3.00	0.000	/	1,488.624
3	Shandong Weifang Rainbow Chemical Co., Ltd.	0.000	/	314.370	2.27	0.000	/	232.432	4.09	0.000	/	0.000	/	0.000	/	491.775	2.98	0.000	/	1,038.577
4	Nantong Jiangshan Agrochemical & Chemicals Co., Ltd.	0.000	/	492.792	2.25	0.000	/	17.600	3.77	0.000	/	81.600	2.90	0.000	/	0.000	/	0.000	/	591.992
5	Jingjiang Sinamyang Import & Export Co., Ltd.	0.000	/	391.065	2.31	0.000	/	0.000	/	0.000	/	80.000	3.07	0.000	/	0.000	/	0.000	/	471.065
6	Eastchem Co., Ltd.	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	15.000	3.13	0.000	/	451.150	2.79	0.000	/	466.150
7	Suzhou Everfortune Imp. & Exp. Co., Ltd.	0.000	/	0.000	/	0.000	/	270.468	3.83	0.000	/	17.600	3.14	0.000	/	52.800	3.28	0.000	/	340.868
8	China Jiangsu International Economic Technical Cooperation Group Co., Ltd.	0.000	/	30.880	2.45	0.000	/	138.600	3.18	0.000	/	52.800	3.15	0.000	/	17.600	3.34	0.000	/	239.880
9	Shenzhen Honbor Industrial Co., Ltd.	0.000	/	200.720	2.28	0.000	/	0.000	/	0.000	/	16.000	3.00	0.000	/	16.000	3.00	0.000	/	232.720
10	Yangzhou Pioneer Chemical Co., Ltd.	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	224.400	3.00	0.000	/	0.000	/	0.000	/	224.400
11	Jiangsu Changlong Agrochemical Co., Ltd.	0.000	/	215.505	2.06	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	215.505
12	Zhejiang Zhongshan Chemical Industry Group Co., Ltd.	0.000	/	199.680	2.12	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	199.680
13	Shandong Qiaochang Modern Agriculture Import & Export Co., Ltd.	0.000	/	55.296	2.21	0.000	/	37.758	4.48	0.000	/	0.000	/	0.000	/	42.180	2.85	0.000	/	135.234
14	Shanghai Haoyan International Trading Co., Ltd.	0.000	/	131.760	2.35	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	131.760
15	Shandong Kesai Eagrow Chemical Co., Ltd.	0.000	/	100.880	2.06	22.519	3.15	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	123.399
	Others	3.000	1.91	732.429	2.40	80.172	3.61	581.795	3.56	13.200	2.91	475.000	3.05	64.000	3.13	128.325	3.08	16.000	3.35	2,093.921
	<b>Total</b>	<b>3.000</b>	<b>1.91</b>	<b>3,010.721</b>	<b>2.33</b>	<b>102.691</b>	<b>3.69</b>	<b>4,624.153</b>	<b>3.49</b>	<b>13.200</b>	<b>2.91</b>	<b>978.400</b>	<b>3.02</b>	<b>64.000</b>	<b>3.13</b>	<b>1,490.030</b>	<b>2.95</b>	<b>16.000</b>	<b>3.35</b>	<b>10,302.195</b>

Note: Nuances in some data are mainly caused by rounding.

Source: China Customs & CCM

Table 3.2.3-3 China's exports of acetochlor technical and formulations by exporter, 2018

No.	Exporter	50% EC		81.5% EC		90% EC		92% Tech.		93% Tech.		94% Tech.		95% Tech.		97% Tech.		Total quantity, tonne
		Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	
1	Shandong Binnong Technology Co., Ltd.	287.656	2.83	0.000	/	578.854	4.09	0.000	/	16.000	3.13	0.000	/	565.200	3.58	0.000	/	1,447.710
2	Hangzhou Nutrichem Co., Ltd.	0.000	/	0.000	/	1,075.470	3.43	0.000	/	324.000	3.28	0.000	/	0.000	/	0.000	/	1,399.470
3	Shandong Weifang Rainbow Chemical Co., Ltd.	339.491	2.85	0.000	/	316.617	4.73	0.000	/	0.000	/	0.000	/	654.030	3.96	0.000	/	1,310.138
4	Nutrichem Company Limited	0.000	/	0.000	/	0.000	/	0.000	/	1,120.000	3.41	0.000	/	0.000	/	0.000	/	1,120.000
5	Nantong Jiangshan Agrochemical & Chemicals Co., Ltd.	712.336	2.79	0.000	/	56.800	2.72	0.000	/	289.020	3.21	0.000	/	16.000	2.72	0.000	/	1,074.156
6	Hangzhou Qingfeng Import and Export Co., Ltd.	553.440	2.99	0.000	/	206.800	3.64	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	760.240
7	Yangzhou Pioneer Chemical Co., Ltd.	0.000	/	0.000	/	0.000	/	0.000	/	614.900	3.78	0.000	/	0.000	/	0.000	/	614.900
8	Suzhou Everfortune Imp. & Exp. Co., Ltd.	0.000	/	0.000	/	311.740	4.02	0.000	/	150.920	3.80	0.000	/	0.000	/	0.000	/	462.660
9	Jiangsu Trustchem Co., Ltd.	0.000	/	0.000	/	455.558	3.19	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	455.558
10	Binzhou Qiaochang Huanyu Import and Export Co., Ltd.	0.000	/	0.000	/	396.000	3.72	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	396.000
11	Eastchem Co., Ltd.	0.000	/	0.000	/	0.000	/	0.000	/	46.879	3.02	16.000	3.74	286.580	3.75	26.050	3.92	375.509
12	China Jiangsu International Economic Technical Cooperation Group Co., Ltd.	116.160	4.06	0.000	/	158.620	3.92	0.000	/	66.000	3.54	0.000	/	0.000	/	0.000	/	340.780
13	Nanjing Bodao Warehousing Co., Ltd.	0.000	/	0.000	/	0.000	/	0.000	/	192.000	3.38	96.000	3.20	16.000	3.59	0.000	/	304.000
14	Sino-Agri Leading Biosciences Co., Ltd.	0.000	/	0.000	/	228.800	3.78	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	228.800
15	Nanjing Red Sun Group International Trade Co., Ltd.	33.704	3.80	17.440	4.07	176.000	3.71	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	227.144
	Others	922.505	2.89	119.736	3.94	1,217.328	3.94	17.600	3.65	996.000	3.68	12.200	4.03	76.500	3.50	112.000	3.87	3,473.869
	<b>Total</b>	<b>2,965.292</b>	<b>2.97</b>	<b>137.176</b>	<b>3.96</b>	<b>5,178.588</b>	<b>3.76</b>	<b>17.600</b>	<b>3.65</b>	<b>3,815.719</b>	<b>3.52</b>	<b>124.200</b>	<b>3.28</b>	<b>1,614.310</b>	<b>3.67</b>	<b>138.050</b>	<b>3.84</b>	<b>13,990.935</b>

Note: Nuances in some data are mainly caused by rounding.

Source: China Customs & CCM

Table 3.2.3-4 China's exports of acetochlor technical and formulations by exporter, 2017

No.	Exporter	20% WP		50% EC		90% EC		92% Tech.		93% Tech.		94% Tech.		95% Tech.		97% Tech.		Total quantity, tonne
		Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	
1	Shandong Weifang Rainbow Chemical Co., Ltd.	0.000	/	671.000	2.31	971.125	3.57	0.000	/	0.000	/	0.000	/	942.600	2.88	0.000	/	2,584.725
2	Nantong Jiangshan Agrochemical & Chemicals Co., Ltd.	0.000	/	552.850	2.19	105.667	3.09	0.000	/	506.180	2.60	0.000	/	0.000	/	0.000	/	1,164.699
3	Shandong Binnong Technology Co., Ltd.	0.000	/	196.000	2.24	671.179	3.24	0.000	/	0.000	/	0.000	/	236.000	3.07	0.000	/	1,103.179
4	Suzhou Everfortune Imp. & Exp. Co., Ltd.	0.000	/	0.000	/	744.700	3.39	0.000	/	57.860	3.38	0.000	/	0.000	/	0.000	/	802.560
5	Jiangsu Changlong Agrochemical Co., Ltd.	0.000	/	0.000	/	767.000	2.79	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	767.000
6	Hangzhou Qingfeng Import and Export Co., Ltd.	0.000	/	0.000	/	522.016	3.32	0.000	/	52.800	3.62	0.000	/	7.040	2.63	0.000	/	581.856
7	Shenzhen Honbor Industrial Co., Ltd.	0.000	/	492.320	1.82	53.904	3.36	0.000	/	17.600	2.75	0.000	/	0.000	/	0.000	/	563.824
8	Ningbo Kenova Chemical Co., Ltd.	0.000	/	0.000	/	498.960	2.97	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	498.960
9	Jiangsu Trustchem Co., Ltd.	0.000	/	0.000	/	474.106	2.81	0.000	/	10.000	2.87	0.000	/	0.000	/	0.000	/	484.106
10	Nanjing Bodao Warehousing Co., Ltd.	0.000	/	0.000	/	0.000	/	0.000	/	352.000	2.92	32.000	2.39	64.000	2.89	0.000	/	448.000
11	Nanjing Red Sun International Trading Co., Ltd.	0.000	/	0.000	/	382.118	3.25	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	382.118
12	Eastchem Co., Ltd.	0.000	/	0.000	/	0.000	/	0.000	/	69.300	2.60	0.000	/	292.500	2.74	0.000	/	361.800
13	Hangzhou Nutrichem Co., Ltd.	0.000	/	0.000	/	312.620	3.10	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	312.620
14	Zhejiang Changxing Zhongshan Import and Export Co., Ltd.	0.000	/	307.200	1.98	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	307.200
15	China Jiangsu International Economic Technical Cooperation Group Co., Ltd.	0.000	/	98.030	2.54	44.000	2.97	35.200	2.63	90.000	3.09	0.000	/	0.000	/	0.000	/	267.226
	Others	16.000	1.82	1,510.021	2.14	2,013.056	3.12	81.600	2.61	1,748.125	2.64	0.000	/	192.600	3.30	209.800	3.12	5,771.204
	<b>Total</b>	<b>16.000</b>	<b>1.82</b>	<b>3,827.421</b>	<b>2.13</b>	<b>7,560.451</b>	<b>3.16</b>	<b>116.800</b>	<b>2.62</b>	<b>2,903.865</b>	<b>2.74</b>	<b>32.000</b>	<b>2.39</b>	<b>1,734.740</b>	<b>2.92</b>	<b>209.800</b>	<b>3.12</b>	<b>16,401.077</b>

Note: Nuances in some data are mainly caused by rounding.

Source: China Customs & CCM

### 3.3 Export, H1 2022

Table 3.3-1 China's exports of acetochlor technical and formulations by month, H1 2022

Month	50% EC		90% EC		92% Tech.		93% Tech.		94% Tech.		95% Tech.	
	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg
1	0.000	/	0.000	/	0.000	/	262.846	6.38	0.000	/	0.000	/
2	0.000	/	0.000	/	16.000	6.93	189.568	7.24	0.000	/	35.200	6.99
3	0.000	/	0.000	/	17.600	7.00	336.778	7.85	72.000	7.44	35.200	7.39
4	72.000	4.30	0.000	/	0.000	/	248.304	7.52	0.000	/	88.600	7.13
5	32.000	4.10	22.494	5.13	0.000	/	157.400	6.18	0.000	/	135.320	7.02
6	0.000	/	22.419	12.45	0.000	/	0.000	/	0.000	/	57.000	6.69
<b>Total</b>	<b>104.000</b>	<b>4.24</b>	<b>44.912</b>	<b>8.78</b>	<b>33.600</b>	<b>6.97</b>	<b>1,194.896</b>	<b>7.14</b>	<b>72.000</b>	<b>7.44</b>	<b>351.320</b>	<b>7.03</b>

Note:  
1. The export data of acetochlor technical and formulations in H1 2022 are incomplete. Only the data of the following 8 countries are included: Vietnam, Pakistan, the US, Mexico, Nigeria, Thailand, Chile and Tanzania.  
2. The data were updated by Tranalysis on 29 Sept., 2022.  
Source: China Customs & CCM

Table 3.3-2 China's exports of acetochlor technical and formulations by destination, H1 2022

No.	Destination	50% EC		90% EC		92% Tech.		93% Tech.		94% Tech.		95% Tech.		Total quantity, tonne
		Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	
1	Vietnam	40.000	4.49	0.000	/	0.000	/	338.800	6.69	0.000	/	210.920	6.93	589.720
2	Pakistan	0.000	/	0.000	/	33.600	6.97	348.000	7.13	72.000	7.44	81.000	6.88	534.600
3	The US	0.000	/	0.000	/	0.000	/	275.416	7.53	0.000	/	0.000	/	275.416
4	Mexico	0.000	/	0.000	/	0.000	/	138.600	8.64	0.000	/	59.400	7.57	198.000
5	Nigeria	0.000	/	0.000	/	0.000	/	94.080	5.46	0.000	/	0.000	/	94.080
6	Thailand	64.000	4.08	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	64.000
7	Chile	0.000	/	22.494	5.13	0.000	/	0.000	/	0.000	/	0.000	/	22.494
8	Tanzania	0.000	/	22.419	12.45	0.000	/	0.000	/	0.000	/	0.000	/	22.419
<b>Total</b>		<b>104.000</b>	<b>4.24</b>	<b>44.912</b>	<b>8.78</b>	<b>33.600</b>	<b>6.97</b>	<b>1,194.896</b>	<b>7.14</b>	<b>72.000</b>	<b>7.44</b>	<b>351.320</b>	<b>7.03</b>	<b>1,800.728</b>

Note:  
1. The export data of acetochlor technical and formulations in H1 2022 are incomplete. Only the data of the following 8 countries are included: Vietnam, Pakistan, the US, Mexico, Nigeria, Thailand, Chile and Tanzania.  
2. The data were updated by Tranalysis on 29 Sept., 2022.  
Source: China Customs & CCM

Table 3.3-3 China's exports of acetochlor technical and formulations by exporter, H1 2022

No.	Exporter	50% EC		90% EC		92% Tech.		93% Tech.		94% Tech.		95% Tech.		Total quantity, tonne
		Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	
1	Eastchem Co., Ltd.	40.000	4.49	0.000	/	0.000	/	287.600	6.72	0.000	/	0.000	/	327.600
2	Sharda Cropchem Limited	0.000	/	0.000	/	0.000	/	275.416	7.53	0.000	/	0.000	/	275.416
3	Nantong Jiangshan Agrochemical & Chemicals Co., Ltd.	16.000	4.06	0.000	/	0.000	/	105.600	6.65	0.000	/	17.600	6.55	139.200
4	Jiangsu Changlong Agrochemical Co., Ltd.	0.000	/	0.000	/	0.000	/	138.000	7.36	0.000	/	0.000	/	138.000
5	Valency International Pte Ltd.	0.000	/	0.000	/	0.000	/	94.080	5.46	0.000	/	0.000	/	94.080
6	Shandong Weifang Rainbow Chemical Co., Ltd.	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	80.800	6.75	80.800
7	Nanjing Rising Chemical Co., Ltd.	0.000	/	0.000	/	0.000	/	0.000	/	72.000	7.44	0.000	/	72.000
8	Nanjing Noleson Biotechnology Co., Ltd.	0.000	/	0.000	/	17.600	7.00	52.800	7.02	0.000	/	0.000	/	70.400
9	King Elong Group Limited	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	70.400	7.39	70.400
10	Shandong Binnong Technology Co., Ltd.	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	68.400	7.40	68.400
11	Jiangsu Trustchem Co., Ltd.	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	52.800	6.82	52.800
12	Nanjing Hengchang Biotechnology Co., Ltd.	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	35.200	6.90	35.200
13	Noleson Biotechnology Co., Ltd.	0.000	/	0.000	/	0.000	/	35.200	7.03	0.000	/	0.000	/	35.200
14	Sino-Agri Leading Biosciences Co., Ltd.	32.000	4.20	0.000	/	0.000	/	0.000	/	0.000	/	0.000	/	32.000
15	Nova Agro (HK) Ltd.	0.000	/	22.419	12.45	0.000	/	0.000	/	0.000	/	0.000	/	22.419
	Others	16.000	3.85	22.494	5.13	16.000	6.93	206.200	8.14	0.000	/	26.120	6.89	286.814
	<b>Total</b>	<b>104.000</b>	<b>4.24</b>	<b>44.912</b>	<b>8.78</b>	<b>33.600</b>	<b>6.97</b>	<b>1,194.896</b>	<b>7.14</b>	<b>72.000</b>	<b>7.44</b>	<b>351.320</b>	<b>7.03</b>	<b>1,800.728</b>

Note:  
1. The export data of acetochlor technical and formulations in H1 2022 are incomplete. Only the data of the following 8 countries are included: Vietnam, Pakistan, the US, Mexico, Nigeria, Thailand, Chile and Tanzania.  
2. The data were updated by Tranalysis on 29 Sept., 2022.  
Source: China Customs & CCM



#### 4 Consumption, 2018–2022E

Acetochlor can be used for pre-emergent control of annual weeds and some broadleaf weeds in the fields of corn, cotton, peanut, soybean, etc. In 2022, the apparent consumption (calculated by 100% AI, the same below) is estimated at about 16,172 tonnes, down 1.17% year on year; the actual consumption of acetochlor technical will be about 16,188 tonnes.

During 2018–2022, the apparent consumption of acetochlor technical showed a general downward trend. Policies on cutting down unit consumption of pesticides should be the main reason. Since 2015, the Ministry of Agriculture and Rural Affairs of the People's Republic of China has pushed forward the zero-growth campaign for the use of chemical fertilizers and pesticides. Statistics show that pesticide utilization rate on rice, wheat and corn in China averaged 40.60% in 2020, up about 4% compared with that in 2015.

In 2022, corn, soybean and vegetables will remain the top three major end users of acetochlor, estimatedly accounting for about 53.34%, 16.07%, 7.26%, respectively. Currently, 50% EC and 90% EC are the major types of acetochlor single formulations applied in China; mixed formulations of acetochlor with bensulfuron-methyl, prometryn or 2,4-D butylate are also popular in domestic market.

Table 4-1 Apparent consumption of acetochlor technical in China, 2018–2022E

Year	Output (calculated by 92% technical), tonne	Output (calculated by 100% AI), tonne	Export (calculated by 100% AI), tonne	Apparent consumption (calculated by 100% AI), tonne
2018	30,400	27,968	11,423	16,545
2019	26,900	24,748	8,218	16,530
2020	28,500	26,220	9,672	16,548
2021	26,700	24,564	8,200	16,364
2022E	25,600	23,552	7,380	16,172

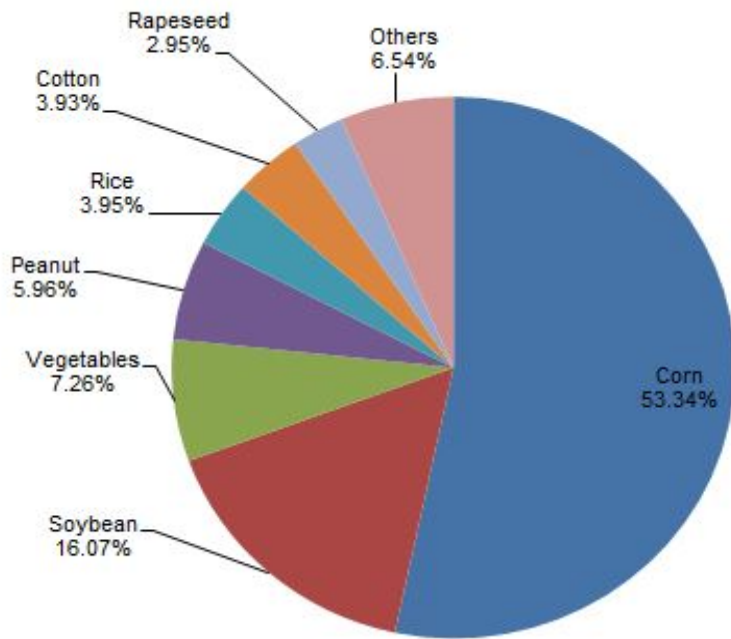
Note: The export volume in 2020–2022 is estimated according to the actual consumption, output and stock evaluation.  
Source: China Customs & CCM

Table 4-2 Actual consumption of acetochlor in China by crop, 2022E

Crops	Consumption volume (calculated by 100% AI), tonne
Corn	8,635
Soybean	2,602
Vegetables	1,176
Peanut	964
Rice	639
Cotton	636
Rapeseed	478
Others	1,059
<b>Total</b>	<b>16,188</b>

Source: CCM

Figure 4-1 Actual consumption pattern of acetochlor in China by crop, 2022E



Source: CCM

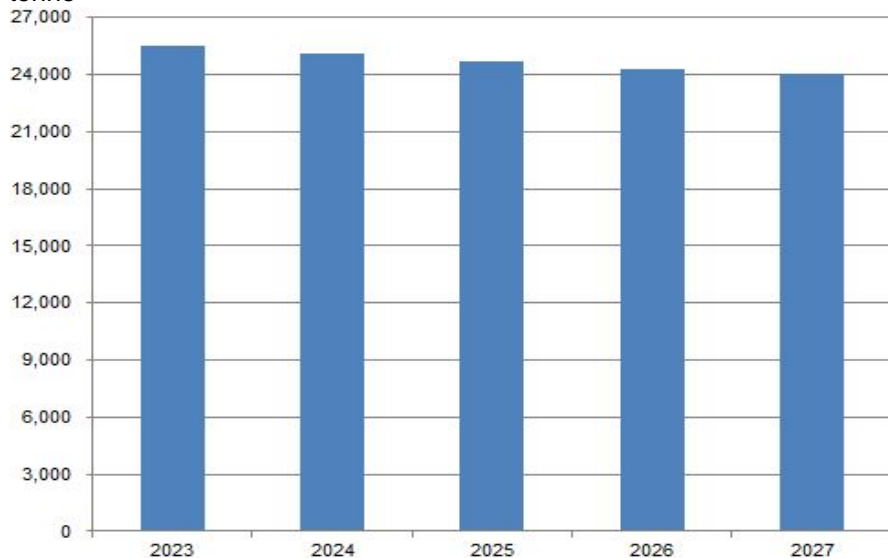
## 5 Outlook, 2023–2027

In 2022, total capacity of acetochlor technical in China is 89,000 t/a, and the output is expected to be about 25,600 tonnes. From 2018 to 2022, the capacity in China has been in the decline in general, echoed by gradually shrinking domestic demand for acetochlor technical. China's acetochlor industry has seen some setbacks in this period.

The output of acetochlor technical in China is estimated to go down in 2023–2027, mainly due to the decreasing domestic and overseas demand. Recently, some provinces have imposed strict requirements and restrictions on new production capacity for acetochlor. On 24 Jan. 2022, the Shandong Provincial Department of Agriculture and Rural Affairs issued the *Notice on Further Strengthening the Management of Pesticide Production*, proposing that new production equipment for acetochlor (excluding the methylene method) shall not be built. Besides, transfer of production equipment for acetochlor (excluding the methylene method) to Henan Province has been prohibited in accordance with the *"Banned, Restricted, and Controlled" Catalogue for Chemical Industrial Transfers to Henan Province*, issued by Henan Provincial Development and Reform Commission. It is unlikely to see an increase in the capacity of acetochlor technical in China in the next five years (2023–2027); the capacity may even go down further in the long run.

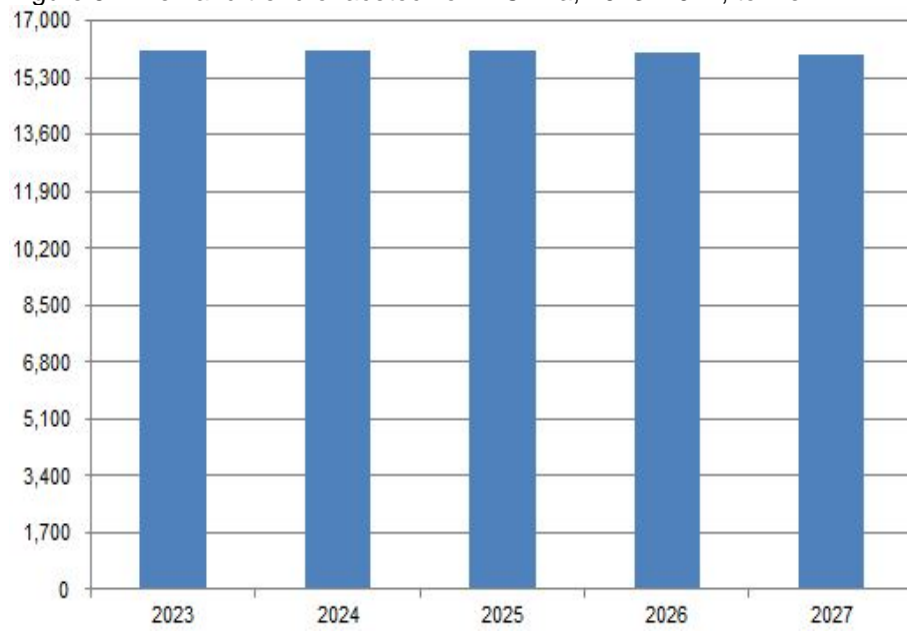
Besides, domestic demand for acetochlor technical may also decrease in 2023–2027. That's mainly because cutting down on unit consumption of pesticides on crops has become mainstream in China these years. Moreover, competition from its substitutes, such as metolachlor technical, is a concern. Therefore, it is estimated that the supply and demand of acetochlor technical in China will go down from 2023.

Figure 5-1 Supply (output) trend of acetochlor technical (calculated by 92% technical) in China, 2023–2027, tonne



Source: CCM

Figure 5-2 Demand trend of acetochlor in China, 2023–2027, tonne



Note: The volume is based on consumption volume calculated by 100% AI.  
Source: CCM

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