

Impact of the COVID-19 pandemic on pesticide industry

The Second Edition

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Contents

Executive summary	1
Methodology	2
1 Briefing on the impact of COVID-19 pandemic in China	3
1.1 Regional changes of pesticide technical output in China	3
1.2 Regional measures and effects amid the COVID-19 pandemic	4
1.3 Overall price trend of China's pesticides in H1 2022	5
2 Impact on imports and exports of pesticide in China, H1 2022	7
2.1 Imports and exports of China's pesticides by volume	7
2.2 Imports and exports of China's pesticides by value	8
3 Impact of the COVID-19 pandemic on AI, H1 2022	11
3.1 Price analysis of main herbicides in China, H1 2022	11
3.1.1 Glyphosate.....	11
3.1.2 Nicosulfuron	11
3.2 Price analysis of main insecticides in China, H1 2022.....	12
3.2.1 Imidacloprid.....	12
3.2.2 Chlorpyrifos.....	13
3.2.3 Emamectin benzoate.....	14
3.3 Price analysis of main fungicides in China, H1 2022	15
3.3.1 Tebuconazole.....	15
3.3.2 Azoxystrobin.....	16
3.3.3 Carbendazim.....	17
4 Impact on the supply side amid the COVID-19 pandemic	19
4.1 Jiangsu Province	19
4.2 Sichuan Province	19
4.3 Shandong Province	19
4.4 Zhejiang Province	20
4.5 Anhui Province.....	20
4.6 Hubei Province.....	21
4.7 Hebei Province.....	22

LIST OF TABLES

Table 1.1-1 China's pesticide technical output by province/region, 2020–May 2022, tonne

Table 1.2-1 Regional measures against the COVID-19 pandemic in China

Table 2.1-1 Import volume of pesticides in China, Jan.–June 2022, tonne

Table 2.1-2 Export volume of pesticides in China, Jan.–June 2022, tonne
Table 2.2-1 Imports value of pesticides in China, Jan.–June 2022, USD
Table 2.2-2 Exports value of pesticides in China, Jan.–June 2022, USD
Table 3.1.1-1 Operating rates of 5 major glyphosate technical manufacturers in China, Jan.–June 2022
Table 3.1.2-1 Operation status of 3 major nicosulfuron technical manufacturers in China, Jan.–June 2022
Table 3.2.1-1 Operation status of 4 major imidacloprid technical manufacturers in China, Jan.–June 2022
Table 3.2.2-1 Operation status of 3 major chlorpyrifos technical manufacturers in China, Jan.–June 2022
Table 3.2.3-1 Operation status of 3 major emamectin benzoate technical manufacturers in China, Jan.–June 2022
Table 3.3.1-1 Operation status of 3 major tebuconazole technical manufacturers in China, Jan.–June 2022
Table 3.3.2-1 Operation status of 3 major azoxystrobin technical manufacturers in China, Jan.–June 2022
Table 3.3.3-1 Operation status of 4 major carbendazim technical manufacturers in China, Jan.–June 2022

LIST OF FIGURES

Figure 1.1-1 Changes on regional output of pesticide technical, 2021 vs 2019, 2021 vs 2020, Jan.-May 2022 vs 2021
Figure 1.3-1 China Agrochemical Price Index (CAPI), June 2021–May 2022
Figure 2.1-1 Imports volume of pesticides, H1 2022 vs H1 2021
Figure 2.1-2 Exports volume of pesticides, H1 2022 vs H1 2021
Figure 2.2-1 Imports value of pesticides, H1 2022 vs H1 2021
Figure 2.2-2 Exports value of pesticides, H1 2022 vs H1 2021
Figure 3.1.1-1 Ex-works prices of 95% glyphosate technical in China, Jan.–June 2022
Figure 3.1.2-1 Ex-works prices of 95% nicosulfuron technical, Jan.–June 2022
Figure 3.2.1-1 Ex-works prices of 97% imidacloprid technical in China, Jan.–June 2022
Figure 3.2.2-1 Ex-works prices of chlorpyrifos technical in China, Jan.–June 2022
Figure 3.2.3-1 Ex-works prices of 70% emamectin benzoate technical in China, Jan.–June 2022
Figure 3.3.1-1 Ex-works prices of 97% tebuconazole technical in China, Jan.–June 2022
Figure 3.3.2-1 Ex-works prices of 96% azoxystrobin technical in China, Jan.–June 2022
Figure 3.3.3-1 Ex-works prices of 98% carbendazim technical (White colour), Jan.-June 2022
Figure 4.1-1 Pesticide output of Jiangsu Province, 2021–Q1 2022
Figure 4.2-1 Pesticide output of Sichuan Province, 2021–Q1 2022
Figure 4.3-1 Pesticide output of Shandong Province, 2021–Q1 2022
Figure 4.4-1 Pesticide output of Zhejiang Province, 2021–Q1 2022
Figure 4.5-1 Pesticide output of Anhui Province, 2021–Q1 2022
Figure 4.6-1 Pesticide output of Hubei Province, 2021–Q1 2022
Figure 4.7-1 Pesticide output of Hebei Province, 2021–Q1 2022

Executive summary

Amid COVID-19 control period, China's pesticide manufacturers encountered with challenges, such as suspended pesticide production, hindered domestic logistics, postponed export procedures, etc. China's central and local governments have put in place various supporting measures to lessen relevant negative effects. For instance, Jiangsu Province, topped the lists of major provinces producing pesticide technical in China by total output in 2020 and 2021, is expecting an output increase, considering its achievement with 0.84% YoY growth made in Q1 2022.

With China's effective control of the pandemic since 2021 hinting the recovery of pesticide industry, pesticide production has been growing steadily, albeit at a mild pace in Jan.–May 2022. During the first half of 2022, the total import and export volume registered a decline of 3.53% year on year while the exports have increased slowly since May. In H1 2022, the monthly value total of exports of China's pesticide achieved varying degrees of growth, especially that of herbicides; the ex-works prices of pesticide technical stood relatively lower than the highs in late 2021. In 2022, it is expected that market would be fluctuated slightly in the near future.

Methodology

The report is drafted by diverse methods as follows:

- Desk research

The sources of desk research are various, including published magazines, journals, government websites and statistics, industrial 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.

- Internet

CCM visited government websites and contacted with players in the domestic agrochemical industry through B2B websites and software as well as obtained registration information on the internet.

- Data processing and presentation

The data collected and compiled are sourced from:

- CCM's database
- Published articles in periodicals, magazines, journals and third-party databases
- Statistics from governments and international institutes
- Telephone interviews with domestic producers, joint ventures, service suppliers and governments
- Third-party data providers
- 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 were held in order to analyse the data and draw the conclusions.

1 Briefing on the impact of COVID-19 pandemic in China

1.1 Regional changes of pesticide technical output in China

According to the National Bureau of Statistics (NBS), China's overall output of pesticide technical ramped up in 2021 to 2.5 million tonnes, growing by 10.83% from 2019 and 16.40% from 2020, with Jiangsu being the biggest producing province, followed by Sichuan, Shandong, Zhejiang and Anhui—the top 5 provinces achieved the combined output exceeding 1.61 million tonnes, accounting for 62.29% of the national total. Among them, Sichuan, Zhejiang and Anhui witnessed double-digit YoY growths, up by 11.59%, 23.49% and 39.25%, separately.

As of May 2022, the country's pesticide production activities continued in a mild and steady manner and most regions have seen good output results in Jan.–May 2022, despite that the emerging infections of Delta and Omicron variants since Q2 2021 have a lasting impact on some areas' production progress. While the majority achieved over 40% of how many they had produced last year during the first five-month period of 2022, Guangxi, Anhui, Hunan and Zhejiang provinces only completed 33%, 35%, 36% and 39% of each total output in 2021.

Table 1.1-1 China's pesticide technical output by province/region, 2020–May 2022, tonne

Region	2020	2021	Jan-May, 2022	Jan.-May of 2022 vs full 2021, %
Jiangsu Province	582,000	549,200	254,700	46%
Sichuan Province	276,000	308,000	145,100	47%
Shandong Province	285,000	291,600	130,400	45%
Zhejiang Province	192,000	237,100	92,900	39%
Anhui Province	161,000	224,200	79,000	35%
Hunan Province	130,000	168,500	86,300	51%
Hubei Province	149,000	153,000	66,200	43%
Henan Province	82,000	100,600	35,900	36%
Ningxia Hui Autonomous Region	36,000	59,300	24,900	42%
Hebei Province	36,000	52,700	22,500	43%
Gansu Province	37,000	47,600	23,100	49%
Inner Mongolia Autonomous Region	43,000	35,100	16,700	48%
Guangxi Zhuang Autonomous Region	31,000	29,000	9,700	33%
Guangdong Province	20,000	22,800	12,300	54%
Others	86,000	219,300	78,300	36%
Total	2,146,000	2,498,000	1,078,000	43%

Note: The output here is converted into 100% AI volume.

Source: National Bureau of Statistics (NBS), China Crop Protection Industry Association (CCPIA) and CCM

Figure 1.1-1 Changes on regional output of pesticide technical, 2021 vs 2019, 2021 vs 2020, Jan.-May 2022 vs 2021



Note: 1. The two bars of 2021 vs 2019 and 2021 vs 2020 indicate year-on-year changes and the line segments show the ratio of output of Jan.-May 2022 to the output of full 2021. 2. The output here is converted into 100% AI volume.

Source: CCM

1.2 Regional measures and effects amid the COVID-19 pandemic

Entering year 3 of the pandemic which has seen suspended pesticide production, lockdown measures, hindered domestic logistics with roads blocking drivers and shipments and many other disturbing factors across the country, China's central and local governments have put in place various supporting measures to tackle the pandemic challenges to pesticide production and logistics across the country this year. For instance, the inter-regional travel system was issued on 29 March, giving permits to vehicles to and from the epidemic-affected areas of 23 provinces/regions through a rapid passage and helping facilitates the imports and exports of pesticides in H1 2022.

Table 1.2-1 Regional measures against the COVID-19 pandemic in China

Time	Province/Region	Regional measures	Results
Feb.–April 2020	Wuhan City, Hubei Province	<ol style="list-style-type: none"> 1. Close non-essential public places and mass gathering activities; 2. Ban citywide traffic, except for transportation of necessities; 3. Bar cross-region traffic. 	<ul style="list-style-type: none"> ● Pesticide production was affected. ● Trades with foreign countries in particular; notably, the export volume and value of insecticides TC dropped by a lot.
Nov. 2020	Hebei Province; Heilongjiang Autonomous Region		
July 2021	Nanjing City, Jiangsu Province; Yangzhou City, Jiangsu Province	<ol style="list-style-type: none"> 1. City entrance and departure require: a green health QR code and travel code, as well as a 48-hour negative nucleic acid testing result; 2. Lock down entries to the affected cities, such as through highway; 3. Issue temporary pass permits to designated destinations; 4. Visitors from medium/high-risk areas must receive 14-day centralised isolation & 7-day home quarantine. 	<ul style="list-style-type: none"> ● In low risk areas, production started to recover and some even scaled up from the 2019 level. ● In 2021, while the export volume of herbicide TC increased slightly, the total value soared, up by about 40% compared with the pre-pandemic figures.
	Other regions in Jiangsu Province	<ol style="list-style-type: none"> 1. Remove 88 checkpoints along the expressways and waterways on 5 Sept., 2021; 2. But strengthen the epidemic control in Yangzhou City. 	
Jan. 2022	Anyang City, Henan Province; Dalian City, Liaoning Province; Zhuhai & Zhongshan & Meizhou cities, Guangdong Province	<ol style="list-style-type: none"> 1. Resume express services; 2. Lift lockdowns of rural area; 3. Exempt the express enterprises from value-added tax in 1 May–31 Dec.; 4. Issue nationwide travel permits with quick application and issuance; 5. Free COVID-19 nucleic acid testing service for truck drivers en route. 	<ul style="list-style-type: none"> ● Traffic services restarted in 23 provinces/regions in China during Jan.–May 2022. ● China's exports improved—the total export volume of pesticides through ports of Ningbo (Zhejiang Province), Qingdao (Shandong Province), Yantai (Shandong Province), Tianjin Municipality, etc. rebounded in May.
March 2022	Shenzhen Municipality; Tianjin Municipality; Changchun City, Jilin Province		
April 2022	Shanghai Municipality		

Source: CCM

1.3 Overall price trend of China's pesticides in H1 2022

Since late 2021, the ex-works prices of pesticide technical remained high, bolstered by the high costs of raw materials, but kept the downtrend in H1 2022.

In Jan., pesticide transaction volumes went up, as the traders foreseeing the gradual shutdown of logistics during Chinese Spring Festival. Raw materials of neonicotinoids insecticides, such as thiamethoxam and clothianidin, were at a high level. Besides the grim situation of prevention and control of the epidemic, pesticide TC and formulations factories in North China faced production stoppage or downsizing as approaching and during the 2022 Olympic Winter Games in Feb.

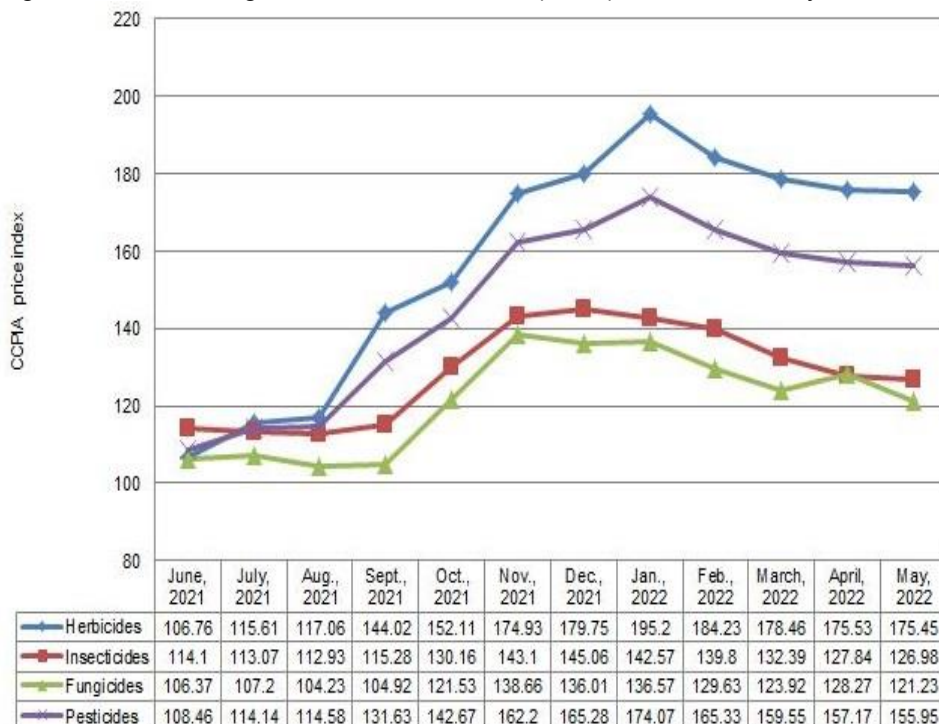
In Feb., due to international conditions like Ukraine War, crude oil prices hit a new high and fueled up the costs of petrochemical-based raw materials, as well as the prices of normal agrochemicals, in particular, herbicides, in combination of growing foreign market demand. While some major manufacturers were forced to earn less margins for sales performance, the ex-works prices of insecticides and fungicides varieties fell back in general.

In March, the spread of the COVID-19 variants and spillover effects had impaired domestic logistics; some regions stopped cross-region traffic, resulting in shortage of raw materials and increased inventory of pesticide products in the place of origin. Trading volume was low and the ex-works prices of most varieties continued to fall, such as glufosinate-ammonium which experienced a dramatic fall in prices, sounding an alarm to other pesticides markets with ballooning prices. Upon the arrival of rigid demand for replenishment, the pesticide market was expected to be warmed up slowly.

In April, the peak season for exports caught on. On supply side, manufacturers caught in tight supply of raw materials. On demand side, with the gradual decrease of inventory, there were more purchasing inquiries and deals in the markets. The price of some fungicides rebounded accordingly.

In May–June, the operating rate of technical manufacturers maintained low as China's off-season of pesticide TC came. On the other hand, the epidemic strain in Shanghai was gradually lessened and the Shanghai Port picked up operation of outbound shipments. Affected by changes in exchange rates, the foreign demand rose leading rapid reduction of the inventory at home and the prices of all varieties standing high compared with last year. As export volumes of pesticide increased under the current backdrop that producers worked on fulfilling early overseas orders, the export value of pesticide technical in the coming months are expected to up.

Figure 1.3-1 China Agrochemical Price Index (CAPI), June 2021–May 2022



Source: China Crop Protection Industry Association (CCPIA)

2 Impact on imports and exports of pesticide in China, H1 2022

2.1 Imports and exports of China's pesticides by volume

In H1 2022, the import and export volume of China's pesticides, such as herbicide, insecticide and fungicide, aggregated 491,492.256 tonnes, down by 3.53% year on year—95% (=465,664.443 tonnes) were exported.

Compared with the same period last year, the import volume of pesticide witnessed growths in Jan. and March, but large decreases in other months; for exports, the volume showed a substantial decline in Feb.–April, yet rebounded slowly in May and June, up by 10.62% and 19.15% YoY, respectively.

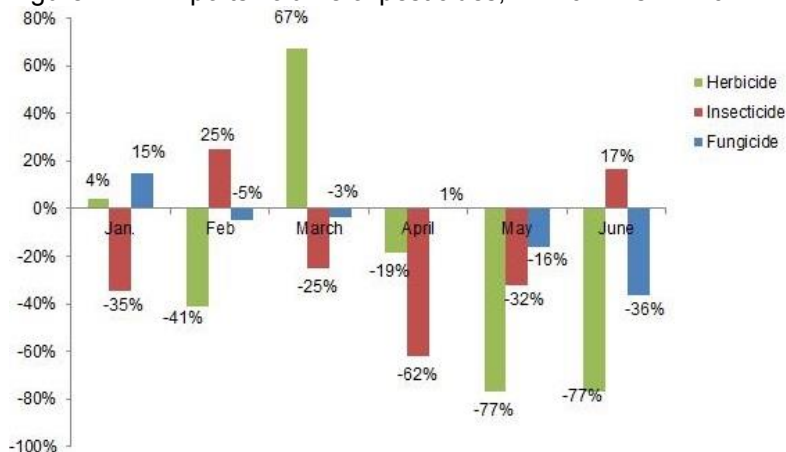
Table 2.1-1 Import volume of pesticides in China, Jan.–June 2022, tonne

Date	Herbicide	Insecticide	Fungicide	Monthly volume, tonne	YoY Change
Jan. 2022	816.016	721.598	4,685.919	6,223.533	4.26%
Feb. 2022	758.169	765.475	2,914.050	4,437.694	-10.47%
March 2022	1,477.056	761.584	3,612.721	5,851.361	3.79%
April 2022	608.492	575.423	3,564.589	4,748.504	-18.27%
May 2022	53.138	542.008	1,926.993	2,522.139	-24.13%
June 2022	28.943	460.714	1,556.925	2,046.582	-31.04%
Total of H1 2022	3,741.814	3,826.802	18,261.197	25,829.813	-9.89%

Note: 1. The calculated volume is based on actual quantity of goods imported. 2. These data are collected under 8 digit HS code provided by China Customs. Thereinto, herbicides are subject to HS code 38089319, insecticides to 38089190 and fungicides to 38089290.

Source: China Customs and CCM

Figure 2.1-1 Imports volume of pesticides, H1 2022 vs H1 2021



Source: China Customs and CCM

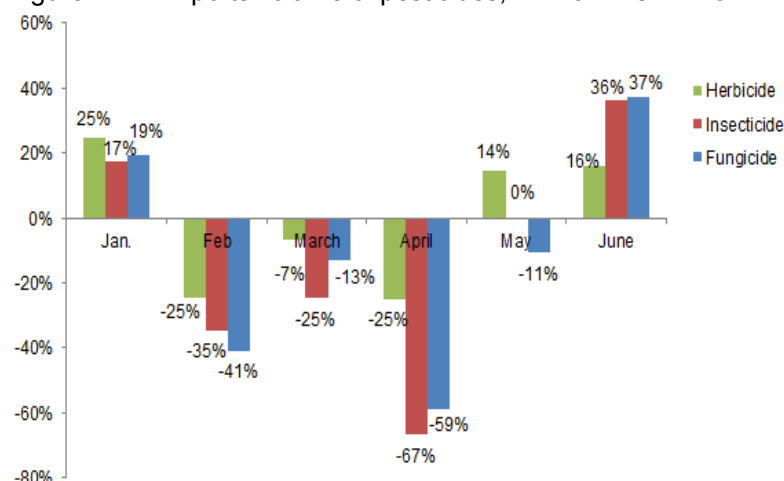
Table 2.1-2 Export volume of pesticides in China, Jan.–June 2022, tonne

Date	Herbicide	Insecticide	Fungicide	Monthly volume, tonne	YoY change
Jan. 2022	75,548.681	9,977.689	6,454.336	91,980.706	23.47%
Feb. 2022	46,537.314	3,750.558	2,433.703	52,721.575	-26.30%
March 2022	70,833.872	6,977.554	5,260.475	83,071.901	-8.82%
April 2022	53,065.115	3,651.701	2,921.533	59,638.349	-32.74%
May 2022	69,676.790	8,937.174	5,365.732	83,979.696	10.62%
June 2022	76,232.903	11,334.010	6,705.303	94,272.216	19.15%
Total of H1 2022	391,894.675	44,628.686	29,141.082	465,664.443	-3.16%

Note: 1. The calculated volume is based on actual quantity of goods exported. 2. These data are collected under 8 digit HS code provided by China Customs. Thereinto, herbicides are subject to HS code 38089319, insecticides to 38089190 and fungicides to 38089290.

Source: China Customs and CCM

Figure 2.1-2 Exports volume of pesticides, H1 2022 vs H1 2021



Source: China Customs and CCM

2.2 Imports and exports of China's pesticides by value

The value of China's imports and exports of pesticides soared significantly by 51.45% year on year in H1 2022, except in May when the import value of all pesticide varieties experienced large declines. As for exports, the value of exported pesticides in H1 increased by 61.02% year on year, occupying 85.68% of the total imports and exports. Throughout the first half of the year, the YoY monthly growths of exported value of herbicides were prominent among categories, especially in Jan. which represented an increase of nearly 172%.

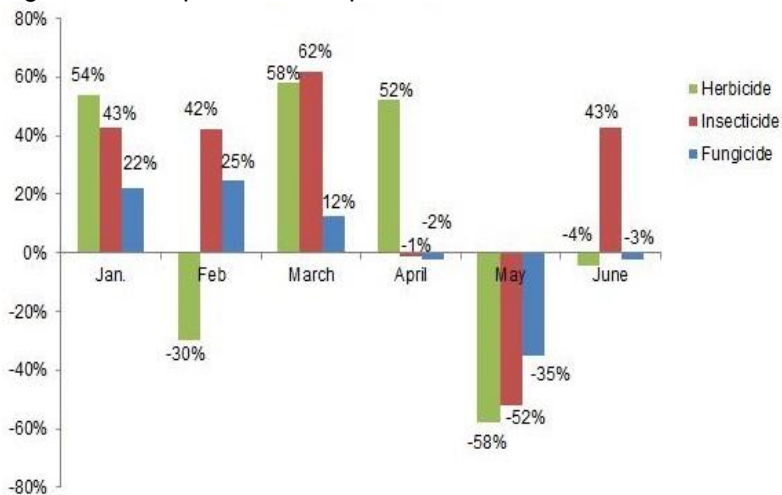
Table 2.2-1 Imports value of pesticides in China, Jan.–June 2022, USD

Date	Herbicide	Insecticide	Fungicide	Monthly Value, USD	YoY Change
Jan. 2022	10,981,727	32,245,897	46,705,367	89,932,991	32.32%
Feb. 2022	10,391,885	27,320,208	27,756,660	65,468,753	16.20%
March 2022	27,814,117	31,065,005	39,486,408	98,365,530	36.70%
April 2022	13,464,837	18,857,592	38,627,003	70,949,432	5.25%
May 2022	1,070,481	10,423,479	19,877,019	31,370,979	-42.95%
June 2022	867,939	16,737,508	24,795,707	42,401,154	11.44%
Total of H1 2022	64,590,986	136,649,689	197,248,164	398,488,839	11.71%

Note: 1. The calculated volume is based on actual quantity of goods imported. 2. These data are collected under 8 digit HS code provided by China Customs. Thereinto, herbicides are subject to HS code 38089319, insecticides to 38089190 and fungicides to 38089290.

Source: China Customs and CCM

Figure 2.2-1 Imports value of pesticides, H1 2022 vs H1 2021



Source: China Customs and CCM

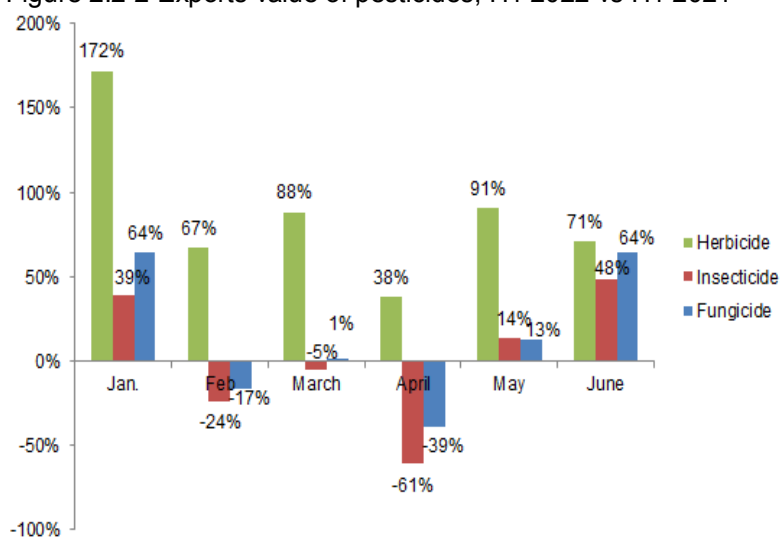
Table 2.2-2 Exports value of pesticides in China, Jan.–June 2022, USD

Date	Herbicide	Insecticide	Fungicide	Monthly Value, USD	YoY change
Jan. 2022	390,984,625	62,109,501	44,488,420	497,582,546	130.70%
Feb. 2022	250,720,170	22,687,210	17,430,808	290,838,188	44.84%
March 2022	357,002,876	42,867,117	29,589,066	429,459,059	62.53%
April 2022	262,713,370	23,795,884	20,512,770	307,022,024	7.80%
May 2022	326,031,171	52,512,078	32,912,460	411,455,709	67.03%
June 2022	339,387,544	67,996,705	40,084,073	447,468,322	66.59%
Total of H1 2022	1,926,839,756	271,968,495	185,017,597	2,383,825,848	61.02%

Note: 1. The calculated volume is based on actual quantity of goods exported. 2. These data are collected under 8 digit HS code provided by China Customs. Thereinto, herbicides are subject to HS code 38089319, insecticides to 38089190 and fungicides to 38089290.

Source: China Customs and CCM

Figure 2.2-2 Exports value of pesticides, H1 2022 vs H1 2021



Source: China Customs and CCM

3 Impact of the COVID-19 pandemic on AI, H1 2022

3.1 Price analysis of main herbicides in China, H1 2022

3.1.1 Glyphosate

According to CCM's price monitoring, the monthly ex-works price of 95% glyphosate technical in H1 2022 indicated a near 20% decline from USD12,267/t in Jan. to USD9,797/t in June, partially due to the reduced cost of yellow phosphorus. The price of glyphosate is expected to remain high for full 2022, with the low ready stock and limited new capacity launching to the market amidst strong demands.

Regarding the operating rate in China, glyphosate technical manufacturers reported stable operation in general. Notably, Hubei Xingfa Chemicals Group Co., Ltd., located in Hubei Province, has recovered its operation from hit by COVID-19 outbreak in Q1 2020, to 80% on average.

Figure 3.1.1-1 Ex-works prices of 95% glyphosate technical in China, Jan.–June 2022



Source: CCM

Table 3.1.1-1 Operating rates of 5 major glyphosate technical manufacturers in China, Jan.–June 2022

Manufacturer	Operating rate					
	Jan.	Feb.	March	April	May	June
Zhejiang Wynca Chemical Group Co., Ltd.	25%	25%	45%	40%	60%	50%
Sichuan Hebang Biotechnology Co., Ltd.	45%	40%	60%	50%	65%	70%
Sichuan Leshan Fuhua Tongda Agro-Chemical Technology Co., Ltd.	75%	70%	85%	80%	80%	75%
Nantong Jiangshan Agrochemical and Chemicals Co., Ltd.	60%	45%	60%	60%	65%	55%
Hubei Xingfa Chemicals Group Co., Ltd.	approx. 100%	50%	70%	70%	85%	90%

Source: CCM

3.1.2 Nicosulfuron

The ex-works price of 95% nicosulfuron technical was stable first in Jan. and started to decrease in Feb. to

the end of H1. Specifically, as the demand eased, the price for herbicide product fell to USD43,510/t in June, similar to the level of early 2021.

Zibo NAB Agrichemicals Co., Ltd, located in Shandong Province, was one of the major Chinese manufacturers of nicosulfuron technical, scaled down its production operation in H1 in Shandong, a province that has seen emerging Delta variant infections since Q2 2021 and the consequential lowered output in Q1 2022.

Figure 3.1.2-1 Ex-works prices of 95% nicosulfuron technical, Jan.–June 2022



Source: CCM

Table 3.1.2-1 Operation status of 3 major nicosulfuron technical manufacturers in China, Jan.–June 2022

Manufacturer	Operation status					
	Jan.	Feb.	March	April	May	June
Zibo NAB Agrichemicals Co., Ltd.	Operating stably	Operational	Operational	Low	Low	Low
Anhui Huaxing Chemical Industry Co., Ltd.	Low	Low	Low	Low	Low	Low
Anhui Fengle Agrochemical Co., Ltd.	Operating stably	Operating stably	Operating stably	Operating stably	Operating stably	Operating stably

Source: CCM

3.2 Price analysis of main insecticides in China, H1 2022

3.2.1 Imidacloprid

During the first half of 2022, the ex-work price of 97% imidacloprid TC in China was lower than the average of H2 2021, down 30.21% from USD31,743/t in Jan. to USD22,153/t in June, weakened by the decreased demand.

Regarding the operation status, most imidacloprid technical manufacturers in China kept stable production in H1. For instance, Hebei Yetian Agrochemicals Co., Ltd. picked up normal operation gradually after regular maintenance in Jan.–Feb. Since Feb. 2020, its factory has implemented strict measures for epidemic prevention, such as factory-wide disinfection twice a day and staggered dining.

Figure 3.2.1-1 Ex-works prices of 97% imidacloprid technical in China, Jan.–June 2022



Source: CCM

Table 3.2.1-1 Operation status of 4 major imidacloprid technical manufacturers in China, Jan.–June 2022

Manufacturer	Operation status					
	Jan.	Feb.	March	April	May	June
Shandong Sino-Agri United Biotechnology Co., Ltd.	Operational	Operational	Operational	Operational	Operational	Operational
Hailir Pesticides and Chemicals Group Co., Ltd.	Operational	Operational	Operational	Operational	Operational	Operational
Jiangsu Changlong Agrochemical Co., Ltd.	Suspended for regular maintenance	Suspended for regular maintenance	Suspended for regular maintenance	Suspended for regular maintenance	Suspended for regular maintenance	Suspended for regular maintenance
Hebei Yetian Agrochemicals Co., Ltd.	Suspended for regular maintenance	Suspended for regular maintenance	Operational and stopped receiving new orders	Operational	Operational	Operational

Note: According to CCM research, Jiangsu Changlong Agrochemical Co., Ltd. has regular maintenance for the production lines of imidacloprid technical and stopped receiving new orders in Q1. The company has enabled inquiries since April and may resume production later in phases.

Source: CCM

3.2.2 Chlorpyrifos

The ex-works price of China's chlorpyrifos technical dropped sharply throughout Q1, bottoming out in March. Following that, recovery was seen starting in April and up to a relatively high level of USD7,200/t in June, as a result of rising prices of raw materials and depressed production during the period. Nanjing Red Sun Co., Ltd. held low stock of finished products in April–May and produced only by orders to overseas in June.

Figure 3.2.2-1 Ex-works prices of chlorpyrifos technical in China, Jan.–June 2022



Source: CCM

Table 3.2.2-1 Operation status of 3 major chlorpyrifos technical manufacturers in China, Jan.–June 2022

Manufacturer	Operation status					
	Jan.	Feb.	March	April	May	June
Hubei Benxing Agrochemical Co., Ltd.	Operational	Operational	Operational	Operational	Operational	Operational
Nanjing Red Sun Co., Ltd.	Operational	Operational	Operational	Operational	Operational	Operational
Jiangsu Fengshan Group Co., Ltd.	Operational	Operational	Operational	Operational	Operational	Operational

Source: CCM

3.2.3 Emamectin benzoate

China's ex-works price of emamectin benzoate technical fell from the peak in Dec. 2021 to USD88,483/t in June with a yearly decrease of 14.77%. In Feb.–April, the production of Inner Mongolia Jumbo Biotechnology Co., Ltd., was suspended due to the COVID-19 outbreak across North China and its product's prices in March, April and May were down by 6.67%, 6.33% and 6.54% month on month, respectively.

Figure 3.2.3-1 Ex-works prices of 70% emamectin benzoate technical in China, Jan.–June 2022



Source: CCM

Table 3.2.3-1 Operation status of 3 major emamectin benzoate technical manufacturers in China, Jan.–June 2022

Manufacturer	Operation status					
	Jan.	Feb.	March	April	May	June
Daqing Jefene Bio-chemical Co., Ltd.	Operational	Operational	Operational	Operational	Operational	Operational
Inner Mongolia Jumbo Biotechnology Co., Ltd.	Operational	Suspended	Suspended	Suspended	Operational	Operational
Qilu Synva Pharmaceutical Co., Ltd.	Operational	Operational	Operational	Operational	Operational	Operational

Source: CCM

3.3 Price analysis of main fungicides in China, H1 2022

3.3.1 Tebuconazole

The operation of Chinese manufacturers of tebuconazole technical in Jiangsu Province, the main production area in the country, has run smoothly in H1 2022. However, the ex-works price of this product was down from the hikes in Oct.–Nov. 2021 pulled by sluggish demand. According to CCM's price monitoring data, the ex-works price of 97% tebuconazole technical was USD11,688/t in June, down by 5.35% year on year.

Figure 3.3.1-1 Ex-works prices of 97% tebuconazole technical in China, Jan.–June 2022



Source: CCM

Table 3.3.1-1 Operation status of 3 major tebuconazole technical manufacturers in China, Jan.–June 2022

Manufacturer	Operation status					
	Jan.	Feb.	March	April	May	June
Jiangsu Sword Agrochemicals Co., Ltd.	Operational	Operational	Operational	Operational	Operational	Operational
Jiangsu Huanghai Pesticide & Chemical Industry Co., Ltd.	Resumed in phases	Operational	Operational	Operational	Operational	Operational
Jiangsu Sevencontinent Green Chemical Co., Ltd.	Operational	Operational	Operational	Operational	Operational	Operational

Source: CCM

3.3.2 Azoxystrobin

In June, the price of 97% azoxystrobin technical marked a 7.57% year-on-year growth to USD38,071/t.

In Jan.–Feb., the market supply of azoxystrobin technical was affected by logistics disruption induced by the COVID-19 pandemic. Starting from March, China's azoxystrobin technical manufacturers managed to fulfill the increasing foreign orders as transport and ports reopened. Estimates of the price of this product hover around USD38,000/t in H2 2022.

Figure 3.3.2-1 Ex-works prices of 96% azoxystrobin technical in China, Jan.–June 2022



Source: CCM

Table 3.3.2-1 Operation status of 3 major azoxystrobin technical manufacturers in China, Jan.–June 2022

Manufacturer	Operation status					
	Jan.	Feb.	March	April	May	June
Jiangyin Suli Chemical Co., Ltd.	Operational	Operational	Operational	Operational	Operational	Operational
CAC Nantong Chemical Co., Ltd.	Operational	Operational	Operational	Operational	Operational	Operational
Hangzhou Qingfeng Agrochemical Co., Ltd.	Operational	Operational	Operational	Operational	Operational	Operational

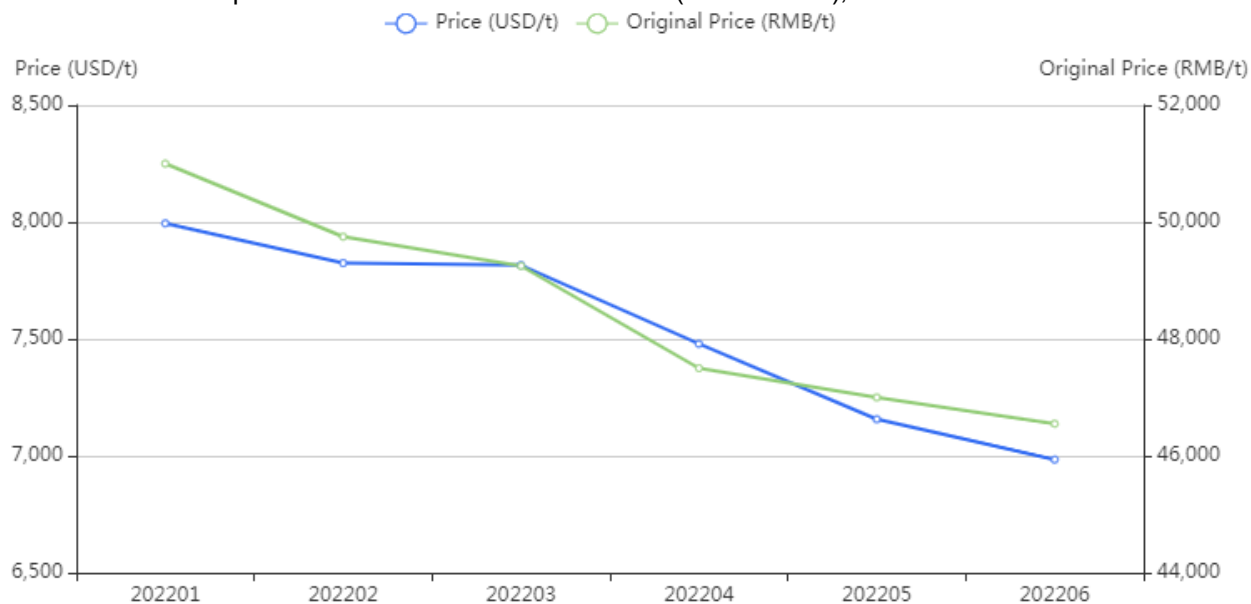
Source: CCM

3.3.3 Carbendazim

China's pledge to fulfil its environmental protection goal has caused lower operating rate and strained inventory of some products in the pesticide industry and driven the ex-works price of carbendazim technical high since 2020, which peaked at USD8,203/t in Dec. 2021. The price figure slid back to USD6,984/t in June 2022, down by 14.86% compared with that in late 2021, thanks to relieves seen this year in major operations and supply with less impacts from the COVID-19 pandemic.

Meanwhile, with growing drug resistance against carbendazim detected in major crop-growing areas like Jiangsu and Anhui provinces indicating lukewarm market demand, the price of this product is very likely to keep falling in the coming few months, but at a slow pace.

Figure 3.3.3-1 Ex-works prices of 98% carbendazim technical (White colour), Jan.-June 2022



Source: CCM

Table 3.3.3-1 Operation status of 4 major carbendazim technical manufacturers in China, Jan.–June 2022

Manufacturer	Operation status					
	Jan.	Feb.	March	April	May	June
Ningxia Wynca Technology Co., Ltd.	Suspended for regular maintenance	Operational	Suspended for regular maintenance	Suspended for regular maintenance	Suspended for regular maintenance	Suspended for regular maintenance
Jiangsu Lanfeng Bio-chemical Co., Ltd.	Operational	Operational	Operational	Operational	Operational	Operational
Anhui Guangxin Agrochemical Co., Ltd.	Operational	Operational	Operational	Operational	Operational	Operational
Jiangsu Yangnong Chemical Co., Ltd.	Operational	Operational	Operational	Operational	Operational	Operational

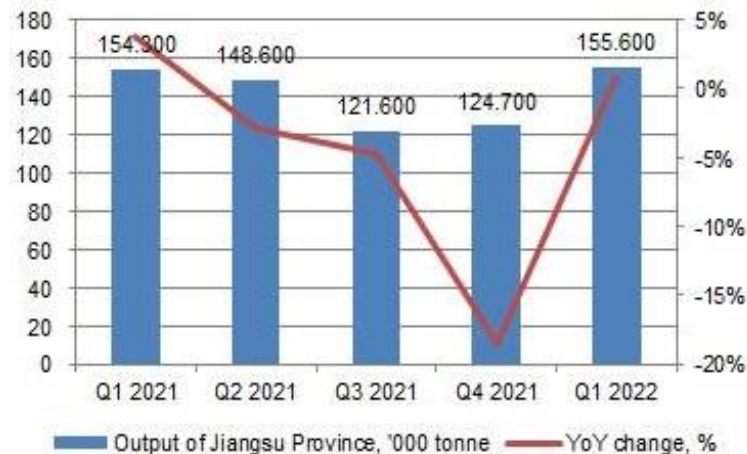
Source: CCM

4 Impact on the supply side amid the COVID-19 pandemic

4.1 Jiangsu Province

In 2020 and 2021, Jiangsu Province's total outputs of pesticide technical were the highest among other major producing provinces in China, accounting for 582,000 tonnes and 549,200 tonnes, respectively. In Q1 2022, the output of pesticide technical in Jiangsu Province mounted up 0.84% YoY to around 156,000 tonnes with expectation to grow throughout the year given that adaptable cross-regional traffic measures against COVID-19 pandemic are in place.

Figure 4.1-1 Pesticide output of Jiangsu Province, 2021–Q1 2022



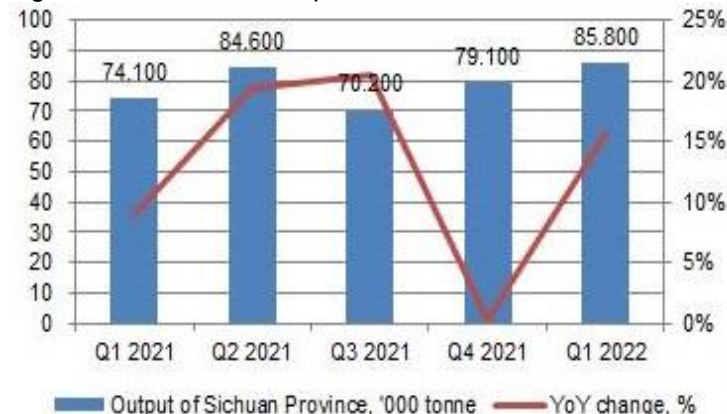
Note: Output is based on 100% active ingredient

Source: CCPIA and CCM

4.2 Sichuan Province

In terms of pesticide production, Sichuan Province is the fastest-growing region in China with recent quarterly outputs above 70,000 tonnes level, raised from the fourth place in 2019 to the second in 2021 among provinces/regions. In Q1 2022, 85,800 tonnes of pesticide technical were manufactured in Sichuan Province, up by 15.79% year on year, a record number for the province in the COVID-19 Era.

Figure 4.2-1 Pesticide output of Sichuan Province, 2021–Q1 2022



Note: Output is based on 100% active ingredient

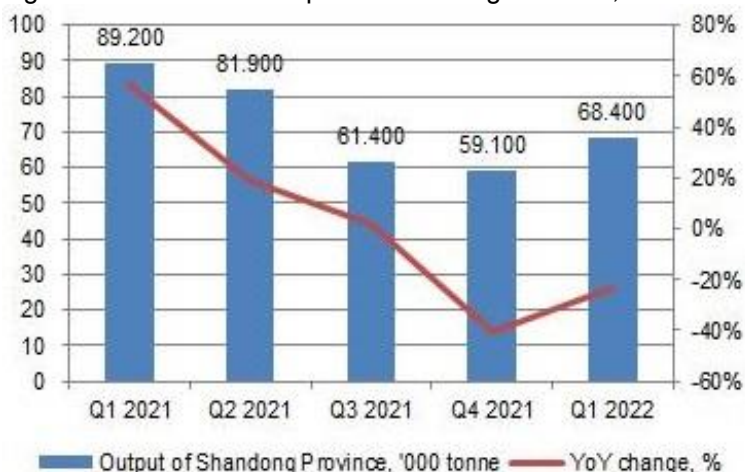
Source: CCPIA and CCM

4.3 Shandong Province

On a yearly basis, the total output of pesticide technical in Shandong Province climbed up from 225,296 tonnes in 2019 to 285,000 tonnes in 2020, an increase of 27%. However, at the start of 2021 when the delta variant surged across the country, the growth was weakened—Shandong's 2021 output was recorded

291,600 tonnes, up only 2% YoY. Such impact carried on entering Q1 2022 with the quarterly number of Q1 2022 arriving at 68,400 tonnes, down 23.32% YoY.

Figure 4.3-1 Pesticide output of Shandong Province, 2021–Q1 2022

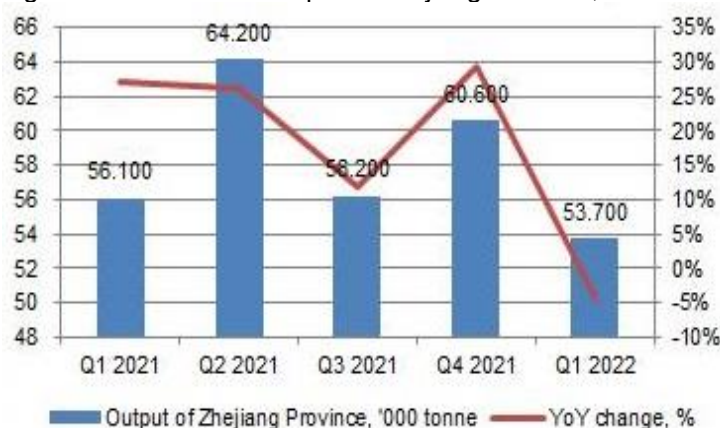


Note: Output is based on 100% active ingredient
Source: CCPIA and CCM

4.4 Zhejiang Province

Zhejiang Province's production of pesticide technical had been growing over recent years, accounting to 185,686 tonnes in 2019, 192,000 tonnes in 2020 and 237,100 tonnes in 2021. Although its Q1 output of 2022 was reported 53,700 tonnes, down 4.28% YoY due to the spread of Delta and Omicron variants, Zhejiang Province is expecting a better performance in the coming months given some COVID-19-related restrictions were lifted in April.

Figure 4.4-1 Pesticide output of Zhejiang Province, 2021–Q1 2022



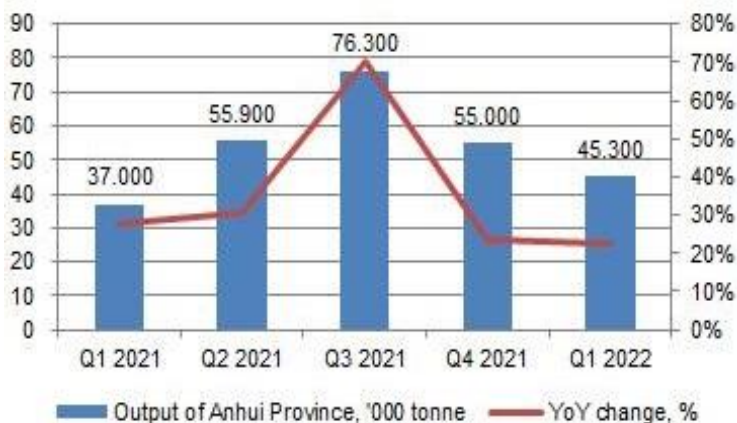
Note: Output is based on 100% active ingredient.
Source: CCPIA and CCM

4.5 Anhui Province

Effectively taming the COVID-19 epidemic, Anhui Province has resumed local production activities in Q1 2022 with total output of pesticides continued rising up by 22.43% YoY to 45,300 tonnes—such growth followed the 2020 and 2021 provincial output tallies which were up by 65% and 130% respectively compared with the total of 2019.

The province implementing the inter-regional transport permit system for easier road transport during the pandemic period has benefited the local pesticide businesses, such as Anhui Guangxin Agrochemical Co., Ltd., Anhui Jintudi Biotechnology Co., Ltd., Anhui Jukai Agrochemical Co., Ltd.

Figure 4.5-1 Pesticide output of Anhui Province, 2021–Q1 2022

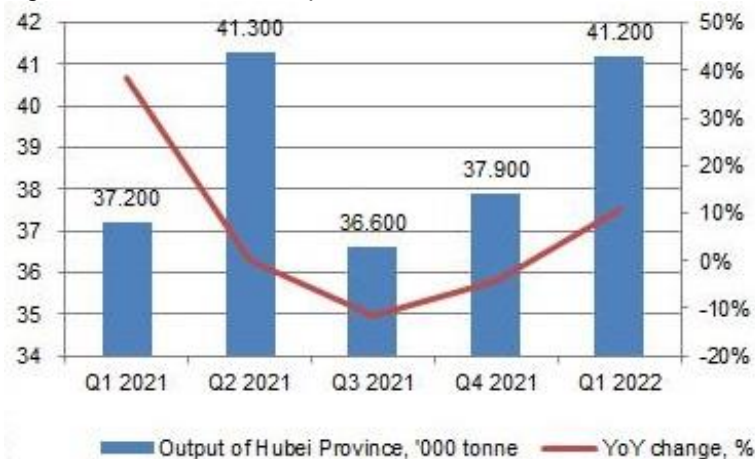


Note: Output is based on 100% active ingredient
 Source: CCPIA and CCM

4.6 Hubei Province

Hubei Province's quarterly outputs of pesticides technical increased by 38.29% YoY in Q1 2021 and 10.75% YoY in Q1 2022, respectively—these surges represented a significant recovery from the first outbreak of COVID-19 dating back to Q1 2020.

Figure 4.6-1 Pesticide output of Hubei Province, 2021–Q1 2022

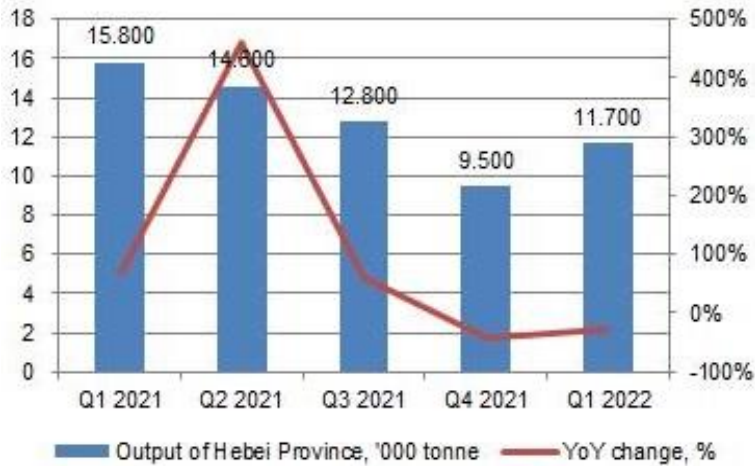


Note: Output is based on 100% active ingredient
 Source: CCPIA and CCM

4.7 Hebei Province

Hebei Province's pesticide output ranked the 10th among the major producing provinces in China in 2021 with sustained YoY growths of 68.09%, 461.54% and 62.03% over the first three quarters of 2021. However, the advent of Delta variant in Q3 2021, has hit the provincial production which slumped 40.99% in Q4 compared with the same quarter of the previous year and moved further in Q1 2022, down by 25.95% YoY to 11,700 tonnes.

Figure 4.7-1 Pesticide output of Hebei Province, 2021–Q1 2022



Note: Output is based on 100% active ingredient
Source: CCPIA and CCM

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