

# Insecticides China Monthly Report 202302

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## Headline

Shandong Huayang has put the 1,000 t/a carbosulfan TC production line into trial production in early Feb.

In order to build a competitive edge in thiamethoxam TC market, Handan Ruitian plans to transform and upgrade its thiamethoxam TC production line. Once the new project is completed, Handan Ruitian's thiamethoxam TC capacity will increase from 2,000 t/a to 6,000 t/a.

On 16 Feb., acceptance of the EI report of Haili Guixi's carbosulfan TC expansion project was announced by local authorities. The company plans to expand its production capacity for carbosulfan TC by 3,000 t/a. As regards Haili Guixi's 3,000 t/a pirimiphos-methyl TC project, though it acquired government approval last year, the construction work has not started yet.

In early Feb., prices of some insecticides TC dropped. Prices of most organophosphorus insecticides TC and carbamate insecticides TC kept stable, but prices of most pyrethroid insecticides TC and nicotinoid insecticides TC continued a fall due to sluggish demand.

On 14 Feb., Jilin Provincial Department of Agriculture and Rural Affairs forecasted an overall moderate occurrence of major pests & diseases and rat damage on crops in the province in 2023. In general, pests & diseases on maize and rice would be moderate. Major pests include maize borer, underground insects and *Chilo suppressalis*.

In Sept.–Nov. 2022, thiamethoxam products from China were mainly exported to Brazil, the US, the Netherlands, Russia, etc.; thiamethoxam TC exported to Brazil soared considerably YoY, making Brazil the biggest export destination.

According to the import and export data from Tranalysis, in 2022, China's insecticide formulation exports far exceeded the imports, marking a large trade surplus. Last year, insecticide formulations from China were mainly exported to 163 countries or regions, the biggest three destinations being Brazil, Thailand and Vietnam.

MARA has planned to introduce a ban on four high-toxicity pesticides—omethoate, aldicarb, carbofuran and methomyl in 2023. As of 3 Feb., 2023, there were 21 valid registrations for TC products of these four insecticidal AIs in China.

On 10 Feb., 2023, the Department of Agrochemical Management of MARA released a batch of products passed registration approval, which include 21 insecticide products, of which 3 are hygienic insecticides.







## Editor's Note

In early Feb., prices of some insecticides TC dropped. Prices of most organophosphorus insecticides TC and carbamate insecticides TC kept stable, but prices of most pyrethroid insecticides TC and nicotinoid insecticides TC continued a fall due to sluggish demand.

In terms of company dynamics, Shandong Huayang put the 1,000 t/a carbosulfan TC production line into trial production in early Feb. On 16 Feb., acceptance of the EI report of Haili Guixi's carbosulfan TC expansion project was announced by local authorities. The company plans to expand its carbosulfan TC capacity by 3,000 t/a. Meanwhile, construction of the company's 3,000 t/a pirimiphos-methyl TC project has not started yet. It's worth noting that carbosulfan has enjoyed a rapid growth as more restrictions have been put to the use of carbofuran in China.

In terms of policies, on 9 Feb., Hubei government released the *Hubei Provincial Pesticide Industry Development Programme 2022–2025*. The Programme proposes that by 2025, the number of pesticide-producing enterprises should be around 60 with an industrial park entry rate of around 80%, pesticide utilisation rate reach more than 43%, and the rate of biopesticide universalisation surpass 20%.

In terms of pesticide registration, on 10 Feb., 2023, the Department of Agrochemical Management of MARA released a batch of pesticide products approved of registration, which include 21 insecticide products, with 3 hygienic insecticides included. All of these insecticides are of mild or low toxicity, and the majority is in SC form.

*The USD/CNY exchange rate in this newsletter is USD1.00 = CNY6.7492 on 1 Feb., 2023, sourced from the People's Bank of China. All the prices mentioned in this newsletter will include the VAT, unless otherwise specified.*





## Company Dynamics

### Shandong Huayang's carbosulfan TC line comes into trial production

Summary: Shandong Huayang has put the 1,000 t/a carbosulfan TC production line into trial production in early Feb.

Shandong Huayang Technology Co., Ltd. (Shandong Huayang) disclosed that its 1,000 t/a carbosulfan TC production line had been completed in mid-Jan. 2023 and the line had been put into trial production in early Feb.

Shandong Huayang was established in 1966, formerly known as Ningyang Pesticide Factory, and it is located in Ningyang Chemical Industrial Park, Ningyang County, Taian City, Shandong Province. The company mainly engages in pesticide business, with products covering insecticides, fungicides, herbicides and seed dressings. As of 7 Feb., 2023, Shandong Huayang had pesticide registration certificates for 23 TC products and 64 formulations; the numbers of the certificates for insecticides TC and insecticides formulations were 17 and 29, respectively. It obtained a registration certificate for 90% carbosulfan TC (registration No. PD20170190) in 2017.

Major carbosulfan TC suppliers in China include Jiangsu Lanfeng Biochemical Co., Ltd. with 2,000 t/a capacity, Haili Guixi New Materials Technology Co., Ltd. (Haili Guixi) with 3,000 t/a capacity, and Hunan Haili Changde Pesticide Chemical Industry Co., Ltd. (Haili Changde) with 1,800 t/a capacity. Both Haili Guixi and Haili Changde are subsidiaries of Hunan Haili Chemical Industry Co., Ltd. It should be noted that Haili Guixi is pushing ahead with a carbosulfan capacity expansion and technological upgrading project, aiming to bring the capacity to 6,000 t/a; its existing lines are located in the Guixi Sulphur and Phosphorus Chemical Industry Base, Guixi City, Jiangxi Province.

Carbosulfan, a carbamate insecticide, is a less-toxic derivative of carbofuran. However, it has already been banned on some crops such as vegetables in China, mainly because of the problem of residue. If it is used on vegetables, it can easily break down into carbofuran and carbofuran-3-hydroxy. It is worth noting that, in a recently held video conference on national pesticide management, the Ministry of Agriculture and Rural Affairs of the People's Republic of China planned to introduce a ban on carbofuran in 2023.

### Handan Ruitian plans to expand capacity for thiamethoxam TC

Summary: In order to build a competitive edge in thiamethoxam TC market, Handan Ruitian plans to transform and upgrade its thiamethoxam TC production line. Once the new project is completed, Handan Ruitian's thiamethoxam TC capacity will increase from 2,000 t/a to 6,000 t/a.

On 7 Feb., Handan Ruitian Pesticide Co., Ltd. (Handan Ruitian) revealed that it had planned to carry out the thiamethoxam TC production line transformation project in the Shangcheng Industrial Park, Cheng'an County, Handan City, Hebei Province. Once the project is successfully built up, Handan Ruitian's capacity of thiamethoxam TC will increase from 2,000 t/a to 6,000 t/a. This project was approved for project filing by local authorities in Jan. 2023 and it still needs to go through other administrative reviews before the construction kick starts. In fact, thiamethoxam TC is one of Handan Ruitian's flagship products and the company has long before acquired the qualifications for the production and sale. It obtained a registration certificate for 98% thiamethoxam TC in 2014.

Thiamethoxam is a neonicotinoid insecticide. After the compound patent for thiamethoxam in China expired in 2013, a number of Chinese





pesticide companies have entered the thiamethoxam market. The dynamic market has enabled strong growth momentum of this product in global market even though many unfavourable factors are there, such as high toxicity to bees and high resistance.

Many Chinese pesticide producers have brought their large-scale thiamethoxam TC production lines into operation; these manufacturers include Handan Ruitian, Hebei Yetian Agrochemicals Co., Ltd., Hebei Brilliant Chemical Co., Ltd., Rudong Zhongyi Chemical Co., Ltd., Shandong Kexin Biochemical Co., Ltd., Shandong United Pesticide Industry Co., Ltd. (Shandong United Pesticide), Oriental (Luzhou) Agrochemicals Co., Ltd., Shanghai High Victory Fine Chemical Co., Ltd., Shandong Hailir Chemicals Co., Ltd. and Inner Mongolia Benxing Chemical Co., Ltd. Besides, some other pesticide companies are building or have revealed plans to build capacity for thiamethoxam TC. It is inevitable that the competition in thiamethoxam market will remain fierce for a long time as the new production capacity is added.

It should be noted that Handan Ruitian used to have a 200 t/a bifenthrin TC production line, which was dismantled in May 2018. In addition to Handan Ruitian's withdrawal, Jiangsu Huangma Agrochemicals Co., Ltd.'s 500 t/a bifenthrin TC line and Yancheng South Chemical Co., Ltd.'s 500 t/a bifenthrin TC line were phased out. In recent years, under the impact of workplace safety and environmental protection policies, and due to voluntary product structure optimisation in relevant enterprises, the bifenthrin TC industry in China has experienced great changes, out-dated capacity phased out while new capacity still coming.

At present, major active bifenthrin TC producers in China are: Jiangsu Youjia Crop Protection Co., Ltd. (Jiangsu Youjia), Jiangsu Chunjiang Runtian Agrochemical Co., Ltd (Chunjiang Runtian), ADAMA Huifeng (Jiangsu) Co., Ltd., Jiangsu Lianhe Chemical Technology Co., Ltd., Anhui Biocompounds Chemicals Co., Ltd., Weifang Runnong Chemical Co., Ltd. So far two leading companies—Jiangsu Youjia and Chunjiang Runtian have completed capacity expansion and consolidated their position in the market. Meanwhile, some new ones have revealed plans to build capacity for bifenthrin TC, such as Shandong United Pesticide, Hebei Di'annong Biotechnology Co., Ltd. (Hebei Di'annong) and Hebei Saifeng Biotechnology Co., Ltd. (Hebei Saifeng). Specifically, Hebei Di'annong and Hebei Saifeng have planned to build 3,000 t/a bifenthrin TC capacity, and Shandong United Pesticide has been pushing forward with the construction of its 1,500 t/a bifenthrin TC line.

### **Progress of Haili Guixi's carbosulfan and pirimiphos-methyl projects**

Summary: On 16 Feb., acceptance of the EI report of Haili Guixi's carbosulfan TC expansion project was announced by local authorities. The company plans to expand its production capacity for carbosulfan TC by 3,000 t/a. As regards Haili Guixi's 3,000 t/a pirimiphos-methyl TC project, though it acquired government approval last year, the construction work has not started yet.

On 16 Feb., the environmental impact (EI) report of the new production lines building project (namely carbosulfan TC capacity expansion project) of Haili Guixi New Material Technology Co., Ltd. (Haili Guixi, formerly known as Haili Guixi Chemical Pesticide Co., Ltd.) was publicised by local authorities. The company, located in the Sulphur & Phosphorus Chemical Industry Base, Guixi City, Jiangxi Province, plans to expand its carbosulfan TC capacity from 3,000 t/a to 6,000 t/a. It's worth noting that carbosulfan has enjoyed rapid growth as more restrictions were put to the use of carbofuran in China.





Besides, Haili Guixi's 3,000 t/a pirimiphos-methyl TC project was approved by the Jiangxi Provincial Department of Ecology and Environment in March 2022, but the construction is yet to start. Pirimiphos-methyl is an organophosphorus insecticide with high efficacy, low toxicity and low residue, which is mainly used for the control of pests and mites in warehouses, granaries, livestock sheds, courtyards and industrial premises. Particularly, it can keep effective for a long period against white flies, thrips, scale insects, aphids and mites on tomato, cucumber, pepper, eggplant and other vegetables. It is one of the most efficient and economical insecticides currently available for application in storage sites.

Although Haili Guixi does not hold any pesticide registration certificate for pirimiphos-methyl TC, its parent company Hunan Haili Chemical Industry Co., Ltd. (Hunan Haili) has already obtained a registration certificate for 90% pirimiphos-methyl TC (registration No. PD20081556). So far only three enterprises have had pirimiphos-methyl TC products registered in China, all in 90% active ingredient (AI) content. The AI has also been registered for hygienic use; there are 12 hygienic insecticide products containing pirimiphos-methyl registered in China, which are mainly used for the control of indoor mosquitoes and flies. It should be noted that Hunan Haili holds the only pirimiphos-methyl registration (mixed with deltamethrin) for the control of stored-grain pests in China. As the use of chemical pesticides for the control of stored-product pests decreases and pest resistance increases, pirimiphos-methyl mixed formulation products with deltamethrin, or even spinosad, may become the mainstream in the future.







## Market Analysis

### Prices of some insecticides TC drop in early Feb.

**Summary:** In early Feb., prices of some insecticides TC dropped. Prices of most organophosphorus insecticides TC and carbamate insecticides TC kept stable, but prices of most pyrethroid insecticides TC and nicotinoid insecticides TC continued a fall due to sluggish demand.

In early Feb., prices of some insecticides TC dropped. Prices of most organophosphorus insecticides TC and carbamate insecticides TC kept stable, though some specific products had lower prices. Prices of most pyrethroid insecticides TC and nicotinoid insecticides TC continued to fall due to sluggish demand.

**Organophosphorus insecticides:** Ex-works prices of profenofos TC, phoxim TC and malathion TC were stable, while the price of chlorpyrifos TC decreased under prolonged sluggish demand. Nanjing Red Sun Co., Ltd., a major chlorpyrifos manufacturer in China, has suspended its line temporarily, but other producers have operated normally, such as Hubei Benxing Agrochemical Co., Ltd. and Jiangsu Fengshan Group Co., Ltd. Considering a relatively slack demand for organophosphorus insecticides in China, some products may have their price set lower in the short term.

**Pyrethroid insecticides:** Ex-works prices of most pyrethroid insecticides TC were lowered mainly due to insufficient demand. Prices of bifenthrin TC, lambda-cyhalothrin TC, cypermethrin TC and deltamethrin TC all decreased. In particular, bifenthrin TC price reduced by more than 6% MoM. Considering continued sluggish downstream demand and downward trend in prices of some intermediates, prices of pyrethroid insecticides TC may decline further in the short term.

**Carbamate insecticide:** Ex-works prices of isoprocarb TC and methomyl TC remained stable while carbofuran TC had a lower price. It should be noted a potential ban on carbofuran and methomyl may be issued in China in 2023 due to their high toxicity. Considering the demand for carbamate insecticides is relatively small in China, price drops are expected for products under this category in the short term.

**Nicotinoid insecticides:** Ex-works prices of nicotinoid insecticides were lowered. Domestic demand for these products is slack and most of the products are export-oriented. Prices of imidacloprid TC and acetamiprid TC went down by 4.4% MoM and 5.7% MoM respectively, for lacklustre demand. Specifically, there has been an imidacloprid TC glut in the market—major producers have operated normally, such as Jiangsu Yangnong Chemical Co., Ltd., Shandong United Pesticide Industry Co., Ltd. and Shandong Hailir Chemicals Co., Ltd., while new orders were scarce, mainly for replenishment, and these deals were made only with slashed price. In addition, the price of its raw material 2-chloro-5-chloromethylpyridine (CCMP) continued a fall in mid-Feb. Although the ex-works price of another raw material, phosphorus oxychloride, rose, it had limited support to the price of imidacloprid TC. Considering a relatively weak demand for nicotinoid insecticides, their ex-works prices may decline in the short term.



**TABLE 1:** Ex-works prices of major insecticide TC products in China in early and mid-Feb. 2023

Category	Product	Ex-works price (RMB/t)	Ex-works price (USD/t)	MoM change
Organophosphorus insecticide	95% Chlorpyrifos technical	44,700	6,623	-2.83%
	90% Malathion technical	38,000	5,630	0.00%
	90% Phoxim technical	45,000	6,667	0.00%
	90% Profenofos technical	83,800	12,416	0.00%
Pyrethroid insecticide	97% Bifenthrin technical	232,500	34,449	-6.63%
	98% Deltamethrin technical	500,000	74,083	-4.76%
	94% Cypermethrin technical	79,000	11,705	-2.47%
	95% Lambda-cyhalothrin technical	180,000	26,670	-1.10%
Carbamate insecticide	98% Carbofuran technical	110,000	16,298	-4.35%
	98% Isoprocarb technical	45,500	6,742	0.00%
	98% Methomyl technical	80,000	11,853	0.00%
Nicotinoid insecticide	95% Acetamiprid technical	114,900	17,024	-5.67%
	97% Imidacloprid technical	126,000	18,669	-4.40%

Source:CCM

**Pest**

**Predicted moderate occurrence of major crop pests in Jilin in 2023**

Summary: On 14 Feb., Jilin Provincial Department of Agriculture and Rural Affairs forecasted an overall moderate occurrence of major pests & diseases and rat damage on crops in the province in 2023. In general, pests & diseases on maize and rice would be moderate. Major pests include maize borer, underground insects and *Chilo suppressalis*.

On 14 Feb., Jilin Provincial Department of Agriculture and Rural Affairs released its prediction of pest & disease occurrence and rat damage on major crops in Jilin Province in 2023. Discussions between experts and crop protection specialists led to a forecast that a generally moderate occurrence is anticipated, with an estimated occurring area of about 5.87 million ha affected. Major pests are maize borer, underground insects and *Chilo suppressalis*.

**TABLE 2:** Forecasted pest occurrence on major crops in Jilin Province in 2023

Crop	Occurrence trend in 2023	Pest
Maize	Moderate occurrence in general	Maize borer: mild occurrence
		Underground insects (mainly include wireworm, mole cricket and grub): mild-to-moderate occurrence
		Maize aphid: moderate occurrence
		<i>Monolepta hieroglyphica</i> : moderate occurrence
Rice	Moderate occurrence in general	<i>Chilo suppressalis</i> : moderate occurrence
		Rice leaf miner, rice leaf beetle and rice locust: mild-to-moderate occurrence
Soybean	Sporadic occurrence in general	Soybean aphid: sporadic occurrence
		Soybean pod borer: moderate occurrence
Potato	Moderate occurrence in general	N/A
Peanut	Moderate occurrence in general	N/A

Source: Jilin Provincial Department of Agriculture and Rural Affairs



## Policy

### Hubei releases pesticide industry development plan for 2022–2025

On 9 Feb., Hubei government released the *Hubei Provincial Pesticide Industry Development Programme 2022–2025*. The Programme proposes that by 2025, the number of pesticide-producing enterprises in the province should be around 60 with an industrial park entry rate of around 80%, pesticide utilisation rate reach more than 43%, and the rate of biopesticide universalisation surpass 20%.

On 9 Feb., the Hubei Provincial Department of Agriculture and Rural Affairs released the *Hubei Provincial Pesticide Industry Development Programme 2022–2025*. The Programme proposes that by 2025, the number of pesticide-producing enterprises within the province should be expanded to around 60 with an industrial park entry rate of about 80%, pesticide utilisation rate reach more than 43%, and the rate of biopesticide universalisation surpass 20%.

The Programme also sets as its goals that development of pesticide industry should be more centralised, pesticide operation more standardised, pesticides better used and pesticide management done in a more scientific manner. During 2022–2025, pesticide industry in Hubei Province should strive for four transformations:

- Orientation of pesticide production should be transformed from quantity to quality and efficiency. More emphases should be put on the transformation and upgrading of enterprises and competitiveness enhancement.
- The focus of pesticide business should switch from product marketing to technical services providing. Enterprises should pay more attention to standardising operation processes and making these processes more scientific.
- In pesticide application, priority should be given to efficiency and safety, instead of just effectiveness, with more emphases put on large-scale and green prevention and control.
- Pesticide management should be extended from administrative approval to full-process management, paying due attention to supervision and services in and after the process.

Regarding the promotion of pesticide R&D and innovation, the government encourages creation of new green pesticides, based upon green & high-efficiency pesticides derived from natural products, green & clean production processes, etc. It proposes that by 2025, at least five newly-created pesticides will be achieved in this period, and the R&D investment of the whole pesticide industry will account for more than 3% of the sales revenue.



**TABLE 3:** Key indicators for pesticide development in Hubei Province during 2022–2025

No.	Indicator	2021	2025	Note	
1	Number of pesticide-producing enterprises	48	60	Guidance target	
2	Output of pesticides (actual volume), '000 tonne	238	>280	Anticipated target	
3	Pesticide business revenue from enterprise above designated size, RMB million	15,000	>23,000	Anticipated target	
4	Number of pesticide service stores	15,600	<16,000	Anticipated target	
5	Number of standardised pesticide service stores	100	500	Guidance target	
6	Pesticide consumption (actual volume), '000 tonne	Total	90.5	<89	Anticipated target
		In crop production	41.6	<41	Guidance target
		In other fields	48.9	<48	Anticipated target

Source:Hubei Provincial Department of Agriculture and Rural Affairs

**TABLE 4:** Development direction for pesticide products proposed in Hubei's Programme during 2022–2025

No.	Development direction	Product
1	Priority given to	Biopesticides: Microbial pesticides such as <i>Bacillus thuringiensis</i> , <i>Bacillus</i> spp., <i>Beauverias</i> spp., <i>Metarhizium</i> spp., <i>Trichoderma</i> spp., nuclear polyhedrosis viruses (NPV), <i>Periplaneta fuliginosa</i> densovirus (PfdNV), etc., biopesticides such as sex attractants, plant resistance inducers, S-(+)-methoprene, ivermectin, etc., botanical pesticide such as matrine, azadirachtin, cnidiadin, TDS, etc.
		Chemical pesticides: Focuses are to be put on addressing the lack of pesticides targeting and alternatives to resistance developed by major pests and diseases, such as wheat head blight, rice stem borers, rice planthoppers, corn fall armyworms, diamondback moths, thrips, <i>Bemisia tabaci</i> , etc., and on accelerating the development of fourth-generation nicotinoid insecticides, diamide insecticides, high-efficiency and low-risk fungicides and herbicides (such as pyraclonil).
2	Moderate control	Insecticides: clothianidin, thiamethoxam, triazophos, imidacloprid, flubendiamide, fenvalerate, acetamiprid, bisultap, etc.
3	Phase-out	Phorate, isofenphos-methyl, ethoprophos, isocarbophos, aldicarb, carbofuran, methomyl, omethoate; nonylphenol will be prohibited to be used as a pesticide adjuvant.

Note:For "Moderate control" products, here only insecticides are presented.

Source:Hubei Provincial Department of Agriculture and Rural Affairs



## Import and Export

### Brazil jumps to No.1 export destination of thiamethoxam TC from China in Sept.–Nov. 2022

Summary: In Sept.–Nov. 2022, thiamethoxam products from China were mainly exported to Brazil, the US, the Netherlands, Russia, etc.; thiamethoxam TC exported to Brazil soared considerably YoY, making Brazil the biggest export destination.

According to the import and export data updated on 8 Feb. from Tranalysis, in Sept.–Nov. 2022, thiamethoxam products from China were mainly exported to Brazil, the US, the Netherlands, Russia, etc. The export volume to these major destinations totalled 2,788.46 tonnes (actual volume), or 2,685.86 tonnes (100% AI volume).

Details of China's thiamethoxam exports in Sept.–Nov. 2022 are as follows:

- Specifications for export: 98% TC, 99% TC, 25% WG, 75% WG
- Average export price & export volume: A total of 2,710.79 tonnes (actual volume), or 2,660.12 tonnes (100% AI volume), of TC products were exported at an average price of USD19.23/kg, and 77.66 tonnes (actual volume), or 25.74 tonnes (100% AI volume), of formulation products were exported at an average price of USD8.49/kg.
- Major exporter: The top three exporters, Hebei Brilliant Chemical Co., Ltd. (Hebei Brilliant), Handan Ruitian Pesticide Co., Ltd. and Hailir Pesticides and Chemicals Group Co., Ltd. (Hailir), together exported 1,876.27 tonnes (100% AI volume) of thiamethoxam products, the amount making up nearly 70% (calculated on 100% AI volume) of the total thiamethoxam exports to major destinations.

The export volume of China's thiamethoxam TC to major destinations increased by 168.71% YoY in Sept.–Nov. 2022, and greater YoY rise was seen in the thiamethoxam TC export to Brazil. Brazil shot to the largest destination of thiamethoxam TC from China in these three months, with 1,317.60 tonnes, or 1,294.27 tonnes (100% AI volume) delivered. Hebei Brilliant and Hailir were the main exporters of China's thiamethoxam TC to Brazil during this period, and their products exported were 98% TC and 99% TC.

**TABLE 5:** Exports of thiamethoxam products from China, Sept.–Nov. 2022

Category	Specifications	Volume, kg	Average price, USD/kg
Technical	98% TC	2,356,553	19.11
	99% TC	354,240	20.03
	<b>Subtotal</b>	<b>2,710,793</b>	<b>19.23</b>
Formulation	25% WG	65,011	6.64
	75% WG	12,653	17.96
	<b>Subtotal</b>	<b>77,664</b>	<b>8.49</b>
<b>Total</b>		<b>2,788,456</b>	<b>18.93</b>

*Note: The data were updated by Tranalysis on 8 Feb., 2023.*





Source:Tranalysis

TABLE 6: Top 10 exporters of thiamethoxam products in China, Sept.–Nov. 2022 vs Sept.–Nov. 2021

No.	Sept.–Nov. 2022			Sept.–Nov. 2021		
	Exporter	100% AI volume, tonne	Share	Exporter	100% AI volume, tonne	Share
1	Hebei Brilliant Chemical Co., Ltd.	763	28.40%	Hebei Brilliant Chemical Co., Ltd.	339	20.35%
2	Handan Ruitian Pesticide Co., Ltd.	567	21.12%	Shandong Rainbow Agrosciences Co., Ltd.	130	7.83%
3	Hailir Pesticides and Chemicals Group Co., Ltd.	546	20.33%	Handan Ruitian Pesticide Co., Ltd.	127	7.63%
4	Jiangsu Changqing Agrochemical Co., Ltd.	187	6.95%	At Agro Co., Ltd.	115	6.89%
5	Trustchem Co., Ltd.	72	2.66%	Jiangsu Changqing Agrochemical Co., Ltd.	68	4.07%
6	Shanghai Cheng Bridge International Trade Co., Ltd.	23	0.86%	Ningbo Sunjoy Bioscience Co., Ltd.	55	3.31%
7	Qingdao Hisigma Chemicals Co., Ltd.	10	0.38%	Ningbo Sunjoy Agroscience Co., Ltd.	44	2.63%
8	Shandong Kesai Eagrow Co., Ltd.	7	0.25%	Hangzhou Hulk Chemical Co., Ltd.	38	2.25%
9	Ningbo Sunjoy Agroscience Co., Ltd.	4	0.15%	Shandong Weifang Rainbow Chemical Co., Ltd.	28	1.66%
10	Rotam Agrochemical Co., Ltd.	4	0.14%	Bioagriland HK Crop Care Co., Ltd.	24	1.44%

Note:The data were updated by Tranalysis on 8 Feb., 2023.

Source:Tranalysis



**TABLE 7:** Export of thiamethoxam TC to major destinations from China, Sept.–Nov. 2022 vs Sept.–Nov. 2021

No.	Sept.–Nov. 2022			Sept.–Nov. 2021		
	Destination	100% AI volume, tonne	Share	Destination	100% AI volume, tonne	Share
1	Brazil	1,294	48.65%	The US	662	66.92%
2	The US	931	35.00%	Paraguay	133	13.48%
3	The Netherlands	233	8.75%	South Korea	127	12.85%
4	Russia	95	3.56%	Ukraine	26	2.63%
5	South Africa	64	2.39%	Russia	21	2.12%
6	Vietnam	26	0.98%	Vietnam	12	1.20%
7	Turkiye	15	0.55%	Brazil	3	0.35%
8	Mexico	3	0.11%	Mexico	3	0.30%
9	/	/	/	Peru	2	0.16%

Note: The data were updated by Tranalysis on 8 Feb., 2023.

Source: Tranalysis

### China's insecticide formulation export hits 280kt in 2022

Summary: According to the import and export data from Tranalysis, in 2022, China's insecticide formulation exports far exceeded the imports, marking a large trade surplus. Last year, insecticide formulations from China were mainly exported to 163 countries or regions, the biggest three destinations being Brazil, Thailand and Vietnam.

According to the import and export data from Tranalysis, in 2022, the export volume of China's insecticide formulations hit 280,875 tonnes (actual volume, the same hereafter), and the export value reached USD1,833 million, far exceeding the 7,476 tonnes of and USD235 million spent on insecticide formulation import.

**TABLE 8:** China's imports and exports of insecticide formulations, 2022

No.	Category	Volume, tonne	Value, million USD	Average price, USD/t
1	Insecticide formulations exported	280,875	1,833	6,527
2	Insecticide formulations imported	7,476	235	31,456
<b>Total/Average</b>		<b>288,351</b>	<b>2,069</b>	<b>7,174</b>

Note: 1. The data, sourced from Tranalysis, were updated on 8 Feb., 2023.

2. All the data here are calculated by actual volume.





Source:Tranalysis

The exports of insecticide formulations peaked in July, with nearly 35,000 tonnes delivered, the amount making up 12.35% of the total insecticide formulation export to major destinations.

Insecticide formulations from China were mainly exported to 163 countries or regions in 2022. The top three export destinations were: Brazil, Thailand and Vietnam. The three countries together imported nearly 68,000 tonnes of insecticide formulations, which accounts for 24.12% of the total.

**TABLE 9:** China's exports of insecticide formulations by month, 2022

Month	Export volume, tonne
Jan.	26,885
Feb.	12,003
March	19,382
April	12,146
May	23,808
June	29,348
July	34,675
Aug.	29,315
Sept.	25,339
Oct.	24,327
Nov.	22,065
Dec.	21,582
<b>Total</b>	<b>280,875</b>

Note:1. The data, sourced from Tranalysis, were updated on 8 Feb., 2023.

2. All the data here are calculated by actual volume.

Source:Tranalysis



TABLE 10: Major export destinations of insecticide formulations from China, 2022

No.	Destination	Volume, tonne
1	Brazil	35,669
2	Thailand	16,880
3	Vietnam	15,201
4	Myanmar	14,471
5	Indonesia	14,353
6	Nigeria	12,590
7	Bangladesh	10,881
8	The Philippines	8,923
9	Cambodia	7,472
10	Ghana	7,370
	Others	137,065
	<b>Total</b>	<b>280,875</b>

Note:1. The data, sourced from Tranalysis, were updated on 8 Feb., 2023.

2. All the data here are calculated by actual volume.

Source:Tranalysis



## Registration

### TC registration in China of 4 insecticidal AIs which may be banned this year

Summary: MARA has planned to introduce a ban on four high-toxicity pesticides—omethoate, aldicarb, carbofuran and methomyl in 2023. As of 3 Feb., 2023, there were 21 valid registrations for TC products of these four insecticidal AIs in China.

The Ministry of Agriculture and Rural Affairs of the People's Republic of China (MARA) has planned to introduce a ban on omethoate, aldicarb, carbofuran and methomyl, all high-toxicity pesticides, in 2023. As of 3 Feb., 2023, there were 21 valid registrations for TC products of these four insecticidal active ingredients (AIs) in China, including one for aldicarb TC, four for omethoate TC, and eight for carbofuran TC and methomyl TC each. If the ban is issued later this year, pesticides containing the four high-toxicity AIs will be officially phased out of the market by the end of 2025, considering the two-year shelf life of pesticide products in general. And if this happens, demand for high-efficacy and low-toxicity novel insecticide products will increase, and these products will help fill the gaps in the market.

It is worth noting that Shandong Huayang Technology Co., Ltd. (Shandong Huayang) is the only enterprise in China with a registration certificate for aldicarb TC now. It also holds registrations for carbofuran TC and methomyl TC. Currently, Shandong Huayang has capacity of 2,000 t/a carbofuran TC, 2,000 t/a methomyl TC and 20,000 t/a aldicarb 5% GR. In view of the trend of phasing out high-toxicity pesticide products, the company has been optimising its pesticide product mix; its production line for carbosulfan TC, a low-toxicity pesticide, has been put into trial production recently.



**TABLE 11: TC registration of four insecticidal active ingredients that may be banned in 2023 in China, as of 3 Feb., 2023**

No.	Product	Total content	Expiry date	Registrant
1	Aldicarb TC	80%	2027/6/28	Shandong Huayang Technology Co., Ltd.
2	Omethoate TC	70%	2025/12/15	Shandong Dacheng Biochemical Co., Ltd.
3	Omethoate TC	70%	2025/8/15	Chongqing Pesticide & Chemical Industry (Group) Co., Ltd.
4	Omethoate TC	92%	2025/7/14	Hangzhou Nutrichem Co., Ltd.
5	Omethoate TC	70%	2025/6/15	Labor (Kaifeng) Technology Co., Ltd.
6	Carbofuran TC	95%, 97%	2027/3/27	Hunan Gofar Fine Chemical Industry Tech. Co., Ltd.
7	Carbofuran TC	97%	2026/12/26	Hunan Haili Chemical Industry Co., Ltd.
8	Carbofuran TC	95%	2024/7/7	FMC Corporation
9	Carbofuran TC	97%	2023/12/15	ADAMA Ltd.
10	Carbofuran TC	98%	2023/12/4	Shandong Huayang Technology Co., Ltd.
11	Carbofuran TC	98%	2023/10/20	Jiangsu Lanfeng Biochemical Co., Ltd.
12	Carbofuran TC	96%	2023/5/9	Jiangsu Changlong Agrochemical Co., Ltd.
13	Carbofuran TC	97%	2023/3/11	Jiangsu Huifeng Bio Agriculture Co., Ltd.
14	Methomyl TC	98%	2028/4/28	Shandong Huayang Technology Co., Ltd.
15	Methomyl TC	98%	2028/2/28	ADAMA Ltd.
16	Methomyl TC	98	2027/12/13	Hunan Haili Chemical Industry Co., Ltd.
17	Methomyl TC	98%	2027/11/27	Xi'an Modern Technology Industrial Co., Ltd.
18	Methomyl TC	98%	2026/6/15	Jiangsu Changlong Agrochemical Co., Ltd.
19	Methomyl TC	98%	2024/4/20	Corteva Agriscience
20	Methomyl TC	98%	2023/12/30	Anhui Huaxing Chemical Industry Co., Ltd.
21	Methomyl TC	98%	2023/12/26	Saerfu (Henan) Agrochemical Co., Ltd.

Source: The Institute for the Control of Agrochemicals, Ministry of Agriculture and Rural Affairs

**21 Insecticide products approved of registration in early Feb.**



Summary: On 10 Feb., 2023, the Department of Agrochemical Management of MARA released a batch of products passed registration approval, which include 21 insecticide products, of which 3 are hygienic insecticides.

On 10 Feb., 2023, the Department of Agrochemical Management of the Ministry of Agriculture and Rural Affairs of the People's Republic of China (MARA) released a batch of pesticide products approved of registration, which include 21 insecticide products, with 3 hygienic insecticides included. All of these insecticides are of mild or low toxicity, and the majority is in SC form.

The main active ingredients in these approved insecticide products are chlorantraniliprole, dinotefuran and clothianidin. Of the 21 approved insecticides, seven contain the active ingredient chlorantraniliprole. Three chlorantraniliprole products come from Anyang Ruipu Agrochemical Co., Ltd.: clothianidin·chlorantraniliprole 1.6% GR, chlorantraniliprole 200g/L SC and abamectin-aminomethyl·chlorantraniliprole 11.6% SC.

It should be noted that the compound patent for chlorantraniliprole in China expired last year. Since 2022, at least seven chlorantraniliprole TC products have been registered. The surge in chlorantraniliprole TC registration, as well as Chinese producers' rush of chlorantraniliprole capacity building, provides a favourable environment for the development of chlorantraniliprole formulations.

**TABLE 12:** Insecticide products approved of registration by form released on 10 Feb., 2023

No.	Form	Number
1	SC	11
2	GR	4
3	EW	1
4	SL	1
5	ZC	1
6	RB	1
7	LV	1
8	OD	1
<b>Total</b>		<b>21</b>

Source: The Department of Agrochemical Management of MARA



**TABLE 13:** Insecticide products approved of registration by toxicity released on 10 Feb., 2023

No.	Toxicity	Number
1	Low	13
2	Mild	7
3	Low (TC: highly toxic)	1
<b>Total</b>		<b>21</b>

Source: The Department of Agrochemical Management of MARA

**TABLE 14:** Insecticide products approved of registration by registrant released on 10 Feb., 2023

No.	Registrant	Number
1	Anyang Ruiipu Agrochemical Co., Ltd.	3
2	Shandong Binnong Technology Co., Ltd.	2
3	Guangdong Kefeng Bio-tech Co., Ltd.	2
4	Henan Changjian Bio-tech Co., Ltd.	2
5	Jiangxi Ganwang Chemical Co., Ltd.	1
6	Jiangsu Gongcheng Bio-tech Co., Ltd.	1
7	Guilin Baisong Bio-tech Co., Ltd.	1
8	Hebei Zhicheng Chemical Co., Ltd.	1
9	Jiangsu Youjia Crop Protection Co., Ltd.	1
10	Zenenorva Crop Protection (Anhui) Co., Ltd.	1
11	Jiangxi Zhonghe Chemical Co., Ltd.	1
12	Guangxi Huifeng Biotechnology Co., Ltd.	1
13	Guangxi Shoukong Biotechnology Factory	1
14	Shaanxi Yitianfeng Crop Science and Technology Co., Ltd.	1
15	Bengbu Gerun Bio-tech Co., Ltd.	1
16	Jiangsu Fengshan Group Co., Ltd.	1
<b>Total</b>		<b>21</b>

Source: The Department of Agrochemical Management of MARA



## News in Brief

### **Guidelines on Available Techniques of Pollution Prevention and Control for Pesticide Manufacturing Industry approved in principle**

On 31 Jan., 2023, the *Guidelines on Available Techniques of Pollution Prevention and Control for Pesticide Manufacturing Industry* was deliberated and approved in principle at an executive meeting of the Ministry of Ecology and Environment of the People's Republic of China.

China is a big pesticide producer as well as a big pesticide consumer, and a great variety of pesticide products can be found in the market, with complicated compositions and chemical structures. During pesticide manufacturing processes, high levels of multiple pollutants are discharged, which poses huge impact to the environment. The Guidelines prioritises treatment of waste water and waste gas generated in pesticide manufacturing, while also pays attention to treatment of solid wastes, noise, etc. It combs through features of pollutants generating and discharging in pesticide manufacturing enterprises, and available techniques of pollution prevention and control, which will provide technical support for implementation of discharge standard of pollutants for pesticide industry, application for and issuance of pollution discharge permits, etc., and thus promote healthy, green and high quality development of the industry.

### **Zhejiang Avilive plans to build 500 t/a chlorantraniliprole TC capacity**

In Feb., CCM learned that the environmental impact report of Zhejiang Avilive Chemical Co., Ltd. (Zhejiang Avilive)'s 500 t/a aminopyralid, 700 t/a clopyralid, 1,000 t/a picloram and 500 t/a chlorantraniliprole project had been publicised recently by local authorities. Zhejiang Avilive intends to invest USD12.27 million (RMB82.79 million) in the project, which will be located in Hengdian County, Dongyang City, Zhejiang Province, to extend its presence along the industrial chain.

Zhejiang Avilive's main products include clopyralid, picloram, triclopyr and chlorpyrifos; it can also produce fenitrothion, malathion, lufenuron, fipronil, phoxim and some other pesticides TC & formulations.

### **Nanjing Red Sun: 2kt/a chlorantraniliprole TC line to come into production in H1 2023**

On 13 Feb., Nanjing Red Sun Co., Ltd. (Nanjing Red Sun) revealed that its wholly-owned subsidiary Chongqing Huage Biochemical Co., Ltd.'s 2,000 t/a chlorantraniliprole TC project was well underway and it expected the lines to be put into operation in H1 2023. Besides, Nanjing Red Sun obtained a registration certificate for 97% chlorantraniliprole TC (registration No. PD20220399) at the end of 2022. So far, the company has already built advantages in raw material supply, production technology and registration certificate resource for its chlorantraniliprole business.

### **XUAR releases first batch of three chemical parks to be approved**

On 17 Feb., the Department of Industry and Information Technology of Xinjiang Uygur Autonomous Region (XUAR) released the first-batch list of three chemical parks (chemical concentration areas) to be approved.





**TABLE 15:** List of the first batch of chemical parks to be approved in XUAR

No.	New name given to park/concentration area to be approved	Name of park (in application material)	Location
1	Shaya County Circular Economy Industrial Park Chemical Industry Concentration Area	Shaya County Circular Economy Industrial Park Energy Chemical Industry Park	Shaya County, Aksu Prefecture
2	Kuqa Economic and Technological Development Zone Chemical Industry Concentration Area	Kuqa Economic and Technological Development Zone Chemical Industry Park	Kuqa City, Aksu Prefecture
3	Baicheng Industrial Park Chemical Industry Concentration Area	Baicheng Industrial Park Chemical Industrial Park	Baicheng County, Aksu Prefecture

Source: Department of Industry and Information Technology of Xinjiang Uygur Autonomous Region

### Guangxi Defengfu plans to build capacity for insecticide formulations

On 15 Feb., the environmental impact (EI) report of Guangxi Defengfu Chemical Co., Ltd. (Guangxi Defengfu)'s 10,000 t/a green pesticide formulation project was accepted by local authorities. Guangxi Defengfu plans to build five production lines for pesticide mixing and subpackaging in Chengxiang Town, Laibin City, Guangxi Zhuang Autonomous Region, and thus establish capacity for multiple insecticide formulations.



**TABLE 16:** Insecticide formulation products planned by Guangxi Defengfu in the new project

No.	Product	Capacity, t/a
1	Bisultap AS	1,500
2	Thiamethoxam GR	1,500
3	Emamectin benzoate ME	1,000
4	Lambda-cyhalothrin EW	1,000
5	Tolfenpyrad SC/chlorfenapyr SC	800
6	Thiamethoxam OD	800
7	Fenobucarb EC	500
8	Emamectin benzoate UL/indoxacarb UL	500
9	Buprofezin WP	500
10	Clothianidin DS	500
11	Clothianidin WS	500
12	Thiocyclam hydrogen oxalate WP/acetamiprid WP	200
13	Emamectin benzoate WG	200
14	Nitenpyram SGX	200

Source:EI report of Guangxi Defengfu's 10,000 t/a green pesticide formulation project

### China to revise List of Class-I Crop Diseases and Pests

On 13 Feb., 2023, the Department of Crop Production, Ministry of Agriculture and Rural Affairs of the People's Republic of China publicised the exposure draft of the List of Class-I Crop Diseases and Pests for revision. Compared with the 2020 version, though the number of pests remained the same, two new pests took the places of two old ones.

**TABLE 17:** Pests on the List of Class-I Crop Diseases and Pests, 2023 draft vs 2020 version

No.	2023 Version (draft)	2020 Version
1	<i>Spodoptera frugiperda</i>	<i>Spodoptera frugiperda</i>
2	<i>Locusta migratoria</i> and other migratory locusts	<i>Locusta migratoria</i> and other migratory locusts
3	<i>Loxostege sticticalis</i>	<i>Loxostege sticticalis</i>
4	Armyworms ( <i>Mythimna separata</i> , <i>Leucania loryi</i> )	Armyworms ( <i>Mythimna separata</i> , <i>Leucania loryi</i> )
5	Rice planthoppers ( <i>Nilaparvata lugens</i> , <i>Sogatella furcifera</i> )	Rice planthoppers ( <i>Nilaparvata lugens</i> , <i>Sogatella furcifera</i> )
6	Rice leaf roller	Rice leaf roller
7	<i>Chilo suppressalis</i>	<i>Chilo suppressalis</i>
8	Wheat aphids ( <i>Sitobion miscanthi</i> , <i>Rhopalosiphum padi</i> , <i>Schizaphis graminum</i> )	Wheat aphids ( <i>Sitobion miscanthi</i> , <i>Rhopalosiphum padi</i> , <i>Schizaphis graminum</i> )
9	<i>Ostrinia furnacalis</i>	<i>Leptinotarsa decemlineata</i>
10	Thrips ( <i>Megalurothrips usitatus</i> , <i>Thrips palmi</i> , <i>Frankliniella occidentalis</i> )	<i>Cydia pomonella</i>

Source: Department of Crop Production, Ministry of Agriculture and Rural Affairs of the People's Republic of China

### China approves registration renewal of 230 insecticide products in early Feb.

In early Feb. 2023, the Department of Agrochemical Management of the Ministry of Agriculture and Rural Affairs of the People's Republic of China (MARA) released a batch of 646 pesticide products from 303 enterprises that were approved of registration renewal, including 230 insecticide products (23 TC products and 207 formulations), of which 30 are hygienic insecticides. These formulations are mainly in the form of EC, SC and ME.

**TABLE 18:** Registrants with two or more insecticide TC products approved of registration renewal in early Feb. 2023

No.	Registrant	Product	Toxicity
1	Jiangsu Changlong Agrochemical Co., Ltd.	96% Carbofuran TC	High
2		90% Propargite TC	Low
3		98% Deltamethrin TC	Moderate
4	Gharda Chemicals Ltd. (India)	98% Deltamethrin TC	Moderate
5		98% Chlorpyrifos TC	Moderate
6	FMC Corporation	92% Permethrin TC	Low
7		98% Gamma cyhalothrin TC	Moderate
8	Fuhua Tongda Chemical Co., Ltd.	98% Imidacloprid TC	Low
9		94% Profenofos TC	Moderate

Source: Department of Agrochemical Management, Ministry of Agriculture and Rural Affairs of the People's Republic of China

### Shandong Xinxing's plant protection agent project approved, products including insecticide formulations

On 22 Feb., the environmental impact (EI) report of Shandong Xinxing Biotechnology Co., Ltd. (Shandong Xinxing)'s 30,000 t/a plant protection agent project was approved by local authorities. Shandong Xinxing plans to set this project in Zhanghuang Chemical Industry Park, Yutai County, Jining City, Shandong Province. Planned products include several insecticide formulations.

**TABLE 19:** Insecticide formulation products planned by Shandong Xinxing with capacity over 1k/t in the new project

No.	Product	Capacity, t/a
1	Chlorantraniliprole-clothianidin 0.16% GR	5,000
2	Chlorantraniliprole-clothianidin 1% GR	4,000
3	Bifenthrin-clothianidin 2% GR	3,000
4	Dinotefuran 3% GR	2,000
5	Bifenthrin-clothianidin 1% GR	1,720
6	Phoxim 1.5% GR	1,500

Source: EI report of Shandong Xinxing's 30,000 t/a plant protection agent project



### **Anhui outlined focuses of pesticide management work in 2023**

On 17 Feb, Anhui Provincial Department of Agriculture and Rural Affairs revealed the focuses of pesticide management work in the province in 2023. It requires the strengthening of pesticide registration and administration services, of production and business licensing, of supervision and inspection on pesticide market, of fulfilment of pesticide real-name purchase, etc.

In terms of pesticide registration and administration, registration is encouraged of biopesticides, and new forms & novel products that are suitable for aerial spraying. In terms of pesticide production management, it requires pesticide producers to shoulder their entity responsibility and collect pesticide packaging wastes, and related agencies to offer technical guidance on the safe and rational use of pesticides, etc.

### **Shangyu Nutrichem's pesticide TC & intermediate project passes expert review**

On 17 Feb., Shangyu Nutrichem Co., Ltd. (Shangyu Nutrichem) held a technical consultation meeting on the environmental impact report of its 5,800 t/a pesticide TC and supporting core intermediate project. After discussion and deliberation, the expert panel for the project agreed to the report. Once the project is successfully built up, Shangyu Nutrichem will have 1,000 t/a lufenuron TC added to its insecticide capacity.





## Price Update

## Ex-works prices of major insecticides in China on 8 Feb. 2023

TABLE 20: Ex-works prices of major insecticides in China, 8 Feb., 2023

Product	20230108		20230208	
	Original Price (RMB/t)	Price (USD/t)	Original Price (RMB/t)	Price (USD/t)
95% Abamectin technical	540,000	77,725.8	526,000	77,935.16
97% Acephate technical	55,000	7,916.52	55,000	8,149.11
95% Acetamiprid technical	121,800	17,531.49	114,900	17,024.24
95% Azocyclotin technical	185,000	26,628.28	185,000	27,410.66
95% Beta-Cypermethrin technical	152,000	21,878.37	152,000	22,521.19
97% Bifenthrin technical	249,000	35,840.23	232,500	34,448.53
95% Buprofezin technical	76,000	10,939.19	75,000	11,112.43
98% Carbofuran technical	115,000	16,552.72	110,000	16,298.23
98% Chlorfenapyr technical	215,000	30,946.38	215,000	31,855.63
95% Chlorfluazuron technical	440,000	63,332.13	440,000	65,192.91
95% Chlorpyrifos technical	46,000	6,621.09	44,700	6,623.01
94% Cypermethrin technical	81,000	11,658.87	79,000	11,705.09
99% Cyromazine technical	150,000	21,590.5	148,000	21,928.52
98% Deltamethrin technical	525,000	75,566.75	500,000	74,082.85
95% Diafenthiuron technical	135,000	19,431.45	135,000	20,002.37
98% Dimethoate technical	47,600	6,851.39	47,600	7,052.69
70% Emamectin benzoate technical	504,000	72,544.08	497,000	73,638.36
92% Fenvalerate technical	135,000	19,431.45	135,000	20,002.37
95% Fipronil technical	553,000	79,596.98	540,000	80,009.48
98% Hexaflumuron technical	500,000	71,968.33	500,000	74,082.85





97% Imidacloprid technical	131,800	18,970.85	126,000	18,668.88
98% Isoprocarb technical	45,500	6,549.12	45,500	6,741.54
95% Lambda-cyhalothrin technical	182,000	26,196.47	180,000	26,669.83
90% Malathion technical	38,000	5,469.59	38,000	5,630.3
95% Methidathion technical	90,000	12,954.3	90,000	13,334.91
Methomyl 90% SP	74,000	10,651.31	74,000	10,964.26
98% Methomyl technical	80,000	11,514.93	80,000	11,853.26
75% Omethoate technical	51,400	7,398.34	52,000	7,704.62
90% Phoxim technical	45,000	6,477.15	45,000	6,667.46
90% Profenofos technical	83,800	12,061.89	83,800	12,416.29
90% Propargite technical	60,000	8,636.2	60,000	8,889.94
95% Pymetrozine technical	127,000	18,279.96	119,300	17,676.17
95% Pyridaben technical	105,000	15,113.35	105,000	15,557.4
97% Spirodiclofen technical	160,000	23,029.87	160,000	23,706.51
85% Triazophos technical	59,000	8,492.26	59,000	8,741.78

Note: Ex-works price includes VAT.

Source: CCM

### Shanghai Port prices of major insecticides in China, 8 Feb. 2023





TABLE 21: Shanghai Port prices of major insecticides in China, 8 Feb., 2023

Product	20230108		20230208	
	Original Price (RMB/t)	Price (USD/t)	Original Price (RMB/t)	Price (USD/t)
95% Abamectin technical	540,500	77,797.77	526,500	78,009.25
97% Acephate technical	55,500	7,988.49	55,500	8,223.2
95% Acetamiprid technical	122,300	17,603.45	115,400	17,098.32
95% Azocyclotin technical	185,500	26,700.25	185,500	27,484.74
95% Beta-Cypermethrin technical	152,500	21,950.34	152,500	22,595.27
97% Bifenthrin technical	249,500	35,912.2	233,000	34,522.61
95% Buprofezin technical	76,500	11,011.16	75,500	11,186.51
98% Carbofuran technical	115,500	16,624.69	110,500	16,372.31
98% Chlorfenapyr technical	215,500	31,018.35	215,500	31,929.71
95% Chlorfluazuron technical	440,500	63,404.1	440,500	65,266.99
95% Chlorpyrifos technical	46,500	6,693.06	45,200	6,697.09
94% Cypermethrin technical	81,500	11,730.84	79,500	11,779.17
99% Cyromazine technical	150,500	21,662.47	148,500	22,002.61
98% Deltamethrin technical	525,500	75,638.72	500,500	74,156.94
95% Diafenthiuron technical	135,500	19,503.42	135,500	20,076.45
98% Dimethoate technical	48,100	6,923.35	48,100	7,126.77
70% Emamectin benzoate technical	504,500	72,616.05	497,500	73,712.44
92% Fenvalerate technical	135,500	19,503.42	135,500	20,076.45
95% Fipronil technical	553,500	79,668.95	540,500	80,083.57
98% Hexaflumuron technical	500,500	72,040.3	500,500	74,156.94
97% Imidacloprid technical	132,300	19,042.82	126,500	18,742.96
98% Isoprocarb technical	46,000	6,621.09	46,000	6,815.62







95% Lambda-cyhalothrin technical	182,500	26,268.44	180,500	26,743.91
90% Malathion technical	38,500	5,541.56	38,500	5,704.38
95% Methidathion technical	90,500	13,026.27	90,500	13,409
Methomyl 90% SP	74,500	10,723.28	74,500	11,038.35
98% Methomyl technical	80,500	11,586.9	80,500	11,927.34
75% Omethoate technical	51,900	7,470.31	52,500	7,778.7
90% Phoxim technical	45,500	6,549.12	45,500	6,741.54
90% Profenofos technical	84,300	12,133.86	84,300	12,490.37
90% Propargite technical	60,500	8,708.17	60,500	8,964.03
95% Pymetrozine technical	127,500	18,351.93	119,800	17,750.25
95% Pyridaben technical	105,500	15,185.32	105,500	15,631.48
97% Spirodiclofen technical	160,500	23,101.84	160,500	23,780.6
85% Triazophos technical	59,500	8,564.23	59,500	8,815.86

Note: Shanghai port price = ex-works price + transportation fee from warehouse to Shanghai port, and the ex-works price includes VAT.

Source: CCM

### FOB Shanghai prices of major insecticides in China, 8 Feb. 2023





TABLE 22: FOB Shanghai prices of major insecticides in China, 8 Feb., 2023, USD/t

Product	20230108	20230208
95% Abamectin technical	71,308.07	75,943.14
97% Acephate technical	7,005.77	7,801.36
95% Acetamiprid technical	16,083.93	16,694.5
95% Azocyclotin technical	24,429.62	26,817.65
95% Beta-Cypermethrin technical	19,361.39	21,279.1
97% Bifenthrin technical	31,717.02	32,457.75
95% Buprofezin technical	10,035.95	10,961.57
98% Carbofuran technical	15,185.98	15,999.88
98% Chlorfenapyr technical	28,391.18	31,135.92
95% Chlorfluazuron technical	58,102.88	63,555.67
95% Chlorpyrifos technical	6,074.39	6,590.09
94% Cypermethrin technical	10,317.58	11,132.23
99% Cyromazine technical	19,106.64	20,720.08
98% Deltamethrin technical	66,873.23	69,641.82
95% Diafenthiuron technical	17,195.97	18,920.34
98% Dimethoate technical	6,063.17	6,772.85
70% Emamectin benzoate technical	66,554.2	71,764.37
92% Fenvalerate technical	17,195.97	18,920.34
95% Fipronil technical	73,024.75	77,960.75
98% Hexaflumuron technical	66,025.99	72,200.93
97% Imidacloprid technical	17,404.45	18,301.64
98% Isoprocarb technical	5,795.68	6,480.98
95% Lambda-cyhalothrin technical	23,182.72	25,170.53





90% Malathion technical	4,840.35	5,438.57
95% Methidathion technical	11,884.68	13,124.95
Methomyl 90% SP	9,771.85	10,819.55
98% Methomyl technical	11,514.93	12,721.51
75% Omethoate technical	6,547.21	7,386.23
90% Phoxim technical	5,903.95	6,599.12
90% Profenofos technical	10,674.24	11,803.82
90% Propargite technical	7,923.12	8,802.32
95% Pymetrozine technical	16,176.95	16,725.31
95% Pyridaben technical	13,865.46	15,286.27
97% Spirodiclofen technical	20,380.41	22,395.02
85% Triazophos technical	7,791.07	8,658.23

*Note: FOB price is calculated mainly based on ex-works price, tax refund, value added tax rate, exchange rate, etc.*

*Source: CCM*



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