

Insecticides China Monthly Report 202304

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Headline

In late March, Guang'an Lier's green crop protection project broke ground. The company will build 78,000 t/a production capacity for pesticides TC and 95,700 t/a for fine chemical intermediates in its production base in Guang'an City, Sichuan Province. Products planned include chlorantraniliprole TC, cyantraniliprole TC and chlorantraniliprole intermediates.

On 4 April, the EI report of Gansu Yudeyuan's 2,000 t/a 2-methyl-3-biphenylmethanol, 4,000 t/a CCMT and 2,000 t/a thiamethoxam project was accepted by local authorities. Once the production lines are built up, the company could have an advantage in raw material supply for the production of thiamethoxam TC.

In late March, the EI report of Shenyang Sciencreat's cyetpyrafen capacity expansion project was accepted by local authorities. Once the production lines are built up, the company could double its cyetpyrafen TC capacity to 600 t/a.

On 12 April, it was announced that the EI report of Ningxia Beilite's construction project of 102,000 t/a cyanamide downstream products—guanidines was to be approved by local authorities. The company has planned to build 102,000 t/a production capacity for raw materials of neonicotinoid insecticides, including 40,000 t/a guanidine nitrate, 30,000 t/a nitroguanidine, 12,000 t/a 1-methyl-3-nitroguanidine, 10,000 t/a 3-methyl-4-nitroiminoperhydro-1,3,5-oxadiazine and 10,000 t/a 2-nitroaminoimidazoline.

In early April, prices of most insecticides TC dropped. Prices of some 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 April, ex-works prices of most China's insecticides TC dropped due to sluggish downstream market. Specifically, some nicotinoid insecticides TC and pyrethroid insecticides TC witnessed over 10% MoM price drops.

In late March, the Guangdong Provincial Department of Agriculture and Rural Affairs forecasted an overall relatively heavy occurrence of pests, rats and diseases on crops in the province in H1 2023. Some pests may occur more heavily, such as fall armyworm, rice planthopper, *Phyllotreta striolata*, diamondback moth, *Maruca vitrata*.

On 5 April, Jiangxi Provincial Department of Agriculture and Rural Affairs issued the Implementation Plan for Chemical Pesticide Usage Reduction in Jiangxi Province to 2025. The Plan aims to promote chemical pesticide usage reduction and efficacy enhancement, and to maintain a downward trend in the total use of chemical pesticides.

In Jan.–Feb. 2023, China's insecticide formulations were mainly exported to Brazil, Thailand, Myanmar, Nigeria, etc., with an export volume of over 40,000 tonnes. The volume grew by some 3% YoY.

On 3 April, the Department of Agrochemical Management of MARA released a batch of products granted registration approval, which include 25 insecticide products, of which 3 are hygienic insecticides.







Editor's Note

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In terms of company dynamics, in late March, Guang'an Lier's green crop protection project broke ground. The company will build 78,000 t/a production capacity for pesticides TC and 95,700 t/a for fine chemical intermediates; products planned include chlorantraniliprole TC, cyantraniliprole TC and chlorantraniliprole intermediates. On 4 April, the EI report of Gansu Yudeyuan's 2,000 t/a 2-methyl-3-biphenylmethanol, 4,000 t/a CCMT and 2,000 t/a thiamethoxam project was accepted by local authorities.

In terms of policies, on 5 April, Jiangxi Provincial Department of Agriculture and Rural Affairs issued the *Implementation Plan for Chemical Pesticide Usage Reduction in Jiangxi Province to 2025*. The Plan aims to promote chemical pesticide usage reduction and efficacy enhancement, and to maintain an overall downward trend in the use of chemical pesticides across the province.

In terms of pesticide registration, on 3 April, the Department of Agrochemical Management of MARA released a batch of products granted registration approval, which include 25 insecticide products, of which 3 are hygienic insecticides.

The USD/CNY exchange rate in this newsletter is USD1.00 = CNY6.8805 on 3 April, 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

Guang'an Lier starts construction of chlorantraniliprole TC & cyantraniliprole TC lines

Summary: In late March, Guang'an Lier's green crop protection project broke ground. The company will build 78,000 t/a production capacity for pesticides TC and 95,700 t/a for fine chemical intermediates in its production base in Guang'an City, Sichuan Province. Products planned include chlorantraniliprole TC, cyantraniliprole TC and chlorantraniliprole intermediates.

On 29 March, Guang'an Lier Chemical Co., Ltd. (Guang'an Lier)'s green crop protection project broke ground. It only took three months to set the project under construction, after signing a contract with local authorities on 21 Dec., 2022. This project is by far the largest additional investment Guang'an Lier has ever made since it settled in Guang'an City in 2014. The company will build altogether 78,000 t/a production capacity for pesticides TC and 95,700 t/a for fine chemical intermediates in the Xinqiao Industrial Park of Guang'an Economic and Technological Development Zone, Guang'an City, Sichuan Province, which include 5,000 t/a chlorantraniliprole TC, 1,000 t/a cyantraniliprole TC and some lines for chlorantraniliprole intermediates.

Overview of Guang'an Lier's green crop protection project:

- Some brief information on Guang'an Lier's 78,000 t/a pesticide TC project was publicised by local authorities in April 2022 and Jan. 2023. The products involved and their designed capacity are as follows:
 - Insecticide products: 5,000 t/a Chlorantraniliprole TC and 1,000 t/a cyantraniliprole TC;
 - Other products: 40,000 t/a L-Glufosinate TC, 10,000 t/a triclopyr-butotyl TC, 5,000 t/a picloram TC, 5,000 t/a fluroxypyr-meptyl TC, 3,000 t/a clopyralid TC, 2,000 t/a aminopyralid TC, 2,000 t/a thiabendazole TC, 2,000 t/a pinoxaden TC, 2,000 t/a flumioxazin TC and 1,000 t/a clodinafop-propargyl TC.
- Some details of Guang'an Lier's industrial demonstration project of fine chemicals manufacturing and recycling (also known as 95,700 t/a fine chemical intermediate project) was publicised by local authorities in March 2021; environmental impact report of this project was approved in July 2022. This project uses self-produced chlorine (from the sodium chloride comprehensive utilisation project) and purchased yellow phosphorus as raw materials to produce 24 fine chemicals, including chlorantraniliprole intermediates—2-amino-5-chloro-N,3-dimethylbenzamide (planned capacity: 6,000 t/a) and 3-bromo-1-(3-chloropyridin-2-yl)-1H-pyrazole-5-carboxylic acid (planned capacity: 8,000 t/a).

Although Guang'an Lier has not obtained pesticide registration certificates for chlorantraniliprole TC or cyantraniliprole TC yet, its parent company Lier Chemical Co., Ltd. (Lier Chemical) successfully obtained a registration certificate for chlorantraniliprole TC (No. PD20220234) in Oct. 2022. Lier Chemical mainly engages in R&D, production and sale of high-efficacy and safe pesticides. Its products include chemical intermediates, and more than 30 TC products and over 100 formulations, covering categories of herbicide, insecticide and fungicide. The parent company is headquartered in Mianyang City, Sichuan Province; it has six production bases, scattered in Mianyang City, Guang'an City, Nantong City (Jiangsu Province), Yueyang City (Hunan Province), Hebi City (Henan Province) and Jingzhou City (Hubei Province). Its Guang'an production base consists of three subsidiaries: Guang'an Lier, Guang'an Lihua Chemical Co., Ltd. (Guang'an Lihua) and Guang'an Lvyuan Recycling Technology Co., Ltd.

According to the agreement Lier Chemical signed with the Administrative Committee of Guang'an Economic and Technological Development Zone, a Lier industrial park is to be built in five phases in the Xinqiao Industrial Park. The construction should be carried out





by Guang'an Lier, Guang'an Lihua and Sichuan Lvdiyuan Environmental Protection Technology Co., Ltd.

Gansu Yudeyuan plans to build capacity for thiamethoxam and intermediate CCMT

Summary: On 4 April, the EI report of Gansu Yudeyuan's 2,000 t/a 2-methyl-3-biphenylmethanol, 4,000 t/a CCMT and 2,000 t/a thiamethoxam project was accepted by local authorities. Once the production lines are built up, the company could have an advantage in raw material supply for the production of thiamethoxam TC.

On 4 April, acceptance of the environmental impact (EI) report of Gansu Yudeyuan Technology Co., Ltd. (Gansu Yudeyuan)'s 2,000 t/a 2-methyl-3-biphenylmethanol, 4,000 t/a 2-chloro-5-chloromethylthiazole (CCMT) and 2,000 t/a thiamethoxam project was announced by local authorities. Previously in July and Aug. 2022, some details of this project were publicised. It is planned that the production lines will be built in the Hexipu Industrial Park, Jinchang Economic and Technological Development Zone, Jinchang City, Gansu Province. Among the planned products, 2-methyl-3-biphenylmethanol is an intermediate for the insecticide bifenthrin and CCMT is an important intermediate for the synthesis of second-generation neonicotinoid insecticides such as thiamethoxam, thiacloprid and imidaclothiz. Once the project is completed, the company would have an advantage in raw material supply for the production of thiamethoxam TC.

Thiamethoxam is the most popular second-generation neonicotinoid insecticide; it captures the largest market share of neonicotinoid insecticides. It is applicable on a wide range of crops because of its broad spectrum, high efficacy and low toxicity. Thiamethoxam products are widely used in China. Production capacity for this product has expanded rapidly after the compound patent expired in China in 2013. Many Chinese producers have built up production capacity for thiamethoxam TC, such as Handan Ruitian Pesticide Co., Ltd. (Handan Ruitian), Hebei Brilliant Chemical Co., Ltd. (Hebei Brilliant), Guangdong Liwei Chemical Industry Co., Ltd., Hubei Benxing Agrochemical Co., Ltd. and Hebei Yetian Agrochemicals Co., Ltd.

Thiamethoxam products made in China are mainly export-oriented; more than 60% of thiamethoxam TC products are exported, with main export destinations concentrated in South America and Southeast Asia. According to the import and export data from Tranalysis, major exporters of thiamethoxam TC from China in 2022 were Hebei Brilliant, Handan Ruitian, Hailir Pesticides and Chemicals Group Co., Ltd., Jiangsu Changqing Agrochemical Co., Ltd. and Shenzhen King Quenson Industry Co., Ltd.

Some countries/regions have so far introduced bans or restrictions on the use of thiamethoxam out of concerns over its potential high risk to pollinators such as bees.

- In 2012, the French Ministry of Agriculture decided to ban the use of thiamethoxam in the treatment of rape seeds, based on results of laboratory simulations conducted by the French Agency for Food, Environmental and Occupational Health & Safety (ANSES).
- In 2018, the use of neonicotinoid insecticides (including thiamethoxam, clothianidin, imidacloprid, thiacloprid and acetamiprid) was completely banned in France.
- In 2018, the use of three neonicotinoid insecticides—thiamethoxam, clothianidin and imidacloprid—outside permanent greenhouses was de-authorised in the European Union.
- In 2019, the US Environmental Protection Agency revoked registrations of 12 pesticide products containing thiamethoxam and clothianidin.
- In 2022, the European Union proposed to lower the maximum residue limits (MRLs) for thiamethoxam on all agricultural products to the range of 0.01 mg/kg–0.05 mg/kg, which is where the limit of determination stands.





- In Feb. 2023, the European Union lowered the MRLs for thiamethoxam in or on certain products to 0.01mg/kg–0.05mg/kg.

As the European Union is the world's third-largest importer of agricultural products after the US and China, its lowering of the MRLs for thiamethoxam will impact the global trade of thiamethoxam and agricultural products. Reducing MRLs for thiamethoxam in certain agricultural products to 0.01mg/kg pretty much means the use of thiamethoxam is prohibited in the production of these agricultural products from trading partners of the European Union around the world. It is expected that China's exports of agricultural products to the European Union will be affected, especially the exports of beverage crops such as tea and coffee beans, of legumes, vegetables, and fruits such as grapefruits, apples and strawberries. In addition, global demand for thiamethoxam will thus be slashed, which will then cut down China's thiamethoxam production.

According to the Institute for the Control of Agrochemicals, Ministry of Agriculture and Rural Affairs, as of 18 April, 2023, there were 684 registered pesticide products (consisting of 62 TC and 622 formulations) containing the active ingredient thiamethoxam in China. These products are applicable on a total of 54 crops/sites. Holders of these registrations are mainly located in Jiangsu, Hebei, Shandong, Zhejiang and Inner Mongolia.

Shenyang Sciencreat plans to expand cyetpyrafen TC capacity to 600 t/a

Summary: In late March, the EI report of Shenyang Sciencreat's cyetpyrafen capacity expansion project was accepted by local authorities. Once the production lines are built up, the company could double its cyetpyrafen TC capacity to 600 t/a.

In late March, acceptance of the environmental impact (EI) report of Shenyang Sciencreat Chemicals Co., Ltd. (Shenyang Sciencreat)'s cyetpyrafen capacity expansion project was announced by the Shenyang Municipal Bureau of Ecology and Environment. Shenyang Sciencreat has planned to invest USD4.21 million (RMB29 million) in this project, which will be built in the company's existing plant in Shenyang Economic and Technological Development Zone, Shenyang City, Liangning Province. Once the production lines are built up, the company could expand cyetpyrafen TC capacity from 300 t/a to 600 t/a.

Shenyang Sciencreat is a wholly-owned sub-subsidiary of Jiangsu Yangnong Chemical Co., Ltd. (Jiangsu Yangnong). It mainly engages in the manufacturing and processing of pesticides such as herbicides, fungicides and insecticides, and of other fine chemicals; it also provides application services. Shenyang Sciencreat has obtained governmental approvals to produce 24 pesticides technical, 3 pesticide intermediates, 6 technical by-products and 5 formulation products in its plant. The lines for these products, including 1,000 t/a pymetrozine, 300 t/a cyetpyrafen, 50 t/a tetrachlorantraniliprole and 25 t/a pyriminostrobin production lines, are all operational. The company has also launched an imazamox SL capacity expansion project, which is currently under construction.

Cyetpyrafen and tetrachlorantraniliprole are pesticides independently developed by Shenyang Sinochem Agrochemicals R&D Co., Ltd., also a subsidiary of Jiangsu Yangnong. Cyetpyrafen is a novel acrylonitrile acaricide. There already exist multiple cyetpyrafen-related patents in China. Patents for the compound have been granted in China, the US, Japan, European countries, Brazil, etc., and will expire in 2030. Tetrachlorantraniliprole is China's first diamide insecticide developed with independent intellectual property rights. This product has a broad insecticidal spectrum and is mainly used for the control of pests on rice, maize and beets, control targets including *Chilo*





suppressalis, rice leaf roller, diamondback moth, cabbage caterpillar, corn borer, beet armyworm.

Tetrachlorantraniliprole TC was first registered in China in 2017 and cyetpyrafen TC in 2018. According to the Institute for the Control of Agrochemicals, Ministry of Agriculture and Rural Affairs (ICAMA), as of 19 April, 2023, there were five registered products (two TC products and three formulations) containing these two active ingredients, and the registrants were all Jiangsu Yangnong's subsidiaries.

TABLE 1: Registrations of cyetpyrafen & tetrachlorantraniliprole products in China, as of 19 April, 2023

No.	Active ingredient	Total content	Form	Category	Expiry date	Registrant
1	Cyetpyrafen	98%	TC	Acaricide	2028/4/22	Shenyang Sciencreat Chemicals Co., Ltd.
2	Cyetpyrafen	30%	SC	Acaricide	2028/4/22	Shenyang Sciencreat Chemicals Co., Ltd.
3	Spirodiclofen·cyetpyrafen	30%	SC	Acaricide	2026/6/10	Jiangsu Youjia Crop Protection Co., Ltd.
4	Tetrachlorantraniliprole	95%	TC	Insecticide	2027/8/30	Shenyang Sciencreat Chemicals Co., Ltd.
5	Tetrachlorantraniliprole	10%	SC	Insecticide	2027/8/30	Shenyang Sciencreat Chemicals Co., Ltd.

Source:ICAMA

Ningxia Beilite to build 102kt/a capacity for raw materials of neonicotinoid insecticides

Summary: On 12 April, it was announced that the EI report of Ningxia Beilite's construction project of 102,000 t/a cyanamide downstream products—guanidines was to be approved by local authorities. The company has planned to build 102,000 t/a production capacity for raw materials of neonicotinoid insecticides, including 40,000 t/a guanidine nitrate, 30,000 t/a nitroguanidine, 12,000 t/a 1-methyl-3-nitroguanidine, 10,000 t/a 3-methyl-4-nitroiminoperhydro-1,3,5-oxadiazine and 10,000 t/a 2-nitroaminoimidazoline.

On 12 April, the Administrative Committee of Ningxia Pingluo Industrial Park announced that it was to approve the EI report of Ningxia Beilite Biotechnology Co., Ltd. (Ningxia Beilite)'s construction project of 102,000 t/a cyanamide downstream products—guanidines. The company has planned to build production lines of 40,000 t/a guanidine nitrate, 30,000 t/a nitroguanidine, 12,000 t/a 1-methyl-3-nitroguanidine, 10,000 t/a 3-methyl-4-nitroiminoperhydro-1,3,5-oxadiazine and 10,000 t/a 2-nitroaminoimidazoline in its existing plant in the Ningxia Pingluo Industrial Park, Shizuishan City, Ningxia Hui Autonomous Region.

The planned products are closely related upstream-downstream products; they can be used to synthesise neonicotinoid insecticides.

- Guanidine nitrate is an important intermediate of nitroguanidine, and nitroguanidine is a key intermediate used to synthesise 2-nitroaminoimidazoline and 1-methyl-3-nitroguanidine.
- 2-Nitroaminoimidazoline is mainly used in the production of imidacloprid.
- 1-Methyl-3-nitroguanidine can be used to synthesise several neonicotinoid insecticides such as imidacloprid, thiamethoxam, clothianidin and dinotefuran.
- 3-Methyl-4-nitroiminoperhydro-1,3,5-oxadiazine is an important intermediate of thiamethoxam.

Ningxia Beilite, founded in 2014, is a subsidiary of Ningxia Beilite Chemical Co., Ltd. (Beilite Chemical). It is a state-level high-tech





enterprise, mainly engaged in the production of cyanamide downstream chemical new materials. In recent years, Ningxia Beilite has been proactively extending to cyanamide chemical downstream sectors, optimising its industrial structure, striving to improve added value of its products and promoting green development. The company, along with its parent company Beilite Chemical, aims at fostering an internationally competitive enterprise group and an industrial cluster.

Cyanamide downstream products are numerous, a leading group of which is guanidine compounds. With great strides made in the application of guanidines and nicotinoids in pharmaceutical and pesticide industries in recent years, market demand has ballooned for upstream guanidine intermediates, such as guanidine nitrate, nitroguanidine, 1-methyl-3-nitroguanidine and 3-methyl-4-nitroiminoperhydro-1,3,5-oxadiazine. Supply of these mentioned intermediates fails to meet the demand in China and overseas.

Seeing this huge demand, Ningxia Beilite thus launched this large-scale raw material project, which can take advantage of its existing production equipment for cyanamide downstream products and supporting facilities. It should be noted that Ningxia Beilite has already had active capacity of 30,000 t/a guanidine nitrate, 20,000 t/a nitroguanidine, 7,000 t/a 2-nitroaminoimidazoline, 7,000 t/a 1-methyl-3-nitroguanidine and 6,000 t/a 3-methyl-4-nitroiminoperhydro-1,3,5-oxadiazine. Unlike traditional batch production processes (using tank reactors for all products) adopted by the previous production lines, the new lines will adopt continuous and automatic production processes to produce guanidine nitrate, and automatic production processes to produce nitroguanidine (using advanced tubular reactor and continuous crystallizer). Ningxia Beilite will be a pioneer in applying whole-process automatic technology in production of these products. And the continuous tubular reactor it plans to use has the advantages of high mass and heat transfer efficiency, safety production, short reaction period, etc.





Market Analysis

Prices of most insecticides TC drop in early April

Summary: In early April, prices of most insecticides TC dropped. Prices of some 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 April, prices of most insecticides TC dropped since downstream demand went weaker and new orders were difficult to secure for some insecticides TC producers. Most buyers took a wait-and-see attitude. Although some organophosphorus insecticides TC and carbamate insecticides TC had stable price, most pyrethroid insecticides TC and nicotinoid insecticides TC experienced a continued price fall.

Organophosphorus insecticides: Ex-works prices of malathion TC and profenofos TC were stable, while the prices of phoxim TC and chlorpyrifos TC went down by over 6% MoM. For chlorpyrifos, market supply was consumed slowly; both the supply and demand were sluggish. Early this month, some chlorpyrifos producers suspended production, such as Nanjing Red Sun Co., Ltd. and Chongqing Huage Biochemical Co., Ltd.; meanwhile the line in Jiangsu Fengshan Group Co., Ltd. were operated at a low level. Given a relatively slack demand for organophosphorus insecticides in China, prices of some products may be set lower in the short term.

Carbamate insecticides: Ex-works prices of carbofuran TC and methomyl TC went down over 3% MoM, mainly due to small downstream purchase. Considering weak demand and slow trading in China, prices of some carbamate insecticides may decline in the short term.

Pyrethroid insecticides: Ex-works prices of most pyrethroid insecticides TC decreased mainly due to insufficient domestic demand. Prices of bifenthrin TC, lambda-cyhalothrin TC and cypermethrin TC went down by nearly 12%, 9% and 7% MoM respectively. Considering large inventory of some intermediates and downward trend in their prices, pyrethroid insecticides TC may witness price decline in the short term.

Nicotinoid insecticides: Ex-works prices of nicotinoid insecticides were lowered in general due to slack domestic demand and small exports. Prices of imidacloprid TC and acetamiprid TC plummeted over 14% MoM. There has been a glut of imidacloprid TC in the market. Major imidacloprid producers had normal operation early this month, such as Wuzhong Linghang Biological & Pharmaceutical Co., Ltd., Shandong United Pesticide Industry Co., Ltd. and Shandong Hailir Chemicals Co., Ltd., which explains the ample supply. In addition, the price of the important intermediate 2-chloro-5-chloromethylpyridine (CCMP) fell by nearly 9% MoM in early April. Ex-works prices of nicotinoid insecticides may decline further in the short term, against an expected weak demand.



TABLE 2: Ex-works prices of major insecticide TC products in China in early April 2023

Category	Product	Ex-works price (RMB/t)	Ex-works price (USD/t)	RMB MoM change
Organophosphorus insecticide	90% Phoxim technical	42,000	6,104	-6.67%
	95% Chlorpyrifos technical	40,100	5,828	-6.31%
	90% Malathion technical	38,000	5,523	0.00%
	90% Profenofos technical	83,800	12,179	0.00%
Carbamate insecticide	98% Carbofuran technical	105,000	15,261	-4.55%
	98% Methomyl technical	78,000	11,336	-3.70%
	98% Isoprocarb technical	45,500	6,613	0.00%
Pyrethroid insecticide	97% Bifenthrin technical	195,000	28,341	-11.76%
	95% Lambda-cyhalothrin technical	157,000	22,818	-8.72%
	94% Cypermethrin technical	71,000	10,319	-6.58%
	98% Deltamethrin technical	500,000	72,669	0.00%
Nicotinoid insecticide	97% Imidacloprid technical	100,900	14,665	-14.78%
	95% Acetamiprid technical	90,900	13,211	-14.41%

Source:CCM

Insecticide TC prices fall in general in China in April

Summary: In April, ex-works prices of most China's insecticides TC dropped due to sluggish downstream market. Specifically, some nicotinoid insecticides TC and pyrethroid insecticides TC witnessed over 10% MoM price drops.

In April, ex-works prices of most China's insecticides TC dropped due to slack demand. Insecticide producers actively cut prices to attract orders, yet high inventory in the market spurred downstream buyers to keep taking a wait-and-see attitude. In April, prices of some pyrethroid insecticides TC and nicotinoid insecticides TC fell with large MoM decreases, but prices of a few organophosphorus insecticides TC and carbamate insecticides TC kept stable.

Organophosphorus insecticides: Ex-works prices of phoxim TC, chlorpyrifos TC and profenofos TC all declined. The demand for chlorpyrifos in China was still weak. In late April, some chlorpyrifos producers operated normally, such as Shandong Luba Chemical Co., Ltd., Inner Mongolia Miraculous Crop Science Co., Ltd., Jiangsu Fengshan Group Co., Ltd. and Hubei Benxing Agrochemical Co., Ltd. Raw material price had limited support to the price of chlorpyrifos TC. The prices of the intermediates sodium 3,5,6-trichloropyridin-2-olate



and O,O-diethylthiophosphoryl chloride went down. Given a relatively slack demand for organophosphorus insecticides in China, prices of some products may be set lower in the short term.

Carbamate insecticides: Ex-works price of isoprocarb TC kept stable, while the prices of methomyl TC and carbofuran TC went down by 5.56% and 4.55% MoM, respectively. Considering weak demand, prices of carbamate insecticides may keep stable in the short term.

Pyrethroid insecticides: Ex-works prices of most pyrethroid insecticides TC decreased mainly due to insufficient domestic demand. Prices of bifenthrin TC, lambda-cyhalothrin TC, deltamethrin TC and cypermethrin TC all went down. Specifically, prices of bifenthrin TC and lambda-cyhalothrin TC dropped by 12.54% and 10.09% MoM, respectively. In late April, bifenthrin production in Shandong Gaoxin Runnong Chemical Co., Ltd. was suspended, but operation was normal in other producers, such as Jiangsu Chunjiang Runtian Agrochemical Co., Ltd., Jiangsu Yangnong Chemical Co., Ltd., and Guangdong Liwei Chemical Industry Co., Ltd. With dull downstream demand and slight fall in prices of some intermediates, prices of pyrethroid insecticides TC may decline further in the short term.

Nicotinoid insecticides: Domestic demand for nicotinoid insecticides was sluggish, while export enquiries increased. Prices of imidacloprid TC and acetamiprid TC witnessed over 14% MoM price drops. At present, prices of intermediates for nicotinoid insecticides like 1-methyl-3-nitroguanidine, 3-methyl-4-nitroiminoperhydro-1,3,5-oxadiazine, 2-nitroaminoimidazoline and ethyl N-cyanoethanimideate are stable, but the price of 2-chloro-5-chloromethylpyridine (CCMP) is still in a downtrend. Considering a relatively weak demand for nicotinoid insecticides, their ex-works prices may decline in the short term.



TABLE 3: Ex-works prices of major insecticide TC products in China in April 2023

Category	Product	Ex-works price (RMB/t), 7 April	Ex-works price (RMB/t), 14 April	Ex-works price (RMB/t), 21 April	Ex-works price (RMB/t), 28 April	Ex-works price (monthly average)		
						RMB/t	USD/t	MoM change (based on RMB)
Organophosphorus insecticide	Phoxim TC	42,000	41,500	40,500	40,000	41,000	5,959	-8.89%
	Chlorpyrifos TC	40,100	40,000	38,700	38,600	39,350	5,719	-7.74%
	Profenofos TC	83,800	83,700	83,500	83,400	83,600	12,150	-0.24%
	Malathion TC	38,000	38,000	38,000	38,000	38,000	5,523	0.00%
Pyrethroid insecticide	Bifenthrin TC	195,000	191,000	189,000	185,000	190,000	27,614	-12.54%
	Lambda-cyhalothrin TC	157,000	155,000	148,000	146,000	151,500	22,019	-10.09%
	Deltamethrin TC	500,000	470,000	460,000	430,000	465,000	67,582	-7.00%
	Cypermethrin TC	71,000	70,600	70,400	70,000	70,500	10,246	-6.00%
Carbamate insecticide	Methomyl TC	78,000	77,000	76,000	75,000	76,500	11,118	-5.56%
	Carbofuran TC	105,000	105,000	105,000	105,000	105,000	15,261	-4.55%
	Isoprocarb TC	45,500	45,500	45,500	45,500	45,500	6,613	0.00%
Nicotinoid insecticide	Imidacloprid TC	100,900	99,900	97,500	96,500	98,700	14,345	-14.32%
	Acetamiprid TC	90,900	89,300	88,500	86,900	88,900	12,921	-14.19%

Source:CCM



Pest

Predicted moderate to relatively heavy occurrence of major crop pests in Guangdong in H1 2023

Summary: In late March, the Guangdong Provincial Department of Agriculture and Rural Affairs forecasted an overall relatively heavy occurrence of pests, rats and diseases on crops in the province in H1 2023. Some pests may occur more heavily, such as fall armyworm, rice planthopper, *Phyllotreta striolata*, diamondback moth, *Maruca vitrata*.

In late March, the Guangdong Provincial Department of Agriculture and Rural Affairs released a forecast on pests, rats and diseases on crops in the province in H1 2023—in general, a relatively heavy occurrence is expected, from a great variety of pests & diseases and with wide coverage. Both pest plagues and diseases are estimated to deliver a stronger attack than last year. Pests that may occur relatively heavily are: fall armyworm, rice planthopper, *Phyllotreta striolata*, diamondback moth, *Maruca vitrata*, palm thrips, melon fly, oriental fruit fly, *Conopomorpha sinensis*, citrus red mite, etc.

General pest & disease occurrences on major crops in Guangdong Province in H1 2023 are forecasted as follows:

- Rice: Moderate occurrence in general, relatively heavy occurrence in some areas, with a total occurring area of about 3.20 million ha;
- Maize: Relatively heavy occurrence, with a total occurring area of about 286,700 ha;
- Vegetables: Relatively heavy occurrence, with a total occurring area of about 2.73 million ha;
- Fruit trees: Relatively heavy occurrence, with a total occurring area of about 2.33 million ha;
- Peanut: Moderate occurrence in general, relatively heavy occurrence in some areas, with a total occurring area of about 466,700 ha.



TABLE 4: Forecast on pest occurrence on major crops in Guangdong Province in H1 2023

No.	Crop	Pest	Occurrence forecast, H1 2023
1	Rice	Rice planthopper	Moderate occurrence in general, relatively heavy occurrence in some areas; 933,300 ha
		Rice leaf roller	Moderate occurrence, 800,000 ha
		Rice stem borers (mainly <i>Sesamia inferens</i> and striped rice borer)	Moderate occurrence in general, relatively heavy occurrence in some areas, with an upward trend; 353,300 ha
		Rice <i>Stenotarsus</i> sp.	Moderate occurrence, 33,300 ha
2	Maize	Fall armyworm	Relatively heavy occurrence, 93,300 ha
		Corn borer	Moderate occurrence in general, relatively heavy occurrence in some areas; 73,300 ha
3	Vegetables	<i>Phyllotreta striolata</i>	Relatively heavy occurrence in general, heavy occurrence in the Pearl River Delta region; 346,700 ha
		Diamondback moth	Relatively heavy occurrence in general, heavier in the Pearl River Delta region; 266,700 ha
		<i>Maruca vitrata</i>	Relatively heavy occurrence, 80,000 ha
		Palm thrips	Relatively heavy occurrence on vegetables such as melons, beans and nightshade vegetables; 136,700 ha
		Melon fly	Relatively heavy occurrence on melons such as bitter melon, sponge melon and zucchini; 106,700 ha
		Cabbage caterpillar	Moderate occurrence in general, relatively heavy occurrence in some areas; 160,000 ha
		<i>Spodoptera litura</i>	Moderate occurrence in general, relatively heavy occurrence in some areas; 210,000 ha
		<i>Macrosiphum avenae</i>	Moderate occurrence, 123,300 ha
		<i>Bemisia tabaci</i>	Moderate occurrence, 120,000 ha
4	Fruit trees	Oriental fruit fly	Relatively heavy occurrence, 163,300 ha
		<i>Conopomorpha sinensis</i>	Relatively heavy occurrence, 400,000 ha
		<i>Tessaratoma papillosa</i>	Moderate occurrence, 146,700 ha



		Citrus red mite	Relatively heavy occurrence, 220,000 ha
		Citrus rust mite	Moderate occurrence, 100,000 ha
		Citrus leafminer	Moderate occurrence, 120,000 ha
5	Peanut	<i>Spodoptera litura</i>	Moderate occurrence in general, relatively heavy occurrence in some areas; 66,700 ha
		Thrip	Moderate occurrence in general, relatively heavy occurrence in some areas; 56,700 ha
		Aphid	Moderate occurrence, 56,700 ha
6	Other crops	Sugarcane borer	Moderate occurrence in general, relatively heavy occurrence in some areas; 96,700 ha
		<i>Empoasca pirusuga</i>	Moderate occurrence, 26,700 ha
		Channeled apple snail	Moderate occurrence, 346,700 ha

Source:Guangdong Provincial Department of Agriculture and Rural Affairs





Policy

Jiangxi issues new implementation plan for chemical pesticide usage reduction

Summary: On 5 April, Jiangxi Provincial Department of Agriculture and Rural Affairs issued the *Implementation Plan for Chemical Pesticide Usage Reduction in Jiangxi Province to 2025*. The Plan aims to promote chemical pesticide usage reduction and efficacy enhancement, and to maintain a downward trend in the total use of chemical pesticides.

On 5 April, the Jiangxi Provincial Department of Agriculture and Rural Affairs rolled out the *Implementation Plan for Chemical Pesticide Usage Reduction in Jiangxi Province to 2025*. The Plan aims to promote chemical pesticide usage reduction and efficacy enhancement and to keep a downward trend in the total use of chemical pesticides.

The Plan sets specific goals by 2025, in three aspects:

- In terms of chemical pesticide use intensity (calculated by chemical pesticide use based on 100% AI volume on per-unit sown area), the use intensity for rice and other major grain crops should be reduced by more than 5%, and the intensity for fruits, vegetables, tea and other important cash crops reduced by more than 10%.
- In terms of unified control and prevention of pests and diseases, unified control measures should be adopted in over 50% fields for rice and other major grain crops and almost full coverage in green, high-quality and efficient production demonstration areas for cotton, cereal and oil crops, as well as in modern agricultural industrial parks.
- In terms of green control and prevention of pests and diseases, green control should be applied in over 55% fields for major crops, and basically 100% coverage rate in green agricultural industrial parks and production bases of fruits, vegetables and tea varieties with "three plus one" accreditation (which stands for green food, environment-friendly agro-products, organic agro-products and GI-identified agro-products).

The Plan also outlines four major technological paths to go along as the following:

- Promote "Four Replacements"—the replacement of chemical pesticides with biological ones, obsolete pesticides with highly-effective and low-risk ones, pesticide formulations having greater environment impact with environment-friendly ones, and outdated spraying machines with high-efficiency ones.
- Take "Three Precise" acts—precise prediction and forecasting, precise control at proper time, and precise & targeted pesticide application.
- Carry forward unified control and prevention of pests and diseases, which means to develop specialised groups providing control services and to employ various forms of control and prevention measures.
- Boost integrated and sustainable treatment of crop pests and diseases. Promote integration of unified control & prevention and green control & prevention. When time and conditions of agricultural production permit, a set of green measures should be taken together, like guidance on how to use pesticides in a scientific and safe way, physical and chemical lure and control, induced immunity, to cut down times and intensity of chemical pesticide use. Besides, supervision on and management of pesticide business should be reinforced; illegal sales and use of banned and restricted pesticides, as well as misleading users into applying pesticides unreasonably, should be seriously cracked down and harshly punished.





Import and Export

China's insecticide formulation export sees yearly increase in Jan.–Feb. 2023

Summary: In Jan.–Feb. 2023, China's insecticide formulations were mainly exported to Brazil, Thailand, Myanmar, Nigeria, etc., with an export volume of over 40,000 tonnes. The volume grew by some 3% YoY.

According to the import and export data from China Customs and Tranalysis, in Jan.–Feb. 2023, China altogether exported 40,130.54 tonnes (actual volume, the same hereafter) of insecticide formulations; major export destinations were Brazil, Thailand, Myanmar, Nigeria, etc. The export value totalled USD214.85 million. Compared with the export volume of insecticide formulations achieved in the same period last year, this year's figure saw a 3.20% YoY increase.

During Jan.–Feb. 2023, the average export price of China's insecticide formulations dipped by 19.09% YoY to USD5.35/kg. It is worth noting that ex-works prices of insecticides TC in China declined in general in Q1 2023.

Insecticide formulations from China were exported to at least 130 countries or regions in Jan.–Feb. 2023. The exports to Brazil, Myanmar and Nigeria, three of the top four destinations in this period, each experienced YoY growth. In particular, the export to Nigeria more than doubled to 2,488.81 tonnes, which made Nigeria the fourth largest destination in this period, jumping from the tenth place in the same period last year.

TABLE 5: Jan. and Feb. exports of insecticide formulations from China, 2023 vs 2022

Month	2023		2022	
	Volume, kg	Average price, USD/kg	Volume, kg	Average price, USD/kg
Jan.	22,784,221	5.52	26,884,824	6.54
Feb.	17,346,315	5.14	12,003,028	6.80
Total	40,130,536	5.35	38,887,852	6.62

Note:1. The data sourced from Tranalysis were updated to 1 April, 2023.

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

Source:China Customs & Tranalysis





TABLE 6: Top 10 destinations of insecticide formulations exported from China, Jan.–Feb. 2023 vs Jan.–Feb. 2022

No.	Jan.–Feb. 2023			Jan.–Feb. 2022		
	Destination	Volume, tonne	Share	Destination	Volume, tonne	Share
1	Brazil	3,427	8.54%	Thailand	3,452	8.88%
2	Thailand	3,086	7.69%	Brazil	2,870	7.38%
3	Myanmar	2,605	6.49%	Indonesia	2,672	6.87%
4	Nigeria	2,489	6.20%	Myanmar	2,102	5.41%
5	Indonesia	1,787	4.45%	Vietnam	1,970	5.07%
6	Vietnam	1,542	3.84%	Ghana	1,868	4.80%
7	Cote d'Ivoire	1,465	3.65%	Bangladesh	1,442	3.71%
8	Bangladesh	1,389	3.46%	The Philippines	1,185	3.05%
9	Laos	1,134	2.83%	Kenya	1,141	2.93%
10	Ghana	1,090	2.72%	Nigeria	1,099	2.83%

Note:1. The data sourced from Tranalysis were updated to 1 April, 2023.

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

Source:China Customs & Tranalysis





Registration

25 Insecticide products approved of registration in early April

Summary: On 3 April, the Department of Agrochemical Management of MARA released a batch of products granted registration approval, which include 25 insecticide products, of which 3 are hygienic insecticides.

On 3 April, 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 25 insecticide products, with 3 hygienic insecticides included. Most of these insecticides are of low toxicity, and the most popular form is SC.

Major active ingredients in these insecticide products approved are dinotefuran, abamectin-aminomethyl and chlorantraniliprole. Of the 25 approved insecticide products, two are TC products—a 96% chlorantraniliprole TC from Qingdao Hengning Biotechnology Co., Ltd. and a 98% teflubenzuron TC from Shandong Weifang Rainbow Chemical Co., Ltd. Altogether six registrants have at least two insecticide products approved of registration this time, and Hailir Pesticides and Chemicals Group Co., Ltd. tops the list with three products approved—diafenthiuron 250g/L SC, abamectin 500g/L FS and dinotefuran 75% WG, all for export only.



TABLE 7: Insecticide products approved of registration by form released on 3 April, 2023

No.	Form	Number
1	SC	9
2	FS	3
3	EC	2
4	WG	2
5	TC	2
6	ME	1
7	GR	1
8	OD	1
9	SG	1
10	SL	1
11	RB	1
12	RQ	1
Total		25

Source: The Department of Agrochemical Management of MARA

TABLE 8: Insecticide products approved of registration by toxicity released on 3 April, 2023

No.	Toxicity	Number
1	Low	19
2	Mild	4
3	Moderate	1
4	Moderate (TC: highly toxic)	1
Total		25

Source: The Department of Agrochemical Management of MARA

TABLE 9: Registrants with at least two insecticide products approved of registration released on 3 April, 2023

No.	Registrant	Number
1	Hailir Pesticides and Chemicals Group Co., Ltd.	3
2	Shaanxi Meibang Pharmaceutical Group Co., Ltd.	2
3	Jiaozuo Huasheng Chemical Co., Ltd.	2
4	Jiangxi Zhongxun Agro-Chemical Co., Ltd.	2
5	Hebei Veyong Bio-Chemical Co., Ltd.	2
6	Shandong Weifang Rainbow Chemical Co., Ltd.	2

Source: The Department of Agrochemical Management of MARA

TABLE 10: Major active ingredients of insecticide products approved of registration released on 3 April, 2023

No.	Active ingredient	Number
1	Dinotefuran	6
2	Abamectin-aminomethyl	4
3	Chlorantraniliprole	4
4	Lufenuron	2
5	Clothianidin	2
6	Teflubenzuron	2
7	Tolfenpyrad	2
8	Spirotetramat	2

Source: The Department of Agrochemical Management of MARA



News in Brief

Liaoning Harvest plans to build capacity for chlorantraniliprole intermediates

On 28 March, some brief information on Liaoning Harvest Agrochemical Co., Ltd. (Liaoning Harvest)'s 19,500 t/a pesticide TC, formulation & intermediate project was released by local authorities. Liaoning Harvest plans to build capacity for a total of 26 pesticide TC, formulations and intermediates in the Chemical Industry Park of Tai'an Economic Development Zone, Anshan City, Liaoning Province. The products planned include four chlorantraniliprole intermediates with 4,300 t/a capacity in total: 1,300 t/a (3-chloro-pyridin-2-yl)-hydrazine, 1,000 t/a 3-bromo-1-(3-chloropyridin-2-yl)-1H-pyrazole-5-carboxylic acid, 1,000 t/a 2-amino-5-chloro-N,3-dimethylbenzamide and 1,000 t/a 2-amino-5-chloro-3-methylbenzoic acid.

Proposed production capacity for products beyond the chlorantraniliprole intermediates in the project can be generally divided into: 900 t/a for eight pesticides TC, 11,100 t/a for three pesticide formulations and 3,200 t/a for eleven intermediates for sulfonylurea herbicides.

EI report of Hubei Dingchen's 3kt/a CCMT project accepted

On 30 March, acceptance of the environmental impact (EI) report of Hubei Dingchen Chemical Co., Ltd. (Hubei Dingchen)'s 3,000 t/a 2-chloro-5-chloromethylthiazole (CCMT) project was announced by local authorities. Hubei Dingchen plans to invest USD17.44 million (RMB120 million) to construct this project in the Jingmen Circular Economy Chemical Industrial Park, Jingmen City, Hubei Province.

CCMT is an important raw material for the production of some pesticides and pharmaceuticals; it is mainly used in the synthesis of nicotinoid insecticides thiamethoxam and clothianidin. Thiamethoxam is a broad-spectrum, high-efficacy and low-toxicity nicotinoid insecticide and currently is the second best-selling insecticide in the world. This insecticide is used to control pests like aphids, planthoppers, whiteflies and *Empoasca flavescens*.

Shanghai FMC to expand capacity for chlorantraniliprole TC & cyantraniliprole TC

In April, CCM learned that the environmental impact (EI) report of FMC (Shanghai) Agricultural Sciences Co., Ltd. (Shanghai FMC)'s process optimisation and new environmental protection facility project had been approved by local authorities.

Shanghai FMC mainly produces chlorantraniliprole and cyantraniliprole. Currently, it has the J1 chlorantraniliprole line with 1,100 t/a capacity, and the J2 line (switched between 2,400 t/a chlorantraniliprole and 900 t/a cyantraniliprole), both in active operation. That is to say, at present, Shanghai FMC's maximum capacity for the single product chlorantraniliprole TC is 3,500 t/a and that for the single product cyantraniliprole TC is 900 t/a, but that cannot be achieved simultaneously. Once the expansion completed, the company could have 6,000 t/a capacity for chlorantraniliprole TC at most. And if the company chooses to produce two products at the same time, the maximum capacity for chlorantraniliprole TC and cyantraniliprole TC is then 1,800 t/a and 1,200 t/a, respectively.



**TABLE 11:** Capacity for chlorantraniliprole TC & cyantraniliprole TC at Shanghai FMC after the expansion project

Production line	Chlorantraniliprole TC		Cyantraniliprole TC	
	Existing capacity, t/a	Capacity after the expansion, t/a	Existing capacity, t/a	Capacity after the expansion, t/a
J1	1,100	1,800	/	/
J2	2,400	4,200	900	1,200

Note: Normally, the production line J2 only produces one product (either chlorantraniliprole TC or cyantraniliprole TC).

Source: EI report of Shanghai FMC's process optimisation and new environmental protection facility project

Inner Mongolia Fenglang to build capacity for 3kt/a acephate TC

On 31 March, the environmental impact report of Inner Mongolia Fenglang Pharmaceutical Co., Ltd. (Inner Mongolia Fenglang)'s 4,000 t/a O,O-dimethyl phosphoramidothioate and 3,000 t/a acephate TC project was approved by the Administrative Examination & Approval and Administrative Services Bureau of Alxa High-tech Zone (Wusitai Town). The project will be built in the Wulanbuhe (Ulan Buh) Industrial Park, Alxa League, Inner Mongolia Autonomous Region. Acephate is a highly-effective, low-toxicity, broad-spectrum organophosphorus insecticide. It is mainly used for the control of pests on fruit trees, wheat and rice.

Guizhou to strengthen control over high-toxicity pesticides

On 7 April, the notice by the Guizhou Provincial Department of Agriculture and Rural Affairs on issuing the *Work Plan for Pesticide Regulation and Chemical Pesticide Usage Reduction & Efficacy Enhancement in Guizhou Province in 2023* was released. The Plan aims to promote green control and large-scale control, and strengthen guidance on how to use pesticides in a scientific and safe way; it also sets a 1% reduction in chemical pesticide use as the goal of this year.

One of the major tasks proposed in the work plan is to investigate hidden dangers and strengthen pesticide risk control. The Guizhou government will intensify control of the 10 high-toxicity pesticides still available in the Chinese market, and promote wider awareness of the coming ban on sale and use of four high-toxicity insecticides (phorate, isofenphos-methyl, isocarbophos and ethoprophos) from 1 September, 2024. Besides, the government will pay close attention to the management measures, either prohibitive or restrictive, that are going to be introduced on another four high-toxicity insecticides—omethoate, aldicarb, carbofuran and methomyl, by the Ministry of Agriculture and Rural Affairs of the People's Republic of China later this year.

EI report of Shangyu Nutrichem's 5.8kt/a pesticide TC & intermediate project accepted

On 3 April, acceptance of the environmental impact (EI) report of Shangyu Nutrichem Co., Ltd. (Shangyu Nutrichem)'s 5,800 t/a pesticide TC and supporting core intermediate project was announced by the Ecology and Environment Bureau of Shaoxing City. The project will be built in Hangzhou Bay Shangyu Economic and Technological Development Zone, Shaoxing City, Zhejiang Province. Shangyu Nutrichem has planned to transform the existing Workshop 2 and Workshop 5 and build altogether 5,800 t/a production capacity for four products: 1,000 t/a lufenuron TC, 500 t/a quizalofop-P-tefuryl TC, 3,500 t/a 2-nitro-4-methylsulfonylbenzoic acid and 800 t/a benoxacor.





Lufenuron is a benzoylphenylurea insecticide/acaricide. The active ingredient has been registered in many countries, applicable on a wide range of crops. Although there had been 25 valid lufenuron TC registrations in China as of 14 April, domestic production capacity is mainly concentrated in companies such as Jiangsu Flag Chemical Industry Co., Ltd., Anhui Biocompounds Chemicals Co., Ltd., Dezhou Luba Fine Chemical Co., Ltd., Henan Jinpeng Chemical Co., Ltd. and Jiangsu Jiannong ABA Agrochemical Co., Ltd.

Gansu Liankai to build capacity for raw materials of chlorpyrifos

On 3 April, the environmental impact report of Gansu Liankai Biotechnology Co., Ltd. (Gansu Liankai)'s 4,200 t/a pesticide and intermediate production line construction project was approved by the Ecology and Environment Bureau of Jinchang City. According to the report, the project will be constructed in the Jinchang Economic and Technological Development Zone Hexipu Industrial Park, Jinchang City, Gansu Province. Products and their capacity proposed are: 800 t/a fenoxaprop-P-ethyl, 500 t/a isoxaflutole, 500 t/a prothioconazole, 600 t/a 2,3,6-trichloropyridine, 800 t/a pentachloropyridine and 1,000 t/a (R)-(+)-2-(4-hydroxy phenoxy)propionic acid. Among these products, 2,3,6-trichloropyridine and pentachloropyridine are raw materials for the production of insecticide chlorpyrifos.

FLAGCHEM's chlorantraniliprole project in Huai'an base still awaits government approval

On 11 April, Jiangsu Flag Chemical Industry Co., Ltd. (FLAGCHEM) held an online 2022 annual performance briefing. Regarding the progress of projects carried out by its subsidiary Huai'an Glory Chemical Co., Ltd., FLAGCHEM revealed that whether the new production lines planned for chlorantraniliprole, florasulam, metamifop, etc. could be put into production within the year 2023 still depended on results of approval formalities.

Wuhai Haibo plans to build capacity for 2-chlorobenzaldehyde, an acaricide raw material

On 4 April, acceptance of the environmental impact (EI) report of Wuhai Haibo Fine Chemical Co., Ltd. (Wuhai Haibo)'s 1,200 t/a terephthalaldehyde and 1,000 t/a 2-chlorobenzaldehyde technical transformation project was announced by local authorities. The project will be built in the Wuda Industrial Park, Wuhai City, Inner Mongolia Autonomous Region. 2-Chlorobenzaldehyde is widely used in the synthesis of acaricides, such as clofentezine, flutenzine. Clofentezine is used for the control of mites on dry crops and fruit trees.

Jiangsu Yunfan plans to relocate 1.4kt/a capacity for insecticide formulations

On 6 April, acceptance of the environmental impact (EI) report of Jiangsu Yunfan Chemical Co., Ltd. (Jiangsu Yunfan)'s 3,500 t/a pesticide formulations project was announced by local authorities. The company will relocate 3,500 t/a production capacity (including 1,400 t/a for insecticide formulations) into a new plant in the Qidong Life and Health Industrial Park, Qidong City, Jiangsu Province.





TABLE 12: Insecticide products involved in Jiangsu Yunfan's 3,500 t/a pesticide formulations relocation project

No.	Active ingredient	Total content	Form	Capacity, t/a
1	Abamectin·chlorpyrifos	302g/L	ME	500
2	Pymetrozine·fenobucarb	50%	SC	300
3	Cyromazine	50%	WP	200
4	Fenpyroximate	5%	SC	200
5	Emamectin benzoate	5.7%	WG	100
6	Abamectin· <i>Bacillus thuringiensis</i>	0.1%	WP	100

Source: EI report of the 3,500 t/a pesticide formulations project





Price Update

Ex-works prices of major insecticides in China on 8 April 2023

TABLE 13: Ex-works prices of major insecticides in China, 8 April, 2023

Product	20230308		20230408	
	Original Price (RMB/t)	Price (USD/t)	Original Price (RMB/t)	Price (USD/t)
95% Abamectin technical	500,000	72,046.11	453,500	65,910.91
97% Acephate technical	55,000	7,925.07	50,000	7,266.91
95% Acetamiprid technical	106,200	15,302.59	90,900	13,211.25
95% Azocyclotin technical	220,000	31,700.29	220,000	31,974.42
95% Beta-Cypermethrin technical	141,500	20,389.05	138,000	20,056.68
97% Bifenthrin technical	221,000	31,844.38	195,000	28,340.96
95% Buprofezin technical	73,000	10,518.73	73,000	10,609.69
98% Carbofuran technical	110,000	15,850.14	105,000	15,260.52
98% Chlorfenapyr technical	200,000	28,818.44	170,000	24,707.51
95% Chlorfluazuron technical	430,000	61,959.65	415,000	60,315.38
95% Chlorpyrifos technical	42,800	6,167.15	40,100	5,828.06
94% Cypermethrin technical	76,000	10,951.01	71,000	10,319.02
99% Cyromazine technical	143,000	20,605.19	137,000	19,911.34
98% Deltamethrin technical	500,000	72,046.11	500,000	72,669.14
95% Diafenthiuron technical	130,000	18,731.99	123,000	17,876.61
98% Dimethoate technical	47,600	6,858.79	47,600	6,918.1
70% Emamectin benzoate technical	466,900	67,276.66	400,000	58,135.31
92% Fenvalerate technical	133,000	19,164.27	140,000	20,347.36
95% Fipronil technical	530,000	76,368.88	510,000	74,122.52
98% Hexaflumuron technical	500,000	72,046.11	480,000	69,762.37





97% Imidacloprid technical	118,400	17,060.52	100,900	14,664.63
98% Isoprocarb technical	45,500	6,556.2	45,500	6,612.89
95% Lambda-cyhalothrin technical	172,000	24,783.86	157,000	22,818.11
90% Malathion technical	38,000	5,475.5	38,000	5,522.85
95% Methidathion technical	90,000	12,968.3	90,000	13,080.44
Methomyl 90% SP	75,000	10,806.92	72,200	10,493.42
98% Methomyl technical	81,000	11,671.47	78,000	11,336.39
75% Omethoate technical	52,000	7,492.8	52,000	7,557.59
90% Phoxim technical	45,000	6,484.15	42,000	6,104.21
90% Profenofos technical	83,800	12,074.93	83,800	12,179.35
90% Propargite technical	60,000	8,645.53	60,000	8,720.3
95% Pymetrozine technical	115,500	16,642.65	105,500	15,333.19
95% Pyridaben technical	105,000	15,129.68	105,000	15,260.52
97% Spirodiclofen technical	158,000	22,766.57	155,000	22,527.43
85% Triazophos technical	59,000	8,501.44	69,000	10,028.34

Note: Ex-works price includes VAT.

Source: CCM

Shanghai Port prices of major insecticides in China, 8 April 2023





TABLE 14: Shanghai Port prices of major insecticides in China, 8 April, 2023

Product	20230308		20230408	
	Original Price (RMB/t)	Price (USD/t)	Original Price (RMB/t)	Price (USD/t)
95% Abamectin technical	500,500	72,118.16	454,000	65,983.58
97% Acephate technical	55,500	7,997.12	50,500	7,339.58
95% Acetamiprid technical	106,700	15,374.64	91,400	13,283.92
95% Azocyclotin technical	220,500	31,772.33	220,500	32,047.09
95% Beta-Cypermethrin technical	142,000	20,461.1	138,500	20,129.35
97% Bifenthrin technical	221,500	31,916.43	195,500	28,413.63
95% Buprofezin technical	73,500	10,590.78	73,500	10,682.36
98% Carbofuran technical	110,500	15,922.19	105,500	15,333.19
98% Chlorfenapyr technical	200,500	28,890.49	170,500	24,780.18
95% Chlorfluazuron technical	430,500	62,031.7	415,500	60,388.05
95% Chlorpyrifos technical	43,300	6,239.19	40,600	5,900.73
94% Cypermethrin technical	76,500	11,023.05	71,500	10,391.69
99% Cyromazine technical	143,500	20,677.23	137,500	19,984.01
98% Deltamethrin technical	500,500	72,118.16	500,500	72,741.81
95% Diafenthiuron technical	130,500	18,804.03	123,500	17,949.28
98% Dimethoate technical	48,100	6,930.84	48,100	6,990.77
70% Emamectin benzoate technical	467,400	67,348.7	400,500	58,207.98
92% Fenvalerate technical	133,500	19,236.31	140,500	20,420.03
95% Fipronil technical	530,500	76,440.92	510,500	74,195.19
98% Hexaflumuron technical	500,500	72,118.16	480,500	69,835.04
97% Imidacloprid technical	118,900	17,132.56	101,400	14,737.3
98% Isoprocarb technical	46,000	6,628.24	46,000	6,685.56





95% Lambda-cyhalothrin technical	172,500	24,855.91	157,500	22,890.78
90% Malathion technical	38,500	5,547.55	38,500	5,595.52
95% Methidathion technical	90,500	13,040.35	90,500	13,153.11
Methomyl 90% SP	75,500	10,878.96	72,700	10,566.09
98% Methomyl technical	81,500	11,743.52	78,500	11,409.05
75% Omethoate technical	52,500	7,564.84	52,500	7,630.26
90% Phoxim technical	45,500	6,556.2	42,500	6,176.88
90% Profenofos technical	84,300	12,146.97	84,300	12,252.02
90% Propargite technical	60,500	8,717.58	60,500	8,792.97
95% Pymetrozine technical	116,000	16,714.7	106,000	15,405.86
95% Pyridaben technical	105,500	15,201.73	105,500	15,333.19
97% Spirodiclofen technical	158,500	22,838.62	155,500	22,600.1
85% Triazophos technical	59,500	8,573.49	69,500	10,101.01

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 April 2023





TABLE 15: FOB Shanghai prices of major insecticides in China, 8 April, 2023, USD/t

Product	20230308	20230408
95% Abamectin technical	70,204.61	64,226.23
97% Acephate technical	7,586.88	6,956.8
95% Acetamiprid technical	15,006.2	12,955.36
95% Azocyclotin technical	31,014.48	31,282.68
95% Beta-Cypermethrin technical	19,264.55	18,950.52
97% Bifenthrin technical	30,004.09	26,703.14
95% Buprofezin technical	10,375.93	10,465.66
98% Carbofuran technical	15,560	14,981.17
98% Chlorfenapyr technical	28,167.36	24,149.3
95% Chlorfluazuron technical	60,403.61	58,800.63
95% Chlorpyrifos technical	6,136.5	5,799.1
94% Cypermethrin technical	10,415.06	9,814
99% Cyromazine technical	19,469.67	18,814.07
98% Deltamethrin technical	67,727.17	68,312.85
95% Diafenthiuron technical	17,718.68	16,909.57
98% Dimethoate technical	6,586.65	6,643.61
70% Emamectin benzoate technical	65,564.56	56,655.85
92% Fenvalerate technical	18,127.57	19,246.67
95% Fipronil technical	74,413.37	72,224.53
98% Hexaflumuron technical	70,215.93	67,990.2
97% Imidacloprid technical	16,724.92	14,376.16
98% Isoprocarb technical	6,302.8	6,357.3
95% Lambda-cyhalothrin technical	23,390.58	21,535.34





90% Malathion technical	5,289.05	5,334.79
95% Methidathion technical	12,764.11	12,874.49
Methomyl 90% SP	10,664.28	10,354.92
98% Methomyl technical	12,526.4	12,166.78
75% Omethoate technical	7,183.16	7,245.28
90% Phoxim technical	6,417.69	6,041.64
90% Profenofos technical	11,479.3	11,578.57
90% Propargite technical	8,560.32	8,634.35
95% Pymetrozine technical	15,747.39	14,508.37
95% Pyridaben technical	14,866.01	14,994.56
97% Spirodiclofen technical	21,507.08	21,281.17
85% Triazophos technical	8,420.19	9,932.5

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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17th Floor, Huihua Commercial & Trade Building, No.80 XianlieZhong Road Guangzhou, 510070, P. R. China

Tel:+86-20-37616606

Fax:+86-20-37616768

E-mail:econtact@cnchemicals.com

Website:www.cnchemicals.com