

Insecticides China Monthly Report 202402

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Headline

In Feb., the ex-works price of emamectin benzoate TC in China slipped by 2.50% MoM and went down by 30.20% YoY. Although some manufacturers lowered their operating rates, the price still went down due to drop of upstream material price as well as small amount of new orders.

In Feb., overall insecticide market was stable. Operating rates in insecticide producers have been at a relatively low level, but the supply has been quite sufficient since downstream demand has been weak. This month, the price of nicotinoid insecticides TC slipped, pyrethroid insecticides TC had mixed price trends, and the majority of organophosphorus insecticides TC had stable price.

In Feb., many major raw materials of insecticides TC in China had MoM price drop. The price downtrend has a connection with sluggish demand from insecticide sector.

Early Feb., though the Chinese Spring Festival is just around the corner, operation in insecticide TC producers has been little affected, and the majority have maintained rather stable operation. Investigations in early Feb. show that operating rate averaged at 52%.

On 4 Feb., the EI report of Liaoning Hongfeng's 4,000 t/a thiamethoxam project was approved by local government. The company has planned to invest USD7.04 million (RMB50 million) to build the project in the Liaoning (Yingkou) Coastal Industrial Base.

On 31 Jan., the EI report of Gansu Tailing's 23,000 t/a green pesticides and intermediates project (Phase I) was approved by local authorities. The company has planned to build 1,000 t/a acetamiprid and 3,000 t/a CCMP capacity in the first phase.

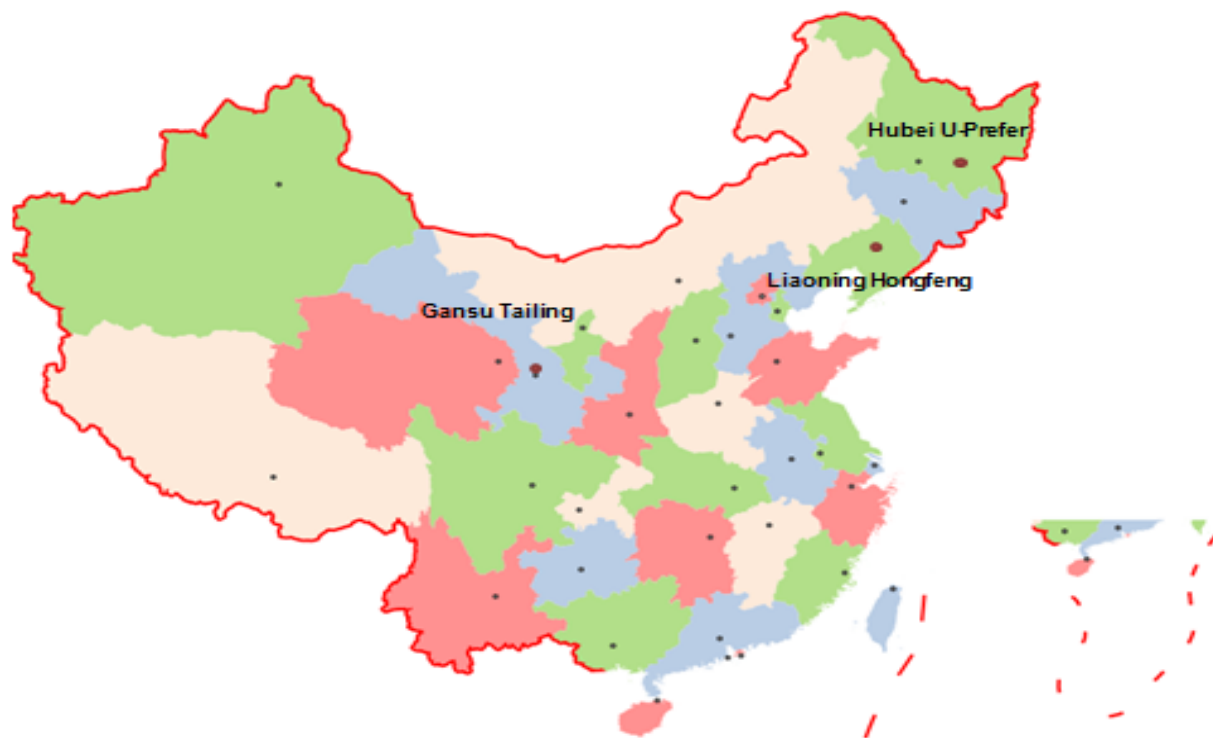
On 1 Feb., the CPCIF association standard Guidelines for Construction of Closed-Off Chemical Industry Park Management Projects (T/CPCIF 0299-2023) came into force. The standard specifies general requirements, construction procedures, construction content, operation and maintenance support, etc. in the construction of closed-off management projects in chemical industry parks. Specifically, it defines the principles, range, control targets, implementation plan and methods, and required functions of such closed-off management projects.

Before the Chinese Spring Festival holidays, MARA had approved of the registration of 60 insecticidal and related products so far in 2024.

In Feb., the Bureau of Agriculture and Rural Affairs of Xishuangbanna Dai Autonomous Prefecture forecasted that in 2024, total planting area across the prefecture may reach 133,933 ha, and there would be an overall moderate occurrence of major diseases, pests, weeds, rats and snails, with relatively heavy occurrence in some local areas. It is expected that total occurrence area would surpass 466,667 ha, 41,707 ha more than the 2023 figure.

In 2023, the export volume of China's insecticide formulations expanded 27.67% YoY, major export destinations being Brazil, Myanmar, Thailand, etc.; the import volume of insecticide formulations to China increased by 2.04% YoY, with Japan being the largest import origin.







Editor's note

On 20 Feb., 2024, the People's Bank of China released the news that the one-year loan prime rate (LPR) remained at 3.45%, while the five-year rate reduced from 4.20% to 3.95%. This signals that the Chinese government has gone further to stimulate the economy, allowing more money to flow out of the banks. Besides, thanks to numerous favourable measures for economic recovery, the Manufacturing Purchasing Managers' Index (PMI) in China went from a decline to a rise in Jan. 2024. Data from the National Bureau of Statistics show that in Jan. 2024, PMI upped 0.2 percentage points MoM to 49.2%, indicating an upturn in manufacturing sector; production index upped 1.1 percentage points MoM to 51.3%, indicating recovery of manufacturing production activities; new orders index upped 0.3 percentage points MoM to 49.0%, indicating improved demand in manufacturing industry; raw materials inventory index dropped by 0.1 percentage points MoM to 47.6%, representing continuous reduction of overall raw materials inventory.

Against the backdrop of economic recovery, insecticide inventory in the market has been gradually consumed. After the Spring Festival, trade increased. However, generally speaking, peak procurement season for insecticides TC is yet to come; obvious growth has not been witnessed in domestic and overseas demand. Therefore, overall ex-works price of insecticides TC dipped this month under still weak downstream demand.

It is worth noting that some insecticide companies have remained quite active in launching new projects. Gansu Shengjinyuan has its thiamethoxam TC and clothianidin TC project approved, Liaoning Hongfeng has the 4,000 t/a thiamethoxam project approved, and Shandong Exceris has the EI report for its 5,000 t/a 4-chlorobenzoyl chloride project accepted by local government.

The USD/CNY exchange rate in this newsletter is USD1.00 = CNY7.1049 on 1 Feb., 2024, sourced from the People's Bank of China. All the prices mentioned in this newsletter will include the VAT, unless otherwise specified.





Market analysis

Price decrease of emamectin benzoate TC slows in Feb., the market remains weak

Summary: In Feb., the ex-works price of emamectin benzoate TC in China slipped by 2.50% MoM and went down by 30.20% YoY. Although some manufacturers lowered their operating rates, the price still went down due to drop of upstream material price as well as small amount of new orders.

In Feb., the ex-works price of emamectin benzoate TC in China slipped by 2.50% MoM and dropped by 30.20% YoY. As the price of upstream material abamectin decreased, the price of emamectin benzoate lost support on this front. Main manufacturers such as Qilu Synva Pharmaceutical Co., Ltd. (Qilu Synva), Hebei Xingbai Pharmaceutical Group Co., Ltd. and Ningxia Taiyicin Biotech Co., Ltd. maintained operation, and some lowered their operating rates. As regards downstream demand, small amount of new orders were placed.

Since the beginning of 2023, the price of emamectin benzoate TC followed a general downtrend; especially in H1 2023, the price spiralled downward as market demand was extremely weak and trade was slow. In Q3 2023, the market became more rational and the price recovered and stabilised, yet in late Q4 the price dipped again as market demand for the product weakened, against the backdrop that registration for alternative chlorantraniliprole products increased.

Emamectin benzoate is mainly used to prevent and control migratory pests like fall armyworm and cotton bollworm. China's use of emamectin benzoate makes up about one third of global emamectin benzoate consumption. And most of emamectin benzoate products produced in China are for export.

As awareness of eco-environment protection and food safety grows across the world, residue of high-toxicity pesticides has drawn increasing attention. Many countries have banned production, sale and use of high-toxicity pesticides. This trend has benefited the growth of emamectin benzoate market as it has features including high efficacy, low toxicity, low residue and persistent effect. As of Feb. 2024, ten pesticide companies have hold valid registration certificate for emamectin benzoate TC products in China. Currently, main emamectin benzoate TC producers in China are Qilu Synva, Hebei Veyong Bio-chemical Co., Ltd., Hailir Pesticides and Chemicals Group Co., Ltd., etc. Qilu Synva, in particular, has the largest production base for emamectin benzoate products in China. In June 2023, the company put the 2,000 t/a emamectin benzoate TC upgrading project into operation. With an investment of USD49.26 million (RMB350 million), the project covered an area of 14,056.58 m² and expanded Qilu Synva's emamectin benzoate TC capacity by 2,000 t/a.

However, it should also be noted that pests have developed greater resistance to emamectin benzoate products in recent years because of unscientific use (farmers repeatedly use the products in excessive amount) and adaptation of pests. In Aug. 2023, the National Agro-Tech Extension and Service Centre (NATESC) issued a monitoring report of cowpea thrips' resistance to some typical insecticides of different categories. According to the report, the thrips had developed low-to-medium resistance to emamectin benzoate. Despite this, with declining price, emamectin benzoate is currently a cost-effective insecticide.



**FIGURE 1:** Monthly ex-works price of 70% emamectin benzoate technical in China, Jan. 2023–Feb. 2024

Source: CCM

Price of the majority of insecticides TC stabilise in Feb.

Summary: In Feb., overall insecticide market was stable. Operating rates in insecticide producers have been at a relatively low level, but the supply has been quite sufficient since downstream demand has been weak. This month, the price of nicotinoid insecticides TC slipped, pyrethroid insecticides TC had mixed price trends, and the majority of organophosphorus insecticides TC had stable price.

In Feb., on average, the price of major insecticide TC products decreased by 0.46% on a monthly basis, and fell by 19.65% on a yearly basis. In general, the insecticide market was stable. Operating rates in insecticide producers have been at a relatively low level, but the supply has been quite sufficient since downstream demand has been weak.

Nicotinoid insecticides: The Feb. ex-works price of nicotinoids decreased MoM. Main intermediates for insecticides under this category, such as 2-nitroaminoimidazoline and 2-chloro-5-(chloromethyl)pyridine (CCMP), had stable price. There has been ample supply of nicotinoids in the market. Imidacloprid TC products were mainly consumed by the producers themselves; dull downstream demand dragged the price down. The majority of acetamiprid TC producers maintained normal operation; however, downstream demand was sluggish and mainly small orders were made to replenish stock.

Pyrethroid insecticides: There were mixed price trends of pyrethroids. On average, the price edged down 0.73% MoM in Feb. Specifically, the prices of beta-cypermethrin TC, cypermethrin TC and lambda-cyhalothrin TC dropped as the supplies were rather sufficient while downstream demand was weak. However, the price of deltamethrin TC edged up 0.25% MoM due to increased raw material costs.

Organophosphorus insecticides: The price of organophosphorus insecticides was rather stable this month, yet it should be noted that the price of chlorpyrifos TC went up by 2.51% MoM. For chlorpyrifos TC, the supply was stable and the producers operated normally; the





downstream buyers stocked the product on need-to basis. Seeing the current chlorpyrifos TC price, buyers took a wait-and-see attitude.

For acaricides, carbamates, insect growth regulators and other insecticides, the market was quite dull. Ex-works prices of most TC products remained at a low level. The prices of buprofezin, carbamates and acaricides/insecticides remained stable. The price downtrend of abamectin TC and emamectin benzoate TC continued. There was scant demand for abamectin. Emamectin benzoate producers lowered their operating rates, while downstream buyers made replenishment on need-to basis.

TABLE 1: Ex-works prices of major insecticide TC products in China in Feb. 2024

Category	Product	Ex-works price (RMB/t)	Ex-works price (USD/t)	RMB MoM change	RMB YoY change
Nicotinoid insecticide	95% Acetamiprid technical	77,000	10,837.59	-0.52%	-31.53%
	97% Imidacloprid technical	86,000	12,104.32	-1.51%	-30.51%
Pyrethroid insecticide	95% Beta-Cypermethrin technical	123,000	17,312.00	-1.76%	-17.17%
	94% Cypermethrin technical	56,000	7,881.88	-0.71%	-28.43%
	98% Deltamethrin technical	395,000	55,595.43	0.25%	-21.00%
	95% Lambda-cyhalothrin technical	110,200	15,510.42	-0.72%	-37.92%
Organophosphorus insecticide	97% Acephate technical	42,000	5,911.41	0.00%	-23.64%
	95% Chlorpyrifos technical	35,160	4,948.70	2.51%	-21.17%
	85% Triazophos technical	69,000	9,711.61	0.00%	16.95%
	90% Phoxim technical	33,000	4,644.68	0.00%	-26.67%
Acaricide	90% Propargite technical	60,000	8,444.88	0.00%	0.00%
	97% Spirodiclofen technical	139,000	19,563.96	0.00%	-13.13%
Carbamate insecticide	98% Carbofuran technical	100,000	14,074.79	0.00%	-9.09%
	98% Methomyl technical	67,000	9,430.11	0.00%	-16.77%
Insect growth regulator	95% Buprofezin technical	65,000	9,148.62	0.00%	-12.16%
Others	95% Abamectin technical	355,000	49,965.52	-2.90%	-31.67%
	70% Emamectin benzoate technical	343,000	48,276.54	-2.50%	-30.20%





Source:CCM

Overall price of major raw materials of insecticides TC decreases MoM

Summary: In Feb., many major raw materials of insecticides TC in China had MoM price drop. The price downtrend has a connection with sluggish demand from insecticide sector.

In Feb., on average, the ex-works price of major raw materials of insecticides TC decreased by 1.61% on a monthly basis. Of these major raw materials, more than half experienced price decrease.

The prices of sodium 3,5,6-trichloropyridin-2-olate, 2-chloro-5-(chloromethyl)pyridine (CCMP), 3-phenoxy-benzaldehyde, liquid ammonia, liquid caustic soda and methanol dropped MoM, the prices of O,O-diethylthiophosphoryl chloride, 2-nitroaminoimidazoline and bromine remained stable, while the prices of ethylenediamine and phenol increased by 5.16% and 6.08% MoM, respectively. The price downtrend has a connection with sluggish demand from insecticide sector. Insecticide TC producers could accept only limited price raise of raw materials, and thus many raw material producers had to lower the price to secure more orders. In general, raw material costs could hardly provide any support to insecticide TC price.

It is worth noting that the price of ethylenediamine went up because of relatively tight effective supply in the market. The producers quoted high prices, but deals could hardly be stricken at such high quotations. The uptrend of phenol price continued in Feb., yet trade volume was not large. It is expected that raw material costs will have weaker support to insecticide TC price in the short term.





TABLE 2: Prices of major raw materials of insecticides in China, Feb. 2024

Raw material	Feb. 2024 ex-works price, RMB/t	Price, USD/t	MoM change (based on RMB price)
Ethylenediamine	13,040	1,835.35	5.16%
Sodium 3,5,6-trichloropyridin-2-olate	31,400	4,419.49	-0.01%
O,O-Diethylthiophosphoryl chloride	14,600	2,054.92	0.00%
2-Chloro-5-(chloromethyl)pyridine (CCMP)	65,000	9,148.62	-2.40%
2-Nitroaminoimidazoline	32,000	4,503.93	0.00%
3-Phenoxy-benzaldehyde	69,000	9,711.61	-1.29%
Bromine	22,000	3,096.45	0.00%
Liquid ammonia	2,475	348.35	-18.72%
Liquid caustic soda	738	103.87	-2.25%
Phenol	7,850	1,104.87	6.08%
Methanol	2,394	336.95	-4.24%

Source:CCM





Company and supply

Insecticide TC output slightly drops in Feb., Spring Festival has limited impact on it

Summary: Early Feb., though the Chinese Spring Festival is just around the corner, operation in insecticide TC producers has been little affected, and the majority have maintained rather stable operation. Investigations in early Feb. show that operating rate averaged at 52%.

Into Feb., Chinese insecticide TC producers have maintained normal operation; operating rates stabilised at a relatively low level, with an average of about 52%. The average rate only slightly dipped on a monthly basis.

Organophosphorus insecticides: Overall operating rate of organophosphorus insecticide TC producers decreased somewhat in Feb. Chlorpyrifos TC producers have been supported mainly by overseas orders this month. The producers have growingly intended to prop up the price and some producers have planned to cut their output. It is reported that major producers like Inner Mongolia Miraculous Crop Science Co., Ltd. and Chongqing Huage Biochemical Co., Ltd. temporarily suspended production. Regarding malathion TC, producers represented by Shandong Luba Chemical Co., Ltd. (Shandong Luba) have maintained normal production. Shandong Luba's output was not large though, and the products were mainly for exports.

Nicotinoid insecticides: Overall operating rate in Feb. declined slightly on a monthly basis, to somewhere around 49%. Main imidacloprid TC producers including Shandong Sino-Agri United Biotechnology Co., Ltd., Shandong Hailir Chemicals Co., Ltd., Wuzhong Linghang Biological & Pharmaceutical Co., Ltd. and Hebei Yetian Agrochemicals Co., Ltd. have kept stable operation, after output cuts in Jan. Market inventory of imidacloprid TC has been sufficient. Acetamiprid TC trade has been impacted by the Spring Festival; output of the product also declined. As to thiamethoxam TC, clothianidin TC and thiacloprid TC, new orders have been placed and stable production has continued. Generally speaking, markets of the three products have not been much affected by the upcoming holidays. However, demand has remained weak and operating rates stayed at a low level.

Pyrethroid insecticides: Overall operating rate in Feb. was stable. In general, the Spring Festival has a small effect on production in pyrethroid insecticide TC producers; the majority of producers have kept their production lines running on the support of a small number of orders, as sluggish demand has continued. Main producers of cyhalothrin TC and bifenthrin TC, such as Jiangsu Yangnong Chemical Co., Ltd., Guangdong Liwei Chemical Industry Co., Ltd. and Jiangsu Chunjiang Runtian Agrochemical Co., Ltd., have kept normal operation, though the rates in these companies were at a relatively low level.



TABLE 3: Supply of main insecticides TC in China in early Feb. 2024

Category	Product	Average operating rate in Feb.	Supply situation in Feb.
Organophosphorus insecticide	Chlorpyrifos TC	55%	Ample supply
	Malathion TC	50%	Normal supply
Nicotinoid insecticide	Imidacloprid TC	40%	Ample supply
	Acetamiprid TC	45%	Ample supply
	Thiamethoxam TC	50%	Ample supply
	Clothianidin TC	50%	Ample supply
	Thiacloprid TC	60%	Ample supply
Pyrethroid insecticide	Cyhalothrin TC	45%	Ample supply
	Bifenthrin TC	50%	Ample supply
Others	Abamectin TC	50%	Ample supply
	Emamectin benzoate TC	60%	Ample supply
	Propargite TC	60%	Ample supply
	Chlorfenapyr TC	50%	Normal supply

Note:1. The operating rates are the average of the rates in major producers, and the statistics are incomplete.

2. Combined with information on downstream orders, the supply situation is here classified into: tight supply, normal supply and ample supply.

Source:CCM

Liaoning Hongfeng to build 4,000 t/a thiamethoxam production line

Summary: On 4 Feb., the EI report of Liaoning Hongfeng's 4,000 t/a thiamethoxam project was approved by local government. The company has planned to invest USD7.04 million (RMB50 million) to build the project in the Liaoning (Yingkou) Coastal Industrial Base.

On 4 Feb., the environmental impact (EI) report of Liaoning Hongfeng Technology Co., Ltd. (Liaoning Hongfeng)'s 4,000 t/a thiamethoxam project was approved by the Business Environment Construction Bureau of Yingkou City. The company has planned to invest USD7.04 million (RMB50 million), of which USD134,414 (RMB955,000) is for environmental protection, in the construction of 4,000 t/a thiamethoxam production capacity in the Liaoning (Yingkou) Coastal Industrial Base; detailed address of its plant is No.234 Qinghua Avenue, Xishi District, Yingkou City, Liaoning Province. The project will cover a floor area over 2,951 m², with construction area of 5,104.6 m².

Liaoning Hongfeng, established in Jan. 2018, is a holding subsidiary of Hebei Brilliant Chemical Co., Ltd. (Hebei Brilliant). In June 2023, to



expand thiamethoxam capacity and improve production technology, Hebei Brilliant invested USD3.10 million (RMB22 million) in a 3,000 t/a thiamethoxam technological transformation project, which cancelled previously planned Phase II program of pesticide production line technological transformation project and adjusted the existing 1,000 t/a thiamethoxam and 300 t/a spiroadiclofen capacity into 3,000 t/a thiamethoxam capacity.

Thiamethoxam is a second-generation neonicotinoid insecticide. It has similar mechanism of action with the first-generation neonicotinoid imidacloprid, yet with improved activity, broader insecticidal spectrum and better safety profile. Besides Liaoning Hongfeng, some other companies also have plans to build or expand their thiamethoxam capacity.

For instance, in late Jan., local government of Wuzhong City announced it had planned to approve the EI reports of Wuzhong Linghang Biological & Pharmaceutical Co., Ltd. (Wuzhong Linghang)'s USD23.93 million (RMB170 million)-worth 5,000 t/a acetamiprid, 10,000 t/a thiamethoxam, 2,000 t/a fluazinam and 2,000 t/a haloxyfop-P-methyl technological transformation and expansion project and of Ningxia Nongjia New Material Technology Co., Ltd. (Ningxia Nongjia)'s USD16.89 million (RMB120 million)-worth 10,000 t/a thiamethoxam and 5,000 t/a clothianidin TC project. Both projects are to be built in the Qingtongxia Industrial Park, Qingtongxia City, Ningxia Hui Autonomous Region. Specifically, Wuzhong Linghang will upgrade and expand its thiamethoxam and acetamiprid production lines and build new lines for fluazinam and haloxyfop-P-methyl, while Ningxia Nongjia will build new capacity for thiamethoxam and clothianidin.

Wuzhong Linghang is a wholly-owned subsidiary of Suzhou Bianjing Agro-Biochemical Co., Ltd. (Suzhou Bianjing). Suzhou Bianjing, with predecessors being Wuxian County Pesticide Factory, Wuxian County Pesticide Chemical Group Co., Ltd. and Suzhou Huayuan Agro-Biochemical Co., Ltd., was founded in 1970. It was the pioneer in R&D and production of imidacloprid in China. Its brands "Wunong" and "Bianjing" are famous trademarks in Jiangsu Province. The company has acquired more than 20 patents. It founded Heze Bianjing Biotechnology Co., Ltd. in Oct. 2022 and launched a 25,000 t/a fine chemical and pesticide formulation project with an investment of USD168.90 million (RMB1,200 million) in this subsidiary. EI report for the project was approved in May 2023; the project is currently under construction.

Ningxia Nongjia was co-founded by Ningxia Soochow Agrochemical Co., Ltd. and Chengwu Chenhui Environmental Protection Technology Co., Ltd. in Oct. 2018. At present, Ningxia Nongjia has a 6,000 t/a ethyl N-cyanoethanimideate project in progress. EI report for the project was re-submitted for approval in Sept. 2023; local government granted approval later. Ethyl N-cyanoethanimideate is an important intermediate for the synthesis of acetamiprid.

Gansu Tailing to build 1,000 t/a acetamiprid & 3,000 t/a CCMP capacity

Summary: On 31 Jan., the EI report of Gansu Tailing's 23,000 t/a green pesticides and intermediates project (Phase I) was approved by local authorities. The company has planned to build 1,000 t/a acetamiprid and 3,000 t/a CCMP capacity in the first phase.

On 31 Jan., the environmental impact (EI) report of Gansu Tailing Technology Co., Ltd. (Gansu Tailing)'s 23,000 t/a green pesticides and intermediates project (Phase I) was approved by the Jiuquan Ecological Environment Bureau. With an investment of USD42.22 million (RMB300 million) for the Phase I program, of which 2.84% or USD1.20 million (RMB8.53 million) is for environmental protection, Gansu





Tailing will build 1,000 t/a acetamiprid and 3,000 t/a 2-chloro-5-(chloromethyl)pyridine (CCMP) production lines in the Yumendong Building Materials Chemical Industrial Park, Jiuquan City, Gansu Province.

Acetamiprid is a chloronicotinyl insecticide, and CCMP is its intermediate. Acetamiprid has control effect on pests that have already developed resistance to organophosphorus, pyrethroid and carbamate insecticides. It is one of the alternatives to high-toxicity organophosphorus pesticides. Therefore some Chinese pesticide companies have made plans to build acetamiprid production capacity. For instance, Shandong United Pesticide Industry Co., Ltd. has launched a 10,000 t/a CCMP and 5,000 t/a acetamiprid TC project. So far, the company has finished the construction of workshops for 5,000 t/a acetamiprid TC and equipment installation has started; construction for the workshops for 10,000 t/a CCMP is in progress. The whole project is expected to be completed in H2 2024.

Meanwhile, some other companies shift the focus on upstream sectors of the pesticide industrial chain, aiming to satisfy the growing demand for pesticide intermediates. Examples are: Yumen Mingye Chemical Co., Ltd. has planned to build in the Yumendong Building Materials Chemical Industrial Park 100 t/a capacity for 2-amino-5-methylpyridine, a raw material for CCMP and an intermediate for acetamiprid and imidacloprid; Jiujiang Shanshui Technology Co., Ltd. has planned to build in the Pengze Jishan Industrial Park, Jiujiang City, Jiangxi Province, capacity of 61,000 t/a chloropyridines and 15,000 t/a CCMP.

New technologies for the eco-friendly production of high-quality pesticide intermediates have also been explored in some Chinese companies. For example, Wuwei Jieda Technology Co., Ltd. substitutes triphosgene for phosphorus oxychloride in the cyclisation reaction process for its 8,000 t/a CCMP production lines. Ningxia Nongjia New Material Technology Co., Ltd. plans to remove the process of hydrogen chloride gas generated from phosphorus trichloride and switch to ethyl N-cyanoethanimideate production to debenzolisation refining process from continuous distillation refining process, for its 6,000 t/a ethyl N-cyanoethanimideate project; ethyl N-cyanoethanimideate is also an intermediate for the production of acetamiprid.





Policy

Guidelines for Construction of Closed-Off Chemical Industry Park Management Projects takes effect on 1 Feb.

Summary: On 1 Feb., the CPCIF association standard *Guidelines for Construction of Closed-Off Chemical Industry Park Management Projects* (T/CPCIF 0299-2023) came into force. The standard specifies general requirements, construction procedures, construction content, operation and maintenance support, etc. in the construction of closed-off management projects in chemical industry parks. Specifically, it defines the principles, range, control targets, implementation plan and methods, and required functions of such closed-off management projects.

On 1 Feb., the China Petroleum and Chemical Industry Federation (CPCIF) association standard *Guidelines for Construction of Closed-Off Chemical Industry Park Management Projects* (T/CPCIF 0299-2023) came into force. The standard specifies general requirements, construction procedures, construction content, operation and maintenance, etc. in the construction of closed-off management projects in chemical industry parks.

It is required in related national policies that chemical industry parks should carry out construction of closed-off management projects. However, currently there has been no national- as well as industry-level standard so far formulated that is applicable to the practice. The existing laws, regulations and provincial standards cannot guide well-rounded construction of closed-off management projects in chemical parks. To strengthen safety management in chemical parks, regulate normal operation, this association standard was worked out by the CPCIF Standardisation Committee, together with related government departments, industry associations, higher education institutes, scientific research institutions, and leading technology units.

Specifically, the standard specifies the principles for the construction, the range of closed-off management, objects of control, implementation plan, modes of closed-off management, functional requirements of closed-off management facilities, etc. In addition, it determines that the whole construction process consists of the following procedures: preliminary consultation, implementation measures, construction, and operation and maintenance support; it also regulates practices at different stages of the process. With the support of this standard, the construction of closed-off chemical industry park management projects can be better guided, the quality of safety management in such parks effectively improved, safety hazards reduced, and risks of accident lowered. It could also serve as a technical basis for governments at all levels, park management agencies, and technology consultancies, when they provide services for related projects, as well as support supervision departments at all levels in tasks like chemical park accreditation and safety rectification.



**TABLE 4:** Content of the construction of closed-off chemical industry park management projects

Item	Content
Principle	Adaptation to local conditions, classified control, level-to-level administration, and distributed implementation
Range of closed-off management	The closed-off management range should be in alignment with the planned boundaries of parks approved by local governments.
Objects of control	Objects that should be controlled include persons, vehicles and goods and materials that go in and out the parks. If permitted, low-flying small aircrafts and boats that go in and out the parks could also be brought under control.
Implementation plan and modes	The parks could be separated via natural boundaries and other devices such as electronic fence. If restricted by the surrounding environment, it is advised to pursue closed-off management by giving priority to the use of smart devices such as electronic fence, intrusion and emergency warning system, and video surveillance system; step by step, an overall closed-off management will be achieved by adopting physical isolation measures.
Functional requirements of closed-off management facilities	Functions that should be delivered include access/pass control, personnel distribution management, transportation path planning, positioning and tracking of hazardous chemicals, parking management of hazardous chemical vehicles, monitoring and early-warning, emergency disposal, and closed-off management system.

Source:CPCIF





Registration

60 Insecticide products approved of registration in 2024, as of early Feb.

Summary: Before the Chinese Spring Festival holidays, MARA had approved of the registration of 60 insecticidal and related products so far in 2024.

Prior to the Chinese Spring Festival holidays, the Ministry of Agriculture and Rural Affairs of the People's Republic of China (MARA) had approved of the registration of 60 insecticidal and related products so far in 2024. Of these products, 44 are insecticide products, 11 hygienic insecticide products, and 3 insecticide/fungicide products (all in FS form), plus one each for acaricide and nematicide. The most popular form is SC, and popular active ingredients are chlorantraniliprole, abamectin, chlorfenapyr, etc. Besides, four of these 60 products are export-only insecticides, and two are low-toxicity TC products—a chlorantraniliprole TC product registered by Anhui Huilong Group Youngsun Pesticides Co., Ltd. and a cyantraniliprole TC product registered by Hebei Xingbai Agricultural Technology Co., Ltd.

TABLE 5: Insecticide products approved of registration in China by form, released during Jan.–Feb. 2024

No.	Form	Number
1	SC	24
2	GR	7
3	ME	6
4	RB	4
5	FS	4
6	WG	3
7	EC	3
8	OD	2
9	TC	2
10	CS	2
11	MV	1
12	SL	1
13	AE	1
Total		60

Source: MARA





TABLE 6: Insecticide TC products approved of registration, released during Jan.–Feb. 2024

N o.	Registration No.	Registrant	Form	Toxicity	Active ingredient and content	Category	Application site	Control target
1	PD20240001	Anhui Huilong Group Youngsun Pesticides Co., Ltd.	TC	Low	97% Chlorantraniliprole	Insecticide	/	/
2	PD20240002	Hebei Xingbai Agricultural Technology Co., Ltd.	TC	Low	90% Cyantraniliprole	Insecticide	/	/
3	PD20240015	Anhui Longguan Biotechnology Co., Ltd.	OD	Mild	10% Dinotefuran·0.90% abamectin-aminomethyl	Insecticide	Tea tree	Smaller green leafhopper
4	PD20240016	Anhui Share World Bio-Tech Co., Ltd.	SC	Low	2.50% Bifenthrin·2.50% thiamethoxam	Insecticide	Wheat	Aphids
5	PD20240017	Anhui Share World Bio-Tech Co., Ltd.	GR	Mild	0.50% Cyfluthrin·1.50% clothianidin	Insecticide	Sugar cane	Cane beetle
6	PD20240018	Anhui Yuanjing Crop Protection Co., Ltd.	ME	Low	5% Abamectin-aminomethyl	Insecticide	Rice	Rice leaf roller
7	PD20240019	Anhui Yuanjing Crop Protection Co., Ltd.	SC	Low	10% Bifenthrin·10% clothianidin	Insecticide	Cabbage	Striped flea beetle
8	PD20240020	Cangzhou Zhicheng Organic Biological Technology Co., Ltd.	SC	Low	20% Bifenazate·20% spiroticlofen	Insecticide	Citrus tree	Red spider mite





9	PD20240021	Foshan Gaoming Wanbang Biology Co., Ltd.	SC	Low	5% Spinosad·10% lufenuron	Insecticide	Cabbage	Diamondback moth
10	PD20240022	Guangxi Kangsaide Agrochemical Co., Ltd.	SC	Low	9% Flonicamid·6% lambda-cyhalothrin	Insecticide	Cucumber	Aphids
11	PD20240023	Guangxi Tianyuan Biochemistry Co., Ltd.	SC	Low	5% Abamectin-aminomethyl	Insecticide	Corn	Fall armyworm
							Cabbage	Beet armyworm
12	PD20240024	Guangxi Tianyuan Biochemistry Co., Ltd.	SC	Low	5% Abamectin-aminomethyl	Insecticide	Corn	Fall armyworm
							Rice	Rice leaf roller
13	PD20240025	Guangxi Tianyuan Biochemistry Co., Ltd.	SC	Low	1.30% Abamectin-aminomethyl·4.50% chlorantraniliprole	Insecticide	Rice	Rice leaf roller
14	PD20240026	Hainan Neemtech Bio-pesticide Co., Ltd.	SC	Low	5% Bifenthrin·10% flonicamid	Insecticide	Peach tree	Peach aphid
15	PD20240027	Henan Changjian Biotechnology Co., Ltd.	ME	Low	0.90% Abamectin-aminomethyl·4% beta-cypermethrin	Insecticide	Cabbage	Diamondback moth
16	PD20240028	Henan Loong Boy Biotechnology Co., Ltd.	SC	Low	14% Chlorfenapyr·6% bifenthrin	Insecticide	Eggplant	Thrip
17	PD20240029	Henan Xinnong Chemical Co., Ltd.	SC	Low (TC: highly toxic)	1.50% Abamectin·8.50% lufenuron	Insecticide	Cabbage	Diamondback moth
18	PD20240030	Henan Yitian Agriculture Co., Ltd.	SC	Low	2.50% Spinosad·12.50% indoxacarb	Insecticide	Cabbage	Diamondback moth





19	PD20240031	Henan Yunnong Crop Protection Technology Co., Ltd.	SC	Low	160g/L Bifenthrin·106g/L chlorantraniliprole	Insecticide	Cabbage	Diamondback moth
20	PD20240032	Henan Yuzhi Star Crop Protection Co., Ltd.	SC	Low	200g/L Chlorantraniliprole	Insecticide	Rice	Rice leaf roller
21	PD20240033	Henan Yuzhi Star Crop Protection Co., Ltd.	SC	Low	24% Chlorfenapyr·6% lufenuron	Insecticide	Cabbage	Beet armyworm
22	PD20240034	Jiangsu Shengjiu Agrochemical Co., Ltd.	ME	Low	0.05% Dinotefuran	Insecticide	Ornamental chrysanthemum (in courtyard)	Aphids
23	PD20240035	Jiangsu State Farm Biochemistry Co., Ltd.	CS	Moderate	10% Lambda-cyhalothrin	Insecticide	Wheat	Aphids
24	PD20240036	Jinan Luba Pesticides Co., Ltd.	SC	Low	5% Chlorantraniliprole	Insecticide	Cabbage	Beet armyworm
25	PD20240037	Jinzhou Shuofeng Pesticide Group Co., Ltd.	GR	Mild	1% Chlorantraniliprole	Insecticide	Sugar cane	Sugarcane borer
26	PD20240038	SixF Crop Protection Co., Ltd.	ME	Low	10% Chlorfenapyr·10% tolfenpyrad	Insecticide	Tea tree	Smaller green leafhopper
27	PD20240039	Nanjing Nannong Pesticide Technology Development Co., Ltd.	SC	Low	20% Chlorfenapyr·10% chlorantraniliprole	Insecticide	Cabbage	Diamondback moth
28	PD20240040	Qingdao Hansen Biologic Science Co., Ltd.	SC	Low	10% Lufenuron·10% chlorantraniliprole	Insecticide	Cabbage	Beet armyworm





29	PD20240041	Qingdao Jiner Agrochemicals R&D Co., Ltd.	SC	Low	5% Bifenthrin·10% flonicamid	Insecticide	Peach tree	Peach aphid
30	PD20240042	Ruilong Agrochemical Technology Co., Ltd.	GR	Mild	1.50% Dinotefuran·1.50% bifenthrin	Insecticide	Leek	Chinese chive maggot
31	PD20240043	Shandong Bio Biotechnology Co., Ltd.	SC	Low	8% Chlorfenapyr·20% clothianidin	Insecticide	Leek	Chinese chive maggot
32	PD20240044	Shandong Fengbeier Biotechnology Co., Ltd.	GR	Mild	1.20% Clothianidin·0.40% chlorantraniliprole	Insecticide	Sugar cane	Sugarcane borer
33	PD20240045	Shandong Kailinong Biological Science and Technology Co., Ltd.	GR	Mild	0.50% Bifenthrin·2.50% clothianidin	Insecticide	Leek	Chinese chive maggot
34	PD20240046	Shandong Kanghui Crop Protection Co., Ltd.	SC	Low	5% Bifenthrin·10% flonicamid	Insecticide	Peach tree	Peach aphid
35	PD20240047	Shandong Vicome Greenland Chemical Co., Ltd.	SC	Moderate	5% Spinosad·15% tolfenpyrad	Insecticide	Eggplant	Thrip
36	PD20240048	Shandong Shengtao Biotechnology Co., Ltd.	GR	Low	6% Metaldehyde	Insecticide	Pak choi	Snail
37	PD20240049	Shandong Shenran Chemical Technology Co., Ltd.	ME	Low	0.90% Abamectin-aminomethyl·4% beta-cypermethrin	Insecticide	Cabbage	Diamondback moth
38	PD20240050	Shanxi Yonghe Lifeng	SC	Low	200g/L Chlorantraniliprole	Insecticide	Rice	Rice leaf roller





		Biotechnology Co., Ltd.						
39	PD20240051	Zhejiang Zhongshan Chemical Industry Group Co., Ltd.	OD	Low	400g/L Chlorantraniliprole	Insecticide	Sugar cane	Sugarcane borer
40	PD20240052	Zhengzhou Xianlida Chemicals Co., Ltd.	GR	Mild	0.09% Clothianidin·0.02% chlorantraniliprole	Insecticide	Peanut	Grub
41	PD20240053	Hebei Veyong Bio-chemical Co., Ltd.	FS	Low	6% Azoxystrobin·2% fludioxonil·20% clothianidin	Insecticide/Fungicide	Peanut	Root rot, grub
42	PD20240054	Jiangmen Daguangming Agrochemical Xinhui Co., Ltd.	FS	Low	1% Difenconazole·1% fludioxonil·8% clothianidin	Insecticide/Fungicide	Wheat	Take-all disease, root rot, wireworms
43	PD20240055	Zeniorva Crop Protection (Anhui) Co., Ltd.	FS	Low	0.50% Fludioxonil·1% metalaxyl-m·7.50% clothianidin	Insecticide/Fungicide	Peanut	Root rot, grub
44	WP20240001	Henan Hanshi Hygienic Products Technology Co., Ltd.	MV	Mild	5mg/tab Meperfluthrin·5mg/tab prallethrin	Hygienic insecticide	Indoor	Mosquito
45	WP20240002	Henan Vision Technology Co., Ltd.	ME	Low	7.50% Permethrin·2.50% esbiothrin	Hygienic insecticide	Indoor	Mosquitoes, flies
46	WP20240003	Hunan Xinchangshan Agricultural Development Co., Ltd.	SL	Low	10% Dinotefuran·5% pyriproxyfen	Hygienic insecticide	Outdoor	Mosquito (larva)



47	WP20240004	Xiamen Shengweida Industry & Trade Co., Ltd.	RB	Mild	0.15% Dinotefuran	Hygienic insecticide	Indoor	Flies
48	WP20240005	Xiamen Shengweida Industry & Trade Co., Ltd.	RB	Mild	0.50% Dinotefuran	Hygienic insecticide	Indoor	Cockroach
49	WP20240006	Shandong Kanghui Crop Protection Co., Ltd.	SC	Low	10% Alpha-cypermethrin	Hygienic insecticide	Indoor	Cockroach
50	WP20240007	Shandong Kanghui Crop Protection Co., Ltd.	SC	Low	10% Beta-cyfluthrin·21% imidacloprid	Hygienic insecticide	Indoor	Cockroach
51	WP20240008	Xuchang Jian'an Changsheng Daily Chemical Co., Ltd.	ZC	Mild	11.60% Thiamethoxam·3.50% lambda-cyhalothrin	Hygienic insecticide	Outdoor	Flies
52	WP20240009	Yuan Long (Fujian) Commodity Co., Ltd.	AE	Mild	0.15% d-Cyphenothrin·0.15% rich-d-transallethrin	Hygienic insecticide	Hygiene	Mosquitoes, flies, cockroaches
53	WP20240010	Zhejiang Tianfeng Biological Science Co., Ltd.	AE	Mild	10% Alpha-cypermethrin	Hygienic insecticide	Outdoor	Red imported fire ant
							Indoor	Ants, cockroaches
54	WP20240011	Zhejiang Tianfeng Biological Science Co., Ltd.	AE	Mild	10% Alpha-cypermethrin	Hygienic insecticide	Outdoor	Red imported fire ant
							Indoor	Ants
55	PD20240126	Jiangsu State Farm Biochemistry Co., Ltd.	SC	Low	4% Abamectin·24% spirotetramat	Acaricide	Citrus tree	Red spider mite



56	PD20240127	Anhui Yuanjing Crop Protection Co., Ltd.	WG	Moderate (TC: highly toxic)	20% Abamectin·40% fluopyram	Nematicide	Cucumber	Root-knot nematodes
57	EX20240001	Hailir Pesticides and Chemicals Group Co., Ltd.	EC	Low	250g/L Bifenthrin	Insecticide	/	/
58	EX20240002	Hailir Pesticides and Chemicals Group Co., Ltd.	EC	Low	200g/L Lambda-cyhalothrin	Insecticide	/	/
59	EX20240003	Hebei Veyong Bio-chemical Co., Ltd.	EC	Low	20g/L Abamectin·40g/L acetamiprid·17.4g/L abamectin-aminomethyl	Insecticide	/	/
60	EX20240004	Shandong United Pesticide Industry Co., Ltd.	FS	Moderate	150g/L Imidacloprid·450g/L thiodicarb	Insecticide	/	/

Source: MARA





Pest

Xishuangbanna: major pests & diseases to occur moderately in general 2024

Summary: In Feb., the Bureau of Agriculture and Rural Affairs of Xishuangbanna Dai Autonomous Prefecture forecasted that in 2024, total planting area across the prefecture may reach 133,933 ha, and there would be an overall moderate occurrence of major diseases, pests, weeds, rats and snails, with relatively heavy occurrence in some local areas. It is expected that total occurrence area would surpass 466,667 ha, 41,707 ha more than the 2023 figure.

According to the Bureau of Agriculture and Rural Affairs of Xishuangbanna Dai Autonomous Prefecture, in 2023, major diseases, pests, weeds, rats and snails occurred mildly in general in Xishuangbanna (of Yunnan Province), with relatively heavy occurrence in some local areas though. Total occurrence area was 424,960 ha, 37,587 ha less than the previous year; total control area reached 499,307 ha, with a year-on-year decrease of 59,040 ha. Specifically, pests attacked a total area of 178,047 ha, down 37,673 ha year on year. In 2023, major pests on rice were rice planthoppers, rice leaf roller and striped rice stem borer; major pests on maize were fall armyworm, corn borers, corn aphids, cutworms, underground insects; major pests on vegetables were thrips, *Lyriomyza* spp., whiteflies, aphids, diamondback moth, tobacco cutworm, cotton leafworm, beet armyworm, slug, underground insects, etc.; major pests on fruit trees were oriental fruit fly, aphids, thrips, etc.; major pests on tea trees were thrips, smaller green leafhopper, tea tussock moth and tea spiny whitefly.

It is reported that in 2023, total crop planting area across the prefecture was 133,087 ha and total yield was almost 1.27 million tonnes. Although the planting area shrank slightly, the yield registered a year-on-year increase of 187,700 tonnes. Main food crops grown in the prefecture include rice, maize, beans and tuber crops, major cash crops are vegetables, melons (as fruit) and sugarcane, and peanut is the main oilseed crop planted.

For the year 2024, the intended planting area is expected to reach 133,933 ha. It is also forecasted that there would be an overall moderate occurrence of major diseases, pests, weeds, rats and snails, with relatively heavy occurrence in some local areas; total occurrence area may surpass 466,667 ha, 41,707 ha more than the 2023 figure. Specifically, pest infestation on rice and maize is forecasted as follows:

- On rice:
 - Rice planthoppers: In general, moderate occurrence is projected, with relatively heavy occurrence in some local areas. Occurrence area may add up to 26,667 ha;
 - Rice leaf roller: In general, moderate occurrence is projected, with relatively heavier occurrence in late rice fields and rice growing areas with dry culture method. Occurrence area may reach 6,667 ha. The rainy and wet weather is conducive to the growth of this pest, and occurrence peak is at the jointing-to-heading stage;
 - Striped rice stem borer: In general, moderate occurrence is projected. Occurrence area may total 4,000 ha. In mixed cropping rice (single- and double-cropping rice) regions, infestation will be heavier as food resources are ample for the pest;
- On maize:
 - Fall armyworm: In general, moderate occurrence is projected, with relatively heavy occurrence in some local areas, but heavy occurrence is expected for fields with no control measures taken. With several generations, the pest may occur in a total area of 70,000 ha. It mainly affects maize crops from seedling stage to tasselling stage; peak occurrence period is from April to Aug.;
 - Corn borers: In general, mild occurrence is projected, with moderate occurrence in some local areas. Total occurrence area





may reach 4,000 ha.

Besides, a general moderate occurrence of pests including vegetable leaf miners, thrips, whiteflies, aphids, diamondback moth, cabbage caterpillar, beet armyworm, mites and slug is expected, with relatively heavy occurrence in some local areas. Moderate occurrence of pests on tea trees including smaller green leafhopper, tea thrips, tea tussock moth, tea spiny whitefly, and of pests on sugarcane and citrus is projected. It should be noted that in some areas, armyworms may occur intensively with high density. Red imported fire ant is expected to infest relatively heavily, and in some areas, there is a possibility of heavy occurrence and spread. Yellow-spined bamboo locust may occur occasionally at some spots and cause damages. Total occurrence area of armyworms, red fire ant and locusts may reach 5,333 ha.



Trade analysis

Average export price of China's insecticide formulations plunges in 2023

Summary: In 2023, the export volume of China's insecticide formulations expanded 27.67% YoY, major export destinations being Brazil, Myanmar, Thailand, etc.; the import volume of insecticide formulations to China increased by 2.04% YoY, with Japan being the largest import origin.

According to the statistics from General Administration of Customs of China (China Customs), in 2023, China exported 358,517.63 tonnes (actual volume, the same hereafter) of insecticide formulation products. The volume expanded 27.67% YoY. However, the average export price in 2023 plunged 22.75% YoY. The top three export destinations of China's insecticide formulations for the year were Brazil, Myanmar and Thailand. The export volume to Brazil accounts for 16.62% of the yearly total export of insecticide formulations; both the volume and Brazil's share to the total grow on a yearly basis.

As regards insecticide formulation imports, China imported 7,628.11 tonnes of insecticide formulation products in 2023; the volume increased slightly by 2.04% YoY. The annual import price averaged USD29.49/kg, down 6.25% YoY. Japan was the largest import origin for the year 2023; the volume from this origin makes up 32.55% of the yearly total import.

TABLE 7: Imports and exports of insecticide formulations from China, 2022–2023

Year	Import			Export		
	Actual volume, kg	Value, USD	Average price, USD/kg	Actual volume, kg	Value, USD	Average price, USD/kg
2022	7,475,663	235,151,490	31.46	280,810,970	1,832,569,767	6.53
2023	7,628,114	224,958,253	29.49	358,517,627	1,807,488,025	5.04

Note: The data are imports and exports of both chemical insecticide formulations and biological insecticide formulations.

Source: China Customs

TABLE 8: Major destinations of insecticide formulations exported from China, 2022–2023

No.	2022			2023		
	Destination	Actual volume, tonne	Share	Destination	Actual volume, tonne	Share
1	Brazil	35,669	12.70%	Brazil	59,571	16.62%
2	Thailand	16,819	5.99%	Myanmar	25,273	7.05%
3	Vietnam	15,201	5.41%	Thailand	20,781	5.80%
4	Myanmar	14,468	5.15%	Nigeria	17,023	4.75%
5	Indonesia	14,353	5.11%	Vietnam	13,851	3.86%
6	Nigeria	12,590	4.48%	Indonesia	13,550	3.78%
7	Bangladesh	10,881	3.87%	Cote d'Ivoire	11,382	3.17%
8	The Philippines	8,923	3.18%	Bangladesh	11,346	3.16%
9	Cambodia	7,472	2.66%	Ghana	10,380	2.90%
10	Ghana	7,370	2.62%	Chile	8,901	2.48%
	Others	137,064	48.81%	Others	166,460	46.43%
	Total	280,811	/	Total	358,518	/

Note: The data are exports of both chemical insecticide formulations and biological insecticide formulations.

Source: China Customs

TABLE 9: Major origins of insecticide formulations to China, 2022–2023

No.	2022			2023		
	Origin	Actual volume, tonne	Share	Origin	Actual volume, tonne	Share
1	Indonesia	1,739	23.26%	Japan	2,483	32.55%
2	Japan	1,253	16.76%	Singapore	1,200	15.73%
3	The US	905	12.10%	Indonesia	1,048	13.74%
4	Singapore	863	11.54%	France	694	9.09%
5	France	761	10.18%	Vietnam	494	6.48%
6	South Korea	574	7.68%	South Korea	398	5.22%
	Others	1,381	18.47%	Others	1,311	17.18%
	Total	7,476	/	Total	7,628	/

Note: The data are imports of both chemical insecticide formulations and biological insecticide formulations.

Source: China Customs



Brief news

Gansu Shengjinyuan: phase I thiamethoxam & clothianidin project approved

Early Feb., CCM learned from Gansu Shengjinyuan Biotechnology Co., Ltd. (Gansu Shengjinyuan) that the environmental impact report of its phase I program of the 7,600 t/a pesticide TC project had been approved by local government. The phase I involves the construction of 3,000 t/a thiamethoxam TC capacity and 2,000 t/a clothianidin TC capacity in the Liugou Coal Chemical Industrial Park of Guazhou Industrial Concentration Zone, Jiuquan City, Gansu Province. According to the plan, Gansu Shengjinyuan will expend 2.6% of the total investment in the project for environmental protection purpose.

EI report of Shandong Exceris' 5,000 t/a 4-chlorobenzoyl chloride project published

In late Jan., the environmental impact (EI) report of Shandong Exceris Chemical Co., Ltd. (Shandong Exceris)'s 5,000 t/a 4-chlorobenzoyl chloride project was accepted by the Weifang Municipal Ecological and Environment Bureau.

4-Chlorobenzoyl chloride is an important intermediate for the synthesis of a wide variety of products, including insecticide flumethrin, fungicide dimethomorph and rodenticide warfarin. Shandong Exceris plans the project to extend its industrial chain, increase added value and core competitiveness of products, strengthen its pesticide business and generate greater economic and social benefits. According to the EI report, the company will repurpose the previous cyromazine reaction workshop (not including formulation workshop), dismantle cyromazine TC production equipment and install 4-chlorobenzoyl chloride production equipment in its existing plant in the Yangkou Chemical Industrial Park, Shouguang City, Shandong Province. Upon completion, it will have 5,000 t/a production capacity for 4-chlorobenzoyl chloride, plus by-product capacity for hydrochloric acid and sodium hypochlorite.

Three-Year Action Plan for Combating Root Causes of Work Safety Accidents (2024–2026) issued

In Feb., the Ministry of Emergency Management of the People's Republic of China revealed that the Work Safety Committee of the State Council had issued the *Three-Year Action Plan for Combating Root Causes of Work Safety Accidents (2024–2026)*. According to the action plan, the central government will take three years to thoroughly launch eight campaigns: safety education and training for chief persons in charge of business entities, improvement of standard system for determining potential risks of major accidents, dynamic removal of major hazards, safety technology support and project management, safety awareness capacity-building for staff of production and operation entities, establishment of safety management system in business entities, precise law enforcement and assistance for safe production, and strengthening of the public's workplace safety knowledge. The document also proposes:

- By the end of 2024, major hazards already found in investigations made in 2023 and before should be basically eliminated;
- By the end of 2025, addition of new major hazards should be effectively curbed;
- By the end of 2026, a dynamic zero-hazard mechanism should be set up and taken as the norm.

Udragon Pesticides & Chemicals' 2,050 t/a pesticide TC project approved

On 22 Feb., the environmental impact report of Zhejiang Udragon Pesticides and Chemicals Co., Ltd. (Udragon Pesticides & Chemicals)'s 2,050 t/a chemical pesticides TC technological transformation project was approved by the Jiaxing Ecology and Environment Bureau. The company will invest USD63.34 million (RMB450 million) in the project, of which USD1.32 million (RMB9.40 million) is for environment





protection. Products planned cover fungicide intermediate, fungicides and insecticides; planned TC products are of high efficacy, low toxicity and broad-spectrum application. Udragon Pesticides & Chemicals expects the project will generate sales revenue of USD84.45 million (RMB600 million), and profits and taxes of USD16.89 million (RMB120 million), once it comes into full operation.

TABLE 10: Insecticides planned in Udragon Pesticides & Chemicals' 2,050 t/a chemical pesticides TC technological transformation project

No.	Insecticide	Content	Design capacity, t/a	Note
1	Tiorantraniliprole	95%	200 /	
2	Spirobudiclofen	95%	50	Cancel the previous production process and make technological upgrade.

Source: Environmental impact report of the project

Shandong offers opinions to facilitate high-quality development of chemical parks

On 5 Feb., the General Office of People's Government of Shandong Province issued the Opinions on Accelerating High-quality Development of Chemical Industry Parks within the Province. According to the document, by the year 2027, the province will cultivate at least 10 chemical parks with total revenue crossed the RMB100 billion threshold, send 7 parks into the rank of Top30 nationwide, increase park entry rate of chemical enterprises that should be in parks to about 60%, raise the revenue ratio of chemical industry to the park total to around 75%, make sure at least 90% of chemical parks reaching D Level (relatively-low level of security risks), and strive for goals that the comprehensive utilisation rate of general industrial wastes stay above 92% and reuse rate of industrial water reach 94% in such parks, and thus take concrete steps in facilitating high-quality development of chemical parks.

Hubei U-Prefer proposes to upgrade and expand capacity for fipronil intermediates

On 26 Feb., some basic environmental impact assessment information of U-Prefer Biotechnology (Hubei) Co., Ltd. (Hubei U-Prefer)'s 2,500 t/a 2,6-dichloro-4-(trifluoromethyl)aniline and 2,000 t/a 4-aminobenzotrifluoride project was released. The company plans to upgrade its existing 2,500 t/a 2,6-dichloro-4-(trifluoromethyl)aniline production line and expand existing 1,600 t/a 4-aminobenzotrifluoride capacity by 400 t/a in the plant in the Yuekou Industrial Park, Tianmen City, Hubei Province. 2,6-Dichloro-4-(trifluoromethyl)aniline is a key intermediate of fipronil, and 4-aminobenzotrifluoride is an important intermediate for the production of fipronil, tau-fluvalinate and penfluron.

EI report of Gansu Lanwo's 8,710 t/a pesticide TC & intermediate project to be approved

On 27 Feb., the Ecology and Environment Bureau of Lanzhou New Area announced that it was to approve the environmental impact (EI) report of Gansu Lanwo Technology Co., Ltd. (Gansu Lanwo)'s 8,710 t/a pesticides TC and intermediates project. The company has planned to invest USD39.41 million (RMB280 million), of which USD1.90 million (RMB13.50 million) is for environment protection, to build the project in the Qinchuan Chemical Industrial Park, Lanzhou City, Gansu Province. Planned products include amide insecticides and intermediates for chlorantraniliprole and fluzaindolizine. Gansu Lanwo is a sub-subsidiary of ABA Chemicals (Nantong) Limited; the latter is itself a subsidiary of ABA Chemicals Corporation.





Heilongjiang releases fourth-batch list of to-be-approved chemical parks

On 26 Feb., the Department of Industry and Information Technology of Heilongjiang Province released the fourth-batch list of to-be-approved chemical parks, which include Heilongjiang Hegang Economic Development Zone Circular Economy Industrial Park and Fujin City Chemical Industrial Park. As of Feb. 2024, Heilongjiang has approved four batches of 20 chemical industrial parks (the two to be approved this time included).



TABLE 11: Accredited chemical industrial parks in Heilongjiang, as of Feb. 2024

No.	Chemical industrial park	Batch of accreditation
1	Qiqihar Yushutun Chemical Industry Concentration Area	First batch
2	Nehe Biotechnology and Chemical Pharmaceutical Industrial Park	First batch
3	Hongwei Chemical Industrial Park of Daqing High-Tech Industrial Development Zone	First batch
4	Xinghua Chemical Industrial Park of Daqing High-Tech Industrial Development Zone	First batch
5	Linyuan Chemical Industrial Park of Daqing High-Tech Industrial Development Zone	First batch
6	Dorbod Economic Development Zone Chemical Industrial Park (Including A Zone And B Zone)	First batch
7	Qitaihe Jianghe Green and Intelligent Manufacturing Integration Industrial Park	First batch
8	Anda Economic Development Zone Fine Chemical Industrial Park	First batch
9	Mudanjiang Hualin Industrial Park	Second batch
10	Jiamusi High-tech Zone Chemical Industrial Park (Huaxi Industrial Park)	Second batch
11	Huanan County Chemical Park	Second batch
12	Heilongjiang Jixi Economic Development Zone Lishu Industry Valley	Second batch
13	Heilongjiang Jidong Economic Development Zone Chemical Industrial Park	Second batch
14	Heilongjiang Jixian Economic Development Zone Chemical Industrial Park (including region A and B)	Second batch
15	Qiqihar (Fuyu) New Bio-Based Materials Circular Economy Industrial Park	Third batch
16	Qitaihe Xinxing Coal Chemical Circular Economy Industrial Park	Third batch
17	Boli Economic Development Zone Chemical and New Material Industrial Park (Zone 1 and Zone 2)	Third batch
18	Shuangyashan Economic and Technological Development Zone New Coal Chemical Industrial Park (with four chemical industrial parks)	Third batch
19	Heilongjiang Hegang Economic Development Zone Circular Economy Industrial Park	Fourth batch (to be approved)
20	Fujin City Chemical Industrial Park	Fourth batch (to be approved)

Source: Department of Industry and Information Technology of Heilongjiang Province

Nanjing Red Sun: pre-packaged reorganisation strategic investor changed to Qujing High-Tech Investment



On 21 Feb., Nanjing Red Sun Co., Ltd. (Nanjing Red Sun) made an announcement on the change of pre-packaged reorganisation strategic investor. The company's selection committee held a meeting and confirmed the following items:

- The committee decided to change Nanjing Red Sun's pre-packaged reorganisation strategic investor to Qujing High-Tech Industrial Development Zone Construction Investment Co., Ltd. (Qujing High-Tech Investment), and urged Qujing High-Tech Investment to set up a company or special partnership to tackle with matters thus concerned;
- The previous strategic investor Hubei Tongfu Venture Capital Management Co., Ltd. gave full respect to Nanjing Red Sun's and the selection committee's decision, understood the change and was ready to play a part in work related to the pre-packaged reorganisation. It will continue to help some of Nanjing Red Sun's businesses settle down in Yichang City of Hubei Province and assist the company in further and high-quality development.

Four insecticide products accredited as 2023 patent intensive products

On 29 Jan., the Patent Protection Association of China announced the list of patent intensive products for the year 2023. The accreditation was launched as a response to the *Notice of the Office of China National Intellectual Property Administration on Carrying out Accreditation of Patent Intensive Products*, and followed the guidance of the *Method for Enterprise Patent Intensive Product Evaluation (T/PPAC 402—2022)*, with procedures including application, review, accreditation and public announcement.

Altogether 18 pesticide products are recognised as patent intensive products, of which four are insecticide products.

TABLE 12: Insecticide products accredited as 2023 patent intensive products

No.	Record No.	Product	Specifications	Number of patents used	Company
1	20223200000151.6	Imidacloprid	Mass fraction of imidacloprid: 98.73%	15	Jiangsu Yangnong Chemical Group Co., Ltd.
2	20233300002793.9	Lufenuron	500g	8	Zhejiang Segate Science and Technology Co., Ltd.
3	20233700000938.3	Indoxacarb	TC	16	Shandong Jingbo Agrochemicals Technology Co., Ltd.
4	20224400000570.2	5% Chlorantraniliprole SC	1,000 mL per bottle	1	Shenzhen Noposion Agrochemicals Co., Ltd.

Source: Patent Protection Association of China





Price update

Ex-works prices of major insecticides in China, 8 Feb., 2024

TABLE 13: Ex-works prices of major insecticides in China, 8 Feb., 2024

Product	20240108		20240208	
	Original Price (RMB/t)	Price (USD/t)	Original Price (RMB/t)	Price (USD/t)
95% Abamectin technical	372,000	52,564.65	355,000	49,965.52
97% Acephate technical	42,000	5,934.72	42,000	5,911.41
95% Acetamiprid technical	79,000	11,162.92	77,000	10,837.59
95% Azocyclotin technical	225,000	31,793.13	225,000	31,668.29
95% Beta-Cypermethrin technical	126,000	17,804.15	123,000	17,312
97% Bifenthrin technical	148,000	20,912.82	142,500	20,056.58
95% Buprofezin technical	65,000	9,184.68	65,000	9,148.62
98% Carbofuran technical	100,000	14,130.28	100,000	14,074.79
98% Chlorfenapyr technical	165,000	23,314.96	160,000	22,519.67
95% Chlorfluazuron technical	395,000	55,814.61	400,000	56,299.17
95% Chlorpyrifos technical	34,300	4,846.69	35,000	4,926.18
94% Cypermethrin technical	58,000	8,195.56	56,000	7,881.88
99% Cyromazine technical	113,000	15,967.22	113,000	15,904.52
98% Deltamethrin technical	390,000	55,108.1	395,000	55,595.43
95% Diafenthiuron technical	112,000	15,825.91	112,000	15,763.77
98% Dimethoate technical	47,600	6,726.01	47,600	6,699.6
70% Emamectin benzoate technical	359,000	50,727.71	343,000	48,276.54
92% Fenvalerate technical	145,000	20,488.91	145,000	20,408.45
95% Fipronil technical	411,000	58,075.46	411,000	57,847.4
98% Hexaflumuron technical	460,000	64,999.29	450,000	63,336.57





97% Imidacloprid technical	88,600	12,519.43	86,000	12,104.32
98% Isoprocarb technical	45,500	6,429.28	45,500	6,404.03
95% Lambda-cyhalothrin technical	111,000	15,684.61	111,000	15,623.02
90% Malathion technical	35,000	4,945.6	35,000	4,926.18
95% Methidathion technical	90,000	12,717.25	90,000	12,667.31
90% Methomyl SP	58,900	8,322.74	58,900	8,290.05
98% Methomyl technical	67,000	9,467.29	67,000	9,430.11
75% Omethoate technical	52,000	7,347.75	52,000	7,318.89
90% Phoxim technical	33,000	4,662.99	33,000	4,644.68
90% Profenofos technical	65,800	9,297.73	58,000	8,163.38
90% Propargite technical	60,000	8,478.17	60,000	8,444.88
95% Pymetrozine technical	100,800	14,243.32	101,000	14,215.54
95% Pyridaben technical	102,000	14,412.89	100,000	14,074.79
97% Spirodiclofen technical	139,000	19,641.09	139,000	19,563.96
85% Triazophos technical	69,000	9,749.89	69,000	9,711.61

Note: Ex-works price includes VAT.

Source: CCM

Shanghai Port prices of major insecticides in China, 8 Feb., 2024





TABLE 14: Shanghai Port prices of major insecticides in China, 8 Feb., 2024

Product	20240108		20240208	
	Original Price (RMB/t)	Price (USD/t)	Original Price (RMB/t)	Price (USD/t)
95% Abamectin technical	372,500	52,635.3	355,500	50,035.89
97% Acephate technical	42,500	6,005.37	42,500	5,981.79
95% Acetamiprid technical	79,500	11,233.57	77,500	10,907.96
95% Azocyclotin technical	225,500	31,863.78	225,500	31,738.66
95% Beta-Cypermethrin technical	126,500	17,874.81	123,500	17,382.37
97% Bifenthrin technical	148,500	20,983.47	143,000	20,126.95
95% Buprofezin technical	65,500	9,255.33	65,500	9,218.99
98% Carbofuran technical	100,500	14,200.93	100,500	14,145.17
98% Chlorfenapyr technical	165,500	23,385.62	160,500	22,590.04
95% Chlorfluazuron technical	395,500	55,885.26	400,500	56,369.55
95% Chlorpyrifos technical	34,800	4,917.34	35,500	4,996.55
94% Cypermethrin technical	58,500	8,266.21	56,500	7,952.26
99% Cyromazine technical	113,500	16,037.87	113,500	15,974.89
98% Deltamethrin technical	390,500	55,178.75	395,500	55,665.81
95% Diafenthiuron technical	112,500	15,896.57	112,500	15,834.14
98% Dimethoate technical	48,100	6,796.67	48,100	6,769.98
70% Emamectin benzoate technical	359,500	50,798.36	343,500	48,346.92
92% Fenvalerate technical	145,500	20,559.56	145,500	20,478.82
95% Fipronil technical	411,500	58,146.11	411,500	57,917.78
98% Hexaflumuron technical	460,500	65,069.94	450,500	63,406.94
97% Imidacloprid technical	89,100	12,590.08	86,500	12,174.7
98% Isoprocarb technical	46,000	6,499.93	46,000	6,474.4





95% Lambda-cyhalothrin technical	111,500	15,755.26	111,500	15,693.39
90% Malathion technical	35,500	5,016.25	35,500	4,996.55
95% Methidathion technical	90,500	12,787.9	90,500	12,737.69
90% Methomyl SP	59,400	8,393.39	59,400	8,360.43
98% Methomyl technical	67,500	9,537.94	67,500	9,500.49
75% Omethoate technical	52,500	7,418.4	52,500	7,389.27
90% Phoxim technical	33,500	4,733.64	33,500	4,715.06
90% Profenofos technical	66,300	9,368.38	58,500	8,233.75
90% Propargite technical	60,500	8,548.82	60,500	8,515.25
95% Pymetrozine technical	101,300	14,313.97	101,500	14,285.92
95% Pyridaben technical	102,500	14,483.54	100,500	14,145.17
97% Spirodiclofen technical	139,500	19,711.74	139,500	19,634.34
85% Triazophos technical	69,500	9,820.55	69,500	9,781.98

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., 2024





TABLE 15: FOB Shanghai prices of major insecticides in China, 8 Feb., 2024, USD/t

Product	20240108	20240208
95% Abamectin technical	51,221.1	46,760.34
97% Acephate technical	5,681.46	5,435.05
95% Acetamiprid technical	10,946.71	10,206.82
95% Azocyclotin technical	31,105.32	29,756.24
95% Beta-Cypermethrin technical	16,822.22	15,709.46
97% Bifenthrin technical	19,704.26	18,149.17
95% Buprofezin technical	9,060	8,667.05
98% Carbofuran technical	13,871.62	13,269.99
98% Chlorfenapyr technical	22,788.22	21,139.26
95% Chlorfluazuron technical	54,412.89	52,711.83
95% Chlorpyrifos technical	4,822.6	4,707.59
94% Cypermethrin technical	7,794.47	7,199.29
99% Cyromazine technical	15,087.29	14,432.94
98% Deltamethrin technical	51,804.54	50,193.06
95% Diafenthiuron technical	14,969.81	14,320.55
98% Dimethoate technical	6,459.14	6,179
70% Emamectin benzoate technical	49,436.76	45,184.87
92% Fenvalerate technical	19,380.56	18,540
95% Fipronil technical	56,588.37	54,134.05
98% Hexaflumuron technical	63,348.12	59,283.22
97% Imidacloprid technical	12,273.16	11,396.32
98% Isoprocarb technical	6,180.79	5,912.72
95% Lambda-cyhalothrin technical	14,802.87	14,160.85





90% Malathion technical	4,777.19	4,570
95% Methidathion technical	12,517.02	11,974.14
90% Methomyl SP	8,212.89	7,856.68
98% Methomyl technical	10,160.77	9,720.08
75% Omethoate technical	7,044.11	6,738.59
90% Phoxim technical	4,615.2	4,415.03
90% Profenofos technical	8,839.09	7,453.37
90% Propargite technical	8,394.61	8,030.52
95% Pymetrozine technical	13,477.13	12,918.19
95% Pyridaben technical	14,161.7	13,281.85
97% Spirodiclofen technical	18,554.51	17,749.77
85% Triazophos technical	9,656.72	9,237.89

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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