

Herbicides China Monthly Report 202212

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Contents

Headline	1
Editor's note	3
Company dynamics	4
Shangyu Xinyinbang plans to build capacity for multiple pesticides TC	4
Huai'an Glory quickens the pace to get 500 t/a florasulam TC line construction started	4
Market analysis	6
Prices of most herbicides TC drop in early Dec.	6
2,4-D TC price decreases in Dec.	7
Paraquat and Pyridine	10
Illegal diquat TC producers and sellers severely cracked down upon	10
Nanjing Red Sun's newly-built diquat dichloride lines go into trial production	10
Paraquat and pure pyridine Dec. prices obviously higher than previous-year level	11
Policy	13
MARA issues action plan for chemical pesticide reduction to 2025	13
Registration	14
Jingbo Agrochem's topramezone TC registration application submitted to MARA	14
Trade analysis	16
Brazil becomes the largest export destination of China's ametryn products in Q3 2022	16
Brief news	19
Gansu Yufengyuan to construct 33,500 t/a fine chemical project	19
Zhongnong Ruihua to build 4,000 t/a clethodim TC capacity	19
Luheng Technology goes public on BSE	19
Jiangsu Yangnong's subsidiary plans to construct 15,650 t/a pesticide TC capacity	19
Jiangxi Heyi plans to launch 15,200t/a pesticide TC and intermediate project	19
Zhangye Hengye plans to construct 2,000 t/a pesticide intermediate project	20
Weifang Rainbow obtains clethodim EC registration in EU	20
Nantong Jiangshan plans to build novel green herbicide TC and formulation project	20
EI report of Henan HDF's 15,000 t/a glycine project under review	20
Ningxia Wynca to construct 3,000 t/a glufosinate-ammonium TC capacity	20
Price Update	22
Ex-works prices of key herbicide raw materials in China, 8 Dec., 2022	22
Ex-works prices of main herbicides in China, 8 Dec., 2022	22
Shanghai port prices of main herbicides in China, 8 Dec., 2022	24
FOB Shanghai prices of main herbicides in China, 8 Dec., 2022	26





Headline

Shangyu Xinyinbang has planned to build capacity for bifenthrin TC, clethodim TC, thifluzamide TC, nicosulfuron TC, carboxin TC, tebuconazole TC, pymetrozine TC and penoxsulam TC.

Huai'an Glory quickens the pace to go through all the administrative formalities necessary for its 1,500 t/a pesticide capacity expansion project, which includes the construction of 500 t/a capacity for florasulam TC.

Into Dec., the majority of herbicides TC see their ex-works price go down, but a few products have stable price.

The ex-works price of 2,4-D technical in China slipped in Dec. Although raw material costs have reduced, operation in 2,4-D manufacturers has not improved due to slack demand. It is expected that 2,4-D price would keep stable or decline slightly, and the chance for a plunge is slim in the short term.

Late Nov., the newly-established Diquat Industry Chain Collaboration Group commissioned Beijing Yongxin Zhicai Law Firm to carry out legal actions against illegal diquat TC production and sales activities and the law firm then issued a stern warning. To clean the diquat market will help foster development in legitimate diquat TC producers as well as a virtuous cycle of diquat TC supply.

Nanjing Red Sun's newly-built diquat dichloride lines have gone into trial production.

In Dec., the FOB price of paraquat 42% TK and the ex-works price of pure pyridine in China saw big YoY increases.

In Nov., MARA issued the Action Plan for Chemical Pesticide Reduction to 2025.

Jingbo Agrochem's application for pesticide registration of a 97% topramezone TC product has passed provincial-level preliminary review. The preliminary assent document, along with other necessary materials, was then submitted to MARA.

In Q3 2022, China mainly exported ametryn products to 11 countries. The biggest export destination was Brazil; the volume (converted to 100% AI) exported to Brazil grew by nearly 950 tonnes YoY.







Editor's note

In Dec., the majority of herbicides TC saw their ex-works price go down in China. The ex-works price of 2,4-D technical slipped this month.

As to company dynamics, Shangyu Xinyinbang has planned to build capacity for several pesticides TC (clethodim TC and nicosulfuron TC included), Huai'an Glory has been quickening the pace to go through all the administrative formalities necessary for its 1,500 t/a pesticide capacity expansion project (including 500 t/a florasulam TC), and Nanjing Red Sun has put its newly-built 10,000 t/a diquat dichloride lines into trial production.

The USD/CNY exchange rate in this newsletter is USD1.00 = CNY7.1225 on 1 Dec., 2022, sourced from the People's Bank of China. All the prices mentioned in this newsletter will include the VAT, unless otherwise specified.





Company dynamics

Shangyu Xinyinbang plans to build capacity for multiple pesticides TC

Summary: Shangyu Xinyinbang has planned to build capacity for bifenthrin TC, clethodim TC, thifluzamide TC, nicosulfuron TC, carboxin TC, tebuconazole TC, pymetrozine TC and penoxsulam TC.

Early Dec., CCM learned from Shaoxing Shangyu Xinyinbang Biochemical Co., Ltd. (Shangyu Xinyinbang) that it had decided to build new capacity for some pesticide TC products, and to expand capacity for its main products hymexazol TC and bifenazate TC. Recently the company has filed to launch the "100 t/a bifenthrin, 100 t/a clethodim, 120 t/a thifluzamide, 140 t/a nicosulfuron, 220 t/a carboxin, 220 t/a tebuconazole, 460 t/a pymetrozine, 480 t/a penoxsulam technological transformation and 1,000 t/a hymexazol expansion" project and the "1,750 t/a bifenazate technological transformation" project.

Shangyu Xinyinbang is a high-tech enterprise involved in R&D, production and sale of pesticides, located in Hangzhou Bay Shangyu Economic and Technological Development Zone, Shaoxing City, Zhejiang Province. Since its establishment, it has invested in several pesticide projects and has gained some influence in the pesticide industry. Currently, the company has active capacity of 250 t/a bifenazate TC, 100 t/a 3-(ethylsulfonyl)-2(1H)-pyridinethione, 80 t/a hymexazol TC, 50 t/a nicosulfuron TC and 5,000 t/a pesticide formulation products. It has also mastered production technologies for some other pesticide TC, formulation and related intermediates, which lays the foundation for its business extension to these products in the future.

With the two new projects, Shangyu Xinyinbang will expand its hymexazol TC capacity by 920 t/a and bifenazate TC capacity by 1,500 t/a. It should be noted that months before the company had its 400 t/a methoxyfenozide project approved by local government, and the construction work has been in progress in an orderly manner.

According to the company, it has long before acquired pesticide registration certificate for its methoxyfenozide TC product. It will push ahead with the methoxyfenozide project and put the lines into operation as fast as possible. Meanwhile, efforts will be put into going through the administrative formalities required to bring the two newly-proposed projects into construction.

Huai'an Glory quickens the pace to get 500 t/a florasulam TC line construction started

Summary: Huai'an Glory quickens the pace to go through all the administrative formalities necessary for its 1,500 t/a pesticide capacity expansion project, which includes the construction of 500 t/a capacity for florasulam TC.

In Dec., CCM learned from Huai'an Glory Chemical Co., Ltd. (Huai'an Glory) that the company had been quickening its pace to go through all the administrative formalities necessary for the 1,500 t/a pesticide capacity expansion project, which plans to build 500 t/a florasulam TC and 1,000 t/a dinotefuran TC lines.

Huai'an Glory, established in Sept. 2012, is a wholly-owned subsidiary and one of the major production bases (along with a base in Nanjing City of Jiangsu Province and a base in Huaibei City of Anhui Province) of Jiangsu Flag Chemical Industry Co., Ltd. (FLAGCHEM).





It is located in Huai'an Salt Chemical New Material Industrial Park, Huai'an City, Jiangsu Province. It plays an important part in FLAGCHEM's overall development strategy. Since the establishment, Huai'an Glory has invested in several projects; so far it has active production capacity for cyproconazole TC, lufenuron TC, pyraclostrobin TC, fluroxypyr-meptyl TC, trinexapac-ethyl TC, carfentrazone-ethyl TC, penoxsulam TC, clodinafop-propargyl TC, fenoxaprop-P-ethyl TC, fluazinam TC, HPPA and HPPA-ET.

The 1,500 t/a pesticide capacity expansion project is a key project planned in line with FLAGCHEM's development strategy. Currently, Huai'an Glory is actively pushing ahead with the formalities required by related laws and regulations. So far, the company has obtained project recordation certificate and its environmental impact report has been accepted by the Huai'an Ecological Environment Bureau. If everything fares well, the project may pass environmental impact assessment before a new year comes.

However, it should still be noticed that some pesticide projects in Jiangsu encounter a prolonged period of approval process, or get declined, influenced by a series of policies on environmental protection, workplace safety, supply side reform in chemical industry, etc. On the other hand, high-quality projects are encouraged by the provincial government, as long as they are allowed by related policies, in order to build up bigger and stronger pesticide enterprises. Under this circumstance, there still exist risks that might foil Huai'an Glory's plan to expand the capacity.





Market analysis

Prices of most herbicides TC drop in early Dec.

Summary: Into Dec., the majority of herbicides TC see their ex-works price go down, but a few products have stable price.

Into Dec., the majority of herbicides TC see their ex-works price go down, while atrazine TC, quizalofop-P-ethyl TC and pretilachlor TC have stable price.

In early Dec., of triazine herbicides, atrazine TC, though it has still been in a slow season, had stable price, which was supported by high raw material costs. The ex-works price of ametryn TC declined by 4.44% MoM due to weak demand. Of sulfonylurea herbicides, quizalofop-P-ethyl TC kept a stable price, while nicosulfuron TC experienced a quick MoM drop, down 11.32%, and bensulfuron-methyl TC had a 4% MoM decline.

Prices of amide herbicides dipped under weakened demand, but production costs of these herbicides stayed high, affected by raw material prices. Yet pretilachlor TC price stopped the previous fall trend and kept stable. As for organophosphorus herbicides, glufosinate-ammonium TC price continued the downtrend, declining by 5.68% MoM to USD26,339/t (RMB187,600/t), along with more supply on the market; glyphosate TC had a 7% MoM decrease in its price, landing at USD7,090/t (RMB50,500/t), due to shrinking export and dwindled confidence in downstream buyers.

Ex-works price of florasulam TC fell by 0.58% MoM. The price of export-oriented diquat TK went down 5.36% MoM to USD7,441/t (RMB53,000/t). However, the price of diuron TC bounced up 4.35% MoM to USD6,739/t (RMB48,000/t).





TABLE 1: Ex-works prices of main herbicides TC in early Dec. 2022

Category	Product	Content of active ingredient	Ex-works price in early Dec., RMB/t	USD/t	MoM change based on RMB
Triazine herbicides	Atrazine TC	9%	36,000	5,054.41	Basically flat
	Ametryn TC	95%	43,000	6,037.21	Down
Sulfonylurea herbicides	Nicosulfuron TC	95%	235,000	32,994.03	Down
	Quizalofop-P-ethyl TC	95%	235,000	32,994.03	Basically flat
	Bensulfuron-methyl TC	96%	192,000	26,956.83	Down
Amide herbicides	Pretilachlor TC	95%	34,000	4,773.60	Basically flat
	Acetochlor TC	92%	39,000	5,475.61	Down
	Metolachlor TC	97%	57,500	8,073.01	Down
Organophosphorus herbicides	Glufosinate-ammonium TC	95%	187,600	26,339.07	Down
	Glyphosate TC	95%	50,500	7,090.21	Down
Triazolo[1,5-a]pyrimidine-2-sulfonanilide herbicides	Florasulam TC	98%	510,000	71,604.07	Down
Bipyridinium herbicides	Diquat TK	40%	53,000	7,441.21	Down
Substituted phenylurea herbicides	Diuron TC	97%	48,000	6,739.21	Up

Source: CCM

2,4-D TC price decreases in Dec.

Summary: The ex-works price of 2,4-D technical in China slipped in Dec. Although raw material costs have reduced, operation in 2,4-D manufacturers has not improved due to slack demand. It is expected that 2,4-D price would keep stable or decline slightly, and the chance for a plunge is slim in the short term.

In H1 2022, the ex-works price of 2,4-D technical in China dropped continuously till May; it recovered bit by bit from June to Aug., and then stabilised for a while before another dip this month. The Dec. price dropped by 4.17% MoM to USD3,229/t (RMB23,000/t). Slack demand is the main force that has driven the price down. Usually, Dec. is a busy time for stockpiling agricultural means of production, yet 2,4-D technical market is quite dull this month. Downstream buyers have made orders based on current needs. The majority of 2,4-D





producers have operated inactively, so the supply has been small.

In general, prices of 2,4-D's raw materials dropped recently. The ex-works price of phenol shot from USD1,377/t (RMB9,207/t) in July to USD1,522/t (RMB10,803/t), but dived in Nov. and dropped further to USD1,110/t (RMB7,905/t) in Dec., down 11.43% MoM (based on RMB price). As for chloroacetic acid, its ex-works price started to edge up in Sept. and came to USD520/t (RMB3,750/t) in Nov., but it decreased by 2.13% MoM to USD515/t (RMB3,670/t) this month.

Decreased raw material costs may become an incentive to increase operating rate in the 2,4-D manufacturers. Yet they are still challenged by dull demand. It is expected that the ex-works price of 2,4-D technical would keep stable or decline slightly, and the chance for a price plunge is slim in the short term.

TABLE 2: Monthly ex-works prices of phenol and chloroacetic acid in China, July–Dec. 2022

Month	Phenol		Chloroacetic acid	
	USD/t	RMB/t	USD/t	RMB/t
July	1,377	9,207	579	3,870
Aug.	1,371	9,253	524	3,537
Sept.	1,517	10,444	529	3,640
Oct.	1,522	10,803	525	3,730
Nov.	1,238	8,925	520	3,750
Dec.	1,110	7,905	515	3,670

Source:CCM





FIGURE 1: Ex-works price of 96% 2,4-D technical in China, Jan.–Dec. 2022



Source:CCM





Paraquat and Pyridine

Illegal diquat TC producers and sellers severely cracked down upon

Summary: Late Nov., the newly-established Diquat Industry Chain Collaboration Group commissioned Beijing Yongxin Zhicai Law Firm to carry out legal actions against illegal diquat TC production and sales activities and the law firm then issued a stern warning. To clean the diquat market will help foster development in legitimate diquat TC producers as well as a virtuous cycle of diquat TC supply.

Recently many pesticide enterprises voiced to the newly-established Diquat Industry Chain Collaboration Group that they had found some enterprises produce and/or sell diquat TC illegally, and upset the normal market order. Late Nov., the collaboration group commissioned Beijing Yongxin Zhicai Law Firm to carry out legal actions against illegal diquat TC production and sales activities and issue a stern warning, in the hope that this move will effectively crack down, in cooperation with law enforcement agencies, upon illegal production practices in underground illegitimate workshops and the like, and create a fair and just playing field in the diquat market, so that healthy and orderly development of pesticide industry can be fostered.

Diquat is a bipyridinium herbicide. It is the third largest widely-used non-selective herbicide, after glyphosate and paraquat. It acts fast and scores quite well in safety, soil conservation, effectiveness on broadleaf weeds and low temperature tolerance. Major diquat TC producers in China include Nanjing Red Sun Co., Ltd. (15,000 t/a capacity), Yongnong BioSciences Co., Ltd. (10,000 t/a capacity) and Shandong Luba Chemical Co., Ltd.

The Diquat Industry Chain Collaboration Group was co-initiated and co-founded in Nov. 2022 in Shaoxing City, Jiangsu Province, by Nanjing Red Sun Co., Ltd., Yongnong BioSciences Co., Ltd., Shandong Luba Chemical Co., Ltd., Guangxi Xintiande Energy Co., Ltd. and Hebi Saiker Chemicals Co., Ltd. The establishment will help regulate production and operation, develop an industry chain collaboration mechanism integrating the upstream supply of raw materials & intermediates and downstream diquat production, and ensure healthy and stable development of the diquat industrial chain. The collaboration group will also facilitate technological advances and green & low-carbon production across the industrial chain.

Nanjing Red Sun's newly-built diquat dichloride lines go into trial production

Summary: Nanjing Red Sun's newly-built diquat dichloride lines have gone into trial production.

On 28 Nov., Nanjing Red Sun Co., Ltd. (Nanjing Red Sun) relied to multiple questions on an interaction platform for investors, the topics covering R&D progress, production, company operation, etc.

According to Nanjing Red Sun, the newly-built 10,000 t/a diquat dichloride lines in the Dongzhi production base (in Anhui Province) have been put into trial production; the lines currently run normally and meet the design objectives. By the end of 2022, the company's diquat dichloride capacity (converted to 100% AI) will reach 20,000 t/a, and diquat dibromide capacity (converted to 100% AI) come to 5,000 t/a. It is estimated that one tonne of diquat dichloride TC (converted to 100% AI) could produce about 2.37 tonnes of 40% diquat dichloride TK, the common product for sale in the market. Moreover, its 20,000 t/a glufosinate-ammonium project is still under construction; the L-





glufosinate project has passed lab tests and pilot scale tests, and the company has been actively facilitating industrial production.

Nanjing Red Sun's 2022 Q3 Report, released on 31 Oct., shows that in the reporting period, it gained a revenue of USD266.40 million (RMB1,897.45 million), a net profit attributable to shareholders of the listed company of USD46.13 million (RMB328.54 million), and a net profit excluding extraordinary profit and loss attributable to shareholders of the listed company of USD50.10 million (RMB356.82 million), up 77.33%, 5,554.23% and 1,959.62% YoY, respectively. The third quarter is usually an off-season for pesticides, and the company has taken the opportunity to optimise, improve and supplement its footing in the industrial chain, via measures such as industrial upgrading, digital transformation, and innovative development. During this period, it has put the diquat dichloride lines into operation, and spared no efforts to stabilise production and shipment so as to satisfy customer demands. The greatly improved performance is the fruit of those efforts. The fourth quarter is a peak season for pesticide export as well as domestic sales, the company expects a strong business performance, supported by ample orders. For some products, it has already had full order book into Q1 2023.

As regards the pre-packaged reorganisation ruled by the Nanjing Intermediate People's Court last month, Nanjing Red Sun expressed that it had consistently urged its controlling shareholder Nanjing First Pesticide Group Co., Ltd. (Nanjing First Pesticide) and related parties to give back the appropriated funds as early as possible. The fund return will be one of the toughest issues in Nanjing Red Sun's possible reorganisation. Currently, Nanjing First Pesticide is undergoing reorganisation itself. Nanjing Red Sun has paid active attentions to the progress, followed the updates on assets, liabilities and operation in Nanjing First Pesticide and the related parties, and regularly sent letters or enquired on spot regarding the implementation of the plan for repatriation of the occupied funds.

Paraquat and pure pyridine Dec. prices obviously higher than previous-year level

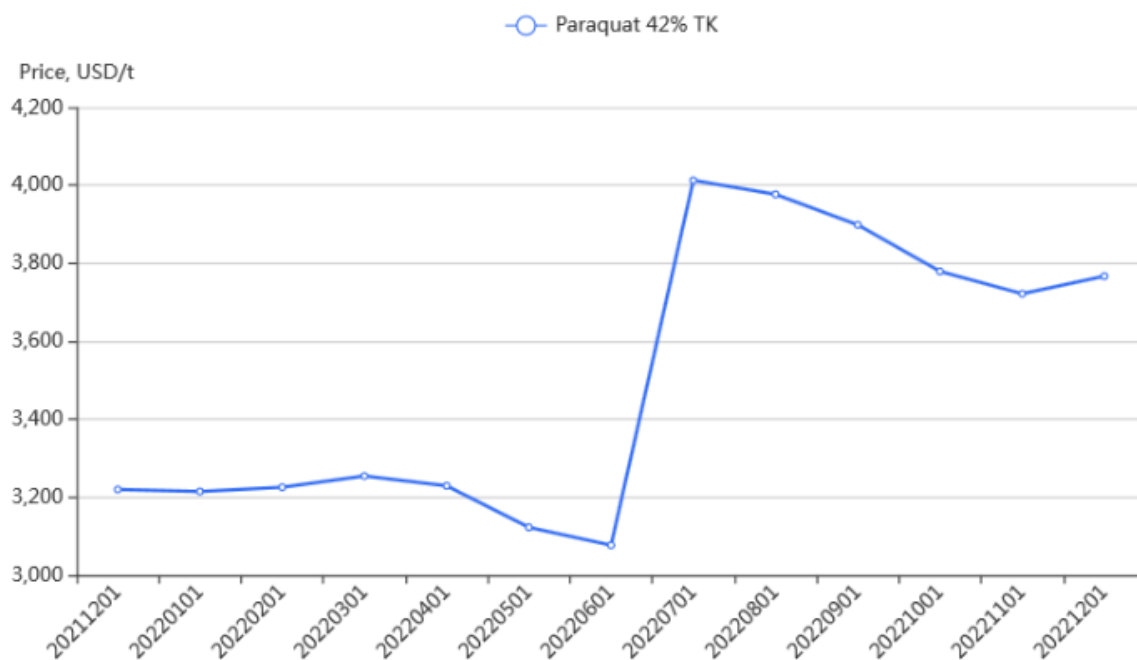
Summary: In Dec., the FOB price of paraquat 42% TK and the ex-works price of pure pyridine in China saw big YoY increases.

CCM's price monitoring data show that the FOB price of paraquat TK in China increased by 1.21% MoM to USD3,767/t in Dec., the price still registering a 16.99% rise on a yearly basis. The ex-works price of pure pyridine kept stable this month, at USD5,897/t (RMB42,000/t), which was 50% higher than the price in Dec. 2021.





FIGURE 2: FOB price of paraquat 42% TK in China, Dec. 2021–Dec. 2022



Note: The monthly prices here are the prices recorded early each month.
Source: CCM

FIGURE 3: Ex-works price of pure pyridine in China, Dec. 2021–Dec. 2022



Note: The monthly prices here are the prices recorded early each month.
Source: CCM





Policy

MARA issues action plan for chemical pesticide reduction to 2025

Summary: In Nov., MARA issued the Action Plan for Chemical Pesticide Reduction to 2025.

In Nov., Ministry of Agriculture and Rural Affairs of the People's Republic of China (MARA) issued the Action Plan for Chemical Pesticide Reduction to 2025. Rollout of this document caters to the inevitable requirement to accelerate the overall green transformation of agriculture, and it is also an important approach to ensure the quality and safety of agricultural products and achieve ecological progress.

According to the action plan, the reduction work should be guided by the principle "focusing on prevention, integrating prevention and treatment measures". Control methods should be changed and emphases put on major crops, major diseases & pests, key areas and key links. Technological integration innovation should be strengthened, an integrated technology system for crop disease & pest prevention and control be fostered that is eco-friendly as well as ecologically compatible, and monitoring and early warning efforts be intensified. Green control and large-scale control should be promoted, and more guidance be given on how to use pesticides in a scientific and safe way. Chemical pesticide reduction goals would be pursued only on the basis of effectively controlled diseases & pests and secured agricultural production.

The plan points out that by 2025, an integrated technology system for crop disease & pest prevention and control that is eco-friendly and ecologically compatible must be set up and strengthened, pesticide variety structure improved, and the skills to use pesticides in a scientific and safe way upgraded. The downward momentum of total chemical pesticide consumption should be maintained with utmost efforts.

The document requires that four basic principles must be followed: balancing pesticide reduction and agricultural yield, attaching equal importance to quantity and quality, co-ordinating agricultural production and ecology, and integrating cost reduction and efficiency increase. Efforts should be made to raise comprehensive disease & pest control and treatment capability, to promote whole-course green control of disease & pest on crops and safe and scientific pesticide use, to alleviate negative influences pesticides posed on the environment and beneficial organisms, and to optimise prevention and control technologies and encourage easy, cost-effective technical patterns. It also requires that local governments should reinforce leadership, policy support, technology support and publicity.

As to technological paths to guard against diseases & pests on crops, the action plan suggests that analyses of the occurrence trends and damage features should first be made, and well-rounded prevention and control solutions, to addressing both the symptoms and the root causes, be given accordingly. Chemical pesticides, out-dated pesticides should be substituted by biopesticides or high-efficacy low-risk pesticides. Diseases & pests monitoring and early warning should be automated and intelligentised, with forecast accuracy improved. Large-scale prevention and control should be better integrated with green control, and the overdependence on chemical pesticides shed.





Registration

Jingbo Agrochem's topramezone TC registration application submitted to MARA

Summary: Jingbo Agrochem's application for pesticide registration of a 97% topramezone TC product has passed provincial-level preliminary review. The preliminary assent document, along with other necessary materials, was then submitted to MARA.

In Dec., CCM learned from the Shandong Provincial Department of Agriculture and Rural Affairs that it had approved, in the preliminary review, Jingbo Agrochemicals Technology Co., Ltd. (Jingbo Agrochem)'s registration application for its 97% topramezone TC product, and the assent document, along with other necessary materials, had been submitted to the Ministry of Agriculture and Rural Affairs of the People's Republic of China (MARA). Whether the application could get final approval is yet unknown, as the product should go through stricter technical review.

The current Regulation on Pesticide Administration rules that pesticide registration system is implemented in China. Registration certificate is one of the necessary documents for a pesticide product legally coming into market circulation. New pesticide product registration application procedures for enterprises in China, as detailed in the Regulation on Pesticide Administration and the Measures for the Administration of Pesticide Registration, mainly include:

- Apply for pesticide registration to the agricultural authority at the provincial level where the company is located; the company shall submit all the applicant materials required.
- The agricultural authorities at the provincial level shall perform a preliminary examination of the data submitted by an applicant, give opinions of the preliminary examination, and report to MARA.
- Upon receipt of the application data and preliminary examination opinions submitted by the agricultural authorities at the provincial level, MARA shall complete technical examinations on the chemistry, toxicity, environment impact, label sample, etc. of the product, give examination opinions, and submit them to the Pesticide Registration Review Committee for a final decision.

Topramezone, developed by BASF SE, is a broad-spectrum pyrazolone herbicide having high activity and easy combination with other products. It is deemed as the safest and an excellent herbicide product for maize fields, with good performance on controlling broadleaf weeds and various kinds of annual gramineous weeds, and safeness to different maize varieties and succeeding crops.

As of 12 Dec. 2022, there were three valid registrations for topramezone TC (all for 97% TC) in China, and their holders are: BASF SE, Weifang Nuchlor Chemical Co., Ltd. (Weifang Nuchlor) and Jiangsu Flag Chemical Industry Co., Ltd. (FLAGCHEM). Currently, the two domestic companies are building their topramezone TC production lines; Weifang Nuchlor has planned 300 t/a capacity and FLAGCHEM 500 t/a.

Moreover, many more enterprises are in the process of applying for a TC production registration, of which Jingbo Agrochem is a representative. Jingbo Agrochem has previously built up 100 t/a topramezone TC production line in its plant in Boxing County of Shandong Province, and is now constructing a 1,000 t/a line. According to its plan, once the new line is put into operation, the current 100 t/a line will be halted.





Other pesticide enterprises that choose to self-develop topramezone TC product include Shandong Eshung Industrial Co., Ltd., Shandong Cynda Chemical Co., Ltd., Gansu Huashi Biotechnology Co., Ltd., Inner Mongolia Nab Technology Co., Ltd. and Inner Mongolia Lange Biotechnology Co., Ltd. These companies have revealed their investment plans to set up commercial production capacity for topramezone TC.





Trade analysis

Brazil becomes the largest export destination of China's ametryn products in Q3 2022

Summary: In Q3 2022, China mainly exported ametryn products to 11 countries. The biggest export destination was Brazil; the volume (converted to 100% AI) exported to Brazil grew by nearly 950 tonnes YoY.

According to the import and export data from Tranalysis, in Q3 2022, China mainly exported 1,246.07 tonnes (100% AI volume, the same hereafter) of ametryn products to 11 countries, including Brazil, Vietnam, Argentina and Peru. Export to Brazil, the largest export destination, reached 936 tonnes, a huge improvement from Q3 2021.

Details of China's ametryn exports in Q3 2022 are as follows:

Ametryn TC

- Specification for export: 95% TC, 96% TC, 97% TC, 98% TC
- Major destination: China exported 96.33 tonnes of ametryn TC to major destinations, at an average price (based on 100% AI) of USD7.39/kg. Vietnam was the largest export destination with a volume of 57.10 tonnes, taking up 59.27% of China's ametryn TC exports to major destinations during this period.

Compared with Q3 2021, Q3 2022 saw ametryn TC exports to major destinations decrease by 466.02 tonnes. However, the export to Vietnam increased by 38.86 tonnes, and its share to the total TC export jumped by 56.03 percentage points.

Ametryn formulations

- Specification for export: 50% SC, 80% WG, 80% WP
- Major destination: China exported 1,149.74 tonnes of ametryn formulations to major destinations, at an average price (based on 100% AI) of USD8.67/kg. Brazil ranked the first as the biggest export destination with 936 tonnes, which accounts for 81.41% of China's ametryn formulation exports to major destinations during this period.

Compared with Q3 2021, Q3 2022 saw ametryn formulation exports to major destinations grow by 758.04 tonnes. In particular, the export to Brazil rocketed by 935.99 tonnes from less than one tonne, and the share to the total formulation export jumped by 81.41 percentage points.

TABLE 3: Exports of ametryn TC products to major destinations from China, Q3 2022

No.	Destination	Volume (100% AI), kg	Value, USD	Average price (based on 100% AI), USD/kg
1	Vietnam	57,095	406,689	7.12
2	Costa Rica	39,232	304,763	7.77
Total		96,327	711,452	7.39

Note: The data, sourced from Tranalysis, were updated on 13 Dec., 2022.

Source: Tranalysis



**TABLE 4:** Exports of ametryn formulation products to major destinations from China, Q3 2022

No.	Destination	Volume (100% AI), kg	Value, USD	Average price (based on 100% AI), USD/kg
1	Brazil	936,000	8,102,180	8.66
2	Argentina	54,720	476,060	8.70
3	Peru	49,425	402,050	8.13
4	Ecuador	35,904	300,651	8.37
5	Uganda	35,400	313,740	8.86
6	The Philippines	16,000	122,913	7.68
7	The US	10,513	143,181	13.62
8	Costa Rica	6,000	55,777	9.30
9	Nigeria	5,763	48,800	8.47
10	India	16	150	9.38
Total		1,149,740	9,965,500	8.67

Note: The data, sourced from Tranalysis, were updated on 13 Dec., 2022.

Source: Tranalysis

TABLE 5: Export of Q3 2022 major ametryn TC export destinations from China vs their situation in Q3 2021

No.	Destination	Q3 2022		Q3 2021	
		Volume (100% AI), kg	Share	Volume (100% AI), kg	Share
1	Vietnam	57,095	59.27%	18,240	3.24%
2	Costa Rica	39,232	40.73%	11,875	2.11%
Total/Sub-total		96,327	100.00%	30,115	5.35%

Note: The data, sourced from Tranalysis, were updated on 13 Dec., 2022.

Source: Tranalysis



**TABLE 6:** Export of Q3 2022 major ametryn formulation export destinations from China vs their situation in Q3 2021

No.	Destination	Q3 2022		Q3 2021	
		Volume (100% AI), kg	Share	Volume (100% AI), kg	Share
1	Brazil	936,000	81.41%	4	<0.01%
2	Argentina	54,720	4.76%	/	/
3	Peru	49,425	4.30%	12,000	3.06%
4	Ecuador	35,904	3.12%	/	/
5	Uganda	35,400	3.08%	32,938	8.41%
6	The Philippines	16,000	1.39%	22,960	5.86%
7	The US	10,513	0.91%	/	/
8	Costa Rica	6,000	0.52%	8,000	2.04%
9	Nigeria	5,763	0.50%	/	/
10	India	16	<0.01%	/	/
Total/Sub-total		1,149,740	100.00%	75,902	19.38%

Note:1. The data, sourced from Tranalysis, were updated on 13 Dec., 2022.

2. According to Tranalysis, there were no data for ametryn formulation export from China to Argentina, Ecuador, the US, Nigeria and India in Q3 2021.

Source:Tranalysis





Brief news

Gansu Yufengyuan to construct 33,500 t/a fine chemical project

On 5 Dec., the Jiuquan Ecological Environment Bureau approved the environmental impact report of Gansu Yufengyuan Technology Co., Ltd. (Gansu Yufengyuan)'s 33,500 t/a fine chemical project (phase I and phase II). Located in the Chemical Industry Zone of Beihewan Circular Economy Industrial Park, Jinta County, Jiuquan City, Gansu Province, the project (phase I and phase II) includes the construction of production lines for:

- Phase I: 1,4-Diamino-2,3-dihydroanthraquinone, 1-nitroanthraquinone, 1-aminoanthraquinone, 2-chloro-6-nitrotoluene (2,500 t/a) and 3-chloro-2-methylaniline (1,000 t/a);
- Phase II: 2,6-Dichlorobenzaldehyde (500 t/a), 2,6-dichlorobenzonitrile (500 t/a) and 2,6-difluorobenzamide (800 t/a).

Zhongnong Ruihua to build 4,000 t/a clethodim TC capacity

On 5 Dec., the Jiuquan Ecological Environment Bureau approved the environmental impact report of Zhongnong Ruihua (Gansu) Pharmaceutical Co., Ltd. (Zhongnong Ruihua)'s pesticide and pharmaceutical intermediate, TC and formulation project (phase I). Located in the Yumendong Building Materials Chemical Industrial Park, the project includes the construction of production lines for 8,000 t/a acrolein, 3,000 t/a 2-chloro-5-chloromethylpyridine, 2,000 t/a acetamiprid TC, 4,000 t/a clethodim TC and 10,000 t/a pesticide formulation products (2,500 t/a azoxystrobin-fluazinam SC, 2,500 t/a cyazofamid-azoxystrobin SC, 2,500 t/a clethodim EC and anilofos-ethoxysulfuron WP).

Luheng Technology goes public on BSE

On 9 Dec., Luheng Technology Group Co., Ltd. (Luheng Technology) went public on the Beijing Stock Exchange (BSE) and delisted from the National Equities Exchange and Quotations (NEEQ). The company publicly issued about 40.50 million shares with this listing, and has raised total funds of USD45.48 million (RMB323.96 million), which will be used for construction of 1,000 t/a 2-chloronicotinic acid, 2,000 t/a 3-cyanopyridine and 8,000 t/a pesticide formulation project, for construction of the Nansha Luheng Breeding Research Institute, and used as supplementary working capital.

Jiangsu Yangnong's subsidiary plans to construct 15,650 t/a pesticide TC capacity

On 2 Dec., brief information on the 15,650 t/a pesticide TC and 7,000 t/a pesticide intermediate project of Liaoning Youchuang Crop Protection Co., Ltd. (Liaoning Youchuang), a wholly-owned subsidiary of Jiangsu Yangnong Chemical Co., Ltd. (Jiangsu Yangnong), was published on the official website of the Huludao Economic Development Zone. With an investment totalling USD591.59 million (RMB4.21 billion), the company plans to construct production lines of 5,000 t/a clethodim TC, 1,500 t/a imazethapyr TC, 500 t/a anilofos TC, 500 t/a diflufenican TC, 250 t/a sethoxydim TC, 200 t/a imazamox TC, 100 t/a imazapic TC, 3,000 t/a cyhalothrin TC, 2,500 t/a pydiflumetofen TC, 1,500 t/a diamide insecticides TC, 500 t/a paclobutrazol TC, 100 t/a pyrisoxazole TC, 3,000 t/a triazoles, 2,000 t/a chloropyridines and 2,000 t/a cyclohexanediones. The project will be located in the Chemical Industrial Park of Huludao Economic Development Zone, Huludao City, Liaoning Province.

Jiangxi Heyi plans to launch 15,200t/a pesticide TC and intermediate project





On 25 Nov., the Pengze County Government publicised the environmental impact report of the 15,200 t/a pesticide TC and intermediate relocation, improvement and transformation project of Jiangxi Heyi Chemical Co., Ltd. (Jiangxi Heyi), which is a wholly-owned subsidiary of Nutrichem Co., Ltd. Planned to be located in the Pengze Jishan Industrial Park, Jiujiang City, Jiangxi Province, the project (phase I) will construct production lines of 100 t/a bupirimate TC, 1,000 t/a iprodione TC, 1,800 t/a dithianon TC, 800 t/a procymidone TC, 1,000 t/a sulfentrazone TC, 500 t/a dimetachlone TC, 500 t/a cyromazine TC, 500 t/a copper oxychloride TC, 2,000 t/a clethodim TC, 500 t/a ethirimol TC, 333 t/a 2-chloropropionic acid, 2,000 t/a methyl 2-chloropropionate, 667 t/a ethyl 2-chloropropionate and 2,000 t/a 3,5-dichloroaniline.

Zhangye Hengye plans to construct 2,000 t/a pesticide intermediate project

On 13 Dec., the environmental impact (EI) report of 2,000 t/a 4,6-dimethoxy-2-(methylsulfonyl)pyrimidine project of Zhangye Hengye Biotechnology Co., Ltd. (Zhangye Hengye) was publicised. The project will be located in the Yanchi Park of Gaotai Industrial Park, Zhangye City, Gansu Province.

4,6-Dimethoxy-2-(methylsulfonyl)pyrimidine can be used as an intermediate to produce pyrimidine salicylic acid herbicides such as bispyribac-sodium, pyriithiobac-sodium and pyribenzoxim.

Weifang Rainbow obtains clethodim EC registration in EU

On 17 Dec., Shandong Weifang Rainbow Chemical Co., Ltd. (Weifang Rainbow) announced that it had a clethodim EC product approved of registration in Poland and approvals of the product were expected in Spain and some other EU countries. Boosted by this success, the company has greater confidence in its strategic planning on EU market and will pick up the pace at expanding the market.

Nantong Jiangshan plans to build novel green herbicide TC and formulation project

On 20 Dec., the Ecology and Environment Bureau of Yichang City publicised the environmental impact report (draft) of the newly-developed green herbicide TC and formulation project of Jiangshan (Yichang) Crop Technology Co., Ltd., a wholly-owned subsidiary of Nantong Jiangshan Agrochemical & Chemicals Co., Ltd. (Nantong Jiangshan). To be located in the Yaojiagang Chemical Park, Zhijiang City, Yichang City, Hubei Province, the project plans to construct a 500 t/a "Benmicao-zuo" production line.

Developed by Nantong Jiangshan, Benmicao-zuo, a protoporphyrinogen oxidase (PPO) inhibitor, is a novel uracil herbicide.

EI report of Henan HDF's 15,000 t/a glycine project under review

On 15 Dec., the Ecology and Environment Bureau of Xuchang City publicised the environmental impact (EI) report of the glycine technological transformation and expansion project of Henan HDF Chemical Co., Ltd. (Henan HDF). To be built in the Xuchang Fine Chemical Park, Xuchang City, Henan Province, the project plans to expand the company's glycine capacity to 15,000 t/a. Glycine is a vital raw material for glyphosate TC production. It is expected that after the expansion, the project would provide sufficient glycine for its 30,000 t/a glyphosate TC project.





Ningxia Wynca to construct 3,000 t/a glufosinate-ammonium TC capacity

On 23 Dec., the Shizuishan People's Government announced that it had planned to approve the environmental impact report of the glufosinate-ammonium TC and methyldiethoxyphosphine project (phase I) of Ningxia Wynca Technology Co., Ltd. (Ningxia Wynca), a subsidiary of Zhejiang Wynca Chemical Group Co., Ltd. Located in Pingluo Industrial Park Taisha Area, Shizuishan City, Ningxia Hui Autonomous Region, the phase I project will build capacity of 3,000 t/a glufosinate-ammonium TC and 2,940 t/a glufosinate-ammonium AS.





Price Update

Ex-works prices of key herbicide raw materials in China, 8 Dec., 2022

TABLE 7: Ex-works prices of key herbicide raw materials in China, 8 Dec., 2022

Raw Materials	20221108		20221208	
	Original Price (RMB/t)	Price (USD/t)	Original Price (RMB/t)	Price (USD/t)
98% Glycine	14,500	2,012	13,000	1,825.2
92% Iminodiacetonitrile	9,300	1,290	9,300	1,305.72
99% Isopropylamine	9,550	1,325	9,550	1,340.82
98% N-(Phosphonmethyl) Iminodiacetic acid	35,000	4,856	30,000	4,212
99% Phosphorus trichloride	8,410	1,167	7,710	1,082.49
99.9% Pyridine	42,000	5,827	42,000	5,896.81

Note: Ex-works price includes VAT.

Source: CCM

Ex-works prices of main herbicides in China, 8 Dec., 2022





TABLE 8: Ex-works prices of main herbicides in China, 8 Dec., 2022

Product	20221108		20221208	
	Original Price (RMB/t)	Price (USD/t)	Original Price (RMB/t)	Price (USD/t)
96% 2,4-D technical	24,000	3,330	23,000	3,229.2
92% Acetochlor technical	39,500	5,480	39,000	5,475.61
97% Atrazine technical	36,000	4,994	36,000	5,054.41
96% Bensulfuron-methyl technical	200,000	27,747	192,000	26,956.83
92% Butachlor technical	26,500	3,676	26,000	3,650.4
95% Clomazone technical	118,000	16,370	113,000	15,865.22
95% Cyhalofop-butyl technical	188,000	26,082	177,500	24,921.02
97% Diuron technical	46,000	6,382	48,000	6,739.21
98% Fenclorim technical	130,000	18,035	127,000	17,830.82
95% Fenoxaprop-P-ethyl technical	182,000	25,249	180,000	25,272.03
96% Fluroxypyr technical	172,000	23,862	173,000	24,289.22
95% Fomesafen technical	139,000	19,284	139,000	19,515.62
95% Glufosinate ammonium technical	198,900	27,594	187,600	26,339.07
95% Glyphosate technical	54,300	7,533	50,500	7,090.21
95% Haloxyfop-P-methyl technical	220,000	30,521	208,000	29,203.23
97% Metolachlor technical	58,000	8,047	57,500	8,073.01
95% Metsulfuron-methyl technical	135,000	18,729	135,000	18,954.02
95% Nicosulfuron technical	265,000	36,764	235,000	32,994.03
97% Oxyfluorfen technical	225,000	31,215	215,000	30,186.03
95% Pendimethalin technical	63,500	8,810	65,700	9,224.29
95% Pretilachlor technical	34,000	4,717	34,000	4,773.6
97% Pyrazosulfuron-ethyl technical	300,000	41,620	255,000	35,802.04





80% Quinclorac technical	147,100	20,408	147,100	20,652.86
95% Quizalofop-P-ethyl technical	235,000	32,602	235,000	32,994.03
95% Tribenuron-methyl technical	145,000	20,116	145,000	20,358.02
95% Trifluralin technical	38,000	5,272	38,000	5,335.21

Note: Ex-works price includes VAT.

Source: CCM

Shanghai port prices of main herbicides in China, 8 Dec., 2022



TABLE 9: Shanghai port prices of main herbicides in China, 8 Dec., 2022

Product	20221108		20221208	
	Original Price (RMB/t)	Price (USD/t)	Original Price (RMB/t)	Price (USD/t)
96% 2,4-D technical	24,500	3,399	23,500	3,299.4
92% Acetochlor technical	40,000	5,549	39,500	5,545.81
97% Atrazine technical	36,500	5,064	36,500	5,124.61
96% Bensulfuron-methyl technical	200,500	27,816	192,500	27,027.03
92% Butachlor technical	27,000	3,746	26,500	3,720.6
95% Clomazone technical	118,500	16,440	113,500	15,935.42
95% Cyhalofop-butyl technical	188,500	26,151	178,000	24,991.22
97% Diuron technical	46,500	6,451	48,500	6,809.41
98% Fenclorim technical	130,500	18,105	127,500	17,901.02
95% Fenoxaprop-P-ethyl technical	182,500	25,319	180,500	25,342.23
96% Fluroxypyr technical	172,500	23,931	173,500	24,359.42
95% Fomesafen technical	139,500	19,353	139,500	19,585.82
95% Glufosinate ammonium technical	199,400	27,663	188,100	26,409.27
95% Glyphosate technical	54,800	7,603	51,000	7,160.41
95% Haloxyfop-P-methyl technical	220,500	30,591	208,500	29,273.43
97% Metolachlor technical	58,500	8,116	58,000	8,143.21
95% Metsulfuron-methyl technical	135,500	18,798	135,500	19,024.22
95% Nicosulfuron technical	265,500	36,834	235,500	33,064.23
97% Oxyfluorfen technical	225,500	31,284	215,500	30,256.23
95% Pendimethalin technical	64,000	8,879	66,200	9,294.49
95% Pretilachlor technical	34,500	4,786	34,500	4,843.8
97% Pyrazosulfuron-ethyl technical	300,500	41,689	255,500	35,872.24



80% Quinclorac technical	147,600	20,477	147,600	20,723.06
95% Quizalofop-P-ethyl technical	235,500	32,672	235,500	33,064.23
95% Tribenuron-methyl technical	145,500	20,186	145,500	20,428.22
95% Trifluralin technical	38,500	5,341	38,500	5,405.41

*Note: Port price equals the ex-works price plus the transport fee from the factory to the port, and the ex-works price includes VAT.
Source: CCM*

FOB Shanghai prices of main herbicides in China, 8 Dec., 2022





TABLE 10: FOB Shanghai prices of main herbicides in China, 8 Dec., 2022, USD/t

Product	20221108	20221208
96% 2,4-D technical	3,385	3,289.15
92% Acetochlor technical	5,476	5,473.72
97% Atrazine technical	4,832	4,890.12
96% Bensulfuron-methyl technical	27,130	26,363.72
92% Butachlor technical	3,722	3,698.76
95% Clomazone technical	16,067	15,577.38
95% Cyhalofop-butyl technical	24,613	23,526.07
97% Diuron technical	6,353	6,702.55
98% Fenclorim technical	17,686	17,488.89
95% Fenoxaprop-P-ethyl technical	24,701	24,725.29
96% Fluroxypyr technical	23,352	23,769.54
95% Fomesafen technical	18,900	19,127.32
95% Glufosinate ammonium technical	26,032	24,856.27
95% Glyphosate technical	8,132	7,664.44
95% Haloxyfop-P-methyl technical	29,828	28,548.29
97% Metolachlor technical	7,972	7,999.64
95% Metsulfuron-methyl technical	18,361	18,581.17
95% Nicosulfuron technical	35,899	32,234.76
97% Oxyfluorfen technical	29,428	28,464.92
Paraquat 42% TK	3,722	3,767.03
95% Pendimethalin technical	8,714	9,119.23
95% Pretilachlor technical	4,734	4,791.05
97% Pyrazosulfuron-ethyl technical	40,621	34,965.48





80% Quinclorac technical	19,993	20,233.26
95% Quizalofop-P-ethyl technical	31,852	32,234.76
95% Tribenuron-methyl technical	19,710	19,946.53
95% Trifluralin technical	5,092	5,153.53

Note: FOB Shanghai price considers factors of Shanghai port price, port sur-charges, loading charges, traders' profits and export tax refund. And the shipment cost shall be paid by the buyer. This FOB price is the average of quotations offered by enterprises and it may be lower than the one reported in customs data which is the actual purchase price.

Source: CCM

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