

# Herbicides China Monthly Report 202209

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## Headline

Hebei Lansheng's Heilongjiang-based subsidiary Anda Lanze plans to build capacity of 1,000 t/a metribuzin TC, 1,000 t/a flufenacet TC and 1,000 t/a intermediate 2-(methylsulfonyl)-5-(trifluoromethyl)-1,3,4-thiadiazole. This project will help Anda Lanze gain advantage in upstream-downstream integration, as well as in large-scale supply of flufenacet TC.

Gansu Huashi's tripyrasulfone TC, fenpyrazone TC and intermediates project is under construction in an orderly manner. Of the planned products, tripyrasulfone and fenpyrazone are patented new herbicide varieties self-developed by R&D centre under Qingdao Qingyuan, which is a shareholder of Gansu Huashi.

Into Sept., most herbicides TC see declining ex-works price, while some products have stable price.

As of early Sept., Shandong Luba has still awaited IEC audit meeting. Previously in July this year, the company filed a prospectus with SSE, intending to issue A-shares on the main board mainly to raise fund for its herbicide projects.

On 13 Sept., Nanjing Red Sun revealed its progresses in R&D of new generation pesticides as well as in diquat dichloride registration abroad, and sketched capacity utilisation of major products. Previously on 31 Aug., the company published semi-annual report for H1 2022, which reported big growths in revenue and net profit in the reporting period.

Compared with the prices in Sept. 2021, the FOB price of paraquat 42% TK and the ex-works price of pure pyridine in early Sept. 2022 increased a lot.

On 16 Sept., Nanjing Red Sun received a notice of bankruptcy liquidation petition sent by Nanjing intermediate court and a petition for reorganisation applied by Nanjing Red Sun's creditor Nanjing Teva-Chem. Nanjing Red Sun reported annual losses continuously during 2019–2021.

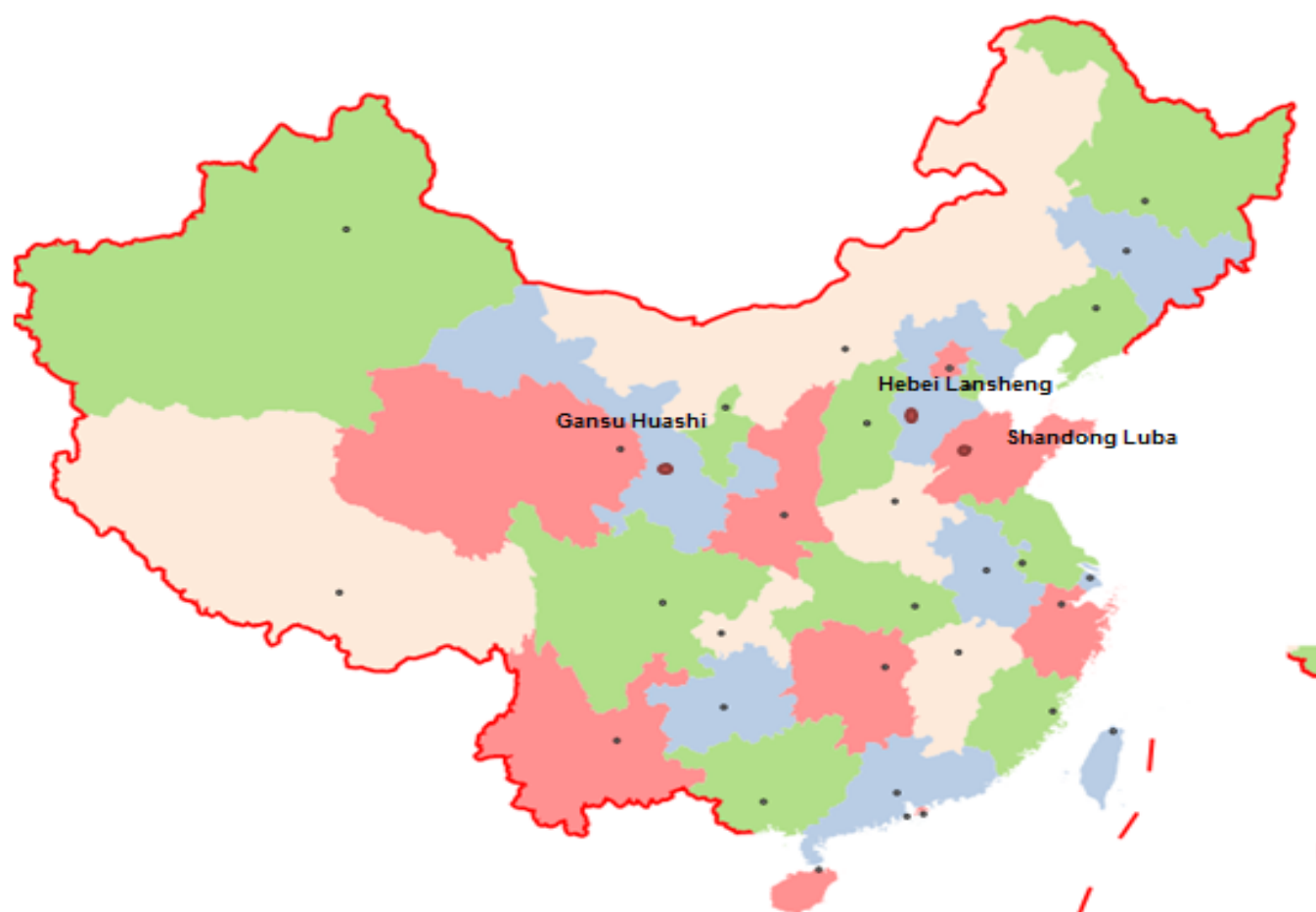
In H1 2022, China's quizalofop-P-ethyl products were exported to 11 major destinations including Bangladesh, Russia and the US. Bangladesh was the biggest destination (by volume) in this period, and its share to China's total quizalofop-P-ethyl export went up 6.59 percentage points YoY.

In Sept. 2022, ICAMA approved 30 newly-registered herbicide products.

On 22 Sept., NDRC briefed in a press conference China's progress in ecological civilisation construction. Since the 18th CPC National Congress, China has made great achievements in energy conservation. And in the future, NDRC will continue to put high priority on energy conservation.









### Editor's note

Into Sept., except that bipyridinium herbicides, substituted phenylurea herbicides and some sulfonylurea herbicides saw stable price, most herbicides TC experienced decrease in their ex-works prices. The FOB price of paraquat TK, which climbed in previous months, dipped slightly this month, yet it was still quite high from a year ago.

As to herbicide producers, Hebei Lansheng's Heilongjiang-based subsidiary has planned to build capacity for flufenacet TC and Gansu Huashi has had its tripyrasulfone TC and fenpyrazone TC lines under construction. Shandong Luba filed a prospectus with SSE months before, but there has been no update so far. Nanjing Red Sun, on one side, has been accelerating construction of its diquat dichloride project, but on the other side, it may go into reorganisation since its debts pushed a creditor to file for a start of pre-packaged reorganisation at Nanjing intermediate court.

Currently, downstream demand for herbicides is weak, and many herbicide producers have low operation and sales. Besides, from Aug. to Sept., some producers were forced to use electricity off-peak. With the National Day holiday around the corner and the 20th CPC National Congress approaching, it is uncertain where the market will go in the short term. We should wait and see.

The USD/CNY exchange rate in this newsletter is USD1.00=CNY6.8821 on 1 Sept., 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

### Hebei Lansheng's subsidiary to build flufenacet TC capacity

Summary: Hebei Lansheng's Heilongjiang-based subsidiary Anda Lanze plans to build capacity of 1,000 t/a metribuzin TC, 1,000 t/a flufenacet TC and 1,000 t/a intermediate 2-(methylsulfonyl)-5-(trifluoromethyl)-1,3,4-thiadiazole. This project will help Anda Lanze gain advantage in upstream-downstream integration, as well as in large-scale supply of flufenacet TC.

In late Aug., Anda Lanze Science & Technology Co., Ltd. (Anda Lanze) announced its acquirement of record filing certificate from Development and Reform Bureau of Anda City, Heilongjiang Province, for the "1,000 t/a metribuzin TC and 1,000 t/a flufenacet TC" investment project early that month. But before it could kick start, the project should go through other administrative formalities, including energy efficiency appraisal, safety evaluation, occupational health assessment and environmental impact assessment.

#### Project overview

- Location: Wanbaoshan Industrial Park in Harbin-Daqing-Qiqihar Industrial Corridor, Anda City, Suihua City, Heilongjiang Province;
- Product & designed capacity:
  - Phase I: 1,000 t/a Metribuzin TC and 1,000 t/a 2-(methylsulfonyl)-5-(trifluoromethyl)-1,3,4-thiadiazole;
  - Phase II: 1,000 t/a Flufenacet TC.

Anda Lanze was founded in Jan. 2019. It is a controlling subsidiary of Hebei Lansheng Biotech Co., Ltd. (Hebei Lansheng), with 51% shares. Anda Lanze is one of Hebei Lansheng's main production bases, besides the other three bases—Hebei Lansheng's headquarters in Jinzhou City, Hebei Province; Hebei Lanrun Plant Protection Technology Co., Ltd., based in Cangzhou City, Hebei Province; Inner Mongolia Lange Biotechnology Co., Ltd., based in Alxa League, Inner Mongolia Autonomous Region. The latter three bases have already had production lines put into operation.

Flufenacet is a broad-spectrum aryloxyacetamide herbicide. Though it is a niche herbicide variety, its traits like high herbicidal activity, low toxicity in general, wide range of applicable crops, good environmental compatibility and compatibility with other pesticides have earned it a certain share in global herbicide market. Currently, its core market is Europe, Germany, the UK and France in particular. It is also used in North America, followed by Southeast Asia, such as Indonesia, Thailand and Vietnam. China, India, South Africa consume some amount, too.

In fact, flufenacet market has started to develop in China only in the past few years. Considering the fact that the compound has already gone off-patent, and the traits mentioned before, it is expected that flufenacet would enjoy quite promising market prospect in China, and thus attract attention from more domestic pesticide producers. Now as Anda Lanze plans large-scale capacity for the key intermediate and flufenacet TC, the company would gain advantages over other competitors in their supplies once the lines put into operation, as well as in upstream-downstream integration. Besides, Anda Lanze's move would prompt better development of the product in China.

It is worth mentioning that Yancheng South Chemicals Co., Ltd. (Yancheng Southchem) was once among the pioneers to explore flufenacet market in China. It had built up 300 t/a flufenacet TC production line in its factory in Xiangshui Ecological Chemical Park,





Yancheng City, Jiangsu Province. Yet pressures of production safety and environmental protection forced Yancheng Southchem to close the lines and move out. The majority of resources held by Yancheng Southchem were then transferred to Hangzhou Nutrichem Co., Ltd. (Hangzhou Nutrichem), including the registration certificate of 98% flufenacet TC. The transfer was made following the decision of their parent company Nutrichem Co., Ltd. In addition, Hangzhou Nutrichem has planned to build 1,000 t/a flufenacet TC production capacity in Linjiang Industrial Park of Hangzhou Dajiangdong Industrial Cluster Zone, Hangzhou City, Zhejiang Province.

### **Gansu Huashi building capacity for tripyrasulfone TC and fenpyrazone TC**

Summary: Gansu Huashi's tripyrasulfone TC, fenpyrazone TC and intermediates project is under construction in an orderly manner. Of the planned products, tripyrasulfone and fenpyrazone are patented new herbicide varieties self-developed by R&D centre under Qingdao Qingyuan, which is a shareholder of Gansu Huashi.

In Sept., CCM learns from Gansu Huashi Biotechnology Co., Ltd. (Gansu Huashi) that its tripyrasulfone TC, fenpyrazone TC and intermediates project is under construction in an orderly manner. The workshops have already been set up, and equipment installation is in progress. The company makes the project possible with the help of Qingdao Qingyuan Resistant Weed Management Co., Ltd. (Qingdao Qingyuan), which is Gansu Huashi's shareholder with 9.09% stake, as well as the controller of the R&D centre that has self-developed the patented herbicidal compounds tripyrasulfone and fenpyrazone.

Product plan for the project is: 200 t/a tripyrasulfone TC, 200 t/a fenpyrazone TC, 200 t/a 1,3-dimethyl-1H-pyrazole-4-carboxylic acid, 200 t/a 1,3-dimethyl-5-pyrazolone, 200 t/a a sodium ethyl hydroxy-pyrazole intermediate and 500 t/a methyl 3-bromomethyl-2-chloro-4-methylsulfonylbenzoate. The four intermediates are raw materials for the production of tripyrasulfone and fenpyrazone.

In recent years, Qingdao Qingyuan's novel herbicide R&D centre has made continuous breakthroughs in innovation in herbicidal compounds. Besides the two products planned in this project, its innovative herbicides are cypirafluone, bipyrazone, flufenoximacil, fluchloraminopyr, flusulfenam, xiuecaosong, ezuocaoding, jiyangmicaowo, etc. Some of them have been brought to commercial production by Qingdao Qingyuan's wholly-owned subsidiary Jiangsu KingAgroot Resistant Weeds Control Co., Ltd. (Jiangsu KingAgroot). So far, Jiangsu KingAgroot has built up in Huai'an Salt Chemical New Material Industrial Park, Huai'an City, Jiangsu Province, production lines of:

TC: 200 t/a Bipyrazone, 200 t/a cypirafluone, 200 t/a fenpyrazone, 400 t/a tripyrasulfone;

Pesticide formulation:

OD: 4,000 t/a 25% Cypirafluone-isoproturon, 2,500 t/a 25% fenpyrazone-atrazine, 2,000 t/a 10% tripyrasulfone-anilofos, 500 t/a 6% cypirafluone, 500 t/a 25% cypirafluone-chlortoluron, 500 t/a 6% tripyrasulfone, 500 t/a 28% tripyrasulfone-propanil;

SE: 500 t/a 22% Bipyrazone-fluroxypyr, 500 t/a 10% bipyrazone, 500 t/a 15% mesosulfuron-methyl-bipyrazone, 500 t/a 6% topramezone-bipyrazone.

Upon completion and operation of Gansu Huashi's 200 t/a tripyrasulfone TC and 200 t/a fenpyrazone TC lines, Qingdao Qingyuan will achieve greater commercialisation of its novel herbicides. Moreover, Gansu Huashi has planned a new pesticides TC and bromine recovery project earlier this year, which proposes to build capacity of 200 t/a topramezone, 200 t/a xiuecaosong, 200 t/a flufenoximacil,





200 t/a flusulfenam, 200 t/a bipyrazone, 200 t/a cypyrafluone. Of the six products covered, five are novel varieties developed by Qingdao Qingyuan. The new project has not finished all the formalities yet.

The investment in Gansu Huashi is Qingdao Qingyuan's response to the national campaign to further develop the central and western China. And it is highly possible that Qingdao Qingyuan will up its stake in Gansu Huashi in the future.





## Market analysis

### Prices of most herbicides TC drop in early-to-mid Sept.

Summary: Into Sept., most herbicides TC see declining ex-works price, while some products have stable price.

Into Sept., except that bipyridinium herbicides, substituted phenylurea herbicides and some sulfonylurea herbicides see stable price, most herbicides TC experience decreases in their ex-works prices.

In early-to-mid Sept., of triazine herbicides, atrazine TC had a 5.26% MoM drop in its ex-works price, coming down to USD5,231/t (RMB36,000/t) with slack demand, while ametryn TC had a stable price though its supply was small. The majority of amide herbicides saw decreased prices. As prices of raw materials for amide herbicides stayed at a high level, production cost of herbicides under this category was high. However, peak season for these herbicides was over, and ex-works prices of pretilachlor TC and acetochlor TC declined. Metolachlor TC enjoyed good export demand, so its price maintained at the same level. Prices of organophosphorus herbicides TC kept going down. The price of glufosinate-ammonium TC edged down by 1.09% MoM to USD33,057/t (RMB227,500/t). The price of glyphosate TC had a larger MoM decrease due to weak downstream demand, even though the production cost actually went up. Besides, the price of florasulam TC was down slightly.

Prices of most sulfonylurea herbicides TC kept stable, but that of nicosulfuron TC fell by 3.57% MoM to USD39,232/t (RMB270,000/t) as the supply grew and downstream buyers were hesitant to purchase. Export-oriented diquat TK had a stable price, and so did diuron TC, even though diuron TC was still in tight supply.



**TABLE 1:** Ex-works prices of main herbicides TC in early-to-mid Sept. 2022

Category	Product	Content of active ingredient	Ex-works price in early-to-mid Sept., RMB/t	USD/t	MoM change based on RMB
Triazine herbicides	Atrazine TC	97%	36,000	5,231	Down
	Ametryn TC	95%	45,000	6,539	Basically flat
Sulfonylurea herbicides	Nicosulfuron TC	95%	270,000	39,232	Down
	Quizalofop-P-ethyl TC	95%	235,000	34,147	Basically flat
	Bensulfuron-methyl TC	96%	200,000	29,061	Basically flat
Amide herbicides	Pretilachlor TC	95%	42,000	6,103	Down
	Acetochlor TC	92%	39,500	5,740	Down
	Metolachlor TC	97%	52,000	7,556	Basically flat
Organophosphorus herbicides	Glufosinate-ammonium TC	95%	227,500	33,057	Down
	Glyphosate TC	95%	59,300	8,617	Down
Triazolo[1,5-a]pyrimidine-2-sulfonamide herbicides	Florasulam TC	98%	510,000	74,105	Down
Bipyridinium herbicides	Diquat TK	40%	58,000	8,428	Basically flat
Substituted phenylurea herbicides	Diuron TC	97%	47,000	6,829	Basically flat

Source:CCM



## Paraquat and Pyridine

### Shandong Luba awaits IEC audit meeting

Summary: As of early Sept., Shandong Luba has still awaited IEC audit meeting. Previously in July this year, the company filed a prospectus with SSE, intending to issue A-shares on the main board mainly to raise fund for its herbicide projects.

As of early Sept., Shandong Luba Chemical Co., Ltd. (Shandong Luba) has still awaited audit meeting of Issuance Examination Committee (IEC) of China Securities Regulatory Committee. Previously on 17 July, 2021, the company decided to terminate listing on the National Equities Exchange and Quotations (NEEQ), and it suspended trading on 13 July, 2021, four days before the extraordinary general meeting that made the termination decision. On 5 July, 2022, the company filed a prospectus with the Shanghai Stock Exchange (SSE), intending to issue shares on the main board.

With this IPO, Shandong Luba hopes to raise about USD196 million (RMB1,350 million) for four construction projects, covering products glufosinate-ammonium, L-glufosinate, fluroxypyr-meptyl, hydroxylamine hydrochloride, hydroxylamine sulphate, etc.

Shandong Luba mainly engages in R&D, production and sale of pesticides technical (TC), pesticide formulations and fine chemicals. It is a leading agrochemical enterprise involved in pyridine industrial chain and nonselective herbicide business. Its pyridine derivatives include five pesticide TC products, one of which is still at development phase though. Pesticide TC sales make the biggest contribution to its total revenue. In 2021, the company had 6 pesticide products passing RMB100 million threshold in sales, of which sales of fluroxypyr, diquat, haloxyfop-P-methyl and paraquat each surpassed USD43.60million (RMB300 million). As revealed by the company, growing sales volume of fluroxypyr TC, diquat TC and haloxyfop-P-methyl TC, as well as increasing sales prices of diquat TC and paraquat TC made possible the surge in revenue from technical business in 2021.

**TABLE 2:** Revenue and net profit of Shandong Luba, 2019–2021, million USD

Item	2021	2020	2019
Revenue	424	337	243
Net profit attributable to shareholders of the parent company after deducting non-recurring gains and losses	37	28	10

Source: Prospectus for stock initial public offering of Shandong Luba



**TABLE 3:** Revenue from paraquat business and its share to the total of Shandong Luba, 2019–2021

Year	Paraquat product sales, million USD	Share to total revenue
2021	57	13.39%
2020	57	17.04%
2019	41	16.77%

Source: Prospectus for stock initial public offering of Shandong Luba

Shandong Luba's products are mainly sold in domestic market, but its overseas sales value has grown fast in the past few years. From 2019 to 2021, the share of export income to the total revenue was 22.75%, 28.40% and 30.54% respectively. Major export destinations include the US, Indonesia, Brazil and Australia.

In 2021, Shandong Luba spent USD9.08 million (RMB62.52 million) on R&D, which makes up 2.16% of the total revenue that year. Currently its ongoing R&D programs include a new method for synthesising pesticide intermediate sodium 3,5,6-trichloropyridin-2-olate, and a process for 2,2'-dipyridyl synthesis; the two programs could be brought into commercialisation soon. Besides active development of pesticides TC and compounds based on pyridine, and of new product series, the company also pays attention to improvement of production process and product quality, production risk reduction and reduction of three wastes. Shandong Luba also proactively collaborates with academic institutions on new technology development.

### Nanjing Red Sun accelerating construction of diquat dichloride project

Summary: On 13 Sept., Nanjing Red Sun revealed its progresses in R&D of new generation pesticides as well as in diquat dichloride registration abroad, and sketched capacity utilisation of major products. Previously on 31 Aug., the company published semi-annual report for H1 2022, which reported big growths in revenue and net profit in the reporting period.

On 13 Sept., Nanjing Red Sun Co., Ltd. (Nanjing Red Sun) revealed in an interaction platform for investors its progresses in:

- **R&D and upgrading:** it accomplished all by itself improvement & upgrading of and innovative technical improvement of core production technologies for diquat dichloride, diquat dibromide, glufosinate-ammonium, paraquat antidote, new pyridine bases, chlorantraniliprole and novel pyrethroids. The company also achieved advances in industrial technology, optimised product structure and made digitised transformation, with the help of digital technology and biotechnology, as well as 33-year rich experience of green pesticide manufacturing.
- **Pesticide registration abroad:** it had been pushing ahead with diquat dichloride registration in foreign countries. By 13 Sept., 2022, registration of the product had been approved in Paraguay.

As regards operation of its production lines, Nanjing Red Sun briefed that operating rates of paraquat and diquat lines had been kept at a high level, since orders were plenty against the backdrop that safety of food supply had sprinted into the spotlight since early 2022 and the rigid demand jumped. The company also revealed that its self-developed diquat dichloride products had been sold quite well since the lines had gone into operation, and it had plenty orders for these products currently. In general, under equal conditions, diquat dichloride



products have advantages over diquat dibromide products in cost and in market competition.

On 31 Aug., Nanjing Red Sun published its semi-annual report for H1 2022. During the reporting period, it achieved total revenue of USD505.15 million (RMB3,476.47 million), surging by 76.95% YoY; its net profit attributable to equity holders of the parent company rocketed 1,923.31% YoY to USD89.68 million (RMB617.19 million), and the net profit excluding extraordinary profit and loss attributable to shareholders of the listed company up by a shocking 3,371.04% YoY to USD90.75 million (RMB624.57 million). Such growths were possible because the company expanded capacity as fast as it could to satisfy market demand. Meanwhile, it has integrated and efficiently allocated its production resources, cut down wastes in production and circulation, so as to increase operating efficiency and boost core strengths.

In H1 2022, the company finished construction of 10,000 t/a diquat dichloride lines in the subsidiary Chongqing Huage Biochemical Co., Ltd., and accomplished expansion of 2,3-dichloropyridine and 2,2'-dipyridyl capacity; all these lines have been put into operation. As to chlorantraniliprole, Nanjing Red Sun has finished lab test and pilot test; it now prepares for the formalities for a new chlorantraniliprole project, and the capacity is expected to be put into use before the end of this year. The company also actively proceeds with its glufosinate-ammonium industrial chain project in Chongqing Municipality and another 10,000 t/a diquat dichloride project undertaken by the sub-subsidiary Anhui Red Sun Biochemistry Co., Ltd. in the Red Sun Dongzhi Industrial Park in Anhui Province. It should be noted that progress of projects planned in the Dongzhi park, which cover products like diquat dichloride, cyhalothrin and bifenthrin, has been delayed by high temperature and COVID-19 control measures. The company now tries to accelerate the construction.

### **Prices of paraquat TK and pure pyridine see big YoY increases in Sept.**

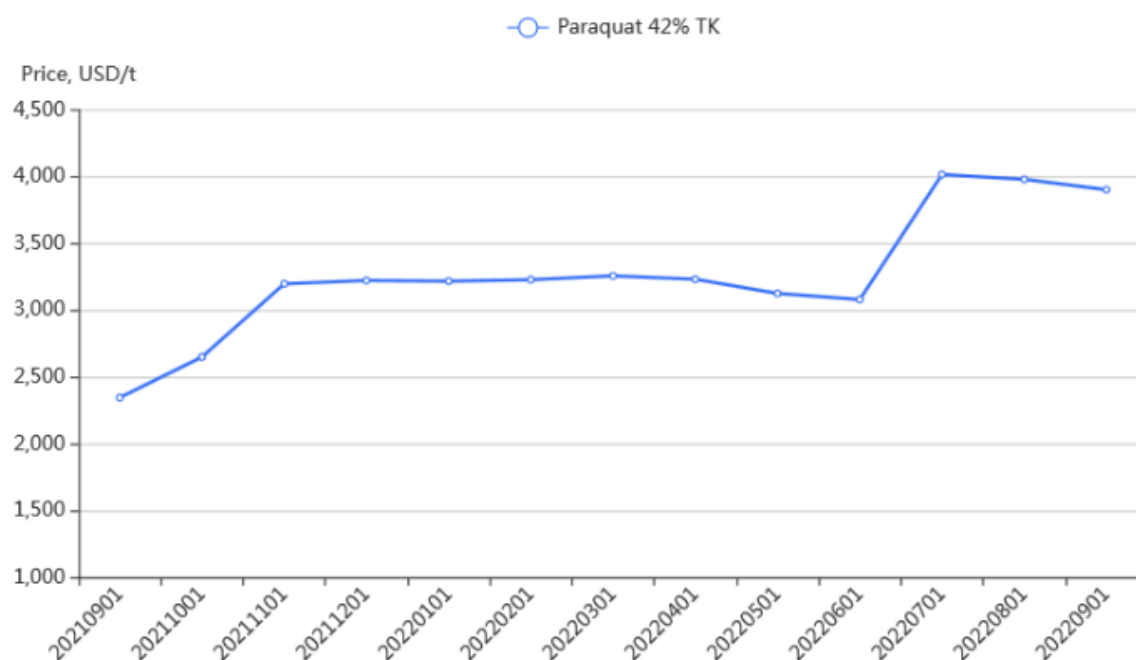
Summary: Compared with the prices in Sept. 2021, the FOB price of paraquat 42% TK and the ex-works price of pure pyridine in early Sept. 2022 increased a lot.

According to CCM's price monitoring, in early Sept., the FOB price of paraquat 42% TK was USD3,898.61/t, down by 1.97% MoM, but up by 66.32% YoY; the ex-works price of pure pyridine stayed at USD5,230.96/t (RMB36,000/t), enjoying an 84.62% YoY increase.



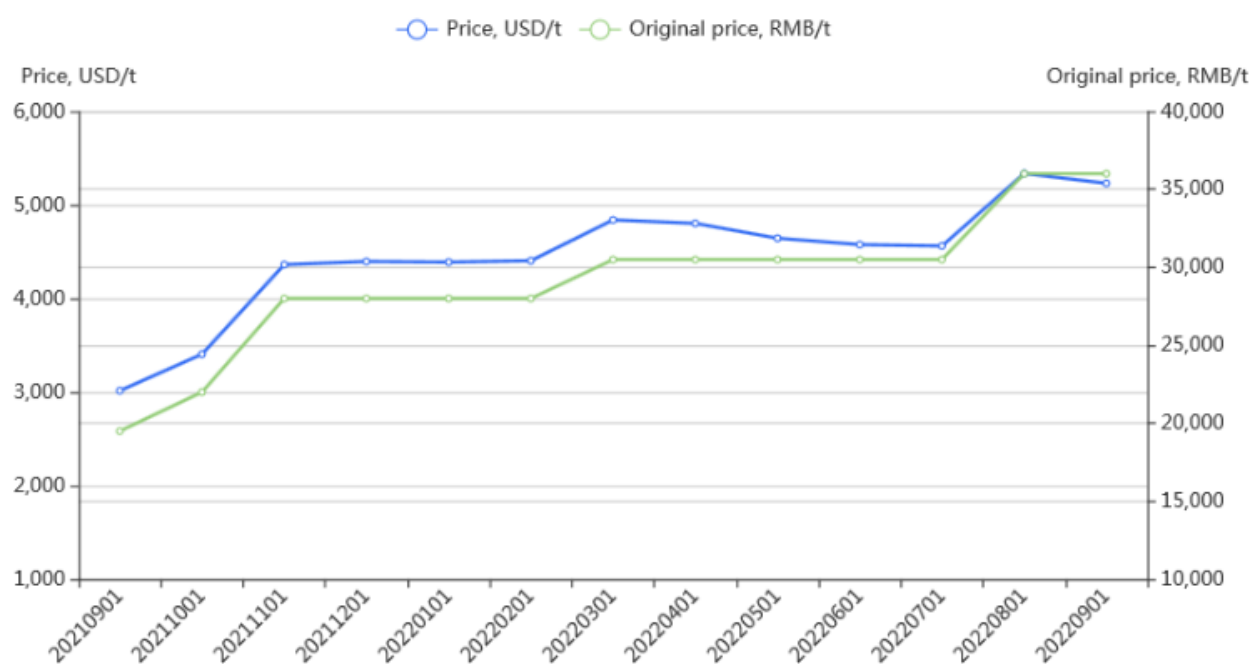


**FIGURE 1:** FOB price of paraquat 42% TK in China, Sept. 2021–Sept. 2022



Source:CCM

**FIGURE 2:** Ex-works price of pure pyridine in China, Sept. 2021–Sept. 2022



Source:CCM

## Nanjing Red Sun may go into reorganisation

Summary: On 16 Sept., Nanjing Red Sun received a notice of bankruptcy liquidation petition sent by Nanjing intermediate court and a petition for reorganisation applied by Nanjing Red Sun's creditor Nanjing Teva-Chem. Nanjing Red Sun reported annual losses continuously during 2019–2021.

On 20 Sept., Nanjing Red Sun Co., Ltd. (Nanjing Red Sun) announced that it had received on 16 Sept. a notice of bankruptcy liquidation petition sent by Nanjing intermediate court and a petition for reorganisation applied by Nanjing Red Sun's creditor Nanjing Teva-Chem. Co., Ltd. (Nanjing Teva-Chem). The creditor took such an action because Nanjing Red Sun could not pay off its debts. Nanjing Teva-Chem also filed for a start of pre-packaged reorganisation at the court.

Nanjing Red Sun revealed that as of 20 Sept., the company had not been informed that the court had accepted Nanjing Teva-Chem's petition, and it was still uncertain whether Nanjing Red Sun would go into pre-packaged reorganisation. Even if the court rules that pre-packaged reorganisation should kick off, it does not mean that the company would formally begin the reorganisation procedure. But if the court judges that Nanjing Red Sun should go through reorganisation, delisting risk warning will be issued on the company's stock trading. And once the company declares bankruptcy due to failed reorganisation, its stock will be at the risk of termination of listing.

Nanjing Teva-Chem once supplied Nanjing Red Sun with emulsifying agents. In 2019, it signed with Nanjing Red Sun 54 sale contracts, the total sum adding up to some USD2.09 million (RMB14.36 million). Thereafter, Nanjing Red Sun only paid small part of the payment, and as of 15 Jan., 2021, there had been USD1.91 million (RMB13.15 million) overdue.

Nanjing Red Sun's annual reports show that the company suffered losses three years in a row since 2019. And in 2021, the net profit was recorded at some -USD544 million (-RMB3,744 million), the greatest losses in recent years. But it had reported positive net profit in H1 2022.

**TABLE 4:** Revenue and net profit of Nanjing Red Sun, 2019–2021, million USD

Year	Revenue	Net profit
2019	670	-49
2020	584	-22
2021	680	-544

Source: Nanjing Red Sun's annual reports



## Import and Export

### Bangladesh becomes No.1 export destination of quizalofop-P-ethyl from China in H1 2022

Summary: In H1 2022, China's quizalofop-P-ethyl products were exported to 11 major destinations including Bangladesh, Russia and the US. Bangladesh was the biggest destination (by volume) in this period, and its share to China's total quizalofop-P-ethyl export went up 6.59 percentage points YoY.

According to the import and export data from Tranalysis, in H1 2022, quizalofop-P-ethyl products from China were mainly exported to 11 destinations, such as Bangladesh, Russia and the US. Export to Bangladesh, the largest export destination with a volume of 134.05 tonnes (actual volume, the same hereafter), accounts for 29.65% of China's total quizalofop-P-ethyl export to major destinations in this period, up 6.59 percentage points YoY.

Details of China's quizalofop-P-ethyl exports to major destinations in H1 2022 are as follows:

#### Quizalofop-P-ethyl technical

Specifications for export: 95% Tech, 96% Tech, 98% Tech

Major destination: China exported 211.14 tonnes of quizalofop-P-ethyl technical products to major destinations, at an average price of USD33.24/kg. In particular, 117 tonnes went to Russia, which makes up 55.41% to the total quizalofop-P-ethyl technical export in this period.

Compared with H1 2021, the first half in 2022 saw quizalofop-P-ethyl technical export to major destinations decline slightly by 15.78 tonnes. However, the export to Russia grew by 30 tonnes, and its share to the total technical export grew by 17.07 percentage points.

#### Quizalofop-P-ethyl formulation

Specifications for export: 5% EC, 10% EC, 15% EC

Major destination: China exported 240.95 tonnes of quizalofop-P-ethyl formulation products to major destinations, at an average price of USD4.49/kg. The largest destination of quizalofop-P-ethyl formulation exported from China was Bangladesh, with 134.05 tonnes, which makes up 55.64% to the total quizalofop-P-ethyl formulation export in this period.

Compared with H1 2021, H1 2022 saw quizalofop-P-ethyl formulation export to major destinations shrink by 802.44 tonnes. The export to Bangladesh also dropped by 158.83 tonnes, yet its share to the total formulation export jumped by 27.57 percentage points.



**TABLE 5:** Exports of China's quizalofop-P-ethyl technical products to major destinations, H1 2022

No.	Destination	Volume, kg	Value, USD	Average price, USD/kg
1	Russia	117,000.00	3,831,094.33	32.74
2	The US	56,602.00	1,970,899.00	34.82
3	Turkey	16,860.00	543,183.00	32.22
4	Vietnam	9,275.00	284,992.50	30.73
5	Pakistan	6,000.00	203,150.00	33.86
6	Argentina	5,400.00	184,988.30	34.26
<b>Total</b>		<b>211,137.00</b>	<b>7,018,307.13</b>	<b>33.24</b>

*Note: The data, sourced from Tranalysis, were updated to 1 Sept., 2022.*

*Source: Tranalysis*

**TABLE 6:** Exports of China's quizalofop-P-ethyl formulation products to major destinations, H1 2022

No.	Destination	Volume, kg	Value, USD	Average price, USD/kg
1	Bangladesh	134,053.00	543,832.62	4.06
2	Thailand	47,000.00	178,600.00	3.80
3	Tanzania	26,107.50	129,384.50	4.96
4	Ecuador	16,905.00	127,914.65	7.57
5	Uzbekistan	11,880.00	83,160.00	7.00
6	Vietnam	5,000.00	18,750.00	3.75
<b>Total</b>		<b>240,945.50</b>	<b>1,081,641.77</b>	<b>4.49</b>

*Note: The data, sourced from Tranalysis, were updated to 1 Sept., 2022.*

*Source: Tranalysis*

**TABLE 7:** Export volume of China's quizalofop-P-ethyl technical products to top 6 destinations, H1 2021 vs H1 2022

No.	H1 2021			H1 2022		
	Destination	Volume, kg	Share	Destination	Volume, kg	Share
1	Russia	87,000.00	38.34%	Russia	117,000.00	55.41%
2	Pakistan	36,100.00	15.91%	The US	56,602.00	26.81%
3	Vietnam	30,200.00	13.31%	Turkey	16,860.00	7.99%
4	Turkey	19,075.00	8.41%	Vietnam	9,275.00	4.39%
5	Costa Rica	18,000.68	7.93%	Pakistan	6,000.00	2.84%
6	Argentina	17,000.00	7.49%	Argentina	5,400.00	2.56%
Sub-total		207,375.68	91.39%	Total	211,137.00	100.00%

Note: The data, sourced from Tranalysis, were updated to 1 Sept., 2022.

Source: Tranalysis

**TABLE 8:** Export volume of China's quizalofop-P-ethyl formulation products to top 6 destinations, H1 2021 vs H1 2022

No.	H1 2021			H1 2022		
	Destination	Volume, kg	Share	Destination	Volume, kg	Share
1	Ukraine	548,830.82	52.60%	Bangladesh	134,053.00	55.64%
2	Bangladesh	292,879.18	28.07%	Thailand	47,000.00	19.51%
3	Indonesia	123,960.00	11.88%	Tanzania	26,107.50	10.84%
4	Vietnam	18,000.00	1.73%	Ecuador	16,905.00	7.02%
5	Thailand	16,000.00	1.53%	Uzbekistan	11,880.00	4.93%
6	Uzbekistan	15,120.00	1.45%	Vietnam	5,000.00	2.08%
Sub-total		1,014,790.01	97.26%	Total	240,945.50	100.00%

Note: 1. The data, sourced from Tranalysis, were updated to 1 Sept., 2022.

2. Due to rounding, the total may not equal 100.00%.

Source: Tranalysis



## Registration

### ICAMA releases 30 newly-registered herbicides in Sept.

Summary: In Sept. 2022, ICAMA approved 30 newly-registered herbicide products.

In Sept. 2022, the Institute for the Control of Agrochemicals, Ministry of Agriculture and Rural Affairs of the People's Republic of China (ICAMA) approved registration of 30 herbicide products. Of the newly-approved, two are TC products with active ingredients glufosinate-p and flumioxazin, and one TK product with active ingredient glufosinate-ammonium. The rest are formulation products, mainly in the form of SL and SC. Popular applied sites are non-cultivated cropland, rice field (direct seeding) and transplanted rice field. The biggest control target is annual weeds.

**TABLE 9:** Forms of newly-registered herbicides in China, 18 Aug.–14 Sept., 2022

No.	Form	Number
1	SL	9
2	SC	7
3	OD	3
4	TC	2
5	WG	2
6	EC	2
7	SG	2
8	ME	1
9	TK	1
10	WP	1
Total		30

Source: ICAMA

**TABLE 10:** Applied sites of the newly-registered herbicides in China, 18 Aug.–14 Sept., 2022

No.	Site	Number
1	Non-cultivated cropland	3
2	Rice field (direct seeding)	3
3	Transplanted rice field	3
4	Soybean field	1
5	Peanut field	1
6	Cotton field	1
7	Maize field	1
<b>Total</b>		<b>13</b>

Note: 17 Products are excluded due to vacant info on the item of applied site.

Source: ICAMA

**TABLE 11:** Control targets of the newly-registered herbicides in China, 18 Aug.–14 Sept., 2022

No.	Control target	Number
1	Annual weeds	6
2	Weeds	3
3	Annual broadleaf weeds, <i>Cyperaceae</i> weeds	2
4	Gramineous weeds such as barnyard grass, <i>Leptochloa chinensis</i>	1
5	Annual broadleaf weeds	1
<b>Total</b>		<b>13</b>

Note: 17 Products are excluded due to vacant info on the item of control target.

Source: ICAMA



## Policy

## NDRC to stick with prioritising energy conservation

Summary: On 22 Sept., NDRC briefed in a press conference China's progress in ecological civilisation construction. Since the 18th CPC National Congress, China has made great achievements in energy conservation. And in the future, NDRC will continue to put high priority on energy conservation.

On 22 Sept., the National Development and Reform Commission of the People's Republic of China (NDRC) held a press conference on China's progress in ecological civilisation construction. In the Q&A session, an NDRC official expressed that the Commission would continue to put a high priority on energy conservation, and crack down upon haphazard development of energy-intensive, large-emission projects using outdated technologies.

Saving resources is a basic state policy. Since the 18th National Congress of the Communist Party of China (CPC), following the CPC Central Committee's and the State Council's decisions and arrangements, NDRC has effectively performed its duties and collaborated with related departments in performing key tasks in energy conservation. Through the years, great achievements have been made—significant lift in efficiency of energy utilisation, obvious decrease in energy use in key fields, and improved energy conservation mechanism, for instance.

China still faces prominent energy and resource constraints on its development, plus the carbon peaking and carbon neutrality goals, which set higher requirements on energy conservation. To follow the saving-first spirit, better work should be done in the following aspects:

- **Strengthen energy security for high-quality development:** improve "dual control" policy (on energy consumption and energy intensity), optimise frequency of and methods for evaluation of energy-saving targets, implement the policy that newly-generated renewable energy sources and energies used as raw materials should be excluded from total energy consumption control targets, and separate energy consumption quota for projects of major importance to the nation so as to guarantee reasonable energy demand from these projects.
- **Curb haphazard development of energy-intensive, large-emission projects using outdated technologies:** optimise project management, and adopt list-based, classified management and dynamic monitoring towards such projects. Promote optimisation and upgrading of industrial structure via strictly controlling new projects of this nature, and tapping the potentials of existing projects.
- **Promote energy conservation transformation in key fields and industries:** encourage integrated improvements in energy-saving and carbon-cutting, in heating and in flexibility on coal-fired power generation units. Prompt energy conservation transformation aligning with advanced levels of energy efficiency in key energy-intensive industries like steel, nonferrous metal, petrochemical, chemical, building material industries. Speed up such transformation in resident buildings and public facilities, and keep going on with energy-saving and carbon-cutting renovations on infrastructures such as old heating pipe network.
- **Improve regulations and policies on energy conservation:** promote revision of regulations and policies like the *Law on Energy Conservation* and the *Measures for the Energy Conservation Examination*. Accelerate formulation and amendment of compulsory national standards on energy consumption limit and equipment energy efficiency. Actively promote the use of advanced energy-saving technologies and products available.



## News in Brief

### Guizhou to approve five chemical parks

On 1 Sept., the Department of Industry and Information Technology of Guizhou Province released the second-batch list of chemical parks to be approved. Of the five chemical parks on the list, four are newly-established parks.

**TABLE 12:** Second-batch list of chemical parks to be approved in Guizhou Province

No.	Chemical park	Location
1	Qiandongnan Tianzhu Chemical Industry Park	Qiandongnan Miao and Dong Autonomous Prefecture
2	Bijie Zhijin Chemical Industry Park	Bijie City
3	Liupanshui Panbei Chemical Industry Park	Liupanshui City
4	Guizhou Tongren Wanshan Chemical Industry Park	Tongren City
5	Xingren Modern Chemical Industry Park	Qianxinan Bouyei and Miao Autonomous Prefecture

Source: Department of Industry and Information Technology of Guizhou Province

### China approves revised Law on Quality and Safety of Agricultural Products

On 2 Sept., the revised *Law on Quality and Safety of Agricultural Products* was approved by the 36th session of the Standing Committee of the 13th National People's Congress of the People's Republic of China. The revised law will come into effect on 1 Jan. 2023. With so far the most rigorous standards, the strictest regulations, the most severe punishment and the most serious accountability system, the law will regulate, together with the *Food Safety Law of the People's Republic of China*, activities in production, processing and marketing of agricultural products.

### Norsyn Crop to provide interest-free loan to Shaanxi Sunger Road

On 8 Sept., Norsyn Crop Technology Co., Ltd. (Norsyn Crop) announced that the company would provide USD31.11 million (RMB214.09 million) three-year interest-free loan to its wholly-owned subsidiary Shaanxi Sunger Road Bio-Science Co., Ltd. (Shaanxi Sunger Road) for two projects in the subsidiary—the green pesticide formulation intelligent digital factory technical transformation project and the R&D centre construction project.

### Hainan enhances management of inbound pesticides

On 16 Aug., the Department of Agriculture and Rural Affairs of Hainan Province and the Hainan Provincial Department of Transport decided to enhance the management of inbound pesticides. In accordance with the *Several Provisions of Hainan Special Economic Zone on Pesticide Administration*, the *Measures for the Administration of Pesticide Wholesale and Retail Operation Licensing in Hainan Special Economic Zone* and the *Notice of the Department of Agriculture and Rural Affairs of Hainan Province on Filing Records of Pesticide Products*, Hainan Province started to implement a "white list" system on the pesticides into the island starting from 15 Sept., 2022.

### Weifang Nuchlor unveils EI report of haloxyfop-P-methyl technological transformation project

On 2 Sept., the environmental impact (EI) report of the 3,000 t/a haloxyfop-P-methyl TC technological transformation project of Weifang Nuchlor Chemical Co., Ltd. (Weifang Nuchlor) was released. With this project, Weifang Nuchlor would increase its production efficiency and cut down annual production time of haloxyfop-P-methyl TC to 270 days from 310 days. The 40 days thus saved would be spent on producing a new product—fluazifop-P-butyl TC. Once the project completed, Weifang Nuchlor will maintain its haloxyfop-P-methyl TC capacity at 3,000 t/a and expand fluazifop-P-butyl TC capacity by 500 t/a.

### Heilongjiang reveals second-batch list of chemical parks to be approved

On 9 Sept., the Department of Industry and Information Technology of Heilongjiang Province unveiled the second-batch list of chemical parks to be approved. A total of 6 chemical parks are on the list.

TABLE 13: Second-batch list of chemical parks to be approved in Heilongjiang Province

No.	Chemical park	Location
1	Mudanjiang Hualin Industrial Park	Yangming District, Mudanjiang City
2	Jiamusi High-tech Zone Chemical Industry Park (Huaxi Industrial Park)	Dongfeng District, Jiamusi City
3	Huanan County Chemical Park	Huanan County, Jiamusi City
4	Heilongjiang Jixi Economic Development Zone Lishu Industry Valley	Lishu District, Jixi City
5	Heilongjiang Jidong Economic Development Zone Chemical Industry Park	Jidong County, Jixi City
6	Heilongjiang Jixian Economic Development Zone Chemical Industry Park (including region A and B)	Jixian County, Shuangyashan City

Source: Department of Industry and Information Technology of Heilongjiang Province

### Shangyu Nutrichem's digital workshop wins recognition by Zhejiang government

On 6 Sept., the Economy and Information Technology Department of Zhejiang Province unveiled the first-batch approved smart factories (digital workshop) in 2022. After expert review on the factories (workshops) applied by enterprises or recommended by local governments, 89 factories (workshops) were recognised as first-batch province-level smart factories (digital workshops) in 2022. The appraisal work was made based on the *Implementation Plan of Constructing Smart Factory or Digital Workshop in Zhejiang Province (2019–2022)*. The mesotrione digital workshop of Shangyu Nutrichem Co., Ltd. (Shangyu Nutrichem) is one the recognised province-level digital workshops.

### Anhui approves two chemical parks

On 18 Sept., the Development and Reform Commission of Anhui Province unveiled the second-batch list of approved chemical parks, with two chemical parks on the list.



**TABLE 14:** Second-batch list of approved chemical parks in Anhui Province

No.	To be named	Location	Planned area, km <sup>2</sup>	Name used in declaration
1	Fuyang Linquan Chemical Industry Park	Fuyang City	2.2	Linquan Economic Development Zone Chemical Industry Concentration Area
2	Xuancheng Ningguo Chemical Industry Park (port area)	Xuancheng City	5.4	Ningguo Port Industrial Park Chemical Industry Park

Source: Development and Reform Commission of Anhui Province

### Fengshan Group establishes new wholly-owned subsidiary

On 17 Sept., Jiangsu Fengshan Group Co., Ltd. (Fengshan Group) announced that it had newly established in Yichang City, Hubei Province, the wholly-owned subsidiary Hubei Fengshan New Material Technology Co., Ltd. (Hubei Fengshan). The new subsidiary was granted business licence a few days before. With registered capital totalling USD14.53 million (RMB100 million), Hubei Fengshan engages in pesticide production, wholesale and retail of pesticides, R&D of biopesticide technology, production of basic chemical materials, sale of chemical products, production and sale of specialty chemical products, etc.

### BSE approves Luheng Technology's IPO application

On 22 Sept., the Beijing Stock Exchange (BSE) approved Luheng Technology Group Co., Ltd. (Luheng Technology)'s initial public offering (IPO) application. It expects to raise funds of roughly USD54.20 million (RMB373 million) through this IPO. Some will be spent on the 1,000 t/a 2-chloronicotinic acid, 2,000 t/a 3-cyanopyridine and 8,000 t/a pesticide formulation project and the Nansha Luheng Seed Breeding Research Institute construction project, and the rest will be used as supplementary working capital.

## Price Update

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

**TABLE 15:** Ex-works prices of key herbicide raw materials in China, 8 Sept., 2022

Raw Materials	20220808		20220908	
	Original Price (RMB/t)	Price (USD/t)	Original Price (RMB/t)	Price (USD/t)
98% Glycine	11,000	1,630.43	12,000	1,743.65
92% Iminodiacetonitrile	9,300	1,378.45	9,300	1,351.33
99% Isopropylamine	9,550	1,415.51	9,550	1,387.66
98% N-(Phosphonmethyl) Iminodiacetic acid	38,000	5,632.38	38,000	5,521.57
99% Phosphorus trichloride	6,740	999.01	8,060	1,171.15
99.9% Pyridine	36,000	5,335.94	36,000	5,230.96

*Note: Ex-works price includes VAT.*

*Source: CCM*

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

TABLE 16: Ex-works prices of main herbicides in China, 8 Sept., 2022

Product	20220808		20220908	
	Original Price (RMB/t)	Price (USD/t)	Original Price (RMB/t)	Price (USD/t)
92% Acetochlor technical	41,000	6,077.05	39,500	5,739.53
97% Atrazine technical	38,000	5,632.38	36,000	5,230.96
96% Bensulfuron-methyl technical	200,000	29,644.12	200,000	29,060.9
92% Butachlor technical	30,000	4,446.62	27,000	3,923.22
95% Clomazone technical	118,000	17,490.03	118,000	17,145.93
95% Cyhalofop-butyl technical	188,000	27,865.47	188,000	27,317.24
97% Diuron technical	47,000	6,966.37	47,000	6,829.31
98% Fenclorim technical	140,000	20,750.89	140,000	20,342.63
95% Fenoxaprop-P-ethyl technical	185,000	27,420.81	185,000	26,881.33
96% Fluroxypyr technical	180,000	26,679.71	176,000	25,573.59
95% Fomesafen technical	142,000	21,047.33	139,000	20,197.32
95% Glufosinate ammonium technical	230,000	34,090.74	227,500	33,056.77
95% Glyphosate technical	62,500	9,263.79	59,300	8,616.56
95% Haloxyfop-P-methyl technical	220,000	32,608.53	222,000	32,257.6
97% Metolachlor technical	52,000	7,707.47	52,000	7,555.83
95% Metsulfuron-methyl technical	135,000	20,009.78	135,000	19,616.11
95% Nicosulfuron technical	280,000	41,501.77	270,000	39,232.21
97% Oxyfluorfen technical	230,000	34,090.74	230,000	33,420.03
95% Pendimethalin technical	63,500	9,412.01	63,500	9,226.83
95% Pretilachlor technical	43,000	6,373.49	42,000	6,102.79
97% Pyrazosulfuron-ethyl technical	300,000	44,466.18	300,000	43,591.35
80% Quinclorac technical	138,700	20,558.2	138,700	20,153.73



95% Quizalofop-P-ethyl technical	235,000	34,831.84	235,000	34,146.55
95% Tribenuron-methyl technical	145,000	21,491.99	145,000	21,069.15
95% Trifluralin technical	38,000	5,632.38	38,000	5,521.57

*Note: Ex-works price includes VAT.*

*Source: CCM*

### Shanghai Port prices of main herbicides in China, 8 Sept., 2022

**TABLE 17:** Shanghai Port prices of main herbicides in China, 8 Sept., 2022

Product	20220808		20220908	
	Original Price (RMB/t)	Price (USD/t)	Original Price (RMB/t)	Price (USD/t)
92% Acetochlor technical	41,500	6,151.16	40,000	5,812.18
97% Atrazine technical	38,500	5,706.49	36,500	5,303.61
96% Bensulfuron-methyl technical	200,500	29,718.23	200,500	29,133.55
92% Butachlor technical	30,500	4,520.73	27,500	3,995.87
95% Clomazone technical	118,500	17,564.14	118,500	17,218.58
95% Cyhalofop-butyl technical	188,500	27,939.59	188,500	27,389.9
97% Diuron technical	47,500	7,040.48	47,500	6,901.96
98% Fenclorim technical	140,500	20,825	140,500	20,415.28
95% Fenoxaprop-P-ethyl technical	185,500	27,494.92	185,500	26,953.98
96% Fluroxypyr technical	180,500	26,753.82	176,500	25,646.24
95% Fomesafen technical	142,500	21,121.44	139,500	20,269.98
95% Glufosinate ammonium technical	230,500	34,164.85	228,000	33,129.42
95% Glyphosate technical	63,000	9,337.9	59,800	8,689.21
95% Haloxyfop-P-methyl technical	220,500	32,682.64	222,500	32,330.25
97% Metolachlor technical	52,500	7,781.58	52,500	7,628.49
95% Metsulfuron-methyl technical	135,500	20,083.89	135,500	19,688.76
95% Nicosulfuron technical	280,500	41,575.88	270,500	39,304.86
97% Oxyfluorfen technical	230,500	34,164.85	230,500	33,492.68
95% Pendimethalin technical	64,000	9,486.12	64,000	9,299.49
95% Pretilachlor technical	43,500	6,447.6	42,500	6,175.44
97% Pyrazosulfuron-ethyl technical	300,500	44,540.29	300,500	43,664
80% Quinclorac technical	139,200	20,632.31	139,200	20,226.38





95% Quizalofop-P-ethyl technical	235,500	34,905.95	235,500	34,219.21
95% Tribenuron-methyl technical	145,500	21,566.1	145,500	21,141.8
95% Trifluralin technical	38,500	5,706.49	38,500	5,594.22

*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 Sept., 2022

**TABLE 18:** FOB Shanghai prices of main herbicides in China, 8 Sept., 2022, USD/t

Product	20220808	20220908
92% Acetochlor technical	6,066.9	5,735.58
97% Atrazine technical	5,440.59	5,060.94
96% Bensulfuron-methyl technical	28,985.34	28,415.08
92% Butachlor technical	4,481.35	3,969.27
95% Clomazone technical	17,165.77	16,828.05
95% Cyhalofop-butyl technical	26,296.41	25,779.05
97% Diuron technical	6,931.75	6,795.37
98% Fenclorim technical	20,336.87	19,936.76
95% Fenoxaprop-P-ethyl technical	26,823.23	26,295.5
96% Fluroxypyr technical	26,102.52	25,023.75
95% Fomesafen technical	20,625.16	19,795.46
95% Glufosinate ammonium technical	32,136.04	31,163.03
95% Glyphosate technical	9,976.73	9,287.57
95% Haloxyfop-P-methyl technical	31,868.17	31,523.79
97% Metolachlor technical	7,652.45	7,501.9
95% Metsulfuron-methyl technical	19,616.17	19,230.24
95% Nicosulfuron technical	40,516.63	38,306.45
97% Oxyfluorfen technical	32,136.04	31,503.79
Paraquat 42% TK	3,976.85	3,898.61
95% Pendimethalin technical	9,310.08	9,126.91
95% Pretilachlor technical	6,355.18	6,088.84
97% Pyrazosulfuron-ethyl technical	43,399.46	42,545.61
80% Quinclorac technical	20,149.49	19,753.07



95% Quizalofop-P-ethyl technical	34,030.28	33,360.76
95% Tribenuron-methyl technical	21,057.58	20,643.29
95% Trifluralin technical	5,440.59	5,333.55

*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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