

# Herbicides China Monthly Report 202203

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## Headline

Lier Chemical reported its net profit attributable to equity holders of the listed company surpassing USD170.12 million (RMB1,072 million) in its annual report for the year 2021 released on 5 March.

Liaoning Longtian has built up a 1,000 t/a mesotrione TC production line. Previously, the company put into operation production capacity of 3,000 t/a 2-nitro-4-methylsulfonylbenzoic acid.

On 12 March, Jiangsu Fengshan announced that it had planned a change to one of its investment projects. The new plan is to build production lines for 1,700 t/a quizalofop-P-ethyl TC, 500 t/a quizalofop-P-tefuryl TC, and 1,083 t/a potassium chloride (by-product) with technological upgrades.

Early March, most herbicides TC in China saw their prices set lower.

Ex-works price of glufosinate-ammonium technical was recorded at USD34,912.88/t in early March, down 32.31% MoM. At present, domestic producers basically stop quoting for the product.

Tensions between Russia and Ukraine pushed up the price of crude oil, which gives a price advantage to China's coal-based upstream raw materials of pesticides, such as pyridine, chloroacetic acid and paraformaldehyde.

The FOB price of paraquat 42% TK remained high at USD3,255/t in March, edging up 0.90% MoM.

According to CCM's price monitoring, the ex-works price of pure pyridine in early March was USD4,840/t (RMB30,500/t), up 8.93% MoM based on RMB price.

In 2021, China exported 17,573.60 tonnes (actual volume) of 2,4-D products to Brazil, 3,380.24 tonnes less than that in 2020. But the amount to Brazil accounted for 46.56% of China's total 2,4-D export to major destinations, up 17.20 percentage points from that in 2020.

In March 2022, ICAMA approved registration renewal of 105 herbicide products.

On 1 March, 2022, MARA issued the Opinions on Implementing the Plans of the CPC Central Committee and the State Council for Key Agricultural and Rural Work of Comprehensively Promoting Rural Revitalisation in 2022.







### Editor's note

Early March, most herbicides TC in China saw their prices set lower. In particular, ex-works price of glufosinate-ammonium TC plummeted by 32.31% MoM; domestic producers basically stop quoting for this product. Besides, tensions between Russia and Ukraine have turbocharged price growth of crude oil, which gives a price advantage to China's coal-based upstream raw materials of pesticides, such as pyridine, chloroacetic acid and paraformaldehyde.

Regarding company dynamics, Lier Chemical reported its net profit attributable to equity holders of the listed company surpassing a RMB1 billion threshold in its 2021 annual report released on 5 March; Liaoning Longtian revealed that it had built up a 1,000 t/a mesotrione TC production line in early March and put into operation production capacity of 3,000 t/a 2-nitro-4-methylsulfonylbenzoic acid for quite a while; Jiangsu Fengshan announced on 12 March that it had planned to change a previously proposed project into a quizalofop-P-ethyl TC, quizalofop-P-tefuryl TC, and potassium chloride project with technological upgrades.

Regarding registration dynamics, ICAMA approved registration renewal of 105 herbicide products in March. Most of them are formulation products, with AS, WP and EC as popular forms and glyphosate, diquat and glufosinate-ammonium as popular active ingredients.

As to the latest policy, on 1 March, MARA issued the *Opinions on Implementing the Plans of the CPC Central Committee and the State Council for Key Agricultural and Rural Work of Comprehensively Promoting Rural Revitalisation in 2022*, a response to the No.1 Central Document 2022.

The USD/CNY exchange rate in this newsletter is USD1.00=CNY6.3014 on 1 March, 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

## Lier Chemical reports 2021 net profit over RMB1 billion

Summary: Lier Chemical reported its net profit attributable to equity holders of the listed company surpassing USD170.12 million (RMB1,072 million) in its annual report for the year 2021 released on 5 March.

Lier Chemical Co., Ltd. (Lier Chemical) released its annual report for the year 2021 on 5 March. It achieved a total revenue of USD1.03 billion (RMB6.49 billion), up 30.70% YoY. The net profit attributable to equity holders of the listed company came to USD170.12 million (RMB1,072.39 million), soaring 75.17% YoY. The historic high performance came from quite stable product supply secured with utmost efforts as well as favourable market opportunities snatched. In 2021, the company strengthened management on work safety and environmental protection, and overcame many difficulties such as temporary production suspension in key production bases and disruption to the supply chain.

Over 92% of the revenue came from pesticide business in 2021. Overseas market contributed 46.60% to the total revenue with USD480.26 million (RMB3,026.31 million), the figure jumping 60.73% YoY, while USD550.35 million (RMB3,467.95 million) achieved in domestic market, up 12.38% YoY.

**TABLE 1:** Output, sales and revenue of pesticide technical & formulation products of Lier Chemical

Product type	Output, tonne	Sales volume, tonne	Revenue, million USD	Revenue growth YoY	Revenue share to the total revenue
Technical	36,359	35,231	687.26	26.91%	66.69%
Formulation	42,995	43,700	216.34	26.57%	20.99%

Source: Lier Chemical Co., Ltd.

Its R&D investment in 2021 grew to USD41.69 million (RMB262.74 million), accounting for some 4% of the total revenue. Lier Chemical put more efforts on developing production technology of new products, and built multi-functional R&D and pilot test platforms. Mainstream synthesis routes for some products have been worked out and brought about several pilot test programs. At present, ongoing research programs include: improvement to currently-adopted production technologies for glufosinate-ammonium, flumioxazin and fluroxypyr, development of new approach to epoxiconazole production, development of commercial production processes for L-glufosinate, pinoxaden, chlorantraniliprole and new fire retardants. These programs will build a solid foundation and technical readiness for long-term growth & stronger competitiveness, as well as serve as potential new sources of profit.

In 2021, its subsidiary Guang'an Lier Chemical Co., Ltd. (Guang'an Lier) posted huge increases in revenue and net profit, the amount reaching USD355.02 million (RMB2,237.11 million) and USD106.76 million (RMB672.77 million) respectively. Guang'an Lier finished technological upgrades of production processes for glufosinate-ammonium and flumioxazin and achieved scale production, which expanded the company's glufosinate-ammonium capacity and competitiveness. It is still going on with the methylphosphorus dichloride





production improvement project, which aims to boost reliability and stability during operation of the facilities.

### Liaoning Longtian builds up 1kt/a mesotrione TC production line

Summary: Liaoning Longtian has built up a 1,000 t/a mesotrione TC production line. Previously, the company put into operation production capacity of 3,000 t/a 2-nitro-4-methylsulfonylbenzoic acid.

Early March, news from Liaoning Longtian Chemical Technology Co., Ltd. (Liaoning Longtian) came that in late Feb., the company built up a 1,000 t/a mesotrione TC production line in the plant in Fluorine Industry Development Zone, Fuxin City, Liaoning Province. The plant also boasts production capacity of 3,000 t/a 2-nitro-4-methylsulfonylbenzoic acid, 400 t/a 2-chloro-4-(methylsulfonyl)benzoic acid and 4,000 t/a methyl p-tolyl sulfone. That is to say, Liaoning Longtian has shaped a huge advantage in mesotrione TC business, as methyl p-tolyl sulfone is a key raw material for 2-nitro-4-methylsulfonylbenzoic acid and 2-chloro-4-(methylsulfonyl)benzoic acid, while 2-nitro-4-methylsulfonylbenzoic acid is a main upstream intermediate for mesotrione.

Established in June 2018, Liaoning Longtian mainly engages in R&D, manufacturing and sales of fine chemicals like pesticides. So far the company has planned a Phase I 12,700 t/a fine chemical project and Phase II 5,600 t/a pesticides/APIs and intermediates project. Details of designed products and capacity are as follows:

- Phase I: 3,000 t/a 2-Nitro-4-methylsulfonylbenzoic acid, 400 t/a 2-chloro-4-(methylsulfonyl)benzoic acid and 4,000 t/a methyl p-tolyl sulfone, the three put into use already; 3,000 t/a 2-chloro-5-(chloromethyl)pyridine (cancelled), 300 t/a methyl 2-(methoxyimino)-2-o-tolylacetate, 1,000 t/a 2-coumaranone and 1,000 t/a p-fluoroacetophenone.
- Phase II: 1,000 t/a Mesotrione TC (built up), 1,000 t/a chlorantraniliprole TC, 600 t/a methoxyamine hydrochloride and 3,000 t/a tosyl chloride.

Mesotrione is one of star herbicides in China's pesticide market in recent years; domestic production capacity of this product grew quickly. Besides Liaoning Longtian, companies like Zhejiang Zhongshan Chemical Industry Group Co., Ltd., Jiangsu Youjia Crop Protection Co., Ltd., Zhangye Dagong Pesticide Chemistry Co., Ltd., Limin Chemical Co., Ltd., Shangyu Nutrichem Co., Ltd., Hubei Guangfulin Biological Products Co., Ltd. and Shenyang Sciencreat Chemicals Co., Ltd. also hold mesotrione TC capacity. Many more are investing in this product and accordingly, fiercer competition is expected in the future.

### Jiangsu Fengshan to increase quizalofop-P-ethyl capacity

Summary: On 12 March, Jiangsu Fengshan announced that it had planned a change to one of its investment projects. The new plan is to build production lines for 1,700 t/a quizalofop-P-ethyl TC, 500 t/a quizalofop-P-tefuryl TC, and 1,083 t/a potassium chloride (by-product) with technological upgrades.

On 12 March, Jiangsu Fengshan Group Co., Ltd. (Jiangsu Fengshan) announced that it would make modification to the previous "800 t/a quizalofop-P-ethyl TC and 500 t/a quizalofop-P-tefuryl TC technological upgrade project". The new plan is to build production lines for 1,700 t/a quizalofop-P-ethyl TC, 500 t/a quizalofop-P-tefuryl TC, and 1,083 t/a potassium chloride (by-product) with technological upgrades. The new project, located in Dafeng Port Petrochemical New Material Industrial Park in Yancheng City, Jiangsu Province, is expected to go into operation in June 2023.





Currently, Jiangsu Fengshan has 1,300 t/a quizalofop-P-ethyl capacity with two workshops: one with a 400 t/a line and the other 900 t/a. As its new production technology is quite green, and can raise product quality while lower unit production cost, the company decides to expand designed new quizalofop-P-ethyl capacity by 900 t/a. Once the new project is put into use, the old 900 t/a workshop might be switched to other purpose based on market situation then. Some USD16.20 million (RMB102.05 million) raised fund has already been put into the previous project, and facilities have been built. These assets can serve the new project directly, plus USD11.35 million (RMB71.52 million, inclusive of interest income and cash management earnings) have-not-been-used raised fund. The total investment stayed at USD27.06 million (RMB170.50 million).

The new project will enrich the company's product portfolio, boost market share and strengthen its overall profitability. Besides, recycling by-product potassium chloride can cut down solid wastes as well as generate some more economic benefits. According to Jiangsu Fengshan's calculation, investment recovery period for the new project stands at nearly five years and five months and internal rate of return after taxes at 27.20%.







## Market analysis

### Prices of most herbicides TC decline in China in early March

Summary: Early March, most herbicides TC in China saw their prices set lower.

Most herbicides TC in China recorded lower prices in early March.

#### - Sulfonylurea herbicides

Quizalofop-P-ethyl TC: Its ex-works price came to USD36,500/t (RMB230,000/t), up 1.10% MoM. Price of its raw materials is at a high level, and inventory of the product is low. Domestic downstream customers have started stockpiling.

Nicosulfuron TC: Its ex-works price slipped 3.68% MoM to USD51,973/t (RMB327,500/t). The manufacturers mainly fulfil previous orders.

#### - Amide herbicides

Pretilachlor TC: Its ex-works price increased by 3.77% MoM to USD8,728/t (RMB55,000/t).

Acetochlor TC: Its price stayed steady.

Metolachlor TC: Its price stayed steady at a historic high due to low operating rate and expensive raw materials.

#### - Organophosphorus herbicides

Glyphosate TC: The ex-works price dropped 4.87% MoM to USD11,474/t (RMB72,300/t). Spot goods on the market have been quite ample as the majority of producers have operated stably among sluggish demand. Besides, the price of glycine has kept going down; decreased raw material cost has brought down the price of glyphosate TC. Glyphosate market may enter downward spiral, though production cost still poses some pressures on the producers.

Glufosinate-ammonium TC: The price plummeted by 32.31% MoM to USD34,913/t (RMB 220,000/t). Its supply is rather stable, but new orders are small.

#### - Bipyridinium herbicides

Diquat 40% TK: Its ex-works price slipped 3.33% MoM to USD9,204/t (RMB58,000/t). Operating rate of the product has stayed at low level. It is mainly for export.



**TABLE 2: Ex-works prices of main herbicides TC in early March 2022**

Category	Product	Content of active ingredient	Ex-works price on 8 March, RMB/t	USD/t	MoM change based on RMB	Ex-works price on 8 Feb., RMB/t	USD/t
Triazine herbicides	Atrazine TC	97%	39,000	6,189	-4.88%	41,000	6,449
	Ametryn TC	95%	48,000	7,617	-1.03%	48,500	7,628
Sulfonylurea herbicides	Nicosulfuron TC	95%	327,500	51,973	-3.68%	340,000	53,476
	Quizalofop-P-ethyl TC	95%	230,000	36,500	1.10%	227,500	35,782
	Bensulfuron-methyl TC	96%	220,000	34,913	0.00%	220,000	34,602
Amide herbicides	Pretilachlor TC	95%	55,000	8,728	3.77%	53,000	8,336
	Acetochlor TC	92%	47,500	7,538	0.00%	47,500	7,471
	Metolachlor TC	97%	50,000	7,935	0.00%	50,000	7,864
Organophosphorus herbicides	Glufosinate-ammonium TC	95%	220,000	34,913	-32.31%	325,000	51,117
	Glyphosate TC	95%	72,300	11,474	-4.87%	76,000	11,953
Triazolo[1,5-a]pyrimidine-2-sulfonamide herbicides	Florasulam TC	98%	520,000	82,521	0.00%	520,000	81,787
Bipyridinium herbicides	Diquat TK	40%	58,000	9,204	-3.33%	60,000	9,437
Substituted phenylurea herbicides	Diuron TC	97%	47,000	7,459	-11.32%	53,000	8,336

Source:CCM

### Quotation for glufosinate-ammonium stops in China and price might plummet

Summary: Ex-works price of glufosinate-ammonium technical was recorded at USD34,912.88/t in early March, down 32.31% MoM. At present, domestic producers basically stop quoting for the product.

CCM's price monitoring data show that a 32.31% MoM drop was seen in the ex-works price of glufosinate-ammonium technical in the



beginning of March; the price was recorded at USD34,912.88/t (RMB220,000/t). At present, domestic producers basically stop quoting for the product.

Entering 2022, ex-works price of glufosinate-ammonium technical has been set lower, and the market might see the price plummet in near future. Operating rates of glufosinate-ammonium producers have gone up, plus realisation of new capacity in Inner Mongolia and Gansu. Yet the market saw sluggish demand. A few producers offered lower prices, but encountered growing wait-and-see attitude. This round of price fall will mainly deal a blow to domestic manufacturers. If a freefall does come, those with new glufosinate-ammonium capacity will suffer losses when they put the lines into operation. No wonder they are waiting for a positive sign, too.

FIGURE 1: China's ex-works price of glufosinate-ammonium TC, March 2021–March 2022



Source:CCM

### Jumping oil price give an advantage to coal-based upstream raw materials

Summary: Tensions between Russia and Ukraine pushed up the price of crude oil, which gives a price advantage to China's coal-based upstream raw materials of pesticides, such as pyridine, chloroacetic acid and paraformaldehyde.

Tensions between Russia and Ukraine caused the US and many European countries to strengthen sanctions against Russia, a leading exporter of crude oil and natural gas. In 2020, Russia's crude oil exports made up nearly a quarter of the world's total, so did its natural gas exports with a 25.3% share to the world's total. Although the West cannot cut ties with Russia immediately, in particular on energy supply, knock-on effects of such gradually escalating sanctions have shown already: some clients and shipowners refused to buy or carry Russian oil. Soaring prices of oil- and natural gas-based chemical raw materials loom as Russian oil supply suffers great disruption.

In China, coal is still the largest energy source. Expansion of coal chemical industry will certainly be encouraged as worldwide concerns over suspension of Russian oil have been turbocharging oil price growth. Coal-derived pesticide raw materials, pyridine, chloroacetic acid





and paraformaldehyde, for instance, may well have advantageous price over oil- and gas-derived raw materials abroad. Investigation shows that the ex-works price of pyridine in China remained stable from Dec., 2021 to Feb. 2022; it climbed by 8.93% MoM in March. In contrast, ex-works prices of chloroacetic acid and paraformaldehyde dropped by 38.76% and 3.17% MoM in March respectively. Considering a possible price hike in oil/gas-derived pesticides under prolonged Russia-Ukraine tension, expanding export of pyridine, chloroacetic acid and paraformaldehyde from China is expected, given their good prices.

Pyridine is an upstream material for herbicides like paraquat, diquat and picloram, and a material for many broad-spectrum fungicides and insecticides. It is also widely used in the production of pharmaceuticals and other chemical products. Besides application in pharmaceutical and dye industries, chloroacetic acid is used in pesticide industry to produce 2,4-D, glyphosate, dimethoate, 1-naphthyl acetic acid and etc. Paraformaldehyde is an upstream raw material for glyphosate, alachlor and butachlor. It is also used to produce insecticides, plant growth regulators and other pharmaceutical & organic raw materials.





### Paraquat and Pyridine

#### FOB Price of paraquat TK remains high in March

Summary: The FOB price of paraquat 42% TK remained high at USD3,255/t in March, edging up 0.90% MoM.

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



Source:CCM

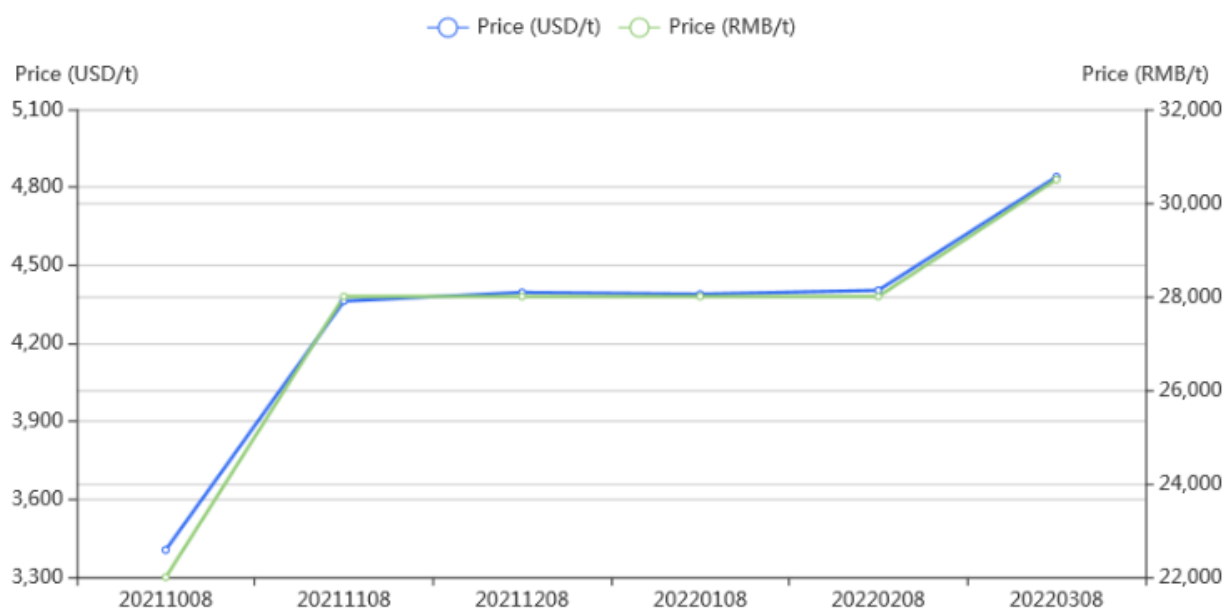
#### Price of pure pyridine goes up in early March

Summary: According to CCM's price monitoring, the ex-works price of pure pyridine in early March was USD4,840/t (RMB30,500/t), up 8.93% MoM based on RMB price.





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



Source:CCM





## Import and export

### China's 2,4-D export to Brazil goes down in 2021 yet the share to total expands

Summary: In 2021, China exported 17,573.60 tonnes (actual volume) of 2,4-D products to Brazil, 3,380.24 tonnes less than that in 2020. But the amount to Brazil accounted for 46.56% of China's total 2,4-D export to major destinations, up 17.20 percentage points from that in 2020.

According to the import and export data from Tranalysis, in 2021, 2,4-D products from China were mainly exported to 26 destinations such as Brazil, Mexico, Ecuador and Peru. Export volume to the biggest destination Brazil was 17,573.60 tonnes (actual volume), or 15,594.16 tonnes (100% AI volume). Although Brazil had less 2,4-D products from China in 2021, its volume took larger share to China's total 2,4-D export to major destinations than that in 2020.

Here's the information of China's 2,4-D exports to major destinations in 2021.

#### 2,4-D formulation

- Specifications for export: 2,4-D amine salt 600g/L SL, 2,4-D amine salt 720g/L SL, 2,4-D amine salt 860g/L SL, 2,4-D amine salt 96% SG, 304g/L SL
- Main destination: China exported 9,850.67 tonnes (actual volume) of 2,4-D formulation products to major destinations, at an average price of USD2.53/kg. In particular, 3,526 tonnes went to Brazil, which makes up 35.79% to the total 2,4-D formulation export.
- Compared with 2020, the year 2021 saw 2,4-D formulation export to major destinations decrease by 23,094 tonnes. In particular, a decline of 3,196.82 tonnes was seen in the export to Brazil; however, the country's share to the total rose by 15.38 percentage points.

#### 2,4-D technical

- Specifications for export: 95% Tech, 98% Tech
- Main destination: China exported 27,895.83 tonnes (actual volume) of 2,4-D technical products to major destinations, at an average price of USD2.77/kg. In particular, 14,047.60 tonnes went to Brazil, which makes up 50.36% to the total 2,4-D technical export; the share went up by 13.32 percentage points YoY.
- Compared with 2020, the year 2021 saw 2,4-D technical export to major destinations decrease by 10,524.85 tonnes. The export to Brazil slipped slightly by 183.42 tonnes, but that to the US expanded against the general downtrend.



**TABLE 3:** Exports of China's 2,4-D technical to major destinations, 2021

No.	Destination	Volume, kg	Value, USD	Unit price, USD/kg
1	Brazil	14,047,600.00	40,426,523.20	2.88
2	The US	7,283,378.58	17,812,324.78	2.45
3	Argentina	3,391,801.02	10,025,974.30	2.96
4	Indonesia	776,000.00	2,206,872.00	2.84
5	Ecuador	460,241.85	1,556,660.74	3.38
6	Turkey	442,000.00	1,144,600.00	2.59
7	Paraguay	334,000.00	914,248.48	2.74
8	India	324,006.30	724,985.67	2.24
9	Russia	228,000.00	688,400.00	3.02
10	The Philippines	204,000.00	533,153.84	2.61
	Others	404,806.00	1,133,407.33	2.80
	<b>Total</b>	<b>27,895,833.74</b>	<b>77,167,150.34</b>	<b>2.77</b>

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

Source: Tranalysis





TABLE 4: Exports of China's 2,4-D formulation to major destinations, 2021

No.	Destination	Volume, kg	Value, USD	Unit price, USD/kg
1	Brazil	3,526,000.00	8,889,047.94	2.52
2	Mexico	1,295,088.89	3,843,251.12	2.97
3	Ecuador	1,246,812.28	3,363,110.61	2.70
4	Peru	900,492.47	2,065,781.48	2.29
5	Indonesia	860,240.00	1,831,109.17	2.13
6	Uganda	444,370.96	925,585.67	2.08
7	Nigeria	284,636.00	972,445.97	3.42
8	The Philippines	271,924.96	450,305.38	1.66
9	Panama	268,706.52	833,206.50	3.10
10	Kenya	159,396.94	322,908.53	2.03
	Others	592,998.61	1,466,605.22	2.47
	<b>Total</b>	<b>9,850,667.63</b>	<b>24,963,357.59</b>	<b>2.53</b>

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

Source: Tranalysis



**TABLE 5:** Export volume of China's 2,4-D technical to top 10 destinations, 2020 vs 2021

No.	2020			2021		
	Destination	Volume, kg	Share	Destination	Volume, kg	Share
1	Brazil	14,231,022.33	37.04%	Brazil	14,047,600.00	50.36%
2	Argentina	5,741,604.05	14.94%	The US	7,283,378.58	26.11%
3	The US	5,122,486.00	13.33%	Argentina	3,391,801.02	12.16%
4	Indonesia	3,570,600.00	9.29%	Indonesia	776,000.00	2.78%
5	India	1,998,000.00	5.20%	Ecuador	460,241.85	1.65%
6	Russia	1,860,720.00	4.84%	Turkey	442,000.00	1.58%
7	Paraguay	851,400.00	2.22%	Paraguay	334,000.00	1.20%
8	The Philippines	738,920.00	1.92%	India	324,006.30	1.16%
9	Turkey	501,200.00	1.30%	Russia	228,000.00	0.82%
10	Ecuador	244,075.00	0.64%	The Philippines	204,000.00	0.73%
	<b>Sub-total</b>	<b>34,860,027.38</b>	<b>90.72%</b>	<b>Sub-total</b>	<b>27,491,027.74</b>	<b>98.55%</b>

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

Source: Tranalysis

**TABLE 6:** Export volume of China's 2,4-D formulation to top 10 destinations, 2020 vs 2021

No.	2020			2021		
	Destination	Volume, kg	Share	Destination	Volume, kg	Share
1	Brazil	6,722,816.00	20.41%	Brazil	3,526,000.00	35.79%
2	Nigeria	4,127,411.00	12.53%	Mexico	1,295,088.89	13.15%
3	Mexico	2,113,396.00	6.41%	Ecuador	1,246,812.28	12.66%
4	Peru	1,593,340.01	4.84%	Peru	900,492.47	9.14%
5	Indonesia	1,267,958.00	3.85%	Indonesia	860,240.00	8.73%
6	Ecuador	1,253,262.76	3.80%	Uganda	444,370.96	4.51%
7	Uganda	1,126,520.00	3.42%	Nigeria	284,636.00	2.89%
8	Kenya	608,972.76	1.85%	The Philippines	271,924.96	2.76%
9	Panama	346,858.48	1.05%	Panama	268,706.52	2.73%
10	The Philippines	342,379.58	1.04%	Kenya	159,396.94	1.62%
	<b>Sub-total</b>	<b>19,502,914.59</b>	<b>59.20%</b>	<b>Sub-total</b>	<b>9,257,669.02</b>	<b>93.98%</b>

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

Source: Tranalysis



## Registration

### ICAMA approves registration renewal of 105 herbicides in March 2022

Summary: In March 2022, ICAMA approved registration renewal of 105 herbicide products.

In March 2022, the Institute for the Control of Agrochemicals, Ministry of Agriculture and Rural Affairs of the People's Republic of China (ICAMA) approved registration renewal of 105 herbicide products, which include 9 technical products—iodosulfuron-methyl-sodium, 2,4-D, butachlor, mesotrione, clopyralid, penoxsulam, clethodim, propyzamide and acetochlor. As to formulation products, AS, WP and EC are popular forms; popular active ingredients are glyphosate, diquat and glufosinate-ammonium. These pesticide products are mainly applicable to non-cultivated cropland and winter wheat field.





TABLE 7: Applied sites of the herbicides granted registration renewal in China, 17 Feb., 2022–14 March, 2022

No.	Site	Amount
1	Non-cultivated cropland	27
2	Winter wheat field	16
3	Rice field (direct seeding)	8
4	Maize field	8
5	Transplanted rice field	6
6	Spring soybean field	4
7	Citrus orchard	4
8	Winter rape field	2
9	Sugarcane field	2
10	Summer soybean field	2
11	Wheat field	2
12	Lawn (Bermuda grass), Lawn ( <i>Zoysia japonica</i> )	1
13	Soybean field	1
14	Soybean, rice, peanut and potato fields	1
15	Soybean, rape fields	1
16	Garlic field	1
17	Winter and spring wheat fields	1
18	Peanut field	1
19	Cotton field	1
20	Non-tillage rape field, non-cultivated cropland	1
21	Rice field	1
22	Rice field (direct seeding), peanut field	1
23	Tobacco, maize, potato fields	1





<b>Total</b>	<b>93</b>
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*Note: Twelve products are excluded due to vacant info on the item of applied site.*

*Source: ICAMA*

**TABLE 8:** Forms of the herbicides granted registration renewal in China, 17 Feb., 2022–14 March, 2022

No.	Form	Amount
1	AS	23
2	WP	18
3	EC	13
4	OD	10
5	TC	9
6	SP	6
7	WG	6
8	SC	6
9	EW	5
10	SG	4
11	TK	2
12	EA	1
13	FG	1
14	SE	1
<b>Total</b>		<b>105</b>

*Source: ICAMA*





## Policy

### MARA issues implementation opinions on No.1 Central Document 2022

Summary: On 1 March, 2022, MARA issued the Opinions on Implementing the Plans of the CPC Central Committee and the State Council for Key Agricultural and Rural Work of Comprehensively Promoting Rural Revitalisation in 2022.

On 1 March, 2022, Ministry of Agriculture and Rural Affairs of the People's Republic of China (MARA) issued the Opinions on Implementing the Plans of the CPC Central Committee and the State Council for Key Agricultural and Rural Work of Comprehensively Promoting Rural Revitalisation in 2022 (The Plans is referred to as No.1 Central Document 2022). The implementation opinion file points out that key work should focus on "four stabilisations and four increases"—to stabilise crop planting area and increase yield, to stabilise industrial foundations for agricultural businesses and increase economic benefits, to stabilise rural construction progress and increase quality & management, to stabilise growth momentum of rural income and increase sustaining forces.

Key points include:

#### **Vigorously promote agricultural production to secure supply of important agricultural products**

- Stabilise crop cultivation: total planting area of crops should maintain steady and overall yield stay above 650 million tonnes.
- Overcome all difficulties to expand planting area of soybean and oil crops. Great efforts will be devoted to encouraging corn-soybean strip intercropping. Larger subsidy will be given to farmers practise crop rotation and greater incentives granted to counties with prominent oil-crop yield.
- Strengthen supervision over quality and safety of agricultural products. Attention will be paid to overall output as well as product quality. Keep cracking down upon illegal use of prohibited pesticides, strictly curbing out-of-limit residue cases, and strive for basically clearing prominent problems.
- Enhance cooperation with foreign counterparts in agriculture and establish more platforms. Keep pushing for construction of pilot agricultural opening-up and foreign cooperation zones and SCO agricultural technology exchange & training demonstration zones.

#### **Upgrade agricultural facilities and machinery and consolidate material basis for modern agriculture**

- Impose stronger control over use of arable land and secure at least 120 million ha arable land.
- Expand high-standard farmland. Cultivate additional 6.67 million ha high-standard farmland mainly in food production functional areas and important agricultural product production protection areas recognised by the government. Develop 1 million ha land adopting high-efficient water-saving irrigation system.
- Raise soil fertility. Extend black soil protection to over 6.67 million ha land and carry out conservational tillage on at least 5.33 million ha black soil.
- Proceed with Seed Industry Revival Initiative and strengthen protection of domestic germplasm resources.
- Upgrade agricultural machinery. Accelerate R&D on and manufacturing of machines and tools that are badly needed but unfortunately lacking. Promote whole-process mechanisation.
- Build up stronger and self-independent agricultural technology strength. Construct technological innovation centres of modern agriculture. Let agricultural enterprises play the leading role in innovation.
- Build smart agriculture and digital rural areas. Establish a batch of digital agriculture innovation centres and innovative application bases in rural areas. Encourage R&D on and application of equipment and technologies in various aspects, like integration of water and fertiliser, automatic feeding and smart environment control. Set up government-backed big data platforms serving agriculture and rural areas.





**Strengthen protection over agricultural resources and environment, facilitate green transformation**

- Reduce agricultural inputs while increase their efficiency. Encourage decreased use of fertiliser, pesticides and water. Cultivate 100 counties using green prevention and control methods. Provide trainings on pesticide use in a scientific and safe manner. Put an end to the use of four high-toxic pesticides.
- Push forward with treatment of agricultural non-point source pollution. Promote higher-value straw utilisation, and application of thickened mulch plastic film and full bio-degradable film. Crack down on circulation and application of sub-standard mulch film.
- Boost efforts on "agricultural production three plus one"—cultivating superior agricultural variety, raising product quality, creating brand and fostering standardised production. Increase supply of green and quality agricultural products. Improve agricultural standardisation; formulate and revise maximum residue limits for some 500 pesticides and animal drugs prescribed in national and industry standards. Select 10 agricultural products to pilot modern, full-chain standardisation program. Set up 100 national demonstration bases for standardised agricultural production.







## News in Brief

### **Sichuan Hebang sees significant rise in its net profit**

On 3 March, Sichuan Hebang Bio-technology Co., Ltd. (Sichuan Hebang) disclosed its 2021 preliminary earnings estimate. The company reported a total revenue of USD1.57 billion (RMB9.87 billion), a YoY increase of 87.56%, and its net profit attributable to equity holders of the listed company stood at USD479.26 million (RMB3.02 billion), nearly 73 times higher than the USD6.50 million (RMB40.94 million) in 2020. Given stricter environmental protection requirements, restricted capacity expansion and increased government efforts in phasing out outdated capacity after the COVID-19 began, Sichuan Hebang collected good operating profit in 2021, seeing jumping sales prices of its flagship products—PMIDA, glyphosate, sodium carbonate, ammonium chloride and glass, amid rising downstream demand.

### **Guangxi Tianyuan to boost production capacity of agrochemicals and chemical intermediates**

The signing ceremony of Guangxi Tianyuan Biochemistry Co., Ltd. (Guangxi Tianyuan)'s construction project, green agrochemicals and supporting fine chemical intermediates production base was held on 5 March. The planned Liucheng-based production base, covering around 20 ha with the total investment standing at USD158.69 million (RMB1 billion), will be a win-win to both Guangxi Tianyuan and the local government.

Totalling 2,000 ha, Liucheng County Industrial Park, an A-grade industrial park recognised by Guangxi Provincial Government, has formed a development structure featuring "one industrial park, four function areas". In 2021, Liucheng County's total industrial output value posted a remarkable YoY increase of 15%, reaching USD2.01 billion (RMB12.70 billion).

### **Multiple factors cause Zhejiang Xinnong's weak performance**

In 2021, the company's total revenue stood at USD184.53 million (RMB1.16 billion), edging down by 2.59% YoY, and its net profit attributable to equity holders of the listed company reached USD22.06 million (RMB139.02 million), a YoY decrease of 20.67%, according to the 2021 preliminary earnings estimate disclosed by Zhejiang Xinnong Chemical Co., Ltd. (Zhejiang Xinnong) on 3 March. During the reporting period, due to the fluctuation of raw material prices, sluggish market demand and rising logistic cost amid the COVID-19 Pandemic, Zhejiang Xinnong's industrial sector saw a considerable decline in the sales prices of some products, pesticide TC and intermediates, resulting in weak business performance.

### **Shandong grants pesticide production certificate for 8 enterprises**

Eight pesticide enterprises in Shandong are expected to be granted the pesticide production certificate for the first time, according to a review result revealed by the Expert Committee on Pesticide Management and Appraisal of Shandong Province. Publicity period for result was from 2 to 8 March. Specifically, production certificates for four pesticide TC products from three companies, diafenthiuron of Qingdao Hengning Biotechnology Co., Ltd., tebuthiuron and amicarbazone of Chengwu Taihe Chemical Co., Ltd. and diethyltoluamide of Weifang Benzo Chemical Co., Ltd., are newly added. Five new formulation enterprises passed the review are: Shandong Qiaoxin Biotechnology Co., Ltd., Qingdao Huizhi Biotechnology Co., Ltd., Shandong Runqi Biotechnology Co., Ltd., Yuncheng Chengyou Biotechnology Co., Ltd. and Guopeng Luhua Group Co., Ltd. To date, all the eight have not obtained any pesticide registration certificate yet.





### **Grand Holding green lights a RMB50 million-worth bio-pesticide technology transfer to its subsidiary**

On 15 March, Grand Industrial Holding Co., Ltd. (Grand Holding) announced resolutions made at the board meeting held on 11 March. The board decided to give a green light to a transfer of bio-pesticide scientific and technological achievement to its wholly-owned subsidiary Grand Life Science & Crop Protection (Shanghai) Co., Ltd. Total cost for this transfer is USD7.93 million (RMB50 million), including USD1.58 million (RMB10 million) technology transfer fee and USD6.34 million (RMB40 million) as sales income sharing. Transfer agreement is yet to sign and there still remains uncertainty over final signing. The meeting also approved the plan to establish Grand Oils & Foods (Dubai) LLC. (the name is not finalised) in Dubai by another wholly-owned subsidiary Grand Oils & Foods (Singapore) Pte. Ltd. with its own fund totalling USD2 million.

### **Sichuan Hebang expects to sell phosphate ore in April**

On 16 March, Sichuan Hebang Bio-technology Co., Ltd. (Sichuan Hebang) revealed that the 1,000,000 t/a phosphate mine exploitation project in Yanfeng Town, Mabian Yi Autonomous County (Sichuan Province) had started construction. The company expects to start selling phosphate ore in this April. Sichuan Hebang owns two phosphate mines: one in Yanfeng Town, the other in Hanyuan County (Sichuan Province), with phosphorus ore reserves totalling 90.91 million tonnes.

Boasting 150,000 t/a PMIDA and 50,000 t/a glyphosate production capacity, Sichuan Hebang is the largest PMIDA supplier around the globe. CCM's price monitoring data show that in March, ex-works prices of PMIDA and glyphosate technical saw YoY increases of 154% and 148%, respectively. The company is also the largest alkali producer using combined-soda process in Southwest China.

### **Lier Chemical to promote quick launch of glufosinate-p in markets home and abroad**

On 16 March, Lier Chemical Co., Ltd. (Lier Chemical) revealed that efforts had been made to acquire registration of glufosinate-p in foreign markets, and it would sell glufosinate-p products in accordance with specific market needs at home and abroad in the near future. The company has been actively communicating and cooperating with well-established international agrochemical enterprises as part of efforts to ensure quick launch of its glufosinate-p products in markets after its lines starting operation. Lier Chemical will also push for more glufosinate-p projects at different production sites so as to gain a stronger foothold in this segment market.

In addition, Lier Chemical would ramp up efforts into the construction of its multi-functional R&D and pilot-scale experiment platform, into R&D on production techniques of glufosinate-p, pinoxaden and chlorantraniliprole, and into improvement of quality and production techniques of existing products like glufosinate, epoxiconazole, flumioxazin and fluroxypyr.

### **Nutrichem releases annual report of 2021**

On 18 March, Nutrichem Co., Ltd. (Nutrichem) issued its annual report of 2021. Nutrichem mainly engages in R&D, production and sale of pesticide TC, formulations and intermediates. It also provides GLP (Good Laboratory Practice) testing & analysis service.

During the reporting period:

- Total revenue: USD1.17 billion (RMB7.35 billion), a YoY increase of 18.14% compared with the USD987.84 million (RMB6.22





billion) in 2020;

- Net profit attributable to equity holders of the listed company: USD76.33 million (RMB480.98 million), jumping 47.86% YoY from the USD51.62 million (RMB325.30 million) in 2020.

As of the end of the reporting period:

- Total assets: USD1.90 billion (RMB11.94 billion), an increase of 11.32% over the beginning of the reporting period;
- Net assets attributable to equity holders of the listed company: USD767.24 million (RMB4.84 billion), a growth of 5.46% from the beginning of 2021.

### **Zhejiang Wynca: record high performance in 2021 & good start in Q1 2022**

On 21 March, Zhejiang Wynca Chemical Group Co., Ltd. (Zhejiang Wynca) disclosed its annual report of 2021 and the performance projection of Q1 2022. Total revenue and net profit in 2021 reached a historic high since the company went listed:

- Total revenue: USD3.01 billion (RMB18.98 billion), a YoY increase of 51.45%;
- Net profit attributable to equity holders of the listed company: USD421.25 million (RMB2.65 billion), surging by 354.56% YoY.

In Q1 2022, prices of Zhejiang Wynca's flagship products, including glyphosate, organosilicon and industrial silicon, remained at a high level, supported by favourable demand-supply dynamics. Net profit attributable to equity holders of the listed company is expected to fall between USD182.50 million–USD198.37 million (RMB1.15 billion–RMB1.25 billion), up 313%–349% YoY.

### **Zhongnong Ruihua's agrochemical production project starts construction**

The groundbreaking ceremony of the "pesticide & pharmaceutical intermediates, technical and formulations production lines" project of Zhongnong Ruihua (Gansu) Pharmaceutical Co., Ltd. (Zhongnong Ruihua) was held in the Yumendong Building Materials & Chemical Industrial Park on 22 March. Zhongnong Ruihua expects a sales revenue of USD28.57 million (RMB180 million) and profits of USD6.35 million (RMB40 million) annually upon full operation.

Overview of Zhongnong Ruihua's project

- Product & designed capacity, including:
  - 3,000 t/a 2-chloro-5-(chloromethyl)pyridine (CCMP)
  - 3,000 t/a (3-trans-Chloroallyl)oxyamine
  - 10,000 t/a formulation products containing active ingredients like azoxystrobin, ethoxysulfuron, clethodim
- Total investment: USD42.53 million (RMB268 million)
- Covered area: 15.2 ha
- Floor area: 9.18 ha





## Price Update

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

TABLE 9: Ex-works prices of key herbicide raw materials in China, 8 March, 2022

Raw Materials	20220208		20220308	
	Original Price (RMB/t)	Price (USD/t)	Original Price (RMB/t)	Price (USD/t)
98% Glycine	28,000	4,403.9	23,500	3,729.33
92% Iminodiacetonitrile	9,300	1,462.72	9,300	1,475.86
99% Isopropylamine	9,550	1,502.04	9,550	1,515.54
98% N-(Phosphonmethyl) Iminodiacetic acid	44,000	6,920.42	42,000	6,665.19
99% Phosphorus trichloride	9,237.5	1,452.89	11,110	1,763.1
99.9% Pyridine	28,000	4,403.9	30,500	4,840.19

Note: Ex-works price includes VAT.

Source: CCM

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



TABLE 10: Ex-works prices of main herbicides in China, 8 March, 2022

Product	20220208		20220308	
	Original Price (RMB/t)	Price (USD/t)	Original Price (RMB/t)	Price (USD/t)
92% Acetochlor technical	47,500	7,470.90	47,500	7,538.01
97% Atrazine technical	41,000	6,448.57	39,000	6,189.10
96% Bensulfuron-methyl technical	220,000	34,602.08	220,000	34,912.88
92% Butachlor technical	45,000	7,077.70	45,000	7,141.27
95% Clomazone technical	120,000	18,873.86	116,000	18,408.61
95% Cyhalofop-butyl technical	225,000	35,388.49	215,000	34,119.40
97% Diuron technical	53,000	8,335.95	47,000	7,458.66
98% Fenclorim technical	190,000	29,883.61	170,000	26,978.13
95% Fenoxaprop-P-ethyl technical	200,000	31,456.43	195,000	30,945.50
96% Fluroxypyr technical	200,000	31,456.43	195,000	30,945.50
95% Fomesafen technical	142,000	22,334.07	140,000	22,217.29
95% Glufosinate ammonium technical	325,000	51,116.70	220,000	34,912.88
95% Glyphosate technical	76,000	11,953.44	72,300	11,473.64
95% Haloxyfop-P-methyl technical	277,000	43,567.16	250,000	39,673.72
97% Metolachlor technical	50,000	7,864.11	50,000	7,934.74
95% Metsulfuron-methyl technical	135,000	21,233.09	135,000	21,423.81
95% Nicosulfuron technical	340,000	53,475.94	327,500	51,972.58
97% Oxyfluorfen technical	250,000	39,320.54	250,000	39,673.72
95% Pendimethalin technical	63,500	9,987.42	60,000	9,521.69
95% Pretilachlor technical	53,000	8,335.95	55,000	8,728.22
97% Pyrazosulfuron-ethyl technical	300,000	47,184.65	300,000	47,608.47
80% Quinclorac technical	140,000	22,019.50	137,000	21,741.20



95% Quizalofop-P-ethyl technical	227,500	35,781.69	230,000	36,499.83
95% Tribenuron-methyl technical	170,000	26,737.97	165,000	26,184.66
95% Trifluralin technical	38,000	5,976.72	38,000	6,030.41

*Note: Ex-works price includes VAT.*

*Source: CCM*

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



TABLE 11: Shanghai Port prices of main herbicides in China, 8 March, 2022

Product	20220208		20220308	
	Original Price (RMB/t)	Price (USD/t)	Original Price (RMB/t)	Price (USD/t)
92% Acetochlor technical	48,000	7,549.54	48,000	7,617.35
97% Atrazine technical	41,500	6,527.21	39,500	6,268.45
96% Bensulfuron-methyl technical	220,500	34,680.72	220,500	34,992.22
92% Butachlor technical	45,500	7,156.34	45,500	7,220.62
95% Clomazone technical	120,500	18,952.50	116,500	18,487.96
95% Cyhalofop-butyl technical	225,500	35,467.13	215,500	34,198.75
97% Diuron technical	53,500	8,414.60	47,500	7,538.01
98% Fenclorim technical	190,500	29,962.25	170,500	27,057.48
95% Fenoxaprop-P-ethyl technical	200,500	31,535.07	195,500	31,024.85
96% Fluroxypyr technical	200,500	31,535.07	195,500	31,024.85
95% Fomesafen technical	142,500	22,412.71	140,500	22,296.63
95% Glufosinate ammonium technical	325,500	51,195.34	220,500	34,992.22
95% Glyphosate technical	76,500	12,032.09	72,800	11,552.99
95% Haloxyfop-P-methyl technical	277,500	43,645.80	250,500	39,753.07
97% Metolachlor technical	50,500	7,942.75	50,500	8,014.09
95% Metsulfuron-methyl technical	135,500	21,311.73	135,500	21,503.16
95% Nicosulfuron technical	340,500	53,554.58	328,000	52,051.92
97% Oxyfluorfen technical	250,500	39,399.18	250,500	39,753.07
95% Pendimethalin technical	64,000	10,066.06	60,500	9,601.04
95% Pretilachlor technical	53,500	8,414.60	55,500	8,807.57
97% Pyrazosulfuron-ethyl technical	300,500	47,263.29	300,500	47,687.82
80% Quinclorac technical	140,500	22,098.14	137,500	21,820.55



95% Quizalofop-P-ethyl technical	228,000	35,860.33	230,500	36,579.17
95% Tribenuron-methyl technical	170,500	26,816.61	165,500	26,264
95% Trifluralin technical	38,500	6,055.36	38,500	6,109.75

*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 March, 2022







TABLE 12: FOB Shanghai prices of main herbicides in China, 8 March, 2022, USD/t

Product	20220208	20220308
92% Acetochlor technical	7,432	7,498.76
97% Atrazine technical	6,215.82	5,973.92
96% Bensulfuron-methyl technical	33,816.44	34,120.19
92% Butachlor technical	7,049.62	7,112.94
95% Clomazone technical	18,521.11	18,070.17
95% Cyhalofop-butyl technical	33,363	32,174.03
97% Diuron technical	8,273.24	7,421.59
98% Fenclorim technical	29,227.85	26,403.83
95% Fenoxaprop-P-ethyl technical	30,757.38	30,262.01
96% Fluroxypyr technical	30,757.38	30,262.01
95% Fomesafen technical	21,886.09	21,774.02
95% Glufosinate ammonium technical	48,116.90	32,918.35
95% Glyphosate technical	12,837.37	12,330.28
95% Haloxyfop-P-methyl technical	42,534.78	38,750
97% Metolachlor technical	7,814.38	7,884.57
95% Metsulfuron-methyl technical	20,815.41	21,002.38
95% Nicosulfuron technical	52,170.84	50,710.36
97% Oxyfluorfen technical	37,051.47	37,384.28
Paraquat 42% TK	3,225.79	3,254.76
95% Pendimethalin technical	9,879.25	9,427.85
95% Pretilachlor technical	8,273.24	8,656.21
97% Pyrazosulfuron-ethyl technical	46,052.71	46,466.36
80% Quinclorac technical	21,580.18	21,311.04





95% Quizalofop-P-ethyl technical	34,963.59	35,663.46
95% Tribenuron-methyl technical	26,168.78	25,632.20
95% Trifluralin technical	5,773.20	5,825.06

*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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