

Herbicides China Monthly Report 202205

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Headline

Jiangsu Tuoqiu recently promised to call an end to production resumption of altogether 3,575 t/a capacity for pesticides TC & intermediates in its production base in Yanhai Industrial Park, Yancheng City, Jiangsu Province.

On 5 May, Weifang Municipal Ecology and Environment Bureau, Binhai Branch approved Weifang Union's "1,200 t/a propyzamide TC project" based on the EIA report it submitted.

Early May, prices of most herbicides TC were stable, but the price of glyphosate TC had a big jump. As compared to last month, sulfonyleurea herbicides and amide herbicides TC saw small price drop, while prices of organophosphorus herbicides TC went upward.

The FOB price of paraquat 42% TK was USD3,123/t in May, down by 3.29% MoM.

According to CCM's price monitoring, the ex-works price of pure pyridine in early May was USD4,644/t (RMB30,500/t).

According to export data from Tranalysis, in Q1 2022, China exported 5,187.98 tonnes (actual volume) or 5,083.59 tonnes (converted to 100% AI) dicamba products to six major destinations including the US, Argentina and Australia.

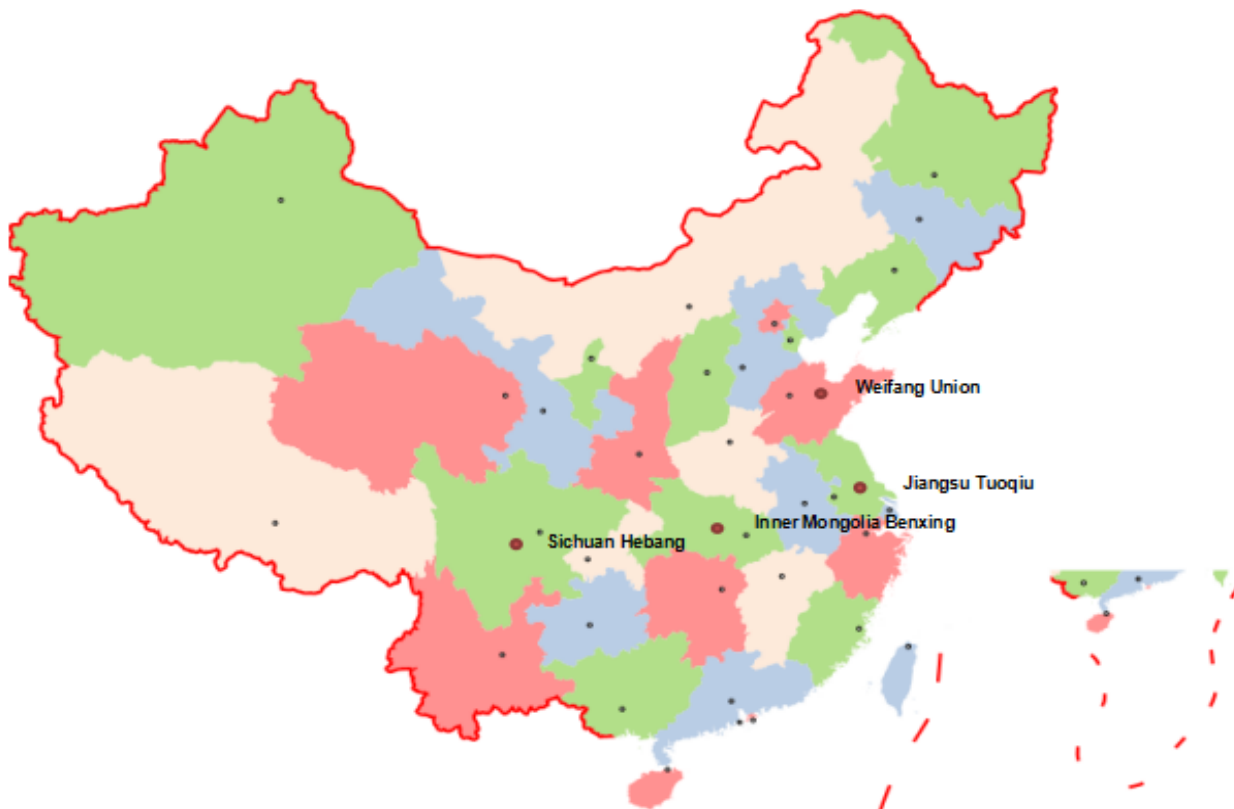
In May 2022, ICAMA approved 25 newly registered herbicide products.

On 26 April, Shandong Provincial Department of Agriculture and Rural Affairs publicised second-batch appraisal result made by the Expert Committee on Pesticide Management and Appraisal of Shandong Province. Six producers will be granted pesticide production permits if no objection is raised.

On 28 April, 2022, People's Government of Kunming Municipality issued the Interim Measures for Administration of Pesticide Operation and Application in Dianchi Lake and Yangzonghai Lake Basins. It specifies that pesticide use is not allowed in drinking water source reserve areas in these two basins and Level protection zone in Dianchi Lake basin.

On 10 May, NDRC issued the Plan for the Development of Bio-Economy during the 14th Five-Year Period.







Editor's note

Late April, Jiangsu Tuoqiu announced that it would no longer seek resumption of 3,575 t/a capacity for pesticides TC & intermediates in the production base in Yanhai Industrial Park, Yancheng City, Jiangsu Province. Contrary to that capacity cut, Weifang Union got a yes from local authorities to construct production lines for 1,200 t/a propyzamide TC.

As for ex-works prices of herbicides TC, most products saw stable price in early May, but glyphosate TC had a big price hike. As compared to last month, sulfonyleurea herbicides and amide herbicides TC saw small price drop, while prices of organophosphorus herbicides TC went upward. Prices of bipyridinium herbicides kept unchanged.

This month, ICAMA approved 25 newly registered herbicide products, of which 22 are formulation products, mainly in the form of SL, WG and EC. Popular active ingredients include glufosinate-ammonium, 2,4-D, flumioxazin and clomazone.

As to latest policies, on 28 April, People's Government of Kunming Municipality issued the Interim Measures for Administration of Pesticide Operation and Application in Dianchi Lake and Yangzonghai Lake Basins. Pesticide use is not allowed in drinking water source reserve areas in these two basins and Level 1 protection zone in Dianchi Lake basin. And on 10 May, NDRC issued the Plan for the Development of Bio-Economy during the 14th Five-Year Period, which states firmly that China should give priority to development of four fields of major importance: bio-medicine, bio-agriculture, biomass substitution and bio-safety during 2021–2025.

The USD/CNY exchange rate in this newsletter is USD1.00=CNY6.5672 on 5 May, 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

Jiangsu Tuoqiu to slash pesticide TC & intermediate capacity in Jiangsu Base

Summary: Jiangsu Tuoqiu recently promised to call an end to production resumption of altogether 3,575 t/a capacity for pesticides TC & intermediates in its production base in Yanhai Industrial Park, Yancheng City, Jiangsu Province.

Late April, news from Jiangsu Tuoqiu Agriculture Chemical Co., Ltd. (Jiangsu Tuoqiu) came that the company would no longer seek resumption of 3,575 t/a pesticide TC & intermediate capacity in the production base in Yanhai Industrial Park, Yancheng City, Jiangsu Province. The decision was made based on its plan for future development and in conformity with the *Implementation Plan for Rectification on and Improvement of Work Safety and Environment Protection in Chemical Industry* issued by Yancheng municipal government.

The explosion in a chemical park in Xiangshui County in March 2019 led to a widespread production suspension in chemical enterprises in Yancheng City. Before the accident, Jiangsu Tuoqiu had put some 13,000 t/a pesticide TC & intermediate capacity in operation in the Jiangsu production base. As of 25 April, 2022, part of the capacity was approved of resumption after rectifications.

TABLE 1: Capacity of Jiangsu Tuoqiu in Jiangsu Base and the status, as of 25 April, 2022

No.	Category	Product & capacity	Note
1	Formulation	7,700 t/a	Production resumed
2	Technical	600 t/a Paclobutrazol TC, 500 t/a fipronil TC, 300 t/a bromothalonil TC and 300 t/a diniconazole TC	Production resumed
		1,000 t/a dicamba TC, 300 t/a azoxystrobin TC, 300 t/a pyraclostrobin TC, 200 t/a ethiprole TC, 200 t/a penoxsulam TC and 300 t/a clodidol	No longer seek resumption
3	Pesticide intermediate	400 t/a trichloroacetyl chloride, 300 t/a 2-bromoheptafluoropropane, 250 t/a heptafluoropropane, 75 t/a 5-amino-1-(2,6-dichloro-4-(trifluoromethyl)phenyl)-1H-pyrazole-3-carbonitrile and 50 t/a methanesulfinylchloride, 1,1,1-trifluoro-, etc.	No longer seek resumption

Source:CCM

In recent years, Jiangsu Tuoqiu has beefed up its investment outside Jiangsu, setting up new production bases to build stronger cushion against accident-induced production suspension in an individual base, which would undermine its performance. In April 2020, it established the subsidiary Tuoqiu Biotechnology (Lanzhou) Co., Ltd. (Lanzhou Tuoqiu) in the Lanzhou New District Chemical Park in Lanzhou City, Gansu Province. It planned a 12,100 t/a pesticide TC, API & intermediate project in the Lanzhou Base, which includes:

- TC & API: 2,000 t/a prochloraz TC, 2,000 t/a paclobutrazol TC, 800 t/a fipronil TC, 500 t/a bromothalonil TC, 300 t/a prothioconazole TC, 300 t/a bromacil TC, 300 t/a imazamox TC, 500 t/a clodidol and 100 t/a ivermectin;
- Intermediate: 3,000 t/a 4-chlorobenzotrifluoride, 1,500 t/a 3,4-dichlorobenzotrifluoride, 500 t/a 3-methyl-4-nitrobenzoic acid and 300 t/a methyl 1-[(2'-cyanobiphenyl-4-yl)methyl]-2-ethoxy-1H-benzimidazole-7-carboxylate.





Moreover, Jiangsu Tuoqiu acquired 51% shares of Liaoning Futuo New Energy Materials Co., Ltd. (Liaoning Futuo) in Feb. 2022. Liaoning Futuo boasts a large-scale production base in the Fluorine Industry Development Zone in Fuxin City, Liaoning Province; it mainly produces pesticides and intermediates for pesticides, pharmaceuticals.

Weifang Union to build 1,200 t/a propyzamide TC capacity

Summary: On 5 May, Weifang Municipal Ecology and Environment Bureau, Binhai Branch approved Weifang Union's "1,200 t/a propyzamide TC project" based on the EIA report it submitted.

On 5 May, Weifang Municipal Ecology and Environment Bureau, Binhai Branch approved Weifang Sino-Agri Union Chemical Co., Ltd. (Weifang Union)'s "1,200 t/a propyzamide TC project" based on the EIA report it submitted. The project will be built in the company's existing factory in Weifang Binhai Industrial Park. Previously, Weifang Union filed for the construction project at local government.

Total investment for the project is about USD7 million (RMB46 million), of which USD1.28 million (RMB8.41 million) is for environmental protection. Weifang Union will re-purpose the former guanidine nitrate workshop and install equipment for propyzamide TC production.

The approval opinion specified that solid wastes generated during production should be disposed of following the principle "recycling, reduction and non-hazardousness". Disposal of hazardous wastes like residues and sodium chloride (NaCl) mother liquor generated in centrifugation process of 3-chloro-3-methyl-1-butyne synthesis should be entrusted to eligible services providers. And NaCl-containing wastes, after refinement, can be turned into industrial salt; once identified as non-hazardous and qualified for being treated as like products, the salt can be sold out as by-product salt.

Weifang Union, founded in Oct. 2006, mainly engages in production and sale of pesticides and some other chemicals. Its enterprise registration certificate says the company has capacity of 10,956 t/a sulphur (18%), 7,000 t/a guanidine nitrate, 7,500 t/a nitroguanidine and 697 t/a methanol. And the current 1,200 t/a propyzamide TC project will help enrich its product mix.





Market analysis

Most herbicides TC see stable price but glyphosate TC has big price hike in China in May

Summary: Early May, prices of most herbicides TC were stable, but the price of glyphosate TC had a big jump. As compared to last month, sulfonyleurea herbicides and amide herbicides TC saw small price drop, while prices of organophosphorus herbicides TC went upward.

- Sulfonyleurea herbicides

Quizalofop-P-ethyl TC: Its ex-works price kept stable. Stock of the product was small. Its price is expected to go up in the short term as prices of its raw materials were at a high level.

Nicosulfuron TC: Its ex-works price dropped by 3.88% MoM to USD47,204/t (RMB310,000/t) due to dull trade. Overall operating rate increased; manufacturers like Shandong Kunji Biotechnology Co., Ltd., Anhui Huaxing Chemical Industry Co., Ltd. and Anhui Fengle Agrochemical Co., Ltd. were in normal production.

- Amide herbicides

Prices of amide herbicides TC have stayed high as raw material prices have been at a high level. However, domestic demand has lessened and they are mainly for export currently.

Pretilachlor TC: Its ex-works price decreased by 3% MoM to USD7,385/t (RMB48,500/t).

Acetochlor TC: Its price decreased by 5.26% MoM to USD6,852/t (RMB45,000/t), though the supply was slightly tight.

Metolachlor TC: Its price kept stable.

- Organophosphorus herbicides

Glyphosate TC: Its ex-works price rose by 3.48% MoM to USD9,898/t (RMB65,000/t). The manufacturers have operated stably; they mainly fulfil previous orders. New orders were small. Production cost was relatively stable. The price is expected to stabilise as the manufacturers are reluctant to compromise.

Glufosinate-ammonium TC: Its ex-works price shot up 28.96% MoM to USD36,545/t (RMB240,000/t). Its supply was tight, but the manufacturers were inactive in accepting new orders. The price may rise steadily since those with a stock hope for a higher price.

- Bipyridinium herbicides

Diquat 40% TK: Its price remained unchanged and the supply has been stable.





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

Category	Product	Content of active ingredient	Ex-works price on 8 May, RMB/t	USD/t	MoM change based on RMB	Ex-works price on 8 April, RMB/t	USD/t
Triazine herbicides	Atrazine TC	97%	39,000	5,939	0.00%	39,000	6,141
	Ametryn TC	95%	48,000	7,309	0.00%	48,000	7,558
Sulfonylurea herbicides	Nicosulfuron TC	95%	310,000	47,204	-3.88%	322,500	50,780
	Quizalofop-P-ethyl TC	95%	230,000	35,023	0.00%	230,000	36,215
	Bensulfuron-methyl TC	96%	200,000	30,454	-4.76%	210,000	33,066
Amide herbicides	Pretilachlor TC	95%	48,500	7,385	-3.00%	50,000	7,873
	Acetochlor TC	92%	45,000	6,852	-5.26%	47,500	7,479
	Metolachlor TC	97%	52,000	7,918	0.00%	52,000	8,188
Organophosphorus herbicides	Glufosinate-ammonium TC	95%	240,000	36,545	28.96%	186,100	29,303
	Glyphosate TC	95%	65,000	9,898	3.48%	63,300	9,967
Triazolo[1,5-a]pyrimidine-2-sulfonanilide herbicides	Florasulam TC	98%	520,000	79,181	0.00%	520,000	81,878
Bipyridinium herbicides	Diquat TK	40%	58,000	8,832	0.00%	58,000	9,133
Substituted phenylurea herbicides	Diuron TC	97%	43,000	6,548	-6.52%	46,000	7,243

Source:CCM



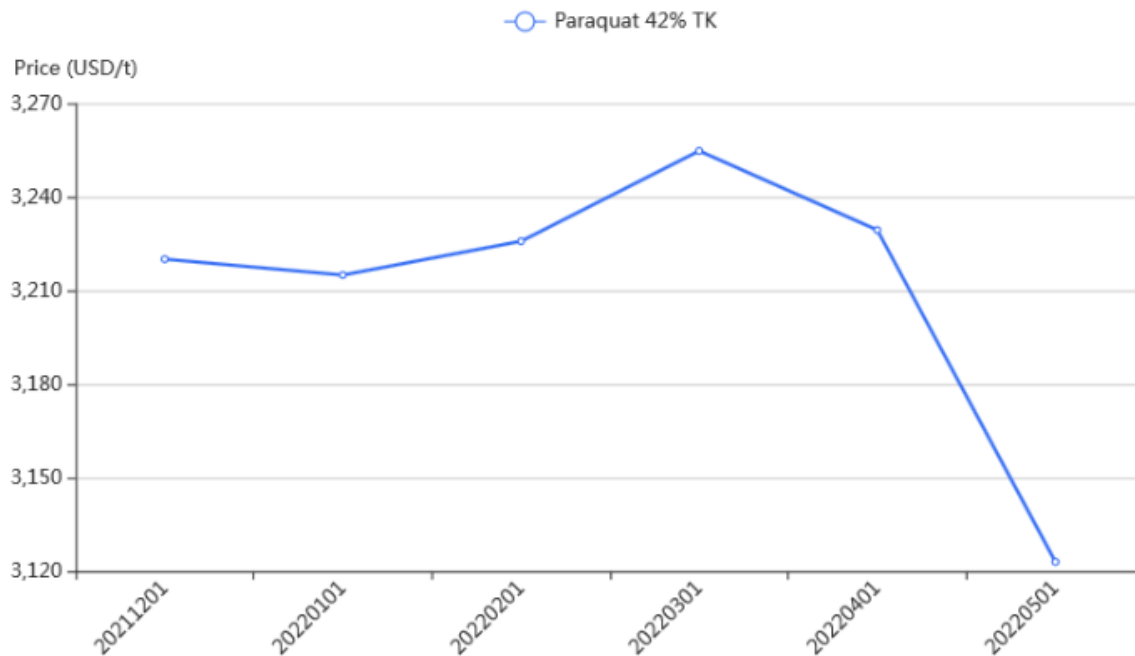


Paraquat and Pyridine

FOB Price of paraquat TK drops in May

Summary: The FOB price of paraquat 42% TK was USD3,123/t in May, down by 3.29% MoM.

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



Source:CCM

Price of pure pyridine keeps stable in early May

Summary: According to CCM's price monitoring, the ex-works price of pure pyridine in early May was USD4,644/t (RMB30,500/t).



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



Source: CCM



Import and export

China's dicamba exports to major destinations in Q1 2022

Summary: According to export data from Tranalysis, in Q1 2022, China exported 5,187.98 tonnes (actual volume) or 5,083.59 tonnes (converted to 100% AI) dicamba products to six major destinations including the US, Argentina and Australia.

In Q1 2022, China exported 5,187.98 tonnes (actual volume) or 5,083.59 tonnes (converted to 100% AI) dicamba products to six major destinations including P the US, Argentina and Australia, according to the import and export data updated to 12 May from Tranalysis.

Details of China's dicamba exports in Q1 2022 are as follows:

Dicamba technical

- Specifications for export: 98% TC
- Major destination: China exported 5,185.74 tonnes (actual volume, the same hereafter) of dicamba TC to major destinations, at an average price of USD13.96/kg. Among them, the US was the largest export destination with a volume of 4,797.00 tonnes, taking up 92.50% of China's total dicamba TC exports during this period.
- Major exporter: The top three dicamba TC exporters, Jiangsu Yangnong Chemical Group Co., Ltd., Jiangsu Changqing Agrochemical Co., Ltd. and Shandong Weifang Rainbow Chemical Co., Ltd., together exported 4,047.24 tonnes of dicamba TC, making up 78.05% of China's total dicamba TC exports during this period.

Dicamba formulation

- Specifications for export: 70% WG
- Major destination: China only exported 2.24 tonnes of dicamba formulations to Paraguay, at an average price of USD13.31/kg.
- Major exporter: The sole exporter was unspecified.

TABLE 3: Exports of dicamba products from China by formulation, Q1 2022

No.	Formulation	Volume, kg	Average price, USD/kg
1	70% WG	2,240.00	13.31
2	98% TC	5,185,740.00	13.96
Total		5,187,980.00	/

Note: The data, sourced from Tranalysis, were updated to 12 May, 2022.

Source: Tranalysis



**TABLE 4:** Major destination of dicamba TC products exported from China, Q1 2022

No.	Destination	Volume, kg	Value, USD	Unit price, USD/kg
1	The US	4,797,000.00	67,073,709.55	13.98
2	Argentina	360,000.00	4,914,069.55	13.65
3	Australia	18,240.00	255,391.16	14.00
4	Russia	10,000.00	154,924.71	15.49
5	Turkey	500.00	7,000.00	14.00
Total		5,185,740.00	72,405,094.97	13.96

Note: The data, sourced from Tranalysis, were updated to 12 May, 2022.

Source: Tranalysis

TABLE 5: Major destination of dicamba formulation products exported from China, Q1 2022

No.	Destination	Volume, kg	Value, USD	Unit price, USD/kg
1	Paraguay	2,240.00	29,814.41	13.31
Total		2,240.00	29,814.41	13.31

Note: The data, sourced from Tranalysis, were updated to 12 May, 2022.

Source: Tranalysis

TABLE 6: Exports of dicamba TC products from China by manufacturer, Q1 2022

No.	Manufacturer	Volume, kg	Value, USD	Unit price, USD/kg
1	Jiangsu Yangnong Chemical Group Co., Ltd.	2,266,240.00	31,610,924.90	13.95
2	Jiangsu Changqing Agrochemical Co., Ltd.	1,578,000.00	22,095,864.64	14.00
3	Shandong Weifang Rainbow Chemical Co., Ltd.	203,000.00	2,842,346.78	14.00
4	Zhejiang Shenghua Biok Biology Co., Ltd.	24,500.00	340,087.22	13.88
5	Others	1,114,000.00	15,515,871.44	13.93
Total		5,185,740.00	72,405,094.97	13.96

Note: The data, sourced from Tranalysis, were updated to 12 May, 2022.

Source: Tranalysis



**TABLE 7:** Exports of dicamba formulation products from China by manufacturer, Q1 2022

No.	Manufacturer	Volume, kg	Value, USD	Unit price, USD/kg
1	Unknown	2,240.00	29,814.41	13.31
Total		2,240.00	29,814.41	13.31

Note: The data, sourced from Tranalysis, were updated to 12 May, 2022.

Source: Tranalysis





Registration

ICAMA approves 25 newly registered herbicide products in May 2022

Summary: In May 2022, ICAMA approved 25 newly registered herbicide products.

In May 2022, the Institute for the Control of Agrochemicals, Ministry of Agriculture and Rural Affairs of the People's Republic of China (ICAMA) approved 25 newly registered herbicide products, including 22 formulation products, 2 TC products (AI: clomazone and bicyclopyrone) and a glufosinate-ammonium TK product. The formulation products are mainly in the form of SL, WG and EC. Main applicable sites are spring soybean field and winter wheat field. Active ingredients include glufosinate-ammonium, 2,4-D, flumioxazin, clomazone and etc.

TABLE 8: Applied sites of the newly-registered herbicides in China, 23 April, 2022–23 May, 2022

No.	Site	Amount
1	Spring soybean field	3
3	Winter wheat field	2
2	Non-cultivated cropland	2
4	Rice field (direct seeding)	2
5	Spring maize field	1
Total		10

Note: Fifteen products are excluded due to vacant info on the item of applied site.

Source: ICAMA



TABLE 9: Forms of newly-registered herbicides in China, 23 April, 2022–23 May, 2022

No.	Form	Amount
1	SL	5
2	EC	5
3	WG	5
4	OD	2
5	SG	2
6	TC	2
7	WP	1
8	TK	1
9	ME	1
10	SC	1
Total		25

Source:ICAMA

Shandong to grant pesticide production licences to 6 producers

Summary: On 26 April, Shandong Provincial Department of Agriculture and Rural Affairs publicised second-batch appraisal result made by the Expert Committee on Pesticide Management and Appraisal of Shandong Province. Six producers will be granted pesticide production permits if no objection is raised.

On 26 April, Shandong Provincial Department of Agriculture and Rural Affairs publicised second-batch appraisal result made by the Expert Committee on Pesticide Management and Appraisal of Shandong Province. The publicity period ended on 5 May.

Six producers will be granted pesticide production licences if no objection has been raised. Among them, Qingdao Hengning Biotechnology Co., Ltd. was previously permitted to produce diafenthiuron TC as per the first-batch appraisal result this year. And since Shandong Chupeng Biotechnology Development Co., Ltd. applied for a change to the enterprise name from the previous Shandong Fuchuan Biological Technology Co., Ltd., the original licence (No. 0117 Shandong) should be revoked after new issuance.

TABLE 10: Second-batch appraisal result for pesticide producers in Shandong Province, 2022

No.	Producer	Qualified item	Unqualified item
1	Jining Shengcheng Chemical Experimental Co., Ltd.	Aluminium phosphide, Aluminium phosphide TB	/
2	Qingdao Hengning Biotechnology Co., Ltd.	Chlorfenapyr, difenoconazole, propiconazole; EC	/
3	Shandong Zhongxin Chemicals Co., Ltd.	CS, CF, WG, GR, OD, SC, EC, ME, AS, EW, SP, SL, WP	/
4	Shandong Chupeng Biotechnology Development Co., Ltd.	GR, SC, ME	/
5	Shouguang Chengxin Pesticide Co., Ltd.	WP, SP, GR, WG, EC, AS, SL, SC, ME, EW, OD, FS, CS	/
6	Weifang Aofeng Crop Disease Control Co., Ltd.	ME, EW, EC, SC, OD, SE	CS, FS, WP, SP

Source: Shandong Provincial Department of Agriculture and Rural Affairs; CCM

Besides, six pesticide operators were also reviewed as qualified operators this time. They are: Dongying Dingcheng Garden Engineering Co., Ltd., Shandong Furunshi Biotechnology Co., Ltd., Dongying Mingshi Agricultural Supplies Co., Ltd., Shandong Lvqiao International Trade Co., Ltd., Linyi Xinsiwei Electronic Technology Co., Ltd. and Zhangqiu Changjiu Agricultural Supplies Co., Ltd. Similarly, if no objection raised, they will be granted with pesticide business licences.

The 26 April announcement also made clear that changes had been made to the scope of pesticide production licence concerning formulation types AS (aqueous solution) and FSC (flowable concentrate for seed coating). These two types were replaced by SL (soluble concentrate) and FS (flowable concentrate for seed treatment) respectively in the national standard *GB/T 19378-2017 Nomenclature and Codes of Pesticide Formulations*.



Policy

Kunming to ban pesticide use in parts of Dianchi Lake and Yangzonghai Lake basins

Summary: On 28 April, 2022, People's Government of Kunming Municipality issued the *Interim Measures for Administration of Pesticide Operation and Application in Dianchi Lake and Yangzonghai Lake Basins*. It specifies that pesticide use is not allowed in drinking water source reserve areas in these two basins and Level 1 protection zone in Dianchi Lake basin.

On 28 April, 2022, People's Government of Kunming Municipality issued the *Interim Measures for Administration of Pesticide Operation and Application in Dianchi Lake and Yangzonghai Lake Basins*, which will come into force on 6 June, 2022. The Measures specifies that pesticide use is not allowed in drinking water source reserve areas in these two basins and Level 1 protection zone in Dianchi Lake basin. And within these two basins, pesticides regulated with restricted uses, rodenticides excluded, are also prohibited. List of such pesticides is subject to latest notice from the Ministry of Agriculture and Rural Affairs of the People's Republic of China.

Regulations should be observed by pesticide operators in Dianchi Lake and Yangzonghai Lake basins (excerpt)

- Sales of pesticides with restricted uses, rodenticides excluded, may not be permitted. List of such pesticides is subject to previous official announcement.
- Purchase ledger should be set up and kept for at least two years, in which pesticide name, Ref. No. of related certificates/permits, specifications, purchase volume, pesticide manufacturer and/or dealer & their contacts, purchase date should be recorded faithfully.
- Sales ledger should be set up and kept for at least two years, in which pesticide name, specifications, sales volume, pesticide manufacturer, buyer, sales date should be recorded faithfully. Operators of household pesticides are not required for keeping such ledger.
- Further processing and subpackaging pesticides are not allowed. So does addition of other substance into pesticide products to be sold.
- Operators should shoulder their due responsibility of recovering packaging wastes of pesticides.

People's governments at district and county levels should make their specific plans to reduce pesticide application and dutifully carry them out. Green control technologies should be actively promoted. Besides, green and eco-friendly agriculture is welcomed, which would gradually cut down pesticide use in Dianchi Lake and Yangzonghai Lake basins.



TABLE 11: 20 Pesticides with restricted uses in China, as of 11 May, 2022

Pesticide	Scope of use prohibition
Phorate, isofenphos-methyl, carbofuran, isocarbophos, omethoate, methomyl, aldicarb and ethoprophos	Prohibited on vegetables, melons, tea and Chinese medicinal herbs, or for prevention & control of health pests, or for prevention & control of diseases and pests threatening aquatic plants
Phorate, isofenphos-methyl and carbofuran	Prohibited on sugarcane
Demeton, phosfolan and isazofos	Prohibited on vegetables, melons, tea and Chinese medicinal herbs
Acephate, carbosulfan and dimethoate	Prohibited on vegetables, melons, tea, fungi and Chinese medicinal herbs
Chlorpyrifos and triazophos	Prohibited on vegetables
Daminozide	Prohibited on peanut
Fenvalerate	Prohibited on tea
Fipronil	Prohibited on all crops (except used as seed dressing agent on dry crops like corn)
Flubendiamide	Prohibited on rice

Source: Department of Agrochemical Management, Ministry of Agriculture and Rural Affairs

NDRC: to develop bio-agriculture and cultivate leading players

Summary: On 10 May, NDRC issued the *Plan for the Development of Bio-Economy during the 14th Five-Year Period*.

On 10 May, 2022, National Development and Reform Commission of the People's Republic of China (NDRC) unveiled the *Plan for the Development of Bio-Economy during the 14th Five-Year Period*. The document explicitly states that China should give priority to development of four fields of major importance: bio-medicine, bio-agriculture, biomass substitution and bio-safety during 2021–2025. And

by 2025, China will achieve the goals:

- Bio-economy has become a strong driving force for high-quality development
- Gross scale of bio-economy has advanced to the next level
- Comprehensive strengths in biotechnology have enhanced greatly
- More extensive penetration of biotechnology & bio-industry into everyday life & traditional industries has been seen
- Capacity to guarantee bio-safety has been raised to a new level
- Favourable policy environment for biology-related fields has been fostered

By 2035, China will be among the leading players worldwide in bio-economy with strong overall strengths. Basically, it will have advanced technologies, solid foundation in related industries, extensive integration of bio-economy into existing industries and wide application, good resource support and control over safety risks, as well as a complete institutional framework.

The development plan encourages concentration of innovation resources into Beijing-Tianjin-Hebei Region, Yangtze River Delta and



Guangdong-Hong Kong-Macao Greater Bay Area and cultivation of world-class enterprises in bio-medicine, bio-agriculture, bio-manufacturing and etc. Better IPO training sessions should be given to bio-industry companies, and stronger support be provided to get quality enterprises listed on domestic stock markets (main board as well as STAR market).

The document also says that biotechnology-empowered development should be beefed up in industries such as health, agriculture, energy and environmental protection. Deepening integration of biotechnology and information technology should be promoted and diversity of bio-industry increased.

As for bio-agriculture, attentions should first be paid to biology breeding, bio-fertiliser, biological feed, bio-pesticide, etc. New generation of bio-agricultural products should be introduced to the market, a system be established for the demonstration and popularisation of bio-agriculture, and an industrial system be improved of protection and exploitation of germplasm resources.





News in Brief

Weifang Rainbow quadruples its net profit in Q1 2022

On 27 April, Shandong Weifang Rainbow Chemical Co., Ltd. (Weifang Rainbow) disclosed its Q1 report of 2022. During the reporting period:

- Total revenue: USD474.94 million (RMB3.12 billion), up 72.13% YoY;
- Net profit attributable to equity holders of the listed company: USD59.02 million (RMB387.57 million), surging by 303.12% YoY;
- Basic earnings per share: USD0.21 (RMB1.40), marking a YoY increase of 204.35%.

Jiangsu Yangnong's net profit surges by 104 in Q1 2022

On 26 April, Jiangsu Yangnong Chemical Co., Ltd. (Jiangsu Yangnong) issued its Q1 report of 2022, and details are as follows:

- Revenue: USD802.13 million (RMB5.27 billion), up 42.08% YoY;
- Net profit attributable to equity holders of the listed company: USD137.70 million (RMB904.32 million), surging by 103.51% YoY;
- Net cash flow generated by business operation: USD120.20 million (RMB789.35 million);
- Total asset as of the end of Q1 2022: USD2.30 billion (RMB15.07 billion).

Boosted by Youjia Phase III project reaching its designed capacity and part of Youjia Phase IV project starting production, Jiangsu Yangnong's production capacity and output have registered a YoY increase, which has laid a solid foundation for growing business. Another contributor to the performance growth is rising prices of its pesticide products.

Inner Mongolia Miraculous to invest RMB 13.5 billion in Alxa League

On 9 May, Inner Mongolia Miraculous Crop Science Co., Ltd. (Inner Mongolia Miraculous), a wholly-owned subsidiary of Lianyungang Liben Crop Science Co., Ltd., signed an investment agreement on a USD2.06 billion (RMB13.50 billion)-worth project with local government of Alxa League, Inner Mongolia Autonomous Region. Once the project completed and put into full operation, a total of USD2.94 billion (RMB19.30 billion) production value is expected, with profit and tax estimated at about USD198 million (RMB1.30 billion) and creating more than 800 jobs. The project plans production lines for 200,000 t/a methionine, 50,000 t/a glufosinate-ammonium, 50,000 t/a methyl-diethoxyphosphine and its intermediates, 200,000 t/a sodium sulphate, 5,000 t/a by-product potassium sulphate, 50,000 t/a carbon disulphide and 5,000 t/a acrylic acid, and supporting public facilities for sodium cyanide and hydrogen sulphide.

Hailir Group sees growing revenue and profit in 2021

On 26 April, Hailir Pesticide and Chemical Group Co., Ltd. (Hailir Group) disclosed its annual report of 2021. In 2021, it achieved 14.62% YoY increase in revenue, which totalled USD563.24 million (RMB3.70 billion); its net profit recorded a 10.59% YoY increase, reaching USD68.48 million (RMB449.75 million), along with an operating profit of USD80.67 million (RMB529.80 million). Thanks to remarkably rising sales of pesticide formulations, Hailir Group delivered a sound business performance and showed robust overall profitability.

Inner Mongolia Benxing to expand glufosinate-ammonium capacity

On 9 May, the government of Alxa League, Inner Mongolia Autonomous Region held the 2022 Spring Signing Ceremony for Investment Projects. In this ceremony, Inner Mongolia Benxing Chemical Co., Ltd. (Inner Mongolia Benxing), a wholly-owned subsidiary of Hubei





Benxing Agrochemical Co., Ltd., signed to an investment agreement on a pesticide TC and intermediate project, which aims to construct production lines for 20,000 t/a glufosinate-ammonium, 10,000 t/a glufosinate-ammonium TK and 20,000 t/a ammonium chloride. The USD71.57 million (RMB470 million)-worth project has been filed in local government already; it should be located in the Bayinaobao Industrial Park of the Alxa High-tech Industrial Development Zone.

KingAgroot reveals Chinese common names of three patented compounds

On 26 April, the National Technical Committee on Pesticide of Standardisation Administration of China granted approval to Chinese common names of two patented compounds—Ecuocaoding (KAI-162573) and Jiayangmicaowo (code name KAI-177022), a PPO-inhibiting compound and a synthetic auxin herbicidal compound developed by Qingdao KingAgroot Resistant Weed Management Co., Ltd. (KingAgroot). Combined with a latest DOXP inhibitor Xiuecaosong (code name KAI-172402) approved in Sept. 2021, KingAgroot's third-batch fruits of innovation start the journey towards commercial market. It is expected that the three new herbicides will get registered and hit the Chinese market around 2025.

Shandong Leeder to terminate cooperation with Shandong Ruining

On 11 May, Shandong Leeder Cropscience Co., Ltd. (Shandong Leeder) announced that the company had decided to terminate follow-up cooperation with Shandong Ruining Biological Technology Co., Ltd. (Shandong Ruining), given a divergence between the company's adjusted strategic direction and Shandong Ruining's main business. Shandong Leeder would transfer the 51% equity of Shandong Ruining it holds to Tian Huiqin. After the transfer, Tian Huiqin and Tian Ya'nian would hold 51% and 49% equity of Shandong Ruining, respectively.

Dezhou Luba proposes to construct 10kt/a diquat TC capacity

On 6 May, Environmental Impact Assessment (EIA) report of the 10,000 t/a diquat TC project of Pingyuan Branch of Dezhou Luba Fine Chemical Co., Ltd. (Dezhou Luba) was publicised by the People's Government of Pingyuan County. The investment totalling USD27.57 million (RMB181.05 million), diquat TC production lines and supporting public and environmental protection facilities are proposed to be constructed in the Chemical Industry Park of Pingyuan Economic Development Zone.

In 2021, EIA report of the 4,000 t/a diquat TC project of Weifang Xinlu Chemical Co., Ltd. (Weifang Xinlu) was disclosed; like Dezhou Luba, Weifang Xinlu is also a wholly-owned subsidiary of Shandong Luba Chemical Co., Ltd. It planned to refine existing diquat TC production lines and public facilities located in the Weifang Binhai Chemical Industrial Park and boost the company's total capacity of diquat TC by 4,000 t/a.

Shandong Huimeng puts HPPA, MAQ & HPPA-Et lines into operation

On 12 May, the bio-fermentation project of Anhui Anhe Biotechnology Co., Ltd., a wholly-owned subsidiary of Shandong Huimeng Bio-tech Co., Ltd. (Shandong Huimeng), was put into production successfully. Details of the project are as follows:

- Covered areas: 40,000 m²;
- Floor areas: 15,000 m²;
- Total investment: RMB35.02 million (RMB230 million), including USD15.80 million (RMB103.73 million) in fixed assets;





- Product & designed capacity:
 - 5,000 t/a R-(+)-2-(4-Hydroxyphenoxy)propionic acid (HPPA);
 - 2,500 t/a Methyl R-(+)-2-(4-hydroxyphenoxy)propionate (MAQ);
 - 500 t/a Ethyl R-(+)-2-(4-hydroxyphenoxy)propionate (HPPA-Et).

EIA info of Sichuan Hebang's 500kt/a PMIDA project disclosed

On 16 May, the Management Committee of Guang'an Economic and Technological Development Zone disclosed environmental impact assessment (EIA) information on the 500,000 t/a PMIDA project of Guang'an Bimeida Biotechnology Co., Ltd., a wholly-owned subsidiary established by Sichuan Hebang Bio-technology Co., Ltd. (Sichuan Hebang) in April 2022 with registered capital of USD152 million (RMB1 billion). The PMIDA project is planned to construct nine processing installations and supporting public and auxiliary facilities in Guang'an Xinqiao Chemical Industrial Zone.





Price Update

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

TABLE 12: Ex-works prices of key herbicide raw materials in China, 8 May, 2022

Raw Materials	20220408		20220508	
	Original Price (RMB/t)	Price (USD/t)	Original Price (RMB/t)	Price (USD/t)
98% Glycine	21,000	3,306.62	21,000	3,197.71
92% Iminodiacetonitrile	9,300	1,464.36	9,300	1,416.13
99% Isopropylamine	9,550	1,503.72	9,550	1,454.2
98% N-(Phosphonmethyl) Iminodiacetic acid	39,000	6,140.86	39,000	5,938.6
99% Phosphorus trichloride	11,100	1,747.78	11,100	1,690.22
99.9% Pyridine	30,500	4,802.47	30,500	4,644.29

Note: Ex-works price includes VAT.

Source: CCM

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



TABLE 13: Ex-works prices of main herbicides in China, 8 May, 2022

Product	20220408		20220508	
	Original Price (RMB/t)	Price (USD/t)	Original Price (RMB/t)	Price (USD/t)
92% Acetochlor technical	47,500	7,479.25	45,000	6,852.24
97% Atrazine technical	39,000	6,140.86	39,000	5,938.6
96% Bensulfuron-methyl technical	210,000	33,066.18	200,000	30,454.38
92% Butachlor technical	42,500	6,691.96	45,000	6,852.24
95% Clomazone technical	119,000	18,737.5	118,000	17,968.08
95% Cyhalofop-butyl technical	200,000	31,491.6	200,000	30,454.38
97% Diuron technical	46,000	7,243.07	43,000	6,547.69
98% Fenclorim technical	165,000	25,980.57	160,000	24,363.5
95% Fenoxaprop-P-ethyl technical	190,000	29,917.02	190,000	28,931.66
96% Fluroxypyr technical	175,000	27,555.15	175,000	26,647.58
95% Fomesafen technical	142,000	22,359.04	142,000	21,622.61
95% Glufosinate ammonium technical	186,100	29,302.93	240,000	36,545.26
95% Glyphosate technical	63,300	9,967.09	65,000	9,897.67
95% Haloxyfop-P-methyl technical	240,000	37,789.92	235,000	35,783.9
97% Metolachlor technical	52,000	8,187.82	52,000	7,918.14
95% Metsulfuron-methyl technical	135,000	21,256.83	135,000	20,556.71
95% Nicosulfuron technical	322,500	50,780.2	310,000	47,204.29
97% Oxyfluorfen technical	250,000	39,364.5	244,000	37,154.34
95% Pendimethalin technical	63,500	9,998.58	63,500	9,669.27
95% Pretilachlor technical	50,000	7,872.9	48,500	7,385.19
97% Pyrazosulfuron-ethyl technical	300,000	47,237.4	300,000	45,681.57
80% Quinclorac technical	134,500	21,178.1	136,200	20,739.43



95% Quizalofop-P-ethyl technical	230,000	36,215.34	230,000	35,022.54
95% Tribenuron-methyl technical	160,000	25,193.28	160,000	24,363.5
95% Trifluralin technical	38,000	5,983.4	40,000	6,090.88

Note: Ex-works price includes VAT.

Source: CCM

Shanghai Port prices of main herbicides in China, 8 May, 2022



TABLE 14: Shanghai Port prices of main herbicides in China, 8 May, 2022

Product	20220408		20220508	
	Original Price (RMB/t)	Price (USD/t)	Original Price (RMB/t)	Price (USD/t)
92% Acetochlor technical	48,000	7,557.98	45,500	6,928.37
97% Atrazine technical	39,500	6,219.59	39,500	6,014.74
96% Bensulfuron-methyl technical	210,500	33,144.91	200,500	30,530.52
92% Butachlor technical	43,000	6,770.69	45,500	6,928.37
95% Clomazone technical	119,500	18,816.23	118,500	18,044.22
95% Cyhalofop-butyl technical	200,500	31,570.33	200,500	30,530.52
97% Diuron technical	46,500	7,321.8	43,500	6,623.83
98% Fenclorim technical	165,500	26,059.3	160,500	24,439.64
95% Fenoxaprop-P-ethyl technical	190,500	29,995.75	190,500	29,007.8
96% Fluroxypyr technical	175,500	27,633.88	175,500	26,723.72
95% Fomesafen technical	142,500	22,437.76	142,500	21,698.75
95% Glufosinate ammonium technical	186,600	29,381.66	240,500	36,621.39
95% Glyphosate technical	63,800	10,045.82	65,500	9,973.81
95% Haloxyfop-P-methyl technical	240,500	37,868.65	235,500	35,860.03
97% Metolachlor technical	52,500	8,266.54	52,500	7,994.27
95% Metsulfuron-methyl technical	135,500	21,335.56	135,500	20,632.84
95% Nicosulfuron technical	323,000	50,858.93	310,500	47,280.42
97% Oxyfluorfen technical	250,500	39,443.23	244,500	37,230.48
95% Pendimethalin technical	64,000	10,077.31	64,000	9,745.4
95% Pretilachlor technical	50,500	7,951.63	49,000	7,461.32
97% Pyrazosulfuron-ethyl technical	300,500	47,316.13	300,500	45,757.7
80% Quinclorac technical	135,000	21,256.83	136,700	20,815.57



95% Quizalofop-P-ethyl technical	230,500	36,294.07	230,500	35,098.67
95% Tribenuron-methyl technical	160,500	25,272.01	160,500	24,439.64
95% Trifluralin technical	38,500	6,062.13	40,500	6,167.01

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 May, 2022





TABLE 15: FOB Shanghai prices of main herbicides in China, 8 May, 2022, USD/t

Product	20220408	20220508
92% Acetochlor technical	7,440.31	6,825.05
97% Atrazine technical	5,927.36	5,732.13
96% Bensulfuron-methyl technical	32,323.01	29,777.59
92% Butachlor technical	6,674.69	6,825.05
95% Clomazone technical	18,388.7	17,634.96
95% Cyhalofop-butyl technical	29,707.7	28,729.23
97% Diuron technical	7,210.62	6,528.89
98% Fenclorim technical	25,432.41	23,854.36
95% Fenoxaprop-P-ethyl technical	29,260.52	28,296.78
96% Fluroxypyr technical	26,963.66	26,075.57
95% Fomesafen technical	21,910.55	21,188.9
95% Glufosinate ammonium technical	27,654.61	34,442.8
95% Glyphosate technical	10,732.02	10,652.94
95% Haloxyfop-P-methyl technical	36,916.74	34,960.43
97% Metolachlor technical	8,129.37	7,861.62
95% Metsulfuron-methyl technical	20,838.68	20,152.33
95% Nicosulfuron technical	49,549.49	46,066.5
97% Oxyfluorfen technical	37,092.9	35,014.15
Paraquat 42% TK	3,229.39	3,123.03
95% Pendimethalin technical	9,890.3	9,564.55
95% Pretilachlor technical	7,823.12	7,343.33
97% Pyrazosulfuron-ethyl technical	46,104.19	44,585.69
80% Quinclorac technical	20,762.12	20,330.03





95% Quizalofop-P-ethyl technical	35,385.49	34,220.02
95% Tribenuron-methyl technical	24,666.79	23,854.36
95% Trifluralin technical	5,779.66	5,874.97

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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