

Insecticides China Monthly Report 202210

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Contents

| | |
|--|----|
| Headline | 1 |
| Editor's Note | 3 |
| Company Dynamics | 4 |
| Qilu Synva expanding 2kt/a emamectin benzoate TC capacity | 4 |
| Wuzhong Linghang's 2kt/a imidacloprid TC line passes completion acceptance check | 4 |
| Brief update on some chlorantraniliprole TC projects in China | 5 |
| Market Analysis | 9 |
| Imidacloprid & acetamiprid production in Shandong Hailir may resume in early Nov. | 9 |
| Prices of most insecticides TC drop in late Oct. | 10 |
| Pest | 13 |
| NATESC: prioritise control over wheat aphids & wheat mites in 2022–23 wheat growing | 13 |
| Policy | 14 |
| Many cities roll out action plans for prevention & control of air pollution in autumn & winter | 14 |
| Import and Export | 15 |
| China's lambda-cyhalothrin TC export to the US grows in Jan.–Aug. 2022 | 15 |
| Registration | 19 |
| ICAMA releases 38 newly-registered insecticides in Oct. | 19 |
| Registration of chlorantraniliprole products surges in China | 22 |
| News in Brief | 25 |
| Shandong Youdao makes provisional acceptance of chlorantraniliprole TC and intermediate production lines | 25 |
| Cangzhou Xingbai to build capacity of insecticide TC & formulations | 25 |
| Hebei Lanrun's TC & adjuvant production line transformation project to be re-assessed | 25 |
| Jiangsu Yangnong projects net profit growth in Q1–Q3 2022 | 25 |
| EI report of Jiangsu Gongcheng's 18.5kt/a hygienic insecticides project accepted | 26 |
| Jiangsu Changqing to complete 12kt/a pesticides relocation project by the end of 2024 | 26 |
| Chongqing accredits seven chemical parks | 27 |
| Jiangsu issues Implementation Plan for Carbon Peaking | 27 |
| Hebei Nongxin to launch two chlorantraniliprole formulations in Nov. | 28 |
| Insecticide price index follows downtrend in Q1–Q3 2022 | 28 |
| Price Update | 29 |
| Ex-works prices of major insecticides in China on 8 Oct. 2022 | 29 |
| Shanghai Port prices of major insecticides in China, 8 Oct. 2022 | 30 |
| FOB Shanghai prices of major insecticides in China, 8 Oct. 2022 | 32 |





Headline

Qilu Synva's emamectin benzoate TC capacity expansion project is progressing well. Once the lines successfully put into operation, the company will increase its emamectin benzoate TC capacity by 2,000 t/a.

Wuzhong Linghang has completed the construction of 2,000 t/a imidacloprid TC production line, and has the line passed acceptance check recently. China's imidacloprid TC market welcomes a new supplier.

The compound chlorantraniliprole went off-patent in China on 13 Aug., 2022. So far, some Chinese pesticide producers have planned chlorantraniliprole TC capacity. Among them, Guang'an Lier publicised in late Sept. the EI report involving a set of chlorantraniliprole TC pilot-test equipment, Shandong Youdao finished provisional acceptance of the chlorantraniliprole TC equipment also in late Sept., and Chongqing Huage is currently preparing for early-stage procedures for its chlorantraniliprole TC project.

In early Oct., the ex-work prices of imidacloprid TC and acetamiprid TC were basically stable under weak sales, seeing less than 1% fluctuation. It is worth noting that the supply of these two products would increase soon as Shandong Hailir may resume operation of imidacloprid and acetamiprid production lines in early Nov.

In late Oct., prices of most insecticides TC dropped mainly due to sluggish demand. Some organophosphorus insecticides TC and pyrethroid insecticides TC had stable prices.

On 12 Oct., NATESC released the Technical Programme for the Prevention and Control of Major Wheat Pests and Diseases during the Whole 2022–23 Growth Period. The Programme specifies the main prevention and control targets and simultaneous control targets in specific wheat growing regions, and proposes green prevention and control measures to be taken during the whole growth period.

According to incomplete statistics, as of 9 Oct., local governments of 16 cities in 13 provinces such as Shanxi, Henan, Hunan, Guangxi, Guangdong had issued hundred-day action plans for prevention & control of air pollution in 2022. Some cities have required strict control of energy-intensive and large-emission projects.

In Jan.–Aug. 2022, lambda-cyhalothrin products from China were mainly exported to the US, Belgium, India, etc. The total export volume (actual volume) went down by 58.12% YoY, but export volume of TC products increased. And the US was the largest export destination of China's lambda-cyhalothrin TC; its share to the total lambda-cyhalothrin TC export was 50.79% in this period, up 1.69 percentage points YoY.

In Oct. 2022, ICAMA approved 38 newly-registered insecticide products, including three hygienic insecticide products.

In Oct., FLAGCHEM, Lier Chemical and Shandong Youdao obtained pesticide registration certificates for chlorantraniliprole TC. As of mid-Oct., ICAMA had so far approved registration of 19 chlorantraniliprole products (registration renewals included) in 2022, and more than half of the approved chlorantraniliprole TC products were first registered in 2022. The registration boom is encouraged by large market potential as well as the fact that the compound went off-patent in China from 13 Aug., 2022.







Editor's Note

In Oct. 2022, ICAMA approved 38 newly-registered insecticide products, including three hygienic insecticide products. Among them, three are chlorantraniliprole TC, registered by FLAGCHEM, Lier Chemical and Shandong Youdao respectively.

The compound chlorantraniliprole went off-patent in China on 13 Aug., 2022. So far, some Chinese pesticide producers have planned chlorantraniliprole TC capacity. Among them, Guang'an Lier publicised in late Sept. the EI report involving a set of chlorantraniliprole TC pilot-test equipment, Shandong Youdao finished provisional acceptance of the chlorantraniliprole TC equipment also in late Sept., and Chongqing Huage is currently preparing for early-stage procedures for its chlorantraniliprole TC project. Besides, Hebei Nongxin would launch two chlorantraniliprole formulation products in Nov.—Nongxin Tengge®, a mixed formulation chlorantraniliprole-indoxacarb 25% SC, and Nongxin Zhanshen®, a single formulation chlorantraniliprole 30% SC.

In terms of insecticides market dynamics:

- In early Oct., the ex-work prices of imidacloprid TC and acetamiprid TC were basically stable under weak sales. It is worth noting that the supply of these two products would increase soon as Shandong Hailir may resume operation in early Nov. and Wuzhong Linghang may start imidacloprid TC production in the near future.
- In late Oct., prices of most insecticides TC dropped, while some organophosphorus insecticides TC and pyrethroid insecticides TC had stable prices. Some nicotinoid insecticides TC saw their prices set lower mainly due to slow sales.

The USD/CNY exchange rate in this newsletter is USD1.00 = CNY7.0992 on 10 Oct., 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

Qilu Synva expanding 2kt/a emamectin benzoate TC capacity

Summary: Qilu Synva's emamectin benzoate TC capacity expansion project is progressing well. Once the lines successfully put into operation, the company will increase its emamectin benzoate TC capacity by 2,000 t/a.

In early Oct., CCM learned from Qilu Synva Pharmaceutical Co., Ltd. (Qilu Synva) that its 2,000 t/a emamectin benzoate TC capacity expansion and upgrading project had been progressing well. So far the construction of production lines and support facilities has been close to completion, and some 70% of equipment brought from around the world has been delivered to the company. The equipment will soon be installed.

Emamectin benzoate is a high-efficacy, low-toxicity and low-residue insecticide widely used in the control of pests on vegetables, fruit trees, cotton, corn and other crops. In particular, it is well recognised as an effective product to control fall armyworm, which started to emerge as a major agricultural pest in China in 2019. In fact, emamectin benzoate is one of the popular insecticides used in China, as well as one of the major insecticides exported from China. Besides the usage as an insecticide, it can also be used as a veterinary drug (including as an aquaculture drug).

Many Chinese pesticide producers have by now brought into operation their large-scale emamectin benzoate TC production lines, these manufacturers including Ningxia Taiyicin Biotech Co., Ltd., Inner Mongolia New Veyong Bio-chemical Co., Ltd., Inner Mongolia Jumbo Biochemistry Co., Ltd., Synwill (Nantong) Chemical Co., Ltd., Qingdao KYX Chemical Co., Ltd., Syngenta Nantong Crop Protection Co., Ltd., Jingmen Jinxianda Biotechnology Co., Ltd. and Jingbo Agrochemicals Technology Co., Ltd.

Emamectin benzoate TC is Qilu Synva's flagship product, with 100 t/a production capacity already built up. Qilu Synva, a wholly-owned subsidiary of Qilu Pharmaceutical Co., Ltd. (Qilu Pharmaceutical), is located in the Economic Development Zone, Linyi County, Dezhou City, Shandong Province. It is mainly engaged in R&D, production and sale of pesticides and veterinary drugs. It has obtained pesticide production licence and holds a pesticide registration certificate for 95% emamectin benzoate technical (No. PD20130463).

Its parent company Qilu Pharmaceutical, in order to further develop its pesticide business, acquired 100% equity of Anhui Huaxing Chemical Industry Co., Ltd. (Anhui Huaxing) in March 2022 through another wholly-owned subsidiary Qilu Pharmaceutical (Inner Mongolia) Co., Ltd., and thus Qilu Pharmaceutical now indirectly holds Anhui Huaxing's large-scale pesticide production capacity in Wujiang Fine Chemical Base, Ma'anshan City, Anhui Province. In terms of insecticide production capacity, Anhui Huaxing has lines of 6,000 t/a monosultap TC, 2,000 t/a cartap TC, 300 t/a imidacloprid TC, 200 t/a of fipronil TC, etc.

Wuzhong Linghang's 2kt/a imidacloprid TC line passes completion acceptance check

Summary: Wuzhong Linghang has completed the construction of 2,000 t/a imidacloprid TC production line, and has the line passed acceptance check recently. China's imidacloprid TC market welcomes a new supplier.

In Oct. 2022, CCM learned from Wuzhong Linghang Biological & Pharmaceutical Co., Ltd. (Wuzhong Linghang) that its 2,000 t/a





imidacloprid TC production line had passed completion acceptance check. As a part of Wuzhong Linghang's 21,000 t/a of pesticides technical and pesticide formulations project, the imidacloprid line started construction in April 2021 and came into trial production in July 2021. The large-scale project has been much supported by its parent company Suzhou Bianjing Biotechnology Co., Ltd. (Suzhou Bianjing).

Wuzhong Linghang was established on 12 March, 2019 in Qingtongxia Industrial Park, Wuzhong City, Ningxia Hui Autonomous Region. In addition to the newly unleashed imidacloprid TC capacity, the company has active production capacity of 1,000 t/a of acetamiprid TC and 1,000 t/a nitenpyram TC. Besides, it has some pesticide lines under construction or about to going into construction.

Wuzhong Linghang has obtained the production permit for imidacloprid TC, acetamiprid TC and nitenpyram TC. Its pesticide registration certificates for these technical products are acquired through transfers from Suzhou Bianjing.

TABLE 1: Wuzhong Linghang's insecticides TC registration, as of 9 Oct., 2022

| No. | Active ingredient | Content | Expiry date |
|-----|-------------------|---------|-------------|
| 1 | Nitenpyram | 97% | 2026/9/13 |
| 2 | Acetamiprid | 99% | 2026/3/18 |
| 3 | Thiamethoxam | 98% | 2025/10/22 |
| 4 | Imidacloprid | 98.50% | 2023/4/17 |

Source: The Institute for the Control of Agrochemicals, Ministry of Agriculture and Rural Affairs (ICAMA)

It is a concern that in recent years, cases of enterprises and individuals with no production permit producing pesticide products illegally emerged in China from time to time. Such acts not only violate the *Regulation on Pesticide Administration*, but also seriously impact normal business order in the industry. It has not been rare to see illegal production of imidacloprid TC and acetamiprid TC in recent years, as they are mainstream insecticides. In response to these phenomena, the China Crop Protection Industry Association has repeatedly issued Stern Warning to Enterprises Involving in Illegally Production of Imidacloprid TC & Acetamiprid TC, requesting relevant enterprises to stop illegal production and sale, and warning of reporting to relevant government regulatory bodies.

There are several qualified imidacloprid TC producers with big production capacity in China. Although the total designed imidacloprid TC capacity is relatively large, the actual output may be impacted by many factors such as environmental protection, production safety, upstream raw material supply and individual company's own conditions. As for Wuzhong Linghang, whether it can maintain stable operation of its imidacloprid line for long is uncertain yet.

Brief update on some chlorantraniliprole TC projects in China

Summary: The compound chlorantraniliprole went off-patent in China on 13 Aug., 2022. So far, some Chinese pesticide producers have





planned chlorantraniliprole TC capacity. Among them, Guang'an Lier publicised in late Sept. the EI report involving a set of chlorantraniliprole TC pilot-test equipment, Shandong Youdao finished provisional acceptance of the chlorantraniliprole TC equipment also in late Sept., and Chongqing Huage is currently preparing for early-stage procedures for its chlorantraniliprole TC project.

Recently, Best Agrolife Limited, the first Indian agrochemical company to produce chlorantraniliprole TC by itself, launched two new chlorantraniliprole formulation products: CITIGEN & VISTARA. In China, patent for the compound chlorantraniliprole expired on 13 Aug., 2022. So far, many Chinese producers have disclosed plans to build chlorantraniliprole TC capacity, such as Shandong Eshung Industrial Co., Ltd., Jingzhou Sancaitang Chemical Technology Co., Ltd., Guang'an Lier Chemical Co., Ltd. (Guang'an Lier), Anhui Huilong RMF Bioengineering Co., Ltd., Chongqing Huage Biochemical Co., Ltd. (Chongqing Huage) and Shandong Youdao Chemical Co., Ltd. (Shandong Youdao).

In mid-Sept., Chongqing Huage's parent company Nanjing Red Sun Co., Ltd. revealed that preparation for early-stage procedures for a 2,000 t/a chlorantraniliprole TC project had kicked off. And by the end of Sept., Guang'an Lier had publicised before submitting for government approval the environmental impact (EI) report of the pesticide TC pilot test and supporting facilities construction project, which involves a set of chlorantraniliprole TC pilot-test equipment, and Shandong Youdao had finished provisional acceptance of the production lines for chlorantraniliprole TC and intermediates. In early Oct., Shandong Youdao obtained a pesticide registration certificate for 98% chlorantraniliprole TC and the production permit for chlorantraniliprole; it also expected that commissioning test run would be possible this month, which brings the company an opportunity to first break foreign companies' monopoly on the TC product in the Chinese market.





TABLE 2: Chlorantraniliprole TC capacity planned by some domestic producers, as of mid-Oct. 2022

| No. | Producer | Planned capacity of chlorantraniliprole TC, t/a |
|-----|---|---|
| 1 | Shandong Eshung Industrial Co., Ltd. | 10,000 |
| 2 | Jingzhou Sancaitang Chemical Technology Co., Ltd. | 5,000 |
| 3 | Guang'an Lier Chemical Co., Ltd. | 5,000 |
| 4 | Anhui Huilong RMF Bioengineering Co., Ltd. | 2,000 |
| 5 | Chongqing Huage Biochemical Co., Ltd. | 2,000 |
| 6 | Shandong Youdao Chemical Co., Ltd. | 1,000 |
| 7 | Hebei Di'annong Biotechnology Co., Ltd. | 1,000 |
| 8 | Liaoning Longtian Chemical Technology Co., Ltd. | 1,000 |
| 9 | Gansu Zhongmaotou Chemical Co., Ltd. | 1,000 |
| 10 | Hubei Jinzhu Biological Agriculture Co. Ltd. | 800 |
| 11 | Jiangxi Huihe Chemical Co., Ltd. | 600 |
| 12 | Inner Mongolia BLOK Biology Co., Ltd. | 400 |

Source:CCM

In terms of chlorantraniliprole TC registration, nine producers had obtained the registration certificate in China as of 18 Oct., 2022. Among them, five domestic enterprises obtained registration this year.





TABLE 3: Chlorantraniliprole TC registration in China, as of 18 Oct., 2022

| No. | Content | Expiry date | Registrant | Year of first approval |
|-----|---------|-------------|--|------------------------|
| 1 | 98% | 2027/10/8 | Shandong Youdao Chemical Co., Ltd. | 2022 |
| 2 | 96.50% | 2027/10/8 | Lier Chemical Co., Ltd. | 2022 |
| 3 | 95% | 2027/10/8 | Jiangsu Flag Chemical Industry Co., Ltd. | 2022 |
| 4 | 97% | 2027/4/23 | Synwill (Nantong) Chemical Co., Ltd. | 2022 |
| 5 | 95.30% | 2027/3/24 | Xiangshui Zhongshan Bioscience Co., Ltd. | 2022 |
| 6 | 98% | 2023/4/17 | Shandong Weifang Rainbow Chemical Co., Ltd. | 2018 |
| 7 | 95.30% | 2027/10/17 | Inner Mongolia Miraculous Crop Science Co., Ltd. | 2017 |
| 8 | 95.30% | 2025/9/21 | FMC (Shanghai) Agricultural Sciences Co., Ltd. | 2010 |
| 9 | 95.30% | 2025/1/15 | FMC Corporation | 2010 |

Source: Institute for the Control of Agrochemicals, Ministry of Agriculture and Rural Affairs

Once chlorantraniliprole TC is produced domestically, its price is expected to decrease, which will boost the development of chlorantraniliprole formulations. As domestic companies are scrambling for a share in the market, they should beware of infringement on patented production process.





Market Analysis

Imidacloprid & acetamiprid production in Shandong Hailir may resume in early Nov.

Summary: In early Oct., the ex-work prices of imidacloprid TC and acetamiprid TC were basically stable under weak sales, seeing less than 1% fluctuation. It is worth noting that the supply of these two products would increase soon as Shandong Hailir may resume operation of imidacloprid and acetamiprid production lines in early Nov.

In early Oct., ex-works price of 97% imidacloprid TC in China went down by 0.38% MoM (calculated with RMB price) to USD22,101/t (RMB156,900/t), and it fell by 24.02% YoY; the price of 95% acetamiprid TC stood at USD20,467/t (RMB145,300/t), up 0.55% MoM but down 26.73% YoY. So far into 2022, ex-work prices of these two products followed an overall downtrend, gradually slipping from the peak witnessed in Nov. 2021. It should be noted that the price of 2-chloro-5-chloromethylpyridine (CCMP), an important intermediate for these two products, fell by 4.24% MoM in early Oct.

Domestic demand for imidacloprid TC and acetamiprid TC has been relatively low. Some imidacloprid TC manufacturers mainly fulfil export orders. As to the supply, CCM's monitoring in early Oct. shows that:

- Shandong United Pesticide Industry Co., Ltd. (Shandong United Pesticide): the production lines of imidacloprid TC and acetamiprid TC operate normally.
- Shandong Hailir Chemicals Co., Ltd. (Shandong Hailir): the production lines of imidacloprid TC and acetamiprid TC are expected to resume production in early Nov., but the resumption has not yet been announced officially. The company still has some stock of both products.
- Hebei Yetian Agrochemicals Co., Ltd. (Hebei Yetian): the imidacloprid TC production line runs normally at present. Its product currently is mainly for export, and demand can be met without difficulty.

TABLE 4: Production of imidacloprid TC & acetamiprid TC in some domestic producers, early Oct. 2022

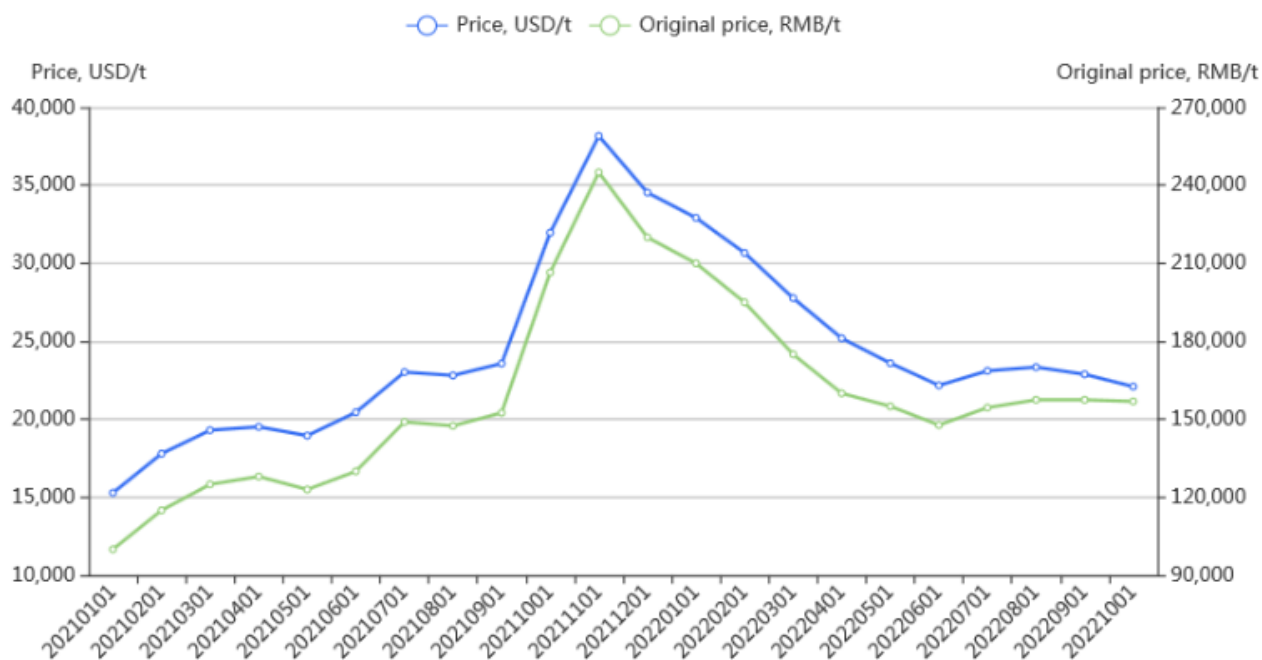
| No. | Producer | Product | Capacity, t/a | Remark |
|-----|---------------------------|-----------------|---------------|----------------------------|
| 1 | Shandong United Pesticide | Imidacloprid TC | 2,000 | Normal production |
| | | Acetamiprid TC | 2,000 | |
| 2 | Hebei Yetian | Imidacloprid TC | 5,000 | Normal production |
| 3 | Shandong Hailir | Imidacloprid TC | 2,500 | Suspension for maintenance |
| | | Acetamiprid TC | 1,200 | |
| 4 | Jiangsu Changlong | Imidacloprid TC | 2,000 | Suspension for maintenance |

Source:CCM



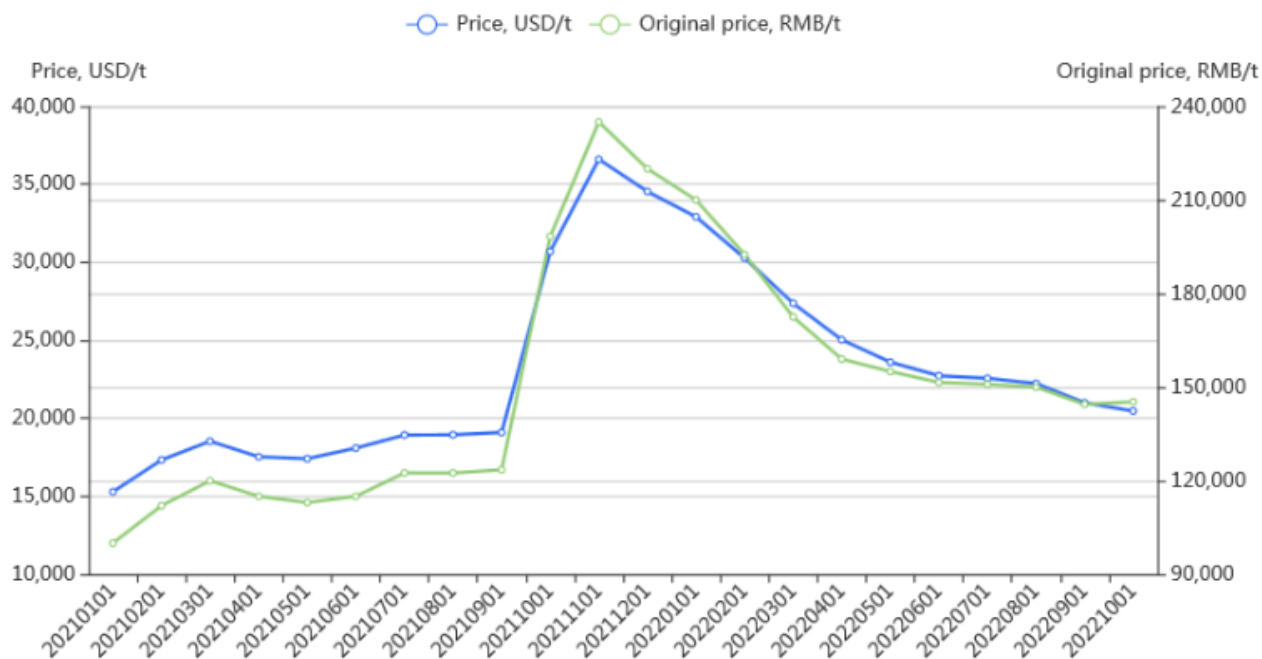


FIGURE 1: Ex-works price of 97% imidacloprid technical in China, Jan. 2021–Oct. 2022



Source:CCM

FIGURE 2: Ex-works price of 95% acetamiprid technical in China, Jan. 2021–Oct. 2022



Source:CCM

Prices of most insecticides TC drop in late Oct.

Summary: In late Oct., prices of most insecticides TC dropped mainly due to sluggish demand. Some organophosphorus insecticides TC and pyrethroid insecticides TC had stable prices.

In late Oct., prices of most insecticides TC dropped, while some organophosphorus insecticides TC and pyrethroid insecticides TC had





stable prices. Some nicotinoid insecticides TC saw their prices set lower mainly due to slow sales.

Organophosphorus insecticides: Ex-works prices of phoxim TC and profenofos TC were stable, while the prices of malathion TC and chlorpyrifos TC decreased. Sluggish demand was the main reason for the chlorpyrifos TC price fall. The supply of chlorpyrifos TC was stable, as major manufacturers have operated normally, such as Hubei Benxing Agrochemical Co., Ltd., Nanjing Red Sun Co., Ltd. and Jiangsu Fengshan Group Co., Ltd. Considering a relatively slack demand for organophosphorus insecticides, their ex-works prices may decline in the short term.

Pyrethroid insecticides: Ex-works prices of most pyrethroid TC insecticides were lowered mainly due to slow sales. On a monthly basis, bifenthrin TC price declined by more than 2%, lambda-cyhalothrin TC price went down by 1.50%, and cypermethrin TC price slipped by less than 1%. Considering continued sluggish downstream demand, price fall is expected for products under this category in the short term.

Nicotinoid insecticides: Ex-works prices of imidacloprid TC and acetamiprid TC went down for lacklustre demand. According to imidacloprid TC supplier Hebei Yetian Agrochemicals Co., Ltd., its imidacloprid products have been mainly for export recently with sufficient stocks. Though prices of some important intermediates rose, such as 3-methyl-4-nitroiminoperhydro-1,3,5-oxadiazine, 2-nitroaminoimidazoline and ethyl N-cyanoethanimideate, which may drive the production cost up, ex-works prices of organophosphorus insecticides TC may just keep stable against sluggish demand in the short term.



TABLE 5: Ex-works prices of major insecticide TC products in China in late Oct. 2022

| Category | Product | Ex-works price (RMB/t) | Ex-works price (USD/t) | MoM change |
|------------------------------|----------------------------------|------------------------|------------------------|------------|
| Organophosphorus insecticide | 95% Chlorpyrifos technical | 51,400 | 7,240 | -2.10% |
| | 90% Malathion technical | 36,000 | 5,071 | -2.70% |
| | 90% Phoxim technical | 45,000 | 6,339 | 0.00% |
| | 90% Profenofos technical | 82,665 | 11,644 | 0.00% |
| Pyrethroid insecticide | 97% Bifenthrin technical | 267,000 | 37,610 | -2.20% |
| | 95% Lambda-cyhalothrin technical | 197,000 | 27,750 | -1.50% |
| | 94% Cypermethrin technical | 83,500 | 11,762 | -0.60% |
| | 98% Deltamethrin technical | 530,000 | 74,656 | 0.00% |
| Nicotinoid insecticide | 97% Imidacloprid technical | 153,100 | 21,566 | -2.79% |
| | 95% Acetamiprid technical | 142,500 | 20,073 | -2.73% |
| Antibiotic insecticide | 70% Emamectin benzoate technical | 537,000 | 75,642 | -4.11% |
| | 95% Abamectin technical | 560,000 | 78,882 | -3.45% |

Note: MoM change is calculated with RMB price.

Source: CCM



Pest

NATESC: prioritise control over wheat aphids & wheat mites in 2022–23 wheat growing

Summary: On 12 Oct., NATESC released the Technical Programme for the Prevention and Control of Major Wheat Pests and Diseases during the Whole 2022–23 Growth Period. The Programme specifies the main prevention and control targets and simultaneous control targets in specific wheat growing regions, and proposes green prevention and control measures to be taken during the whole growth period.

On 12 Oct., China's National Agro-Tech Extension and Service Center (NATESC) released the Technical Programme for the Prevention and Control of Major Wheat Pests and Diseases during the Whole 2022–23 Growth Period. Based upon occurrence and damage features of diseases and pests in wheat planting areas in recent years, the Programme specifies the main prevention and control targets and simultaneous control targets in wheat growing regions.

TABLE 6: Pests in wheat growing regions during 2022–23 wheat growth period

| Region | Control target |
|---|---|
| Huang-Huai-Hai region | Major pests: wheat aphids, wheat mites, wheat blossom midges, underground insects |
| Middle & lower reaches of the Yangtze River | Major pests: wheat aphids, wheat mites Simultaneous control targets: <i>Laodelphax striatellus</i> , underground insects, etc. |
| Southwest China | Control targets: wheat mites, underground insects, etc. Potential pests: fall armyworms, etc. |
| Northwest China | Control targets: wheat aphids, wheat mites, wheat blossom midges, underground insects, etc. |
| North China & Northeast China | Major pests: wheat aphids, wheat blossom midges Simultaneous control targets: armyworm, wheat mites |

Source: NATESC

A key step in green prevention and control during the whole wheat growth period is properly treating the seeds in autumn sowing, which can help prevent and control soil-borne & seed-borne diseases and pests, underground pests, and wheat seedling pests and diseases.

- Regions with heavy occurrence of underground insects: seed dressing with phoxim and imidacloprid, or seed coating with imidacloprid is recommended to control pests such as wireworms, grubs, and mole crickets. Such measures can also help control pests like wheat aphids and wheat mites in seedling stage.
- Regions with mixed occurrence of a variety of diseases and pests: fungicides and insecticides used for seed coating or seed dressing should be selected and mixed based on local occurrence features. Seed coating with mixtures like tebuconazole-imidacloprid, difenoconazole-thiamethoxam-fludioxonil, and difenoconazole-thiamethoxam-fenaminstrobin is also a choice. When using mixed formulations, dosage of active ingredients should be roughly the same as that in single formulations.
- Where possible, microbial agents (represented by *Bacillus subtilis*), microbial pesticides (such as *Beauveria* spp. and *Metarhizium* spp.), and immune inducers are highly recommended for the control of soil-borne & seed-borne diseases and underground pests, which can improve crop resistance to pests and diseases.





Policy

Many cities roll out action plans for prevention & control of air pollution in autumn & winter

Summary: According to incomplete statistics, as of 9 Oct., local governments of 16 cities in 13 provinces such as Shanxi, Henan, Hunan, Guangxi, Guangdong had issued hundred-day action plans for prevention & control of air pollution in 2022. Some cities have required strict control of energy-intensive and large-emission projects.

According to incomplete statistics, as of 9 Oct., local governments of 16 cities in in 13 provinces such as Shanxi, Henan, Hunan, Guangxi, Guangdong had issued hundred-day action plans for prevention & control of air pollution in 2022. Some cities in their plans have required strict control of energy-intensive and large-emission projects, and curbing haphazard development of such projects with out-dated technologies applied. Issuance of policies in multiple cities in such a short time signals the beginning of restricted production in industrial sector in autumn-winter period.

On 26 Sept., government of Nanyang City of Henan Province issued the Action Plan for Air Pollution Prevention & Control in 2022 Autumn & Winter Period in Nanyang, requiring strengthened regional joint prevention & control in all departments at all levels so as to continuously improve air quality. Specifically, it urges properly conducting the examination and approval of energy-intensive and large-emission projects on energy conservation measures, to comprehensively manage pollution sources. Enterprises in key industries are required to attain emission reduction and output reduction tasks on time, and conduct peak-shaving production.

The government of Huzhou City of Zhejiang Province pays attention to the management of volatile organic compounds (VOCs) emitted by industrial enterprises. Huzhou government will promote the use of low-VOC or non-VOC raw & auxiliary materials, and strive to replace the VOC-containing materials in 1,411 VOCs-using enterprises by the end of this year. To better regulate disorganised emission of particulate matters from industrial enterprises, a special operation targeting foundry industry will be carried out, and the supervision on mining-related enterprises will be strengthened. At the same time, acceptance of projects into small-scale parks will be strictly controlled to promote green & low-carbon development.

The government of Nanchang City of Jiangxi Province aims at continuing to reduce industrial pollution emissions and accelerate the launch of key emission reduction projects.





Import and Export

China's lambda-cyhalothrin TC export to the US grows in Jan.–Aug. 2022

Summary: In Jan.–Aug. 2022, lambda-cyhalothrin products from China were mainly exported to the US, Belgium, India, etc. The total export volume (actual volume) went down by 58.12% YoY, but export volume of TC products increased. And the US was the largest export destination of China's lambda-cyhalothrin TC; its share to the total lambda-cyhalothrin TC export was 50.79% in this period, up 1.69 percentage points YoY.

According to the import and export data updated on 11 Oct. from Tranalysis, in Jan.–Aug. 2022, lambda-cyhalothrin products from China were mainly exported to the US, Belgium, India, etc. The total export volume was 3,775.52 tonnes (actual volume), or 2,576.29 tonnes (100% AI volume), down 58.12% YoY.

The details of China's lambda-cyhalothrin exports in Jan.–Aug. 2022 are as follows:

- Specification for export: 95% TC, 96% TC, 97% TC, 10% SC, 10% WP, 250g/L CS, 25g/L EC, 25g/L EW, 5% SG, 50g/L EC, 50g/L ME, 8% ME
- Average export price: USD31.70/kg for TC products and USD5.80/kg for formulation products
- Major exporter: The top 3 exporters, Youth Chemical Co., Ltd., Shanghai E-tong Chemical Co., Ltd. and China Jiangsu International Economic and Technical Cooperation Group, Ltd., together exported 1,957.01 tonnes (actual volume) of lambda-cyhalothrin products, making up 51.83% of China's total exported to major destinations.

Export volume of the TC products reached 2,624.03 tonnes (actual volume), or 2,498.47 tonnes (100% AI volume), accounting for 69.50% of the total. And TC export to the largest destination, the US, increased to 1,332.75 tonnes (actual volume), or 1,269.32 tonnes (100% AI volume), which accounts for 50.79% of the total TC export, the share up 1.69 percentage points YoY. Youth Chemical Co., Ltd., Nufarm Chemical (Shanghai) Co., Ltd., Adama Makhteshim Ltd. and Jiangsu Changlong Agrochemical Co., Ltd. were the major exporters of lambda-cyhalothrin TC to the US in this period.



TABLE 7: Exports of lambda-cyhalothrin products from China, Jan.–Aug. 2022

| Category | Specification | Volume, kg | Average price, USD/kg |
|--------------|---------------|------------------|-----------------------|
| Technical | 95% TC | 2,211,245 | 31.71 |
| | 96% TC | 261,470 | 32.59 |
| | 97% TC | 151,311 | 29.98 |
| Subtotal | | 2,624,026 | 31.70 |
| Formulations | 25g/L EC | 682,158 | 3.62 |
| | 50g/L EC | 231,735 | 5.22 |
| | 250g/L CS | 158,934 | 15.28 |
| | 10% SC | 33,320 | 5.43 |
| | 25g/L EW | 16,000 | 14.28 |
| | 10% WP | 11,910 | 6.91 |
| | 50g/L ME | 11,168 | 3.55 |
| | 8% ME | 4,070 | 7.52 |
| | 5% SG | 2,200 | 8.08 |
| Subtotal | | 1,151,495 | 5.80 |
| Total | | 3,775,521 | 23.80 |

Note: The data, sourced from Tranalysis, were updated on 11 Oct., 2022.

Source: Tranalysis

TABLE 8: Major exporters of lambda-cyhalothrin products from China, Jan.–Aug. 2022

| No. | Exporter | Volume, kg |
|-----|--|------------------|
| 1 | Youth Chemical Co., Ltd. | 1,722,792 |
| 2 | Shanghai E-tong Chemical Co., Ltd. | 129,600 |
| 3 | China Jiangsu International Economic and Technical Cooperation Group, Ltd. | 104,622 |
| 4 | Jiangsu Changlong Agrochemical Co., Ltd. | 103,320 |
| 5 | Agro Lead Co., Ltd. | 100,800 |
| 6 | Nufarm Chemical (Shanghai) Co., Ltd. | 96,516 |
| 7 | JAT Offshore S.A.L. | 71,776 |
| 8 | Nanjing Bangnong Chemical Co., Ltd. | 71,000 |
| 9 | Guangdong Liwei Import and Export Co., Ltd. | 65,950 |
| 10 | Jiangsu Trustchem Co., Ltd. | 65,146 |
| | Others | 1,244,000 |
| | Total | 3,775,521 |

Note: The data, sourced from Tranalysis, were updated on 11 Oct., 2022.

Source: Tranalysis



TABLE 9: Export of China's lambda-cyhalothrin TC to top 10 destinations, Jan.–Aug. 2022 vs Jan.–Aug. 2021

| No. | Jan.–Aug. 2022 | | | Jan.–Aug. 2021 | | |
|-----|-----------------|------------|----------------|----------------|------------|----------------|
| | Destination | Volume, kg | Share to total | Destination | Volume, kg | Share to total |
| 1 | The US | 1,332,748 | 50.79% | The US | 1,053,150 | 49.10% |
| 2 | Belgium | 600,000 | 22.87% | India | 345,725 | 16.12% |
| 3 | India | 314,000 | 11.97% | Belgium | 279,560 | 13.03% |
| 4 | Pakistan | 137,900 | 5.26% | Brazil | 143,450 | 6.69% |
| 5 | Russia | 87,713 | 3.34% | Pakistan | 94,300 | 4.40% |
| 6 | Turkey | 86,700 | 3.30% | Turkey | 88,400 | 4.12% |
| 7 | Vietnam | 20,950 | 0.80% | Russia | 54,225 | 2.53% |
| 8 | The Philippines | 17,600 | 0.67% | Vietnam | 45,200 | 2.11% |
| 9 | Kazakhstan | 11,750 | 0.45% | Indonesia | 12,200 | 0.57% |
| 10 | Indonesia | 4,800 | 0.18% | Paraguay | 10,000 | 0.47% |

Note: The data, sourced from Tranalysis, were updated on 11 Oct., 2022.

Source: Tranalysis



Registration

ICAMA releases 38 newly-registered insecticides in Oct.

Summary: In Oct. 2022, ICAMA approved 38 newly-registered insecticide products, including three hygienic insecticide products.

In Oct. 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 38 insecticide products, including three hygienic insecticide products. These products are applicable on rice, spinach, peach trees, etc.; their control targets are beet armyworm, thrip, rice leaf roller, etc. Popular active ingredients used in these products include abamectin, abamectin-aminomethyl, chlorantraniliprole and bifenthrin.

Hebei Veyong Bio-Chemical Co., Ltd. has eight insecticide formulation products approved registration this month, and all are for export only: an abamectin-aminomethyl-metaflumizone SC, a bifenthrin-abamectin-acetamiprid EC, an emamectin benzoate EC, an emamectin benzoate WG and four abamectin EC products (with content 1.9%, 8%, 20g/L and 36g/L respectively).

TABLE 10: Form of newly-registered insecticides in China, 14 Sept.–8 Oct., 2022

| No. | Form | Number |
|--------------|------|-----------|
| 1 | SC | 11 |
| 2 | EC | 10 |
| 3 | TC | 4 |
| 4 | WG | 4 |
| 5 | GR | 2 |
| 6 | FS | 2 |
| 7 | WP | 1 |
| 8 | UL | 1 |
| 9 | RQ | 1 |
| 10 | OD | 1 |
| 11 | ME | 1 |
| Total | | 38 |

Source: ICAMA

**TABLE 11:** Toxicity of newly-registered insecticides in China, 14 Sept.–8 Oct., 2022

| No. | Toxicity | Number |
|--------------|-----------------------|-----------|
| 1 | Low | 22 |
| 2 | Moderate (TC is high) | 6 |
| 3 | Mild | 5 |
| 4 | Moderate | 3 |
| 5 | Low (TC is high) | 2 |
| Total | | 38 |

Source: ICAMA



TABLE 12: Registrant of newly-registered insecticides in China, 14 Sept.–8 Oct., 2022

| No. | Registrant | Number |
|-----|---|--------|
| 1 | Hebei Veyong Bio-Chemical Co., Ltd. | 8 |
| 2 | Ningbo Sunjoy Agroscience Co., Ltd. | 3 |
| 3 | Lier Chemical Co., Ltd. | 2 |
| 4 | Shandong Weifang Rainbow Chemical Co., Ltd. | 2 |
| 5 | Shaanxi Topsen Biological Technology Co., Ltd. | 2 |
| 6 | Shaanxi Meibang Pharmaceutical Group Co., Ltd. | 2 |
| 7 | Jiangsu Aijin Crop Science and Technology Group Co., Ltd. | 1 |
| 8 | Shandong Jinqiu Yuantian Biotechnology Co., Ltd. | 1 |
| 9 | Hebei Xingbai Agricultural Technology Co., Ltd. | 1 |
| 10 | Jiangsu Fengshan Group Co., Ltd. | 1 |
| 11 | Hunan Agricultural University Heartale Agrochem Co., Ltd. | 1 |
| 12 | Jiangsu Rotam Chemistry Co., Ltd. | 1 |
| 13 | BrightMart CropScience Co., Ltd. | 1 |
| 14 | Trust Crop Protection Technology Co., Ltd. | 1 |
| 15 | Shandong Aosheng Biotechnology Co., Ltd. | 1 |
| 16 | Shaanxi Hengtian Biological Agriculture Co., Ltd. | 1 |
| 17 | Shandong Kanghui Crop Protection Co., Ltd. | 1 |
| 18 | Fumakilla Limited | 1 |
| 19 | Shandong Youdao Chemical Co., Ltd. | 1 |
| 20 | Dongguan Ruidefeng Biotechnology Co., Ltd. | 1 |
| 21 | Jiangxi Zhonghe Chemical Co., Ltd. | 1 |
| 22 | Jiangsu Greenscie Chemical Co., Ltd. | 1 |
| 23 | Shanxi Yitianfeng Crop Science Co., Ltd. | 1 |



| | | |
|--------------|--|-----------|
| 24 | Jiangsu Flag Chemical Industry Co., Ltd. | 1 |
| 25 | Jiangxi Zhongxun Agro-Chemical Co., Ltd. | 1 |
| Total | | 38 |

Source:ICAMA

Registration of chlorantraniliprole products surges in China

Summary: In Oct., FLAGCHEM, Lier Chemical and Shandong Youdao obtained pesticide registration certificates for chlorantraniliprole TC. As of mid-Oct., ICAMA had so far approved registration of 19 chlorantraniliprole products (registration renewals included) in 2022, and more than half of the approved chlorantraniliprole TC products were first registered in 2022. The registration boom is encouraged by large market potential as well as the fact that the compound went off-patent in China from 13 Aug., 2022.

In Oct., Jiangsu Flag Chemical Industry Co., Ltd. (FLAGCHEM), Lier Chemical Co., Ltd. (Lier Chemical) and Shandong Youdao Chemical Co., Ltd. (Shandong Youdao) have obtained pesticide registration certificates for chlorantraniliprole TC in China. As of mid-Oct., 2022, the Institute for the Control of Agrochemicals, Ministry of Agriculture and Rural Affairs (ICAMA) had approved registration of 19 chlorantraniliprole products (registration renewals included) this year, and more than half of the so far approved chlorantraniliprole TC products were first registered in 2022. Starting from 13 Aug., 2022, the patent for the compound expired in China, which gives rise to the registration boom. Besides, as a low-toxicity high-efficacy insecticide, chlorantraniliprole enjoys great market potential. It is broad-spectrum, widely applicable and safe to environmental organisms. Pests that have certain resistance to popular insecticide products in the market have not developed resistance to chlorantraniliprole products yet. No wonder chlorantraniliprole has attracted the attention of many Chinese pesticide producers.

TABLE 13: Newly-registered chlorantraniliprole TC in China in Oct. 2022

| No. | Registrant | Content | Toxicity |
|-----|--|---------|----------|
| 1 | Jiangsu Flag Chemical Industry Co., Ltd. | 95% | Low |
| 2 | Lier Chemical Co., Ltd. | 96.5% | Low |
| 3 | Shandong Youdao Chemical Co., Ltd. | 98% | Low |

Source:ICAMA

Data from ICAMA show that as of 18 Oct., China had 73 chlorantraniliprole products (9 TC and 64 formulation products) approved registration. Currently, there are six leading registrants, each with at least three registered chlorantraniliprole products.

Now is a good time for pesticide enterprises to apply for registration of their chlorantraniliprole products. However, it should be noted that though the patent for the compound chlorantraniliprole expired, FMC Corporation still holds valid patents for production process, key intermediates, formulations and application; these chlorantraniliprole-related patents are well within the protection period. For instance, the





patent for chlorantraniliprole production process will remain valid until Dec. 2025.

TABLE 14: Registration of chlorantraniliprole formulation products in China, as of 18 Oct., 2022

| Type of formulation | Form | Number of registration |
|---------------------|----------|------------------------|
| Single formulation | SC | 9 |
| | GR | 7 |
| | WG | 2 |
| | FS | 1 |
| | UL | 1 |
| | Subtotal | 20 |
| Mixed formulation | SC | 22 |
| | GR | 10 |
| | WG | 7 |
| | OD | 3 |
| | ZC | 2 |
| | Subtotal | 44 |
| Total | | 64 |

Source: ICAMA

TABLE 15: Registrant with at least three registered chlorantraniliprole products in China, as of 18 Oct., 2022

| No. | Registrant | Number of registration |
|-----|--|------------------------|
| 1 | Syngenta AG | 6 |
| 2 | FMC Corporation | 4 |
| 3 | Guangxi Tianyuan Biochemistry Co., Ltd. | 4 |
| 4 | Syngenta Nantong Crop Protection Co., Ltd. | 4 |
| 5 | Hebei Guanlong Agrochemical Co., Ltd. | 3 |
| 6 | Shenzhen Noposion Agrochemicals Co., Ltd. | 3 |





Source: ICAMA





News in Brief

Shandong Youdao makes provisional acceptance of chlorantraniliprole TC and intermediate production lines

On 30 Sept., Shandong Youdao Chemical Co., Ltd. (Shandong Youdao) finished provisional acceptance of the production lines for chlorantraniliprole TC and intermediates. These lines are parts of the green crop protection products project (Phase I). The company expects that commissioning test run will be possible in mid-to-late Oct., which will make Shandong Youdao the first qualified Chinese chlorantraniliprole TC manufacturer with independent intellectual property rights (not infringe existing patents) as well as with presence across the complete industrial chain of chlorantraniliprole.

The Phase II project has planned to build capacity for 3-bromo-1-(3-chloropyridin-2-yl)-1H-pyrazole-5-carboxylic acid, which is currently undergoing procedures for approval. Construction is estimated to kick off after the Chinese New Year and will be completed in Oct. 2023. If Phase II is successfully put into operation, Shandong Youdao will self-supply all the key intermediates for chlorantraniliprole TC production.

Cangzhou Xingbai to build capacity of insecticide TC & formulations

On 8 Oct., Xingbai (Cangzhou) Technology Co., Ltd. (Cangzhou Xingbai)'s 11,600 t/a high-efficacy low-toxicity pesticide TC & formulations project (Phase I & Phase II) was approved by local authorities. The whole project is divided into three phases, and the main construction content of the first two phases is as follows:

- Phase I: 1,500 t/a dinotefuran 20% SC, 1,500 t/a abamectin 10% SC, and 1,000 t/a abamectin 5% EW;
- Phase II: 500 t/a emamectin benzoate TC, 500 t/a oxine-copper TC, and 500 t/a flucarbazone-Na TC & 100 t/a monosulfuron TC (the two products share the same production line).

Hebei Lanrun's TC & adjuvant production line transformation project to be re-assessed

On 17 Oct., local authorities announced acceptance of Hebei Lanrun Plant Protection Technology Co., Ltd. (Hebei Lanrun)'s environmental impact (EI) report for re-assessment of the pesticide TC and adjuvant production line transformation project. This project was approved construction in May 2022 and came into trial production in June 2022. Yet the trial run found that average emission concentration of nitrogen oxides had exceeded the predicted concentration given in previous EI report and the total emission would surpass the predicted emission load. This forced Hebei Lanrun to apply for a new approval.

After the technological transformation, Hebei Lanrun's pesticide production capacity includes:

- Technical: 500 t/a spirotetramat TC, 1,000 t/a clethodim TC, 2,000 t/a clethodim TK, and 100 t/a sethoxydim TC;
- Adjuvant: 300 t/a isoxadifen-ethyl;
- Formulation: 500 t/a 120g/L clethodim EC, 900 t/a 240g/L clethodim EC.

Hebei Lanrun is a major spirotetramat TC producer in China.

Jiangsu Yangnong projects net profit growth in Q1–Q3 2022

On 21 Oct., Jiangsu Yangnong Chemical Co., Ltd. (Jiangsu Yangnong) released its performance estimation for Q1–Q3 2022. It expected





the net profit attributable to shareholders of the listed company to reach about USD231 million (RMB 1,638 million), up some 61% YoY.

The growth should be mainly attributed to the following drivers:

- Rising sales price of some major pesticide products compared with the same period last year.
- Projects in its subsidiary Jiangsu Youjia Crop Protection Co., Ltd. have progressed well. Phase III project has been put into full operation and the first-stage program of the Phase IV project has also been launched into operation (first-stage program includes 3,800 t/a bifenthrin, 1,000 t/a fluazinam, 3,000 t/a difenoconazole, 6,000 t/a mesotrione).
- Effective measures have been taken to strike a balance between COVID-19 epidemic prevention and normal production.

EI report of Jiangsu Gongcheng's 18.5kt/a hygienic insecticides project accepted

On 18 Oct., local authorities announced acceptance of Jiangsu Gongcheng Bio-tech Co., Ltd. (Jiangsu Gongcheng)'s environmental impact (EI) report for the 18,500 t/a non-agricultural pesticide formulations processing & subpackaging project. Jiangsu Gongcheng will invest USD15.49 million (RMB110 million) in this project, which plans to optimise its product structure and provides pyrethroid, heterocyclic and organophosphorus insecticide formulations in more forms. Upon completion of the project, its existing 2,410 t/a hygiene pesticide formulation lines and 50 t/a permethrin TC line will be dismantled.

Jiangsu Gongcheng (formerly known as Nantong Gongcheng Fine Chemical Co., Ltd.) was established in March 1999. It mainly engages in R&D, production, sale of pesticides technical and formulations, especially hygienic insecticides, and technical services. It is one of the major manufacturers of hygienic insecticide formulations in China. Currently, it has 2,410 t/a active production capacity for hygienic pesticide formulations.

Jiangsu Changqing to complete 12kt/a pesticides relocation project by the end of 2024

On 25 Oct., Jiangsu Changqing Agrochemical Co., Ltd. (Jiangsu Changqing) announced to relocate its pesticide TC production equipment and environmental protection facilities away from the 1-kilometre range to the Yangtze River. Jiangsu Changqing's Sanjiang Avenue Plant, located in Yangzhou City, Jiangsu Province, is divided into southern plant and northern plant. The company plans to acquire 24.2 ha industrial land on the north of the northern plant.

This relocation project, with estimated investment of USD211.29 million (RMB1.50 billion), is scheduled to complete by the end of 2024. During the process, Jiangsu Changqing will slash its production capacity by 13,170 t/a, covering products like benazolin-ethyl, chlorpyrifos, triazophos, imazethapyr and acetamiprid. Once completed, the company will retain 12,000 t/a pesticide capacity for 19 products (11 herbicides, 4 fungicides and 4 insecticides). The project does not involve capacity expansion for its existing products, nor capacity building plan for new products.



**TABLE 16:** Production capacity of insecticide products in Jiangsu Changqing after relocation

| No. | Insecticide products | Capacity, t/a |
|--------------|----------------------|---------------|
| 1 | 98% Imidacloprid TC | 3,000 |
| 2 | 96% Diafenthiuron TC | 1,200 |
| 3 | 96% Fipronil TC | 500 |
| 4 | 98% Thiamethoxam TC | 300 |
| Total | | 5,000 |

Source: Environmental impact report of Jiangsu Changqing's relocation project

Chongqing accredits seven chemical parks

On 10 Oct., the Chongqing Municipal Commission of Economy and Information Technology issued the list of seven approved chemical parks.

TABLE 17: List of approved chemical parks in Chongqing Municipality

| No. | Chemical park | Location |
|-----|--|--|
| 1 | Changshou Economic Development Zone New Material Industrial Park | Changshou District |
| 2 | Wanzhou Economic Development Zone Chemical Industry Park | Wanzhou District |
| 3 | Baitao Industrial Park Chemical Industry Park | Fuling District |
| 4 | Fuling Lingang Economic Zone Chemical Industry Park | Fuling District |
| 5 | Nanchuan Industrial Park Shuijiang Chemical Industry Park | Nanchuan District |
| 6 | Guanba Fuhuan Circular Economy Industrial Park | Wansheng Economic and Technological Development Zone, Qijiang District |
| 7 | Tongnan High-tech Zone Chemical Industry Park | Tongnan District |

Source: Chongqing Municipal Commission of Economy and Information Technology

Jiangsu issues Implementation Plan for Carbon Peaking

On 3 Oct., the Jiangsu Provincial People's Government issued the Implementation Plan for Carbon Peaking in Jiangsu Province, laying out eight special operations. The Plan proposes that rushing to launch energy-intensive and high-carbon-emission projects with backward technologies should be resolutely curbed. It also highlights measures to boost carbon peaking in key industries such as petrochemical industry. Moreover, across-the-board energy-conserving strategy should be actively promoted, and in industrial parks, circular economy





should be facilitated, circular operations bolstered, and circular industry system established. By 2025, across the province, comprehensive utilisation rate of bulk industrial solid wastes should be maintained at above 90%, and circulating transformation completed in all province-level industrial parks.

Hebei Nongxin to launch two chlorantraniliprole formulations in Nov.

In Oct., CCM learned from Hebei Nongxin Biotechnology Co., Ltd. (Hebei Nongxin) that it would hold a trade promotion meeting for its new chlorantraniliprole formulation products in Shijiazhuang City, Hebei Province on 18 Nov. The two products to be debuted are: Nongxin Tengge®, a mixed formulation chlorantraniliprole-indoxacarb 25% SC, and Nongxin Zhanshen®, a single formulation chlorantraniliprole 30% SC. Hebei Nongxin obtained pesticide registration certificates for both products in H2 2021.

Insecticide price index follows downtrend in Q1–Q3 2022

In Oct., China Crop Protection Industry Association (CCPIA) updated the Sept. data of China Agricultural Price Index (CAPI). The price index for insecticides was 127.42 in Sept., down 0.83% MoM, but it still marks a 10.53% YoY jump. In Q1–Q3 2022, the insecticide price index only moved up slightly on a monthly basis in June and July.

Market demand for insecticides has been generally lacklustre this year, with the price of most insecticide products gradually slipping from the peak witnessed late last year. However, in general, the Sept. price of insecticide products was still at a high level.

TABLE 18: Price index for insecticides from the CAPI, Q1–Q3 2022

| Month | Insecticide price index | MoM change |
|-------|-------------------------|------------|
| Jan. | 142.57 | -1.72% |
| Feb. | 139.80 | -1.94% |
| March | 132.39 | -5.30% |
| April | 127.84 | -3.44% |
| May | 126.98 | -0.67% |
| June | 127.47 | 0.39% |
| July | 128.68 | 0.95% |
| Aug. | 128.49 | -0.15% |
| Sept. | 127.42 | -0.83% |

Source:CCPIA





Price Update

Ex-works prices of major insecticides in China on 8 Oct. 2022

TABLE 19: Ex-works prices of major insecticides in China, 8 Oct., 2022

| Product | 20220908 | | 20221008 | |
|----------------------------------|------------------------|---------------|------------------------|---------------|
| | Original Price (RMB/t) | Price (USD/t) | Original Price (RMB/t) | Price (USD/t) |
| 95% Abamectin technical | 590,000 | 85,729.65 | 576,000 | 81,135.9 |
| 97% Acephate technical | 58,000 | 8,427.66 | 58,000 | 8,169.93 |
| 95% Acetamiprid technical | 144,500 | 20,996.5 | 145,300 | 20,467.09 |
| 95% Azocyclotin technical | 210,000 | 30,513.94 | 190,000 | 26,763.58 |
| 95% Beta-Cypermethrin technical | 166,400 | 24,178.67 | 166,400 | 23,439.26 |
| 97% Bifenthrin technical | 275,000 | 39,958.73 | 272,500 | 38,384.61 |
| 95% Buprofezin technical | 75,000 | 10,897.84 | 75,000 | 10,564.57 |
| 98% Carbofuran technical | 115,000 | 16,710.02 | 115,000 | 16,199.01 |
| 98% Chlorfenapyr technical | 321,000 | 46,642.74 | 304,400 | 42,878.07 |
| 95% Chlorfluazuron technical | 485,000 | 70,472.68 | 480,000 | 67,613.25 |
| 95% Chlorpyrifos technical | 53,500 | 7,773.79 | 52,500 | 7,395.2 |
| 94% Cypermethrin technical | 83,000 | 12,060.27 | 80,000 | 11,268.88 |
| 99% Cyromazine technical | 160,000 | 23,248.72 | 160,000 | 22,537.75 |
| 98% Deltamethrin technical | 530,000 | 77,011.38 | 530,000 | 74,656.3 |
| 95% Diafenthiuron technical | 145,000 | 21,069.15 | 140,000 | 19,720.53 |
| 98% Dimethoate technical | 47,600 | 6,916.49 | 47,600 | 6,704.98 |
| 70% Emamectin benzoate technical | 574,000 | 83,404.77 | 553,700 | 77,994.7 |
| 92% Fenvalerate technical | 140,000 | 20,342.63 | 140,000 | 19,720.53 |
| 95% Fipronil technical | 565,000 | 82,097.03 | 565,000 | 79,586.43 |
| 98% Hexaflumuron technical | 530,000 | 77,011.38 | 530,000 | 74,656.3 |





| | | | | |
|----------------------------------|---------|-----------|---------|-----------|
| 97% Imidacloprid technical | 157,500 | 22,885.46 | 156,900 | 22,101.08 |
| 98% Isoprocarb technical | 44,000 | 6,393.4 | 44,000 | 6,197.88 |
| 95% Lambda-cyhalothrin technical | 198,000 | 28,770.29 | 200,000 | 28,172.19 |
| 90% Malathion technical | 37,000 | 5,376.27 | 37,000 | 5,211.85 |
| 95% Methidathion technical | 90,000 | 13,077.4 | 90,000 | 12,677.48 |
| Methomyl 90% SP | 75,000 | 10,897.84 | 75,000 | 10,564.57 |
| 98% Methomyl technical | 86,000 | 12,496.19 | 86,000 | 12,114.04 |
| 75% Omethoate technical | 51,400 | 7,468.65 | 51,400 | 7,240.25 |
| 90% Phoxim technical | 43,000 | 6,248.09 | 45,000 | 6,338.74 |
| 90% Profenofos technical | 82,665 | 12,011.6 | 82,665 | 11,644.27 |
| 90% Propargite technical | 60,000 | 8,718.27 | 60,000 | 8,451.66 |
| 95% Pymetrozine technical | 144,300 | 20,967.44 | 142,500 | 20,072.68 |
| 95% Pyridaben technical | 104,000 | 15,111.67 | 104,000 | 14,649.54 |
| 97% Spirodiclofen technical | 165,000 | 23,975.24 | 160,000 | 22,537.75 |
| 85% Triazophos technical | 58,500 | 8,500.31 | 58,500 | 8,240.37 |

Note: Ex-works price includes VAT.

Source: CCM

Shanghai Port prices of major insecticides in China, 8 Oct. 2022



TABLE 20: Shanghai Port prices of major insecticides in China, 8 Oct., 2022

| Product | 20220908 | | 20221008 | |
|----------------------------------|------------------------|---------------|------------------------|---------------|
| | Original Price (RMB/t) | Price (USD/t) | Original Price (RMB/t) | Price (USD/t) |
| 95% Abamectin technical | 590,500 | 85,802.3 | 576,500 | 81,206.33 |
| 97% Acephate technical | 58,500 | 8,500.31 | 58,500 | 8,240.37 |
| 95% Acetamiprid technical | 145,000 | 21,069.15 | 145,800 | 20,537.53 |
| 95% Azocyclotin technical | 210,500 | 30,586.59 | 190,500 | 26,834.01 |
| 95% Beta-Cypermethrin technical | 166,900 | 24,251.32 | 166,900 | 23,509.69 |
| 97% Bifenthrin technical | 275,500 | 40,031.39 | 273,000 | 38,455.04 |
| 95% Buprofezin technical | 75,500 | 10,970.49 | 75,500 | 10,635 |
| 98% Carbofuran technical | 115,500 | 16,782.67 | 115,500 | 16,269.44 |
| 98% Chlorfenapyr technical | 321,500 | 46,715.39 | 304,900 | 42,948.5 |
| 95% Chlorfluazuron technical | 485,500 | 70,545.33 | 480,500 | 67,683.68 |
| 95% Chlorpyrifos technical | 54,000 | 7,846.44 | 53,000 | 7,465.63 |
| 94% Cypermethrin technical | 83,500 | 12,132.92 | 80,500 | 11,339.31 |
| 99% Cyromazine technical | 160,500 | 23,321.37 | 160,500 | 22,608.18 |
| 98% Deltamethrin technical | 530,500 | 77,084.03 | 530,500 | 74,726.73 |
| 95% Diafenthiuron technical | 145,500 | 21,141.8 | 140,500 | 19,790.96 |
| 98% Dimethoate technical | 48,100 | 6,989.15 | 48,100 | 6,775.41 |
| 70% Emamectin benzoate technical | 574,500 | 83,477.43 | 554,200 | 78,065.13 |
| 92% Fenvalerate technical | 140,500 | 20,415.28 | 140,500 | 19,790.96 |
| 95% Fipronil technical | 565,500 | 82,169.69 | 565,500 | 79,656.86 |
| 98% Hexaflumuron technical | 530,500 | 77,084.03 | 530,500 | 74,726.73 |
| 97% Imidacloprid technical | 158,000 | 22,958.11 | 157,400 | 22,171.51 |
| 98% Isoprocarb technical | 44,500 | 6,466.05 | 44,500 | 6,268.31 |



| | | | | |
|----------------------------------|---------|-----------|---------|-----------|
| 95% Lambda-cyhalothrin technical | 198,500 | 28,842.94 | 200,500 | 28,242.62 |
| 90% Malathion technical | 37,500 | 5,448.92 | 37,500 | 5,282.29 |
| 95% Methidathion technical | 90,500 | 13,150.06 | 90,500 | 12,747.92 |
| Methomyl 90% SP | 75,500 | 10,970.49 | 75,500 | 10,635 |
| 98% Methomyl technical | 86,500 | 12,568.84 | 86,500 | 12,184.47 |
| 75% Omethoate technical | 51,900 | 7,541.3 | 51,900 | 7,310.68 |
| 90% Phoxim technical | 43,500 | 6,320.75 | 45,500 | 6,409.17 |
| 90% Profenofos technical | 83,165 | 12,084.25 | 83,165 | 11,714.7 |
| 90% Propargite technical | 60,500 | 8,790.92 | 60,500 | 8,522.09 |
| 95% Pymetrozine technical | 144,800 | 21,040.09 | 143,000 | 20,143.11 |
| 95% Pyridaben technical | 104,500 | 15,184.32 | 104,500 | 14,719.97 |
| 97% Spirodiclofen technical | 165,500 | 24,047.89 | 160,500 | 22,608.18 |
| 85% Triazophos technical | 59,000 | 8,572.96 | 59,000 | 8,310.8 |

Note: Shanghai port price = ex-works price + transportation fee from warehouse to Shanghai port, and the ex-works price includes VAT.

Source: CCM

FOB Shanghai prices of major insecticides in China, 8 Oct. 2022





TABLE 21: FOB Shanghai prices of major insecticides in China, 8 Oct., 2022, USD/t

| Product | 20220908 | 20221008 |
|----------------------------------|-----------|-----------|
| 95% Abamectin technical | 83,524.14 | 79,052.12 |
| 97% Acephate technical | 8,059.62 | 7,813.15 |
| 95% Acetamiprid technical | 20,572.64 | 20,053.09 |
| 95% Azocyclotin technical | 29,828.13 | 26,176.28 |
| 95% Beta-Cypermethrin technical | 22,834.9 | 22,136.58 |
| 97% Bifenthrin technical | 37,637.44 | 36,156.11 |
| 95% Buprofezin technical | 10,751.92 | 10,423.12 |
| 98% Carbofuran technical | 16,404.13 | 15,902.48 |
| 98% Chlorfenapyr technical | 45,513.02 | 41,847.25 |
| 95% Chlorfluazuron technical | 68,687.08 | 65,901.65 |
| 95% Chlorpyrifos technical | 7,713.86 | 7,340.97 |
| 94% Cypermethrin technical | 11,467.2 | 10,720.12 |
| 99% Cyromazine technical | 21,962.55 | 21,290.92 |
| 98% Deltamethrin technical | 72,394.78 | 70,180.89 |
| 95% Diafenthiuron technical | 19,918 | 18,648.22 |
| 98% Dimethoate technical | 6,642.06 | 6,438.94 |
| 70% Emamectin benzoate technical | 81,263.25 | 75,997.37 |
| 92% Fenvalerate technical | 19,236.49 | 18,648.22 |
| 95% Fipronil technical | 79,991.51 | 77,545.29 |
| 98% Hexaflumuron technical | 75,045.82 | 72,750.85 |
| 97% Imidacloprid technical | 22,409.6 | 21,642.11 |
| 98% Isoprocarb technical | 6,151.37 | 5,963.25 |
| 95% Lambda-cyhalothrin technical | 27,142.08 | 26,576.32 |





| | | |
|-----------------------------|-----------|-----------|
| 90% Malathion technical | 5,197.25 | 5,038.31 |
| 95% Methidathion technical | 12,871.5 | 12,477.88 |
| Methomyl 90% SP | 10,751.92 | 10,423.12 |
| 98% Methomyl technical | 13,399.98 | 12,990.2 |
| 75% Omethoate technical | 7,160.01 | 6,941.05 |
| 90% Phoxim technical | 6,190.9 | 6,273.77 |
| 90% Profenofos technical | 11,421.54 | 11,072.26 |
| 90% Propargite technical | 8,632.34 | 8,368.35 |
| 95% Pymetrozine technical | 19,822.59 | 18,978.56 |
| 95% Pyridaben technical | 14,849.77 | 14,395.65 |
| 97% Spirodiclofen technical | 22,644.07 | 21,290.92 |
| 85% Triazophos technical | 8,420.38 | 8,162.88 |

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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