

New Registrations of Pesticide Formulations in China in 2021

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Executive Summary

According to data released by the Institute for the Control of Agrochemicals, Ministry of Agriculture and Rural Affairs of the People's Republic of China (ICAMA) as of 31 Dec., 2021, China approved 2,491 new and 3,532 renewed registrations of pesticide formulations last year.

Among the 2,491 new & full registrations, herbicide, insecticide and fungicide formulations were the dominating categories, accounting for 38%, 27% and 22% respectively. In terms of pesticide formulation type, suspension concentrate (SC), soluble concentrate (SL), emulsifiable concentrate (EC) were the top three frequently registered types. Since June 2020, China's government has given export-only registrations to pesticides that are strictly forbidden for use in China. Last year, 99 new pesticide formulations for export only were approved with registration numbers starting with the serial code "EX2021-". As for the active ingredients, totalling 889 kinds of active ingredients were applied in the new registrations of pesticide formulation, with glyphosate, clothianidin, glufosinate ammonium, pinoxaden and glyphosate•glufosinate ammonium as the top five. What's more, Shaanxi Meibang Pharmaceutical Group Co., Ltd., Shandong Aokun Crop Science Co., Ltd., Shaanxi Tunpsion Biotechnology Co., Ltd., Zhejiang Wynca Chemical Group Co., Ltd. were the four major registrants when it comes to the number of new registrations of pesticide formulation.

Notably, 17 kinds of different active ingredients were firstly approved in the 17 new & full formulation registrations composed of 7 fungicides, 5 insecticides, 3 herbicides and 2 plant growth regulators; by use, 16 new registrations were approved for formal production permits, 1 for export-only one.

Methodology

The report is drafted by diverse methods as follows:

- Desk research

The sources of desk research are various, including published magazines, journals, government websites and statistics, industrial statistics, association seminars as well as information from the Internet. A lot of work has gone into the compilation and analysis of the obtained information.

- Internet

CCM visited government websites and contacted with players in the domestic agrochemical industry through B2B websites and software.

- Data processing and presentation

The data collected and compiled are sourced from:

- CCM's database
- Published articles in periodicals, magazines, journals and third-party databases
- Statistics from governments and international institutes
- Telephone interviews with domestic producers, joint ventures, service suppliers and governments
- Third-party data providers
- Comments from industrial experts
- Professional databases from other sources
- Information from the internet

The data from various sources have been combined and cross-checked to make this report as precise and scientific as possible. Throughout the process, a series of internal discussions were held in order to analyse the data and draw the conclusions.

1 Overview on new registration of pesticide formulation

1.1 Registration status of China's pesticide formulation for 2021

In 2021, there were 6,023 registrations of pesticide formulations approved in China—2,491 were the full registrations applied for the first time and 3,532 were the renewed ones—accounting for 91% of the total 6,607 registrations of pesticide.

Since June 2020, China's government has specified that pesticides registered for export only are strictly forbidden to use in China. Last year, 99 new pesticide formulations for export only were approved with registration numbers starting with the serial code "EX2021-", taking up 3.97% of the total 2,491 new & full registrations in China.

Newly registered pesticide formulations under 14 kinds of pesticide categories involved with 889 single and/or mixed active ingredients in 2021; top three categories was herbicides, insecticides and fungicides, accounting for 86.5% of the total. Specifically, herbicide formulations reached 949 new registrations with 297 one and/or more active ingredients; 667 new insecticide formulations with 218 different active ingredients, as well as 539 new fungicides approvals with 263 combinations.

In 2021, 2,491 new registrations of pesticide formulations appeared as 32 formulation types altogether. The top 5 formulation types were suspension concentrate (SC), soluble concentrate (SL), emulsifiable concentrate (EC), oil dispersion (OD) and water dispersible granule (WG); among all new registration 2,308 (=92.7%) were accounted to the top ten obtained 2,308. Notably, new SC and SL registrations got a yearly increase of 201% and 304%, respectively.

By toxic level, there were 104 new registrations of pesticide formulations registered as moderate and moderate (TC: highly toxic); 2,095 low-toxic, 35 low-toxic (TC: highly toxic) and 1 low-toxic (TC: hyper toxic); and 256 for mild-toxic.

Table 1.1-1 Registration of pesticide in China, 2021

No.	Registration type	Formulation	Technical	Total
1	New & full	2,491	54	2,545
2	Renewal	3,532	530	4,062
Total		6,023	584	6,607

Source: Institute for the Control of Agrochemicals, Ministry of Agriculture (ICAMA) & CCM

Table 1.1-2 Registration of export-only pesticide in China as of 31 Dec., 2021

No.	Item	EX2021-	EX2020-
1	Formulation	99	1
2	Technical	20	1
Total		119	2

Source: ICAMA & CCM

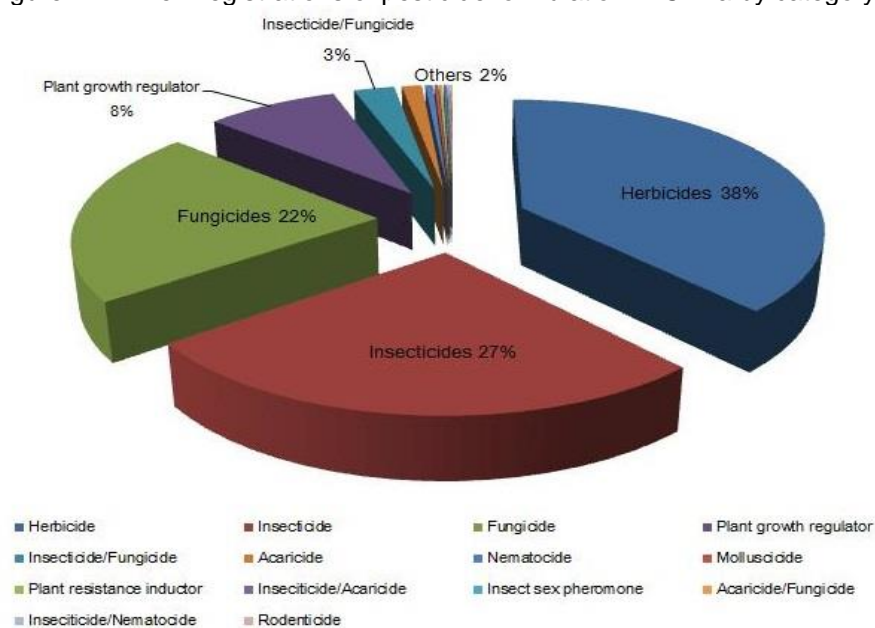
Table 1.1-3 Active ingredients of new registration of pesticide formulation in China, 2021

No.	Category	Number of new registrations	Number of active ingredients
1	Herbicide	949	297
2	Insecticide	667	218
3	Fungicide	539	263
4	Plant growth regulator	206	70
5	Insecticide/Fungicide	63	32
6	Acaricide	31	19
7	Nematocide	12	6
8	Molluscicide	6	4
9	Plant resistance inductor	6	3
10	Insecticide/Acaricide	5	4
11	Insect sex pheromone	3	3
12	Acaricide/Fungicide	2	1
13	Insecticide/Nematocide	1	1
14	Rodenticide	1	1
Total		2,491	889

Note: Since certain active ingredients could be repeatedly counted in different usages, the sum of counts in each category might not equal the total.

Source: ICAMA & CCM

Figure 1.1-1 New registrations of pesticide formulation in China by category, 2021



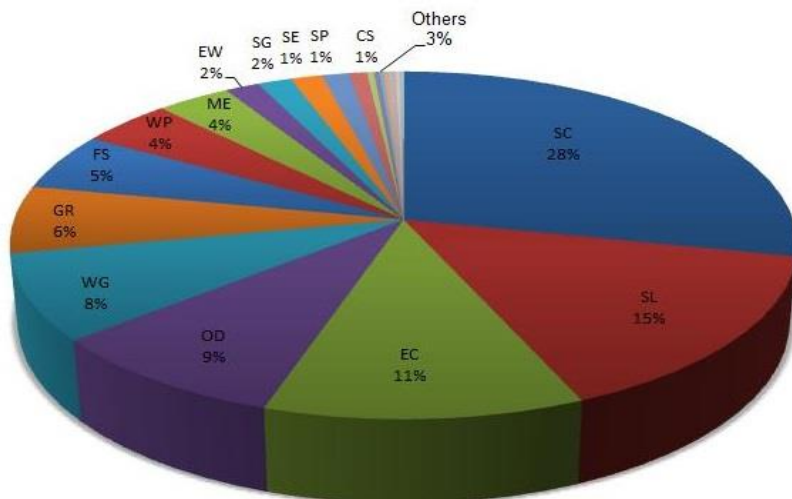
Source: ICAMA & CCM

Table 1.1-4 China's new registrations of pesticide formulation by formulation type

No.	Formulation type	Code	Number of registrations, 2021	Number of registrations, 2020
1	Suspension concentrate	SC	704	234
2	Soluble concentrate	SL	376	93
3	Emulsifiable concentrate	EC	284	111
4	Oil dispersion	OD	221	73
5	Water dispersible granule	WG	199	58
6	Granule	GR	156	58
7	Flowable concentrate for seed treatment	FS	133	41
8	Wettable powder	WP	108	30
9	Micro-emulsion	ME	87	19
10	Emulsion, oil in water	EW	40	20
11	Water soluble granule	SG	40	11
12	Suspo-emulsion	SE	37	13
13	Water soluble powder	SP	32	10
14	Capsule suspension	CS	21	11
15	Dustable powder	DP	8	5
16	Mixed formulations of CS and SC	ZC	7	/
17	Paste	PA	5	4
18	Smoke generator	FU	5	4
19	Water dispersible powder for slurry seed treatment	WS	5	/
20	Dispenser	DR	4	2
21	Emulsion for seed treatment	ES	4	/
22	Hot fogging concentrate	HN	3	/
23	Solution for seed treatment	LS	2	/
Others			10	47
Total			2,491	844

Source: ICAMA & CCM

Figure 1.1-2 New registrations of pesticide formulation in China by formulation type, 2021



Source: ICAMA & CCM

Table 1.1-5 China's new registrations of pesticide formulation by toxic level, 2021

No.	Toxicity	Number of registrations
1	Low	2,095
2	Mild	256
3	Moderate	83
4	Low (TC: highly toxic)	35
5	Moderate (TC: highly toxic)	21
6	Low (TC: hyper toxic)	1
Total		2,491

Source: ICAMA & CCM

1.2 Main registrants of pesticide formulation in China

In 2021, there were 605 registrants of China's new registrations of pesticide formulation. Among them, the top 15 obtained 417 new registrations, accounting for 16.7% of the total formulations approvals; the top three holders were Shaanxi Meibang Pharmaceutical Group Co., Ltd., Shandong Aokun Crop Science Co., Ltd. and Shaanxi Tunpsion Biotechnology Co., Ltd.

Table 1.2-1 Top 15 Chinese registrants of pesticide formulation, 2021

No.	Registrant (EN)	Registrant (CN)	Location	Number of registrations
1	Shaanxi Meibang Pharmaceutical Group Co., Ltd.	陕西美邦药业集团股份有限公司	Shaanxi Province	50
2	Shandong Aokun Crop Science Co., Ltd.	山东奥坤作物科学股份有限公司	Shandong Province	43
3	Shaanxi Tunpsion Biotechnology Co., Ltd.	陕西汤普森生物科技有限公司	Shaanxi Province	35
4	Zhejiang Wynca Chemical Group Co., Ltd.	浙江新安化工集团股份有限公司	Zhejiang Province	33
5	Anhui Jintudi Biotechnology Co., Ltd.	安徽金土地生物科技有限公司	Anhui Province	30
6	Shanghai Yuelian Biotech Co., Ltd.	上海悦联生物科技有限公司	Shanghai Municipality	29
7	Shandong Binnong Technology Co., Ltd.	山东滨农科技有限公司	Shandong Province	26
8	Hunan Xinchangshan Agricultural Development Co., Ltd.	湖南新长山农业发展股份有限公司	Hunan Province	25
9	Shaanxi Yitianfeng Crop Technology Co., Ltd.	陕西亿田丰作物科技有限公司	Shaanxi Province	23
10	Zhejiang Zhongshan Chemical Industry Group Co., Ltd.	浙江中山化工集团股份有限公司	Zhejiang Province	23
11	Shandong Wanhao Chemical Co., Ltd.	山东万豪化工股份有限公司	Shandong Province	22
12	BrightMart Cropsience Co., Ltd.	广东省佛山市盈辉作物科学有限公司	Guangdong Province	21
13	Tianjin Boke Baisheng Technology Co., Ltd.	天津博克百胜科技有限公司	Tianjin Municipality	21
14	Guangxi Tianyuan Biochemistry Co., Ltd.	广西田园生化股份有限公司	Guangxi Province	18
15	Jiangsu Youjia Plant Protection Co., Ltd.	江苏优嘉植物保护有限公司	Jiangsu Province	18
Other				2,074
Total				2,491

Note: Shanghai Yuelian Biotech Co., Ltd. obtained totalling 29 new approvals in 2021, having 24 registered by the current name plus 5 others by Shanghai Yuelian Chemical Co., Ltd.

Source: ICAMA & CCM

2 Active ingredient of China's new registration of pesticide formulation, 2021

2.1 Top 10 active ingredients of pesticide formulation

In 2021, the top 10 active ingredients of all single and/or mixed formulations represented 244 (=9.8%) new formulation registrations under 6 herbicides, 3 insecticides and 1 fungicide by category, and included glyphosate, clothianidin, glufosinate ammonium, pinoxaden, glyphosate•glufosinate ammonium by ingredient type.

Table 2.1-1 Top 10 active ingredients of single and/or mixed pesticide formulation in China, 2021

No.	Active ingredient	Category	Number of registrations
1	Glyphosate	Herbicide	35
2	Clothianidin	Insecticide	33
3	Glufosinate ammonium	Herbicide	27
4	Pinoxaden	Herbicide	22
5	Glyphosate•Glufosinate ammonium	Herbicide	22
6	Thiamethoxam	Insecticide	22
7	2,4-D•Glyphosate	Herbicide	21
8	Pyraclostrobin	Fungicide	21
9	Bifenthrin•Clothianidin	Insecticide	21
10	Metamifop•Cyhalofop-butyl	Herbicide	20
Total			244

Source: ICAMA & CCM

2.2 Top 10 active ingredients of single pesticide formulation

In 2021, total 1,056 new registrations of single pesticide formulations had 274 different active ingredients. Thereinto, based on the number of new registrations, the top 10 active ingredients gained 248 registrations, accounting for 23.5% of the total single pesticide formulations; the top 5 included glyphosate, L-glufosinate, clothianidin, glufosinate ammonium, pinoxaden.

Table 2.2-1 Top 10 active ingredients of single pesticide formulation by number of new registrations in China, 2021

No.	Active ingredient	Category	Number of registrations
1	Glyphosate	Herbicide	35
2	L-Glufosinate	Herbicide	34
3	Clothianidin	Insecticide	33
4	Glufosinate ammonium	Herbicide	27
5	Pinoxaden	Insecticide	22

No.	Active ingredient	Category	Number of registrations
6	Thiamethoxam	Herbicide	22
7	Pyraclostrobin	Fungicide	21
8	Abamectin-aminomethyl	Insecticide	21
9	Abamectin	Insecticide	18
10	Metamifop	Herbicide	15
Total			248

Source: ICAMA & CCM

2.3 Top 10 active ingredients of mixed pesticide formulation

In China, 1,435 new registrations of mixed pesticide formulations were approved, with above 615 kinds of active ingredients. Among them, 206 approvals were mixed formulations with three active ingredients; registration of four active ingredients in one formulation was not available in 2021.

The top 10 active ingredients approved took up 14.1% (=203) of the total mixed pesticide formulations ones. Ranked by registration number, the most popular active ingredients were flonicamid•clothianidin, glyphosate•glufosinate ammonium, metamifop•cyhalofop-butyl and 2,4-D•glyphosate, etc.

Table 2.3-1 Top 10 active ingredients of mixed pesticide formulation by number of new registrations in China, 2021

No.	Active ingredient	Main category	Number of registrations
1	Fonicamid•Clothianidin	Insecticide	30
2	Glyphosate•Glufosinate ammonium	Herbicide	22
4	2,4-D•Glyphosate	Herbicide	21
4	Bifenthrin•Clothianidin	Insecticide	21
5	Abamectin-aminomethyl•Lufenuron	Insecticide	20
6	Fluoroglycofen-ethyl•Glufosinate ammonium	Herbicide	20
7	Metamifop•Cyhalofop-butyl	Herbicide	20
8	Chlorfenapyr•Lufenuron	Insecticide	19
9	MCPA•Glyphosate	Herbicide	15
10	Etoxazole•Bifenazate	Insecticide	15
Total			203

Source: ICAMA & CCM

2.4 China's newly registered active ingredients, 2021

2.4.1 Registration status of China's newly registered active ingredients, 2021

In 2021, China approved 17 registration certificates that were with 17 newly-registered active ingredients and held by 16 registrants. Thereinto, by category, 7 registrations were fungicide formulations, 5 insecticides, 3 herbicides, 2 plant growth regulators; by use, 16 new registrations were available for both domestic and export use, and 1 was for export only.

Table 2.4.1-1 Newly registered active ingredients in China, 2021

No.	Active ingredient	Formulation	Category
1	Bixlozone	Bixlozone 36% SC	Herbicide
2	Tembotrione	Tembotrione 8% OD	Herbicide
3	Tembotrione•Atrazine	Tembotrione•Atrazine 23.5% OD	Herbicide
4	Bacillus velezensis (CGMCC No.14384)	Bacillus velezensis 200 billion CFU/g WG	Fungicide
5	Bacillus nematocida (B16)	Bacillus nematocida 500 million CFU/g DP	Fungicide
6	Chitin oligosaccharide	Chitin oligosaccharide 5% SL	Fungicide
7	Fenpropimorph	Fenpropimorph 750g/l EC	Fungicide
8	Resveratrol	Resveratrol 0.2% SL	Fungicide
9	Picarbutrazox	Picarbutrazox 10% SC	Fungicide
10	Isofetamid	Isofetamid 400g/l SC	Fungicide
11	Cordyceps javanica Ij01	Cordyceps javanica Ij01 200 billion spore/g WP	Insecticide
12	Cordyceps javanica JS001	Cordyceps javanica JS001 5 billion spore/mcg OD	Insecticide
13	Hetero-chitooligosaccharide	Hetero-chitooligosaccharide 7.5% SL	Insecticide
14	Sanguinarinum sulfate•Veratramine	Sanguinarinum sulfate•Veratramine 1% SL	Insecticide
15	Thiorantranilprole	Thiorantranilprole 10% SC	Insecticide
16	Coronatine	Coronatine 0.01% SL	Plant growth regulator
17	Decoyinine	Decoyinine 1% LS	Plant growth regulator

Note: Fenpropimorph was applied as an export-only fungicide formulation (750g/l EC) by Shandong Weifang Rainbow Chemical Co., Ltd.

Source: ICAMA & CCM

Table 2.4.1-2 Newly registered active ingredients in China by category and formulation type, 2021

Category	Number of registrations
Fungicide	7
- DP	1
- EC	1
- SC	2
- SL	2
- WG	1
Herbicide	3
- SC	1
- OD	2
Insecticide	5
- OD	1
- SC	1
- SL	2
- WP	1
Plant growth regulator	2
- SL	1
- LS	1
Total	17

Source: ICAMA & CCM

Table 2.4.1-3 Newly registered active ingredients in China by toxic level, 2021

No.	Toxicity	Number of registrations
1	Low	14
2	Moderate	3
Total		17

Source: ICAMA & CCM

2.4.2 Newly registered active ingredient held by domestic enterprise

In 2021, there were 14 newly registered active ingredients under 14 pesticide formulations approved in China, belonging to 12 domestic manufacturers. Notably, the single fungicide formulation-fenpropimorph 750g/l EC, held by Shandong Weifang Rainbow Chemical Co., Ltd. was applied for export only.

Table 2.4.2-1 Twelve Chinese enterprises of the newly registered active ingredients, 2021

No.	Registrant	Active ingredient	Content	Type	Toxicity	Category	Expiry date	Region
1	Anhui Jukai Agrochemical Co., Ltd.	Tembotrione	8%	OD	Low	Herbicide	2026/12/29	Anhui Province
		Tembotrione•Atrazine	23.50%	OD	Low	Herbicide	2026/12/29	
2	Chengdu Newsun Crop Science Co., Ltd.	Coronatine	0.01%	SL	Low	Plant growth regulator	2026/9/2	Sichuan Province
3	Guangdong Dafeng Plant Protection Technology Co., Ltd.	Cordyceps javanica lj01	200 billion spore/g	WP	Low	Insecticide	2026/9/2	Guangdong Province
4	Inner Mongolia Kingbo Biotech Co., Ltd.	Resveratrol	0.20%	SL	Low	Fungicide	2026/12/29	Inner Mongolia Autonomous Region
5	Institute of Plant Protection, Jiangsu Academy of Agricultural Sciences	Cordyceps javanica JS001	5 billion spore/mcg	OD	Low	Insecticide	2026/9/2	Jiangsu Province
6	Northeast Agricultural University	Decoyinine	1%	LS	Low	Plant growth regulator	2026/12/29	Heilongjiang Province
7	Shaanxi Xiannong Biology Science Co., Ltd.	Sanguinarinum sulfate• Veratramine	1%	SL	Mild	Insecticide	2026/9/2	Shaanxi Province
8	Shandong Weifang Rainbow Chemical Co., Ltd.	Fenpropimorph	750g/l	EC	Low	Fungicide	2026/11/9	Shandong Province
9	Sichuan Baishi Dongwang Biotechnology Co., Ltd.	Bacillus velezensis (CGMCC No.14384)	200 billion CFU/g	WG	Mild	Fungicide	2026/9/2	Sichuan Province
10	Yunnan University	Bacillus nematocida (B16)	500 million CFU/g	DP	Mild	Fungicide	2026/9/2	Yunnan Province
11	Zhejiang Udragon Chemical Co., Ltd.	Thiorantraniliprole	10.00%	SC	Low	Insecticide	2026/9/2	Zhejiang Province
12	Zhongke Rongxin (Suzhou) Bio Technology Co., Ltd.	Chitin oligosaccharide	5.00%	SL	Low	Fungicide	2026/9/2	Jiangsu Province
		Hetero-chitooligosaccharide	7.50%	SL	Low	Insecticide	2026/9/2	

Source: ICAMA & CCM

2.4.3 Newly registered active ingredient held by foreign enterprise

In 2021, 3 new active ingredients firstly launched in China, owned by 3 foreign registrants; one herbicide SC was applied by the US-based FMC Corporation and two fungicide SC were registered by two Japanese enterprises, i.e. Nippon Soda Co., Ltd. and Ishihara Sangyo Kaisha Ltd.

Table 2.4.3-1 Three foreign enterprises of the newly registered active ingredients, 2021

No.	Registrant	Active ingredient	Content	Type	Toxicity	Category	Expiry date	Country
1	FMC Corporation	Bixlozone	36%	SC	Low	Herbicide	2026/9/2	the US
2	Nippon Soda Co., Ltd.	Picarbutrazox	10%	SC	Low	Fungicide	2026/9/2	Japan
3	Ishihara Sangyo Kaisha Ltd.	Isofetamid	400g/l	SC	Low	Fungicide	2026/12/29	Japan

Source: ICAMA & CCM

3 China's new registration of herbicide formulation, 2021

3.1 New registration of herbicide formulation by formulation type

In 2021, among all the new registrations of pesticide formulations in China, 949 were herbicide formulations coming in 17 formulation types. By formulation types, the top 3 made up 606 new registrations, accounting for 63.9% of the total in this category.

Table 3.1-1 New registrations of herbicide formulation in China by formulation type, 2021

No.	Formulation type	Code	Number of registrations
1	Emulsifiable concentrate	EC	224
2	Oil dispersion	OD	196
3	Soluble concentrate	SL	186
4	Suspension concentrate	SC	92
5	Wettable powder	WP	56
6	Water dispersible granule	WG	47
7	Micro-emulsion	ME	44
8	Water soluble granule	SG	32
9	Suspo-emulsion	SE	23
10	Granule	GR	18
11	Water soluble powder	SP	12
12	Emulsion, oil in water	EW	8
13	Capsule suspension	CS	6
14	Mixed formulations of CS and SC	ZC	2
Other			3
Total			949

Source: ICAMA & CCM

3.2 New registration of herbicide formulation by toxic level

There had been 949 new registrations of herbicide formulations in 2021, among which 866 were low-toxic, 79 were mild-toxic and 4 were moderate-toxic.

Table 3.2-1 New registrations of herbicide formulation in China by toxic level, 2021

No.	Toxicity	Number of registrations
1	Low	866
2	Mild	79
3	Moderate	4
Total		949

Source: ICAMA & CCM

3.3 China's main registrants of herbicide formulation, 2021

The 949 new registrations of herbicide formulations were held by 278 registrants in 2021. Top 12 registrants gained 227 approvals, taking up 24.0% of the total herbicide formulations ones; each gained 11 or above registrations.

Table 3.3-1 Main registrants of new herbicide formulation registration in China, 2021

No.	Registrant (EN)	Registrant (CN)	Location	Number of registrations
1	Shandong Aokun Crop Science Co., Ltd.	山东奥坤作物科学股份有限公司	Shandong Province	40
2	Anhui Jintudi Biotechnology Co., Ltd.	安徽金土地生物科技有限公司	Anhui Province	26
3	Zhejiang Wynca Chemical Group Co., Ltd.	浙江新安化工集团股份有限公司	Zhejiang Province	26
4	Shandong Binnong Technology Co., Ltd.	山东滨农科技有限公司	Shandong Province	23
5	Tianjin Boke Baisheng Technology Co., Ltd.	天津博克百胜科技有限公司	Tianjin Municipality	21
6	Sichuan Lier Crop Science Co., Ltd.	四川利尔作物科学有限公司	Sichuan Province	15
7	Shandong Wanhao Chemical Co., Ltd.	山东万豪化工股份有限公司	Shandong Province	14
8	Zhejiang Zhongshan Chemical Industry Group Co., Ltd.	浙江中山化工集团股份有限公司	Zhejiang Province	14
9	Shandong Yueming Biological Technology Co., Ltd.	山东玥鸣生物科技有限公司	Shandong Province	13
10	Heilongjiang Lvfyngyuan Biotechnology Co., Ltd.	黑龙江绿丰源生物科技有限公司	Heilongjiang Province	12
11	Hubei Trisun Chemicals Co., Ltd.	湖北泰盛化工有限公司	Hubei Province	12
12	Shandong Lvbang Crop Science Co., Ltd.	山东绿邦作物科学股份有限公司	Shandong Province	11
Other				722
Total				949

Source: ICAMA & CCM

3.4 Active ingredient of China's new herbicide formulation, 2021

3.4.1 Top 10 active ingredients of herbicide formulation

Among 949 new registrations of herbicide formulations in 2021, there were 297 kinds of active ingredients. In particular, 450 new registrations applied for single active ingredient; 499 ones with two or three active ingredients.

The number of new registrations of the top 10 active ingredients reached 231, nearly 24.3% of the total. The main active ingredients included glyphosate, L-glufosinate, glufosinate ammonium, glyphosate•glufosinate ammonium, pinoxaden, etc.

Table 3.4.1-1 Top 10 active ingredients of herbicide formulation in China, 2021

No.	Active ingredient	Number of registrations
1	Glyphosate	35
2	L-Glufosinate	34
3	Glufosinate ammonium	27
4	Glyphosate•Glufosinate ammonium	22
5	Pinoxaden	22
6	2,4-D•Glyphosate	21
7	Metamifop•Cyhalofop-butyl	20
8	Fluoroglycofen-ethyl•Glufosinate ammonium	20
9	MCPA•Glyphosate	15
10	Metamifop	15
Total		231

Source: ICAMA & CCM

3.4.2 Top 16 active ingredients of single herbicide formulation

Among the 450 new registrations of single herbicide formulations, 98 kinds of active ingredients were involved. Calculated by the number of new registration, glyphosate and L-glufosinate was two most popular active ingredients accounting for 69 registrations altogether, followed by glufosinate ammonium, pinoxaden, metamifop, etc.

Table 3.4.2-1 Top 16 active ingredients of single herbicide formulation in China, 2021

No.	Active ingredient	Number of registrations
1	Glyphosate	35
2	L-Glufosinate	34
3	Glufosinate ammonium	27
4	Pinoxaden	22
5	Metamifop	15
6	Flumioxazin	12
7	Penoxsulam	11
8	Hexazinone	9
9	Cyhalofop-butyl	9
10	Mefenacet	9
11	Mesosulfuron-methyl	8
12	Clethodim	8
13	Isoxaflutole	8
14	Diflufenican	7
15	Pendimethalin	7
16	Bentazone	7
Total		228

Source: ICAMA & CCM

3.4.3 Top 15 active ingredients of mixed herbicide formulation

There were 199 kinds of active ingredients combinations were used in 499 mixtures registered under the new herbicide formulation category. By the number of new registrations, the top 15 active ingredients included glyphosate•glufosinate ammonium, 2,4-D•glyphosate, metamifop•cyhalofop-butyl, fluoroglycofen-ethyl•glufosinate ammonium, as well as MCPA•glyphosate, etc., accounting for 191 new registrations.

Table 3.4.3-1 Top 15 active ingredients of mixed herbicide formulation in China, 2021

No.	Active ingredient	Number of registrations
1	Glyphosate•Glufosinate ammonium	22
2	2,4-D•Glyphosate	21
3	Metamifop•Cyhalofop-butyl	20
4	Fluoroglyphofen-ethyl•Glufosinate ammonium	20
5	MCPA•Glyphosate	15
6	Triclopyr•Glyphosate	12
7	Nicosulfuron•Mefenacet•Atrazine	12
8	Florasulam•Carfentrazone-ethyl	10
9	Oxyfluorfen•Glufosinate ammonium	10
10	Flumioxazin•Glufosinate ammonium	9
11	Quinclorac•Atrazine	9
12	2,4-D-ethylhexyl•Acetochlor•Metribuzin	8
13	Pretilachlor•Bensulfuron-methyl	8
14	2,4-D-ethylhexyl•Acetochlor	8
15	Flumioxazin•Pendimethalin	7
Total		191

Source: ICAMA & CCM

3.4.4 Newly registered active ingredient of herbicide formulation

In 2021, Anhui Jukai Agrochemical Co., Ltd. obtained two registrations of tembotrione 8% OD and tembotrione•atrazine 23.5% OD, which hadn't been registered in China before. FMC Corporation, had one new herbicide formulation registered, bixlozone 36% SC.

Table 3.4.4-1 Newly registered herbicide active ingredients held by domestic enterprises, 2021

Registrant	Active ingredient	Content	Type	Toxicity	Expiry date	Region
Anhui Jukai Agrochemical Co., Ltd.	Tembotrione	8%	OD	Low	2026/12/29	Anhui Province
	Tembotrione•Atrazine	23.5%	OD	Low	2026/12/29	

Source: ICAMA & CCM

Table 3.4.4-2 Newly registered herbicide active ingredient held by foreign enterprises, 2021

Registrant	Active ingredient	Content	Type	Toxicity	Expiry date	Country
FMC Corporation	Bixlozone	36%	SC	Low	2026/9/2	the US

Source: ICAMA & CCM

4 China's new registration of insecticide formulation, 2021

4.1 New registration of insecticide formulation by formulation type

In 2021, among all the new registrations of pesticide formulations in China, 667 were insecticide formulations coming in 22 different formulation types. By formulation types, the top 10 made up 635 new registrations, accounting for 95.2% of the total in this category.

Table 4.1-1 New registrations of insecticide formulation in China by formulation type, 2021

No.	Formulation type	Code	Number of registrations
1	Suspension concentrate	SC	342
2	Granule	GR	87
3	Water dispersible granule	WG	64
4	Emulsifiable concentrate	EC	36
5	Flowable concentrate for seed treatment	FS	26
6	Micro-emulsion	ME	21
7	Oil dispersion	OD	18
8	Soluble concentrate	SL	18
9	Wettable powder	WP	13
10	Emulsion, oil in water	EW	10
11	Capsule suspension	CS	8
12	Smoke generator	FU	5
13	Mixed formulations of CS and SC	ZC	4
14	Water soluble granule	SG	3
15	Water soluble powder	SP	3
	Other		6
	Total		667

Source: ICAMA & CCM

4.2 New registration of insecticide formulation by toxic level

There had been 667 new registrations of insecticide formulations in 2021, among which 489 were low-toxic, 26 low-toxic (TC: highly toxic), 79 mild-toxic.

Table 4.2-1 New registrations of insecticide formulation in China by toxic level, 2021

No.	Toxicity	Number of registrations
1	Low	489
2	Mild	79
3	Moderate	56
4	Low (TC: highly toxic)	26
5	Moderate (TC: highly toxic)	17
Total		667

Source: ICAMA & CCM

4.3 China's main registrants of insecticide formulation, 2021

The 667 new registrations of herbicide formulations were held by 304 registrants in 2021. The top 3 registrants hold 53 approvals all located in Shaanxi Province, accounting for 7.9% of the total insecticide formulations ones.

Table 4.3-1 Main registrants of new insecticide formulation registration in China, 2021

No.	Registrant	Registrant (CN)	Location	Number of registrations
1	Shaanxi Meibang Pharmaceutical Group Co., Ltd.	陕西美邦药业集团股份有限公司	Shaanxi Province	20
2	Shaanxi Yitianfeng Crop Technology Co., Ltd.	陕西亿田丰作物科技有限公司	Shaanxi Province	17
3	Shaanxi Tunpsion Biotechnology Co., Ltd.	陕西汤普森生物科技有限公司	Shaanxi Province	16
4	Shanghai Yuelian Biotech Co., Ltd.	上海悦联生物科技有限公司	Shanghai Municipality	13
5	Shandong Caoda Chemicals Co., Ltd.	山东曹达化工有限公司	Shandong Province	9
6	SixF Crop Protection Co., Ltd.	六夫丁作物保护有限公司	Henan Province	9
7	Shandong Wanhao Chemical Co., Ltd.	山东万豪化工股份有限公司	Shandong Province	7
8	Shandong United Pesticide Industry Co., Ltd.	山东省联合农药工业有限公司	Shandong Province	7
9	Tianjin Huayu Pesticide Co., Ltd.	天津市华宇农药有限公司	Tianjin Municipality	6
10	Shaanxi Sunger Road Bio-Science Co., Ltd.	陕西上格之路生物科学有限公司	Shaanxi Province	6
11	Kaifeng Yitian Biotechnology Co., Ltd.	开封一田生物科技有限公司	Henan Province	6
12	Jiangxi Zhonghe Chemical Co., Ltd.	江西众和化工有限公司	Jiangxi Province	6
13	Hunan Xinchangshan Agricultural Development Co., Ltd.	湖南新长山农业发展股份有限公司	Hunan Province	6

No.	Registrant	Registrant (CN)	Location	Number of registrations
14	Hebei Xingbai Agricultural Technology Co., Ltd.	河北兴柏农业科技有限公司	Hebei Province	6
15	Guangxi Tianyuan Biochemistry Co., Ltd.	广西田园生化股份有限公司	Guangxi Province	6
16	Anhui Meilan Agricultural Development Co., Ltd.	安徽美兰农业发展股份有限公司	Anhui Province	6
Other				521
Total				667

Source: ICAMA & CCM

4.4 Active ingredient of China's new insecticide formulation, 2021

4.4.1 Top 12 active ingredients of insecticide formulation

In 2021, among the 667 new registrations of all insecticide formulations, there were 251 new registrations of single insecticide formulations with 65 different active ingredients; and 416 ones with two or three active ingredients, consisting of 153 combinations altogether.

Counted by number of new registrations, the top 12 active ingredient and/or mixture took up 229 (=34.3%) of the total insecticides formulation registrations. Clothianidin, flonicamid•bifenthrin, thiamethoxam, bifenthrin•clothianidin were amongst the top 4.

Table 4.4.1-1 Top 12 active ingredients of insecticide formulation in China, 2021

No.	Active ingredient	Number of registrations
1	Clothianidin	33
2	Flonicamid•Bifenthrin	30
3	Thiamethoxam	22
4	Bifenthrin•Clothianidin	21
5	Abamectin-aminomethyl	20
6	Abamectin-aminomethyl•Lufenuron	20
7	Chlorfenapyr•Lufenuron	19
8	Flonicamid	15
9	Abamectin	14
10	Dinotefuran	13
11	Clothianidin•Chlorfenapyr	11
12	Clothianidin•Cyfluthrin	11
Total		229

Source: ICAMA & CCM

4.4.2 Top 10 active ingredients of single insecticide formulation

In China, 251 single insecticide formulations were newly registered in 2021, surging by 191.86% year on year, with 65 kinds of active ingredient. The top 3 active ingredients were clothianidin, thiamethoxam, abamectin-aminomethyl.

Table 4.4.2-1 Top 10 active ingredients of single insecticide formulation in China, 2021

No.	Active ingredient	Number of registrations
1	Clothianidin	33
2	Thiamethoxam	22
3	Abamectin-aminomethyl	20
4	Flonicamid	15
5	Abamectin	14
6	Dinotefuran	13
7	Lufenuron	9
8	Imidacloprid	7
9	Petroleum oil	7
10	Spirotetramat	5
Total		145

Source: ICAMA & CCM

4.4.3 Top 11 active ingredients of mixed insecticide formulation

There were 416 kinds of mixed formulations registered under the insecticide category, accounting for 62.37% of the total new production certificates of insecticide formulation in 2021. Thereinto, the top 4 mixtures of insecticide active ingredients were flonicamid•bifenthrin, bifenthrin•clothianidin, abamectin-aminomethyl•lufenuron, chlorfenapyr•lufenuron, registered under 90 approvals.

Table 4.4.3-1 Top 11 active ingredients of mixed insecticide formulation in China, 2021

No.	Active ingredient	Number of registrations
1	Flonicamid•Bifenthrin	30
2	Bifenthrin•Clothianidin	21
3	Abamectin-aminomethyl•Lufenuron	20
4	Chlorfenapyr•Lufenuron	19
5	Clothianidin•Chlorfenapyr	11
6	Clothianidin•Cyfluthrin	11

No.	Active ingredient	Number of registrations
7	Thiamethoxam•Lambda-cyhalothrin	9
8	Thiamethoxam•Bifenthrin	9
9	Flonicamid•Spirotetramat	8
10	Etoxazole•Bifenazate	8
11	Acetamiprid•Flonicamid	7
Total		153

Note: Etoxazole•Bifenazate totalled 15 new registrations of mixed formulations in 2021—8 were used as mixed insecticides ones, 7 as acaricides.

Source: ICAMA & CCM

4.4.4 Newly registered active ingredients of insecticide formulation

China marked 5 newly registered insecticide active ingredients in 2021, which were approved on 3 Sept., 2021; these registrations were all filed by Chinese enterprises.

Table 4.4.4-1 Newly registered insecticide active ingredients, 2021

No.	Active ingredient	Content	Type	Toxicity	Expiry date	Registrant	Region
1	Cordyceps javanica Ij01	200 billion spore/g	WP	Low	2026/9/2	Guangdong Dafeng Plant Protection Technology Co., Ltd.	Guangdong Province
2	Cordyceps javanica JS001	5 billion spore/mcg	OD	Low	2026/9/2	Institute of Plant Protection, Jiangsu Academy of Agricultural Sciences	Jiangsu Province
3	Hetero-chitooligosaccharide	7.50%	SL	Low	2026/9/2	Zhongke Rongxin (Suzhou) Bio Technology Co., Ltd.	Jiangsu Province
4	Sanguinarinum sulfate	1%	SL	Mild	2026/9/2	Shaanxi Xiannong Biology Science Co., Ltd.	Shaanxi Province
5	Thiorantraniliprole	10%	SC	Low	2026/9/2	Zhejiang Udragon Chemical Co., Ltd.	Zhejiang Province

Source: ICAMA & CCM

5 China's new registration of fungicide formulation, 2021

5.1 New registration of fungicide formulation by formulation type

In 2021, among all the new registrations of pesticide formulations in China, 539 were fungicide formulations coming in 20 different formulation types. Suspension concentrate (SC) made up 216 new registrations, accounting for 40.1% of the total in this category.

Table 5.1-1 New registrations of fungicide formulation in China by formulation type, 2021

No.	Formulation type	Code	Number of registrations
1	Suspension concentrate	SC	216
2	Water dispersible granule	WG	76
3	Flowable concentrate for seed treatment	FS	49
4	Soluble concentrate	SL	38
5	Granule	GR	37
6	Wettable powder	WP	34
7	Emulsion, oil in water	EW	18
8	Emulsifiable concentrate	EC	15
9	Micro-emulsion	ME	13
10	Suspo-emulsion	SE	13
11	Water soluble powder	SP	6
12	Capsule suspension	CS	5
13	Emulsion for seed treatment	ES	4
14	Oil dispersion	OD	4
15	Paste	PA	4
16	Water soluble granule	SG	3
	Other		4
	Total		539

Source: ICAMA & CCM

5.2 New registration of fungicide formulation by toxic level

Among China's new registrations of fungicide formulations in 2021, 467 were low-toxic plus 1 low-toxic (TC: highly toxic), 51 slight-toxic, etc.

Table 5.2-1 New registrations of fungicide formulation in China by toxic level, 2021

No.	Toxicity	Number of registrations
1	Low	467
2	Mild	51
3	Moderate	20
4	Low (TC: highly toxic)	1
Total		539

Source: ICAMA & CCM

5.3 China's main registrants of fungicide formulation, 2021

The 539 new registrations of fungicide formulations were held by 260 registrants in 2021; the top 15 registrants held 22.8% of the total and each obtained ≥ 6 new registrations. Specifically, Shaanxi Meibang Pharmaceutical Group Co., Ltd. and Shaanxi Tunpsion Biotechnology Co., Ltd., Shanghai Yuelian Biological Technology Co., Ltd. topped the list.

Table 5.3-1 Main registrants of new fungicide formulation registration in China, 2021

No.	Registrant	Registrant (CN)	Location	Number of registrations
1	Shaanxi Meibang Pharmaceutical Group Co., Ltd.	陕西美邦药业集团股份有限公司	Shaanxi Province	23
2	Shaanxi Tunpsion Biotechnology Co., Ltd.	陕西汤普森生物科技有限公司	Shaanxi Province	13
3	Shanghai Yuelian Biotech Co., Ltd.	上海悦联生物科技有限公司	Shanghai Municipality	10
4	BrightMart Cropscience Co., Ltd.	广东省佛山市盈辉作物科学有限公司	Guangdong Province	9
5	Jiangsu Youjia Plant Protection Co., Ltd.	江苏优嘉植物保护有限公司	Jiangsu Province	7
6	Ningbo Sunjoy Agrosience Co., Ltd.	宁波三江益农化学有限公司	Zhejiang Province	7
7	ADAMA Anpon (Jiangsu) Co., Ltd.	安道麦安邦（江苏）有限公司	Jiangsu Province	6
8	Guangxi Tianyuan Biochemistry Co., Ltd.	广西田园生化股份有限公司	Guangxi Province	6
9	Qingdao Zhongda Agritech Co., Ltd.	青岛中达农业科技有限公司	Shandong Province	6
10	Shandong Huimin Vanda Biological Technology Co., Ltd.	山东惠民中联生物科技有限公司	Shandong Province	6
11	Shandong Qilin Agricultural Co., Ltd.	山东麒麟农化有限公司	Shandong Province	6
12	Qingdao Audis Bio-Tech Co., Ltd.	山东省青岛奥迪斯生物科技有限公司	Shandong Province	6
13	Shaanxi Kanghelifeng Bioscience and Pharmacy Co., Ltd.	陕西康禾立丰生物科技药业有限公司	Shaanxi Province	6

No.	Registrant	Registrant (CN)	Location	Number of registrations
14	Sichuan Baishi Dongwang Biotechnology Co., Ltd.	四川百事东旺生物科技有限公司	Sichuan Province	6
15	Yunnan Yunda Technology Agrochemical Co., Ltd.	云南云大科技农化有限公司	Yunnan Province	6
Other				416
Total				539

Source: ICAMA & CCM

5.4 Active ingredient of China's new fungicide formulation, 2021

5.4.1 Top 12 active ingredients of fungicide formulation

China issued 539 new fungicide formulation certificates with 263 active ingredients/ingredient combinations in 2021. Specifically, the number of new registrations of the top 12 active ingredients reached 125, taking over 23.2% of the total new fungicide formulations; ranking first in 2021, pyraclostrobin was registered for 21 new approvals, followed by pyraclostrobin•tebuconazole, oxine-copper•kasugamycin, fludioxonil.

Table 5.4.1-1 Top 12 active ingredients of fungicide formulation in China, 2021

No.	Active ingredient	Number of registrations
1	Pyraclostrobin	21
2	Pyraclostrobin•Tebuconazole	13
3	Oxine-copper•Kasugamycin	13
4	Fludioxonil	11
5	Pyraclostrobin•Boscalid	10
6	Bacillus subtilis	10
7	Fludioxonil•Azoxystrobin•Metalaxyl-M	9
8	Copper hydroxide	9
9	Trifloxystrobin•Tebuconazole	8
10	Bordeaux mixture	7
11	Fluopicolide•Cyazofamid	7
12	Copper oxychloride	7
Total		125

Source: ICAMA & CCM

5.4.2 Top 13 active ingredients of single fungicide formulation

In China, 217 new registrations of single fungicide formulations was set down with 86 different active ingredients. By number of new registrations, pyraclostrobin, fludioxonil and bacillus subtilis took the top 3, accounting for 19.3% of the total single formulations.

Table 5.4.2-1 Top 13 active ingredients of single fungicide formulation in China, 2021

No.	Active ingredient	Number of registrations
1	Pyraclostrobin	21
2	Fludioxonil	11
3	Bacillus subtilis	10
4	Copper hydroxide	9
5	Bordeaux mixture	7
6	Copper oxychloride	7
7	Kasugamycin	6
8	Oligosaccharins	5
9	Chlorothalonil	5
10	Boscalid	5
11	Hymexazol	5
12	Fluazinam	5
13	Berberine	5
Total		101

Source: ICAMA & CCM

5.4.3 Top 10 active ingredients of mixed fungicide formulation

In 2021, 177 combinations of active ingredients were used in 322 new registrations of mixed fungicide formulations. The registration number of new mixed fungicide formulations of the top 10 active ingredients reached 81, accounting for 25.2% of the total; the top 4 were oxine-copper•kasugamycin, pyraclostrobin•tebuconazole, pyraclostrobin•boscalid, fludioxonil•azoxystrobin•metalaxyl-M.

Table 5.4.3-1 Top 10 active ingredients of mixed fungicide formulation in China, 2021

No.	Active ingredient	Number of registrations
1	Oxine-copper•Kasugamycin	13
2	Pyraclostrobin•Tebuconazole	13
3	Pyraclostrobin•Boscalid	10

No.	Active ingredient	Number of registrations
4	Fludioxonil•Azoxystrobin•Metalaxyl-M	9
5	Fluopicolide•Cyazofamid	7
6	Trifloxystrobin•Tebuconazole	7
7	Pyraclostrobin•Difenoconazole	6
8	Pyraclostrobin•Epoconazole	5
9	Fluopicolide•Metalaxyl-M	5
10	Fludioxonil•Metalaxyl-M	5
Total		81

Source: ICAMA & CCM

5.4.4 Newly registered active ingredient of fungicide formulation

In 2021, there were 7 new fungicide active ingredients firstly registered in 7 registration certificates by different registrants. Among them, two were from Japanese pesticide enterprises and in the form of suspension concentrate (SC).

Table 5.4.4-1 Newly registered fungicide active ingredients held by domestic enterprises, 2021

No.	Active ingredient	Content	Type	Toxicity	Expiry date	Registrant	Region
1	Bacillus velezensis (CGMCC No.14384)	200 billion CFU/g	WG	Mild	2026/9/2	Sichuan Baishi Dongwang Biotechnology Co., Ltd.	Sichuan Province
2	Bacillus nematocida (B16)	500 million CFU/g	DP	Mild	2026/9/2	Yunnan University	Yunnan Province
3	Chitin oligosaccharide	5.00%	SL	Low	2026/9/2	Zhongke Rongxin (Suzhou) Bio Technology Co., Ltd.	Jiangsu Province
4	Fenpropimorph	750g/l	EC	Low	2026/11/9	Shandong Weifang Rainbow Chemical Co., Ltd.	Shandong Province
5	Resveratrol	0.20%	SL	Low	2026/12/29	Inner Mongolia Kingbo Biotech Co., Ltd.	Inner Mongolia Autonomous Region

Note: Fenpropimorph 750g/l EC was approved for export only on 10 Nov. 2021.

Source: ICAMA & CCM

Table 5.4.4-2 Newly registered fungicide active ingredients held by foreign enterprises, 2021

No.	Active ingredient	Content	Type	Toxicity	Expiry date	Registrant	Country
1	Picarbtrazox	10%	SC	Low	2026/9/2	Nippon Soda Co., Ltd.	Japan
2	Isofetamid	400g/l	SC	Low	2026/12/29	Ishihara Sangyo Kaisha Ltd.	Japan

Source: ICAMA & CCM

6 New export-only registration of pesticide formulation in China

6.1 Export-only registration of pesticide formulation by category

In 2021, there were 99 new export-only pesticide formulation registrations under 4 categories in China, including 67 herbicides, 20 insecticides, 8 fungicides, 4 plant growth regulators.

Table 6.1-1 China's new registrations of export-only formulation by category, 2021

No.	Category	Number of registrations
1	Herbicide	67
2	Insecticide	20
3	Fungicide	8
4	Plant growth regulator	4
Total		99

Source: ICAMA & CCM

6.2 Export-only registration of pesticide formulation by formulation type

In 2021, the total 99 China's new export-only pesticide formulation registrations can be sorted by 11 formulation types, 79 (=79.8%) registrations of which are dominated by the top 4 formulation types.

Table 6.2-1 China's new registrations of export-only formulation by formulation type, 2021

No.	Formulation type	Code	Number of registrations
1	Emulsifiable concentrate	EC	24
2	Soluble concentrate	SL	21
3	Suspension concentrate	SC	18
4	Water dispersible granule	WG	16
5	Water soluble granule	SG	7
6	Wettable powder	WP	7
7	Emulsion, oil in water	EW	2
8	Aqueous solution	AS	1
9	Macro granule	GG	1
10	Micro-emulsion	ME	1
11	Paste	PA	1
Total			99

Source: ICAMA & CCM

6.3 Export-only registration of pesticide formulation by toxic level

China has 99 new registrations of export-only formulations in 2021, a sharp increase from the 1 registration in 2020. In terms of toxicity, 77 new approvals of formulations for export only were low-toxic, 10 mild-toxic, 10 moderate-toxic, 1 was low-toxic (TC: highly toxic) and 1 moderate-toxic (TC: highly toxic).

Table 6.3-1 China's new registrations of export-only formulation by toxic level, 2021

No.	Toxicity	Number of registrations
1	Low	77
2	Mild	10
3	Moderate	10
4	Low (TC: highly toxic)	1
5	Moderate (TC: highly toxic)	1
Total		99

Source: ICAMA & CCM

6.4 Active ingredient of China's export-only pesticide formulation, 2021

In 2021, there were 58 kinds of active ingredients and combinations altogether in the 99 new registrations of export-only pesticide formulations. The new registrations with one active ingredient reached 95, accounting for 96.0% of the total; the popular active ingredients in single formulations include glyphosate, glufosinate-ammonium, fipronil, fenoxaprop-P-ethyl and chlorimuron-ethyl. Meanwhile, 4 were registered with two or three active ingredients: acetochlor•metsulfuron-methyl•bensulfuron-methyl, diuron•hexazinone, imidacloprid•spirotriamat•bifenthrin, thidiazuron•diuron.

Table 6.4-1 Top 18 active ingredients of single formulation for export only, 2021

No.	Active ingredient	Main specification	Main category	Number of registrations
1	Glyphosate	450g/l SL, 37% SL, 72% SG & 45.4% SG	Herbicide	13
2	Glufosinate ammonium	85% SG, 5.66% SL, 280g/l SL & 150g/l SL	Herbicide	5
3	Fipronil	50g/l SC, 80% WG	Insecticide	4
4	Fenoxaprop-P-ethyl	69g/l EC, 120g/l EC, 140g/l EC & 200g/l EC	Herbicide	4
5	Chlorimuron-ethyl	25% WP, 50% WP, 25% WG & 75% WG	Herbicide	4
6	Chlorothalonil	500g/l SC, 90% WG	Fungicide	3
7	Imidacloprid	240g/l SC, 22.6% SC & 100g/l SL	Insecticide	3
8	Carfentrazone-ethyl	240g/l EC, 228g/l EW	Herbicide	3
9	2,4-D dimethyl amine salt	400g/l SL, 806g/l SL	Herbicide	2
10	Abamectin	36g/l EC, 38g/l EC	Insecticide	2
11	Prosulfocarb	800g/l EC	Herbicide	2

No.	Active ingredient	Main specification	Main category	Number of registrations
12	Acetamiprid	200g/l SL, 75% WG	Insecticide	2
13	Pendimethalin	400g/l EC	Herbicide	2
14	Haloxyfop-P-methyl	520g/l EC, 240g/l EC	Herbicide	2
15	Abamectin-aminomethyl	29g/l EC, 8.8% WG	Insecticide	2
16	Sulfentrazone	500g/l SC	Herbicide	2
17	Fluazifop-P-butyl	250g/l EW, 12.5% EC	Herbicide	2
18	Terbacil	80% WP, 80% WG	Herbicide	2
Others				36
Total				95

Source: ICAMA & CCM

Table 6.4-2 Active ingredients of mixed formulation for export only, 2021

No.	Active ingredient	Content	Formulation type	Main category	Number of registrations
1	Acetochlor•metsulfuron-methyl•Bensulfuron-methyl	10%	GG	Insecticide	1
2	Diuron•Hexazinone	60%	WP	Herbicide	1
3	Imidacloprid•Spirotetramat•Bifenthrin	570g/l	SC	Plant growth regulator	1
4	Thidiazuron•Diuron	180g/l	SC	Herbicide	1
Total					4

Source: ICAMA & CCM

Table 6.4-3 China's firstly registered active ingredient of pesticide formulation for export only, 2021

Active ingredient	Content	Formulation type	Main category	Number of registrations
Fenpropimorph	750g/l	EC	Fungicide	1

Source: ICAMA & CCM

6.5 Registrant of pesticide formulation for export only in China

There are 35 Chinese enterprises obtained the 99 new registrations of pesticide formulations for export valid in 2021–2026. 74.3% of these registration holders with 84 approvals were located in East China, including Bayer CropScience (China) Co., Ltd., the China-based subsidiary of the overseas pesticide group holding 2 export-only registrations, namely, fipronil 80% WG & fipronil 50g/l SC.

Table 6.5-1 China's registrants of export-only pesticide formulation, 2021

No.	Registrant (EN)	Registrant (CN)	Location	Number of registrations
1	Zhejiang Wynca Chemical Group Co., Ltd.	浙江新安化工集团股份有限公司	Zhejiang Province	21
2	Shandong Weifang Rainbow Chemical Co., Ltd.	山东潍坊润丰化工股份有限公司	Shandong Province	13
3	Max (Rudong) Chemicals Co., Ltd.	迈克斯(如东)化工有限公司	Jiangsu Province	8
4	Jiangsu Flag Chemical Industry Co., Ltd.	江苏中旗科技股份有限公司	Jiangsu Province	7
5	Jiangsu Repont Agrochemical Co., Ltd.	江苏瑞邦农化股份有限公司	Jiangsu Province	5
6	Shandong United Pesticide Industry Co., Ltd.	山东省联合农药工业有限公司	Shandong Province	5
7	Hebei Xingbai Agricultural Technology Co., Ltd.	河北兴柏农业科技有限公司	Hebei Province	3
8	Oriental (Luzhou) Agrochemicals Co., Ltd.	泸州东方农化有限公司	Sichuan Province	3
9	Bayer CropScience (China) Co., Ltd.	拜耳作物科学(中国)有限公司	Zhejiang Province	2
10	Lier Chemical Co., Ltd.	利尔化学股份有限公司	Sichuan Province	2
11	CAC Nantong Chemical Co., Ltd.	南通泰禾化工股份有限公司	Jiangsu Province	2
12	Ningxia Wynca Technology Co., Ltd.	宁夏新安科技有限公司	Ningxia Hui Autonomous Region	2
13	Shandong Binnong Technology Co., Ltd.	山东滨农科技有限公司	Shandong Province	2
14	Weifang Sino-agri Union Chemical Co., Ltd.	潍坊中农联合化工有限公司	Shandong Province	2
15	Sinon Chemical (China) Co., Ltd.	兴农药业(中国)有限公司	Shanghai Municipality	2
16	ADAMA Ltd.	安道麦股份有限公司	Hubei Province	1
17	ADAMA Huifeng (Jiangsu) Co., Ltd.	安道麦辉丰(江苏)有限公司	Jiangsu Province	1
18	Anhui Fengle Agrochemical Co., Ltd.	安徽丰乐农化有限责任公司	Anhui Province	1
19	Anhui Costar Biochemical Co., Ltd.	安徽国星生物化学有限公司	Anhui Province	1
20	Hangzhou Nutrichem Co., Ltd.	杭州颖泰生物科技有限公司	Zhejiang Province	1
21	Hubei Trisun Chemicals Co., Ltd.	湖北泰盛化工有限公司	Hubei Province	1
22	Hunan Tianye Biotechnology Co., Ltd.	湖南田野生物科技有限责任公司	Hunan Province	1
23	Jiangsu Bailing Agrochemical Co., Ltd.	江苏百灵农化有限公司	Jiangsu Province	1
24	Nantong Jiangshan Agrochemical & Chemicals Co., Ltd.	江苏省南通江山农药化工股份有限公司	Jiangsu Province	1

No.	Registrant (EN)	Registrant (CN)	Location	Number of registrations
25	Jiangsu Tuoqiu Agriculture Chemical Co., Ltd.	江苏托球农化股份有限公司	Jiangsu Province	1
26	Jiangsu Yong'an Chemical Co., Ltd.	江苏永安化工有限公司	Jiangsu Province	1
27	Jiangyin Suli Chemical Co., Ltd.	江阴苏利化学股份有限公司	Jiangsu Province	1
28	Ningxia Gerui Fine Chemical Co., Ltd.	宁夏格瑞精细化工有限公司	Ningxia Hui Autonomous Region	1
29	Qingdao Rainbow Chemical Co., Ltd.	青岛润农化工有限公司	Shandong Province	1
30	Qingdao KYX Chemical Co., Ltd.	山东省青岛凯源祥化工有限公司	Shandong Province	1
31	Shaoxing Eastlake High-Tech Co., Ltd.	绍兴东湖高科股份有限公司	Zhejiang Province	1
32	Shenyang Sciencreat Chemicals Co., Ltd.	沈阳科创化学品有限公司	Liaoning Province	1
33	Synwill Co., Ltd.	顺毅股份有限公司	Zhejiang Province	1
34	Zhejiang Heben Pesticide & Chemicals Co., Ltd.	浙江禾本科技股份有限公司	Zhejiang Province	1
35	Zhejiang Tide Cropscience Co., Ltd.	浙江泰达作物科技有限公司	Zhejiang Province	1
Total				99

Source: ICAMA & CCM

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