

Production and Market of Azoxystrobin in China

The Sixth Edition
February 2018

Researched & Prepared by:

Kcomber Inc.

Copyright by Kcomber Inc.

Any publication, distribution or copying of the content in this report is prohibited.

Contents

Executive summary	1
Methodology	2
1 Supply and demand of azoxystrobin in China	4
1.1 Supply of azoxystrobin	4
1.1.1 Registration	4
1.1.2 Overall production situation of azoxystrobin.....	6
1.1.3 Capacity and output of azoxystrobin technical, 2012–2016	7
1.1.4 China’s position in global azoxystrobin supply	10
1.2 Trade of azoxystrobin	11
1.2.1 Price, 2011–2017	11
1.2.2 Export of azoxystrobin, 2011–2016.....	13
1.3 Consumption of azoxystrobin in China	30
1.3.1 Consumption by volume and value, 2012–2016	30
1.3.2 Consumption by crops and regions, 2012–2016.....	31
1.3.3 Market challenge	33
1.3.4 Market trend	33
2 Technology.....	35
2.1 Technology	35
2.1.1 Brief Introduction to different methods	35
2.1.2 Comparison of different production methods	36
2.1.3 Research progress	37
2.2 Azoxystrobin upstream industry	38
2.2.1 Introduction.....	38
2.2.2 Raw material (current supply, consumption, price change and factor, future trend, etc.)	39
2.2.3 Impact of raw material on azoxystrobin industry	42
3 Competitiveness landscape	43
4 Future forecast on azoxystrobin, 2017–2021	44
4.1 Key factors for the development of azoxystrobin in China.....	44
4.1.1 Policy	44
4.1.2 Attitudes of producers and end users towards azoxystrobin.....	44
4.1.3 Resistance.....	45
4.2 Future forecast on azoxystrobin, 2017–2021	45
5 Conclusion and commercial opportunities	49
6 Profile of major Chinese azoxystrobin producers.....	50
6.1 Taizhou Bailly Chemical Co., Ltd.....	50
6.2 Shangyu Nutrichem Co., Ltd.	51
6.3 Shanghai Heben-Eastsun Medicaments Co., Ltd.....	51



6.4 CAC Nantong Chemical Co., Ltd.	52
6.5 Jingbo Agrochemicals Technology Co., Ltd.	53
6.6 Hangzhou Udragon Chemical Co., Ltd.	54
6.7 Jiangsu Luye Agrochemicals Co., Ltd.	55
6.8 Kaifeng Biocar Biochemical Co., Ltd.	56
6.9 Jiangsu Frey Agrochemicals Co., Ltd.	57
6.10 Hebei Veyong Bio-chemical Co., Ltd.	57

LIST OF TABLES

- Table 1.1.1-1 Registrations of azoxystrobin technical in China, as of 3 Jan., 2018
- Table 1.1.2-1 Companies obtaining the azoxystrobin technical production license (within its validity period) in China, as of 3 Jan., 2018
- Table 1.1.2-2 Basic information of azoxystrobin technical producers in China, as of 3 Jan., 2018
- Table 1.1.3-1 Capacity and output of azoxystrobin technical by producers in China, 2012–2016
- Table 1.2.2-1 China's exports of azoxystrobin by month, 2016
- Table 1.2.2-2 China's exports of azoxystrobin by month, 2015
- Table 1.2.2-3 China's exports of azoxystrobin by month, 2014
- Table 1.2.2-4 China's exports of azoxystrobin by month, 2013
- Table 1.2.2-5 China's export volume of azoxystrobin by destination, 2016, tonne
- Table 1.2.2-6 China's export volume of azoxystrobin by destination, 2015, tonne
- Table 1.2.2-7 China's export volume of azoxystrobin by destination, 2014, tonne
- Table 1.2.2-8 China's export volume of azoxystrobin by destination, 2013, tonne
- Table 1.2.2-9 China's export volume of azoxystrobin by exporter, 2016, tonne
- Table 1.2.2-10 China's export volume of azoxystrobin by exporter, 2015, tonne
- Table 1.2.2-11 China's export volume of azoxystrobin by exporter, 2014, tonne
- Table 1.2.2-12 China's export volume of azoxystrobin by exporter, 2013, tonne
- Table 1.3.1-1 Apparent consumption of azoxystrobin (calculated by 95% technical) in China, 2012–2016, tonne
- Table 1.3.1-2 Apparent consumption and market value of azoxystrobin formulations in China, 2012–2016
- Table 1.3.3-1 Market challenge of azoxystrobin in China
- Table 2.1.2-1 Comparison between different routes for producing azoxystrobin technical in China
- Table 2.1.3-1 Number of applications related to azoxystrobin in China, 2008–2017
- Table 2.1.3-2 Number of applications related to azoxystrobin by applicant in China, as of 2017
- Table 2.2.2-1 Capacity and output of key trimethyl orthoformate producers in China, 2012–2016
- Table 2.2.2-2 Consumption of trimethyl orthoformate in China by application field, 2012–2016
- Table 6.1-1 Key products of Taizhou Bailly Chemical Co., Ltd., H1 2017
- Table 6.1-2 Capacity and output of azoxystrobin technical in Taizhou Bailly Chemical Co., Ltd., 2015–2016
- Table 6.2-1 Key products of Shangyu Nutrichem Co., Ltd., H1 2017
- Table 6.2-2 Capacity and output of azoxystrobin technical in Shangyu Nutrichem Co., Ltd., 2015–2016
- Table 6.3-1 Key products of Shanghai Heben-Eastsun Medicaments Co., Ltd., H1 2017
- Table 6.3-2 Capacity and output of azoxystrobin technical in Shanghai Heben-Eastsun Medicaments Co., Ltd., 2015–2016
- Table 6.4-1 Key products of CAC Nantong Chemical Co., Ltd., H1 2017
- Table 6.4-2 Capacity and output of azoxystrobin technical in CAC Nantong Chemical Co., Ltd., 2015–2016
- Table 6.5-1 Key products of Jingbo Agrochemicals Technology Co., Ltd., H1 2017
- Table 6.5-2 Capacity and output of azoxystrobin technical in Jingbo Agrochemicals Technology Co., Ltd., 2015–2016
- Table 6.6-1 Key products of Hangzhou Udragon Chemical Co., Ltd., H1 2017
- Table 6.6-2 Capacity and output of azoxystrobin technical in Hangzhou Udragon Chemical Co., Ltd., 2015–2016
- Table 6.7-1 Key products of Jiangsu Luye Agrochemicals Co., Ltd., H1 2017
- Table 6.7-2 Capacity and output of azoxystrobin technical in Jiangsu Luye Agrochemicals Co., Ltd., 2015–2016
- Table 6.8-1 Key products of Kaifeng Biocar Biochemical Co., Ltd., H1 2017
- Table 6.8-2 Capacity and output of azoxystrobin technical in Kaifeng Biocar Biochemical Co., Ltd., 2015–2016
- Table 6.9-1 Key products of Jiangsu Frey Agrochemicals Co., Ltd., H1 2017
- Table 6.9-2 Capacity and output of azoxystrobin technical in Jiangsu Frey Agrochemicals Co., Ltd., 2015–2016
- Table 6.10-1 Key products of Hebei Veyong Bio-chemical Co., Ltd., H1 2017
- Table 6.10-2 Capacity and output of azoxystrobin technical in Hebei Veyong Bio-chemical Co., Ltd., 2015–2016

LIST OF FIGURES

- Figure 1.1.3-1 Capacity and output of azoxystrobin technical in China, 2012–2016
- Figure 1.1.3-2 Output of azoxystrobin technical in China by region, 2016
- Figure 1.1.4-1 China's export volume of azoxystrobin (converted to 95% technical) by destination, 2016
- Figure 1.2.1-1 Annual ex-works price of azoxystrobin technical in China, 2011–2017
- Figure 1.2.1-2 Monthly ex-works price of 96% azoxystrobin technical in China, Jan. 2015–Dec. 2017
- Figure 1.2.1-3 Annual ex-works price of azoxystrobin 25% SC in China, 2011–2017
- Figure 1.2.1-4 Annual ex-works price of azoxystrobin 50% WDG in China, 2011–2017
- Figure 1.3.2-1 Consumption of azoxystrobin in China by crop, 2016
- Figure 1.3.2-2 Consumption of azoxystrobin in China by crop (1), 2012–2016
- Figure 1.3.2-3 Consumption of azoxystrobin in China by crop (2), 2012–2016
- Figure 2.1.1-1 Route A for producing intermediate used in azoxystrobin technical production in China
- Figure 2.1.1-2 Route B for producing intermediate used in azoxystrobin technical production in China
- Figure 2.1.1-3 Route C for producing intermediate used in azoxystrobin technical production in China
- Figure 2.1.1-4 Process route of azoxystrobin technical production in China
- Figure 2.2.1-1 Trimethyl orthoformate's role in azoxystrobin technical synthesis
- Figure 2.2.2-1 Annual ex-works price of trimethyl orthoformate in Shandong Sinobioway Biomedicine Co., Ltd., 2012–2016
- Figure 2.2.2-2 Annual ex-works price of major raw materials of trimethyl orthoformate in China, 2012–2016
- Figure 4.2-1 Forecast on output of azoxystrobin technical (converted to 95% technical) in China, 2017–2021, tonne
- Figure 4.2-2 Forecast on export volume of azoxystrobin (converted to 95% technical) in China, 2017–2021
- Figure 4.2-3 Forecast on demand for azoxystrobin (converted to 95% technical) in China, 2017–2021
- Figure 4.2-4 Forecast on ex-works price of 96% azoxystrobin technical in China, 2017–2021

1. Introduction

Azoxystrobin is an important strobilurin fungicide in China. This report provides an overview of the azoxystrobin industry in China in the aspects of production, product price, exports and consumption, in an aim of unfolding the details of the downtrends and dig out the factors behind the market trends. A five-year forecast on supply and demand of the product is also given to help readers to gain insights into the foreseeable outlook of the industry.

2. Approach for this report

Methodology

This report is drafted by diverse methods as follows:

Desk research

Sources of desk research are various including published magazines, journals, government statistics, industrial statistics, customs statistics, associated seminars as well as information from the Internet. A lot of work has been done to compile and analyse the information obtained. When necessary, checks were made with Chinese market players regarding the market information such as production, demand, consumption and competition.

Telephone interview

The interviewees cover:

- Azoxystrobin manufacturers
- Traders
- Local governments
- Researchers
- Farmers
- Industrial associations

CCM carried out extensive telephone interviews with almost all azoxystrobin technical manufacturers. From those active manufacturers, potential manufacturers and even manufacturers who have stopped production, CCM sourced and verified detailed production and market situation as well as players' comments on azoxystrobin.

In a bid to understand the formulation application situation of azoxystrobin in China, CCM also made contact with domestic traders, sellers and farmers as well. To directly analyse the import and export situation of azoxystrobin technical and formulations, many importers and exporters were contacted whenever the verification was needed.

Raw material and intermediate suppliers are also contacted to get the price, supply information as well as government policies on raw materials and their impact on azoxystrobin.

Data processing and presentation

The data collected and compiled are sourced from:

- Published articles from Chinese periodicals, magazines, journals and third-party databases
- Government statistics & customs statistics
- Telephone interviews with Chinese manufacturers, traders, governments and farmers
- Professional databases from other sources
- Information from the Internet

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

3. Executive summary

Azoxystrobin is a strobilurin fungicide. After years' development, China's azoxystrobin market has become increasingly intense. More registrations have appeared and more azoxystrobin producers come out accordingly. As of H1 2017, there were XXX major producers of azoxystrobin technical in China, among which, there were XXX active producers. In 2016, the capacity and output of azoxystrobin were XXX t/a and XXX tonnes respectively. From 2012 to 2016, the compound annual growth rates (CAGR) of capacity and output of azoxystrobin technical were XXX and XXX respectively.

From 2011 to 2016, the annual ex-works price of azoxystrobin technical decreased in China, at a CAGR of XXX. And the annual ex-works price of azoxystrobin formulations also showed a downward trend during the same period. However, affected by the increasing production cost and tight supply, the annual ex-works prices of azoxystrobin technical, azoxystrobin 25% SC and azoxystrobin 50% WDG increased in 2017, at year-on-year growth rates of XXX, XXX and XXX, respectively.

From 2011 to 2016, China exported azoxystrobin products to more and more countries and regions and the number of exporters increased year by year. Moreover, in 2016, China's total export volume of azoxystrobin products (converted to 95% technical) was XXX tonnes, an increase of XXX year on year. And the top five destinations are India, Vietnam, Paraguay, Argentina and Uruguay, to which the export volume was accounted for XXX of the total.

From 2012 to 2016, the domestic apparent consumption of azoxystrobin (converted to 95% technical) in China increased from XXX tonnes to XXX tonnes. The CAGR of the consumption of azoxystrobin was XXX from 2012 to 2016. In 2016, the consumption of azoxystrobin (converted to 95% technical) in China increased by XXX year on year. Additionally, thanks to

the volume growth, the domestic market value of azoxystrobin (at ex-works level) increased by XXX year on year.

Thanks to increasing demand for azoxystrobin at home and abroad, it is forecasted that during 2017–2021, China's total output of azoxystrobin (calculated by 95% technical) will keep increasing and the total export volume of azoxystrobin (calculated by 95% technical) will continuously increase, with a CAGR of XXX. Domestic demand for azoxystrobin technical is expected to hit around XXX tonnes (calculated by 95% technical) in 2021, representing a CAGR of XXX in 2017–2021. And the ex-works price of 96% azoxystrobin technical will see a slight increase in 2018–2021.

4. What's in this report?

Note: Key data/information in this sample page is hidden, while in the report it is not.

.....

1 Supply and demand of azoxystrobin in China

1.1 Supply of azoxystrobin

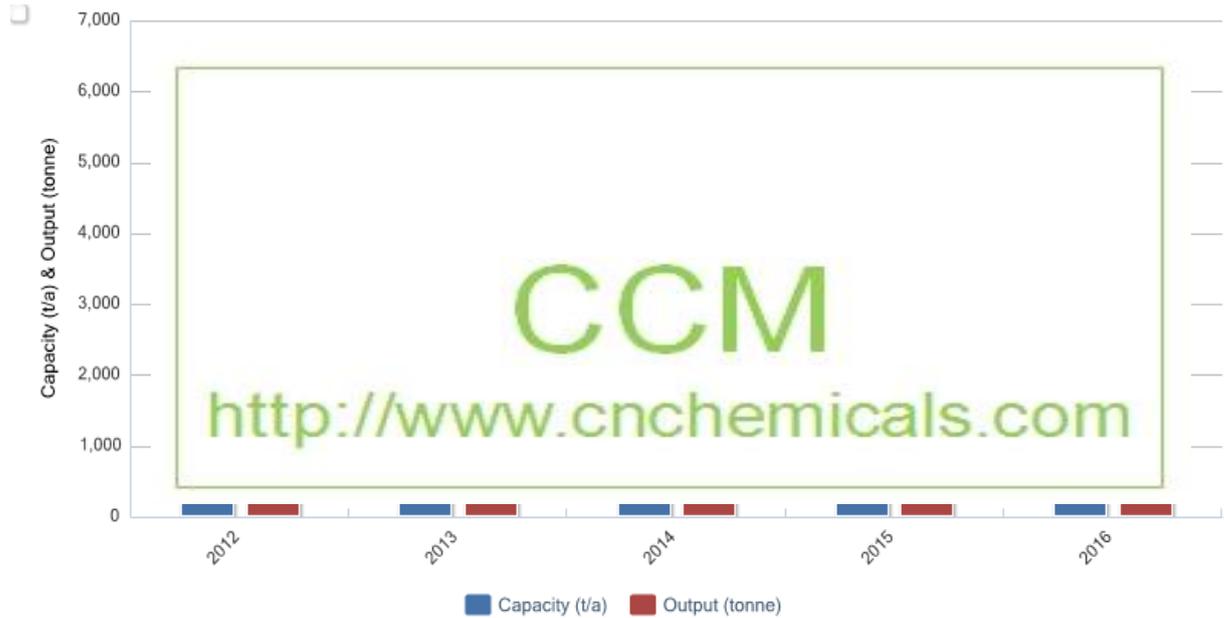
1.1.3 Capacity and output of azoxystrobin technical, 2012–2016

Thanks to the stimulation of overseas demand and active investment by domestic enterprises, the capacity and output of azoxystrobin have continued to grow in recent years. In 2016, although there was no increase in the capacity of azoxystrobin technical, the output achieved a significant year-on-year increase of XXX, being at XXX tonnes. From 2012 to 2016, the compound annual growth rates of capacity and output of azoxystrobin technical were XXX and XXX respectively.

As of H1 2017, there were XXX major producers of azoxystrobin technical in China, among which, there were XXX active producers. And XXX producers suspended the azoxystrobin production during the same period, including

.....

Figure 1.1.3-1 Capacity and output of azoxystrobin technical in China, 2012–2016



Source: CCM

Table 1.1.3-1 Capacity and output of azoxystrobin technical by producers in China, 2012–2016

No.	Producer	Region	Status, H1 2017	Capacity, t/a					Output, tonne				
				2016	2015	2014	2013	2012	2016	2015	2014	2013	2012
1	XXX	XXX	Active	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
2	XXX	XXX	Active	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
3	XXX	XXX	Active	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
4	XXX	XXX	Active	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
5	XXX	XXX	Active	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
...
Total				XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX

Source: CCM

.....

1.2.1 Price, 2011–2017

From 2011 to 2016, the annual ex-works price of azoxystrobin technical decreased in China, at a CAGR of XXX. And the annual ex-works price of azoxystrobin formulations also showed a

downward trend: for the price of azoxystrobin 25% SC and azoxystrobin 50% WDG, their CAGRs were XXX and XXX respectively. However, the annual ex-works prices of azoxystrobin technical, azoxystrobin 25% SC and azoxystrobin 50% WDG increased in 2017, at year-on-year growth rates of XXX, XXX and XXX, respectively.

.....

Figure 1.2.1-1 Annual ex-works price of azoxystrobin technical in China, 2011–2017



Note: The data in 2011–2013 were for 95% azoxystrobin technical and in 2014–2017 were for 96% azoxystrobin technical.

Source: CCM

.....

1.2.2 Export of azoxystrobin, 2011–2016

.....

In 2016, China exported azoxystrobin to XXX countries and regions, an increase of XXX over 2015, among which the export volume (converted to 95% technical) to the top XXX destinations amounted to XXX tonnes, accounting for XXX of the total. And the top five destinations are XXX, XXX, XXX, XXX and XXX, to which the export volume was accounted for XXX of the total.

In 2016, the number of China's azoxystrobin exporters reached XXX, an increase of XXX over 2015, among which the export volume (converted to 95% technical) of the top XXX exporters reached XXX tonnes, accounting for XXX of the total.

.....

Table 1.2.2-1 China's exports of azoxystrobin by month, 2016

No.	Month	Azoxystrobin 95% technical		Azoxystrobin 96% technical		Azoxystrobin 97% technical		...	Total (calculated by 95% technical)
		Volume (tonne)	Price (USD/kg)	Volume (tonne)	Price (USD/kg)	Volume (tonne)	Price (USD/kg)		
1	Jan.	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
2	Feb.	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
3	March	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
4	April	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
5	May	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
6	June	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
7	July	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
8	Aug.	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
9	Sept.	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
10	Oct.	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
11	Nov.	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
12	Dec.	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
Total		XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX

Note: Total price in the table refers to average price.

Source: China Customs & CCM

.....

4.2 Future forecast on azoxystrobin, 2017–2021

It is forecasted that China's total output of azoxystrobin technical will XXX in 2017–2021, driven by XXX from both domestic and overseas markets.

Domestic demand for azoxystrobin technical is expected to hit around XXX tonnes (calculated by 95% technical) in 2021, XXX in 2017–2021, which is mainly attributed to the expansion of cash crop planting area and its high effectiveness.

Furthermore, it is forecasted that China's total export volume of azoxystrobin (calculated by 95% technical) will XXX in the next few years, at a CAGR of XXX during 2017–2021, based on the

advantages of advanced quality of products and continuously XXX demand for azoxystrobin technical and formulations in overseas market.

The ex-works price of 96% azoxystrobin technical will see a slight XXX during 2018–2021, mainly due to the following reasons:

.....

If you want more information, please feel free to contact us.

Tel: +86-20-37616606 Fax: +86-20-37616968

Email: econtact@cnchemicals.com