

Forecasts on Pests and Diseases of Corn, Rice and Wheat in China

The First Edition

Feb. 2018

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1. Introduction

Based on comprehensive analysis of previous occurrence of pests and diseases, crop distribution, planting methods, climatic trend and other factors, it is predicted that the occurrence of major crop pests and diseases will remain severe in 2018. Overall occurrence area will reach 0.33 billion ha (5 billion mu). Wheat head blight, rice planthoppers, rice leaf rollers and cotton bollworms are very likely to occur heavily. Asiatic rice borers, rice sheath blight, wheat aphids and corn borers will occur heavily and affect a large area. Armyworms, rice blast, wheat stripe rust, corn northern leaf blight and potato late blight will occur heavily in some regions. Occurrence of migratory locusts will be stable on the whole, while highly dense occurrence is possible to appear in some areas. Occurrence of major crop pests, diseases, weeds and rodents was heavy in China in 2017 with an occurrence area of 0.43 billion ha (6.5 billion mu) and a prevention and control area of 0.54 billion ha (8.1 billion mu).

This report provides the forecasts on the occurrence of pests and diseases of corn, rice and wheat in 31 provinces/cities throughout China in 2018 in detail.

2. Approach for this report

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.

3. Executive summary

Based on comprehensive analysis of previous occurrence of pests and diseases, crop distribution, planting methods, climatic trend and other factors, it is predicted that the occurrence of major crop pests and diseases will remain severe in 2018. Overall occurrence area will reach xxx billion ha (xxx billion mu). Wheat head blight, rice planthoppers, rice leaf rollers and cotton bollworms are very likely to occur heavily. Asiatic rice borers, rice sheath blight, wheat aphids and corn borers will occur heavily and affect a large area. Armyworms, rice blast, wheat stripe rust, corn northern leaf blight and potato late blight will occur heavily in some regions. Occurrence of migratory locusts will be stable on the whole, while highly dense occurrence is possible to appear in some areas.

Occurrence of major crop pests, diseases, weeds and rodents was heavy in China in 2017 with an occurrence area of xxx billion ha (xxx billion mu) and a prevention and control area of xxx billion ha (xxx billion mu). Specifically,

- Rice pests and diseases occurred moderately. Occurrence of pests was slightly severer than that of diseases. Some regions were struck heavily by Asiatic rice borers.
- Wheat pests and diseases occurred heavily.
- Corn pests and diseases occurred heavily. Cotton bollworms, armyworm and corn borers occurred heavily in some regions.
- Potato pests and diseases occurred slightly. Potato late blight occurred slightly in the north.
- Cotton pests and diseases occurred moderately. Cotton spider mites occurred heavily in Xinjiang Uygur Autonomous Region, while cotton mirids occurred heavily in the Yellow River basin.
- Farmland weeds occurred heavily. Barnyard grasses have high resistance to herbicides in the middle and lower reaches of the Yangtze River, rice growing regions in Northeast China and Northwest China.
- Occurrence of rodents was moderate to heavy in agricultural areas. Rodents occurred heavily and affected a large area in most of Northeast China, most of South China, and parts of Northwest China.
- Occurrence of locusts was slight to moderate in agricultural areas. There was highly dense occurrence in some areas of Jilin, Shandong and Shaanxi provinces.

Structure of planting industry needs to be further optimized, despite of the stable planting area. It is predicted that planting area of grain crops will reach more than xxx billion ha (xxx billion mu). Planting area of grain crops was generally stable in 2017, reaching xxx billion ha (xxx billion mu). Compared with 2016, in 2017, China's corn planting area decreased by xxx million ha (xxx million mu), soybean planting area increased by over xxx million ha (xxx million mu), planting area of coarse cereals increased by xxx million ha (xxx million mu) and planting area of high quality feed crops increased by over xxx million ha (xxx million mu). And planting area of oil-bearing crops increased, while that of oilseed rape basically remained unchanged.

Development of plant protection equipment is closely related to plant protection level. China's plant protection unmanned aerial vehicles (UAVs) developed rapidly in 2017, which is likely to remain in 2018. In 2017, China's total number of large and medium-sized plant protection equipment reached xxx units. Number of in-use plant protection UAVs owned by growers in China reached xxx units in 2017 with an operating area of more than xxx million ha (xxx million mu). Moreover, operating area of rented plant protection UAVs reached over xxx million ha (xxx million mu). In 2017, total operating area of plant protection UAVs exceeded xxx million ha (xxx million mu), while the operating area of manned helicopters and fixed wing aircrafts exceeded xxx million ha (xxx million mu). Demand for high-efficient plant protection equipment will remain strong in 2018. And as the plant protection UAV market continues to heat up, it is predicted that quantity of plant protection UAVs demanded will reach about xxx units with an operating area of xxx million ha (xxx million mu). Influenced by aerial crop protection, demand for self-propelled sprayers will remain basically unchanged, while those self-propelled sprayers that used in orchard will increase.

This report provides the forecasts on the occurrence of pests and diseases of corn, rice and wheat in 31 provinces/cities throughout China in 2018 in detail.

Note: In China, people use the term "coarse cereals" to define grain crops besides rice, wheat, corn, soybean and tuber crops.

4. What's in this report?

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

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1 Forecasts on pests and diseases of three major crops in China in 2018

1.1 Forecasts on rice pests and diseases in China in 2018

Table 1.1-1 Forecasts on occurrence area of rice pests in China, 2016–2018, million ha

No.	Pest	Occurrence area		
		2016	2017	2018
1	Rice planthopper	XXX	XXX	XXX
2	Rice leaf roller	XXX	XXX	XXX
3	Asiatic rice borer	XXX	XXX	XXX
4	Yellow rice borer	XXX	XXX	XXX
5	Rice gall midge, Japanese rice leaf miner and other pests	XXX	XXX	XXX
/	Total	XXX	XXX	XXX

Source: National Agricultural Technology Extension and Service Center (NATESC)

Table 1.1-2 Forecasts on occurrence area of rice diseases in China, 2016–2018, million ha

No.	Disease	Occurrence area		
		2016	2017	2018
1	Rice sheath blight	XXX	XXX	XXX
2	Rice blast	XXX	XXX	XXX
3	Rice false smut	XXX	XXX	XXX
4	Rice virus diseases	XXX	XXX	XXX
5	Rice bacterial leaf blight, rice bacterial foot rot, rice bakanae disease and other rice diseases	XXX	XXX	XXX
/	Total	XXX	XXX	XXX

Source: NATESC

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1.2 Forecasts on corn pests and diseases in China in 2018

Table 1.2-1 Forecasts on occurrence area of corn pests in China, 2016–2018, million ha

No.	Pest	Occurrence area		
		2016	2017	2018
1	Corn borer	XXX	XXX	XXX
1.1	First-generation corn borer	XXX	XXX	XXX
1.2	Second-generation corn borer	XXX	XXX	XXX
1.3	Third-generation corn borer	XXX	XXX	XXX
2	Armyworm	XXX	XXX	XXX
3	Cotton bollworm	XXX	XXX	XXX
...	...	XXX	XXX	XXX
/	Total	XXX	XXX	XXX

Source: NATESC

Table 1.2-2 Forecasts on occurrence area of corn diseases in China, 2016–2018, million ha

No.	Disease	Occurrence area		
		2016	2017	2018
1	Corn northern leaf blight	XXX	XXX	XXX
2	Corn southern leaf blight	XXX	XXX	XXX
3	Southern corn rust	XXX	XXX	XXX
4	Corn brown spot	XXX	XXX	XXX
5	Corn curvularia leaf spots	XXX	XXX	XXX
6	Corn head smut	XXX	XXX	XXX
7	Corn smut, corn rough dwarf, corn top rot, corn stem rot, corn ear rot, corn gray leaf spot, corn dwarf nematode and other diseases	XXX	XXX	XXX
/	Total	XXX	XXX	XXX

Source: NATESC

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