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Crop pests and diseases monitoring and forecasting **Global**

China, South and Southeast Asia

September 2019

Minor infestation of pest and disease on rice

Overview

Integrated with multi-source Earth Observation data, e.g. meteorological data, field data, and remote sensing data (such as GF series and HJ series in China, MODIS and Landsat series in US, Sentinel series in EU), and self-developed models and algorithms for crop pest and disease monitoring and forecasting, AIR (RADI) constructed the 'Crop pests and diseases monitoring and forecasting system', which could regularly release thematical maps and reports on main crop pests and diseases in whole China.

In September 2019, rice blast (*magnaporthe oryzae*) and rice planthopper (*nilaparvata lugens*) slightly occurred in twelve main rice production countries, including China, India, Thailand, Bangladesh, Indonesia, Myanmar, Vietnam, Cambodia, Philippines, Pakistan, Nepal and Laos.

Rice blast

The distribution and statistics of rice blast in China, South and Southeast Asia are shown

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in Figure 1 and Table 1. The total rice area in China is about 30 million hectares, the area affected by rice blast accounts for 4% of the total rice areas, with the disease mainly occurred in Northeast and Central China. In India, the total rice area is about 44 million hectares, the disease accounts for 12% of total rice area, mainly in the Gangetic plain and Northeast India. In Thailand, the total rice area is about 13 million hectares, 7% of rice areas are infested, mainly in south and central Chao Phraya Plain, and south Korat plateau. In Bangladesh, the total rice area is about 10 million hectares, the affected areas reach 9%, essentially occurred in Central Gangetic plain. In Indonesia, the total rice area is about 14 million hectares, the affected areas reach 11% of cultivated areas, occurred mainly in North Sumatra, and Java. In Myanmar, the total rice

area is about 7 million hectares, the disease affects 6% of rice areas, mainly in northern regions of hills area and Central Irrawaddy delta. In Vietnam, the total rice area is about 7 million hectares, the fungus occurs in 5% of rice growing areas, mainly in South Mekong Delta. In Cambodia, the total rice area is about 3 million hectares, the affected areas are 7% of rice areas, mainly in regions of rice areas. In Philippines, the total rice area is about 4 million hectares, the disease affects 9% of rice areas,

mainly occurred in rice growing area of Luzon plain. In Pakistan, the total rice area is about 3 million hectares, the pathogen occurs in 8% of rice areas, mainly occurred in North Punjab. The total rice area in Nepal is about 2 million hectares, the affected area accounts for 6% of rice land, mainly occurred in Central Nepal. In Laos, the total rice area is about 1 million hectares, the affected areas cover 8% of rice areas mainly occurred in South Laos.



Figure 1 Distribution of rice blast in China, South and Southeast Asia (September 2019)

Rice planthopper

The distribution and statistics of rice planthopper in China, South and Southeast Asia are shown in Figure 2 and Table 1. The area affected by rice planthopper in China accounts for 20% of the total rice area, with the pest mainly occurred in middle and lower Yangtze region, and South China. In India, the pest occurs accounts for 26% of total rice area, mainly occurred in Gangetic plain and eastern coastal areas of India. In Thailand, the insect affects 22% of rice areas, mainly in southern and northern region of the Chao Phraya Plain

and western region of the Korat plateau. Affected areas in Bangladesh reach 24%, especially in Central Gangetic plain. The affected areas in Indonesia reach 13% of cultivated areas, mainly occurred in southern regions of Sumatra, and Central Java. In Myanmar the insect affects 24% of rice areas, mainly in northern regions of hills area and Central Irrawaddy delta. In Vietnam infested areas cover 31% of rice areas mainly in northern regions of the Red River Delta, South Mekong Delta, and eastern regions of coastal

areas. In Cambodia, the southern regions of rice areas are affected, representing 15% of rice areas. In Philippines, 12% of rice areas suffered from rice planthopper, mainly in rice growing area of Luzon plain. In Pakistan the

pest occurs in 14% of rice areas, mainly in northern Punjab. The affected area in Nepal accounts for 17% of rice land, mainly in central regions. In Laos, The affected area accounts for 23% of rice land, mainly in southern region.



Figure 2 Distribution of rice planthopper in China, South and Southeast Asia (September 2019)

Table 1 Statistics of rice disease and pest in China, South and Southeast Asia (September 2019)

Rice production countries	Disease and pest occurrence ratio / %		Total planted area/ million hectares
	Rice blast	Rice planthopper	
China	4	20	30
India	12	26	44
Thailand	7	22	13
Bangladesh	9	24	10
Indonesia	11	13	14
Myanmar	6	24	7
Vietnam	5	31	7
Cambodia	7	15	3
Philippines	9	12	4
Pakistan	8	14	3
Nepal	6	17	2
Laos	8	23	1

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Chinese



English

The crop pests and diseases monitoring and forecasting system are available under:

<http://www.rscropmap.com/>

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Disclaimer

The geographic borders are purely a graphical representation and are only intended to be indicative. The boundaries do not necessary reflect the official position.

Mission statements: As the science and knowledge service, the Sino-UK Crop Pest and Disease Forecasting & Management Joint Laboratory is to support independent evidence for crop monitoring.

Supported by the Strategic Priority Research Program of the Chinese Academy of Sciences (XDA19080304), National Key R&D Program of China (2017YFE0122400, 2016YFB0501501), National Natural Science Foundation of China (61661136004/ST/N006712/1, 41801338, 41871339), Science and Technology Service program of Chinese Academy of Sciences (KFJ-ST-S-ZDTP-054).

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