

Aerospace Information Research Institute, Chinese Academy of Sciences
Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences
Key laboratory of Digital Earth Science, Chinese Academy of Sciences
Sino-UK Crop Pest and Disease Forecasting & Management Joint Laboratory
Key Lab of Aviation Plant Protection, Ministry of Agriculture and Rural Affairs, P.R. China

Crop pests and diseases monitoring and forecasting Global America, Brazil, Argentina, and China 2018

Minor infestation of pest and disease on soybean

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 2018, soybean mosaic virus and soybean aphid (*Aphis glycines* Matsumura) slightly occurred in four main soybean production countries, including America, Brazil, Argentina, and China.

Soybean mosaic virus

The total soybean area in America is about

Content

Overview	1
Soybean mosaic virus	1
Soybean aphid	3
Contact us	5

35.7 million hectares, the area affected by soybean mosaic virus accounts for 4.6% of the total soybean areas, with the disease mainly occurred in northwestern and eastern regions of the soybean planting areas. The distribution and statistics of soybean mosaic virus in America are shown in Figure 1 and Table 1. In Brazil, the total soybean area is about 35.5 million hectares, the disease accounts for 2.0% of total soybean area, slightly occurred in the whole soybean planting areas. The distribution and statistics of soybean mosaic virus in Brazil are shown in Figure 2 and Table 1. In Argentina, the total soybean area is about 16.5 million hectares, 2.2% of soybean areas are slightly infested, mainly in western and eastern regions of the

soybean planting areas. The distribution and statistics of soybean mosaic virus in Argentina are shown in Figure 3 and Table 1. In China, the total soybean area is about 8.3 million hectares, the affected areas reach 2.7%,

slightly occurred in the whole soybean planting areas. The distribution and statistics of soybean mosaic virus in China are shown in Figure 4 and Table 1.

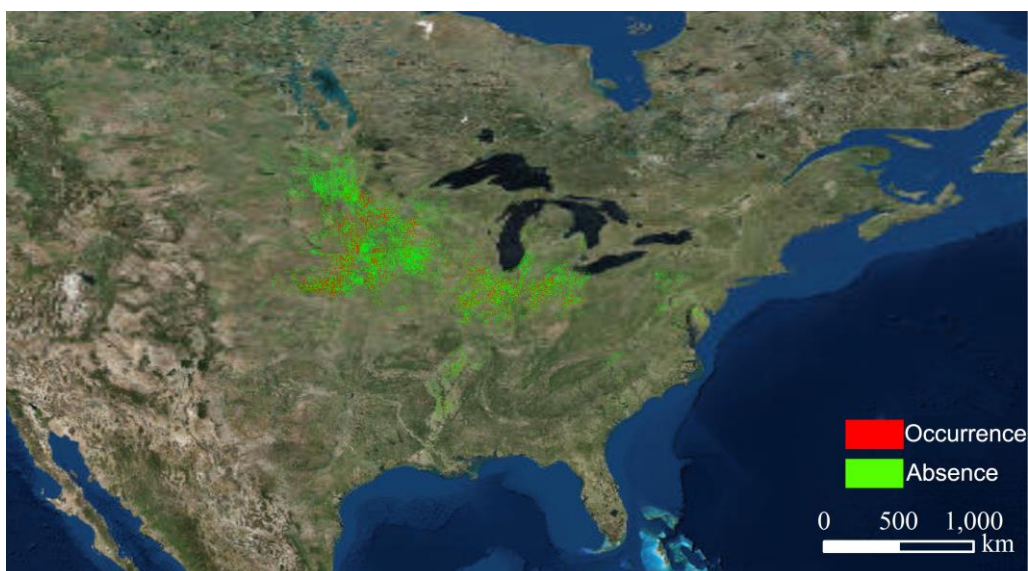


Figure 1 Distribution of soybean mosaic virus in America (2018)



Figure 2 Distribution of soybean mosaic virus in Brazil (2018)



Figure 3 Distribution of soybean mosaic virus in Argentina (2018)

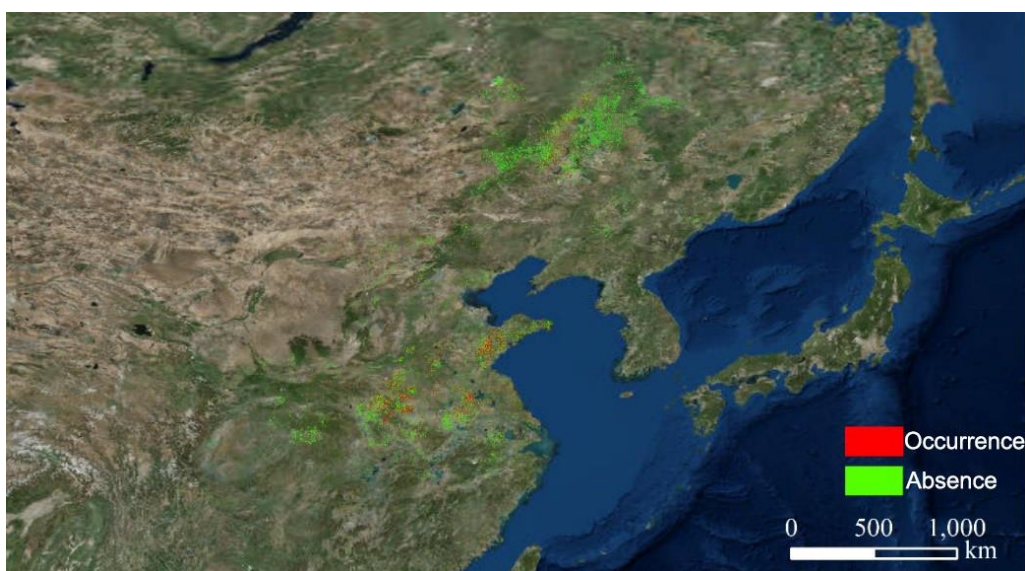


Figure 4 Distribution of soybean mosaic virus in China (2018)

Soybean aphid

The area affected by soybean aphid in America accounts for 2.1% of the total soybean areas, with the disease mainly occurred in eastern region of the soybean planting areas. The distribution and statistics of soybean aphid in America are shown in

Figure 5 and Table 1. The soybean aphid in China accounts for 3.5% of total soybean area, slightly occurred in the whole soybean planting areas. The distribution and statistics of soybean aphid in China are shown in Figure 6 and Table 1.

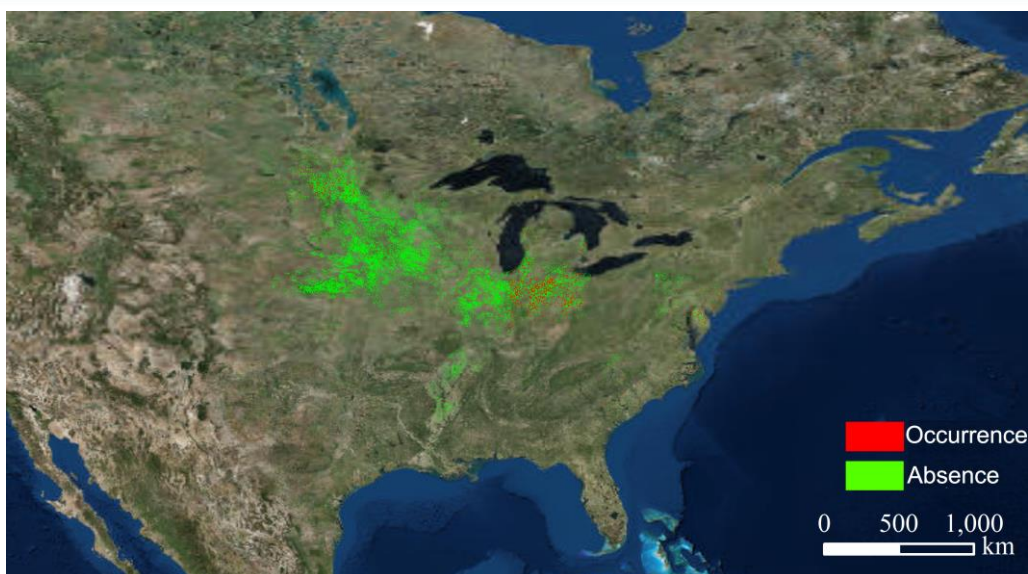


Figure 5 Distribution of soybean aphid in America (2018)

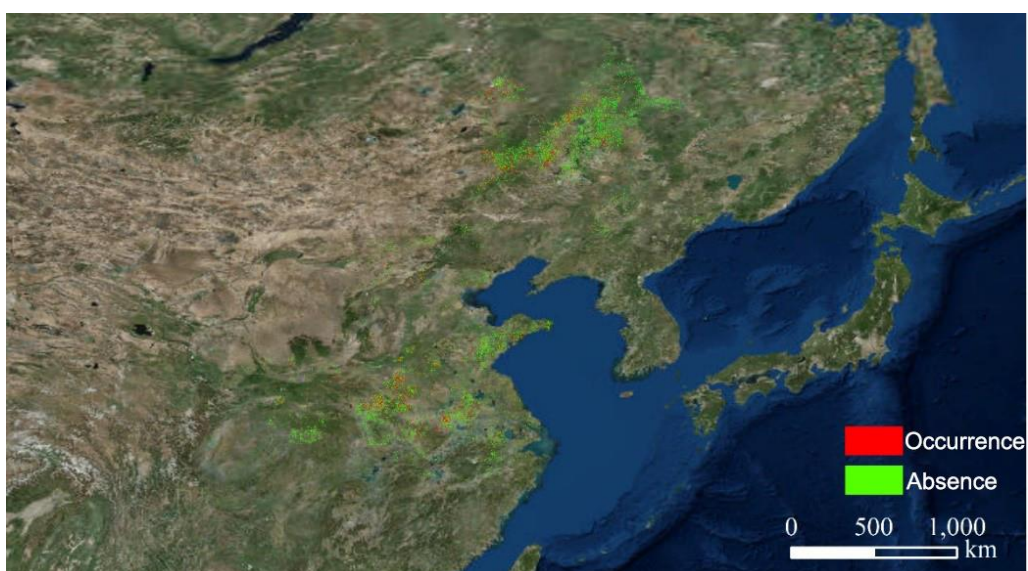


Figure 6 Distribution of soybean aphid in China (2018)

Table 1 Statistics of soybean disease and pest in four main production countries (2018)

Soybean production countries	Disease and pest occurrence ratio / %		Total planted area/ million hectares
	soybean mosaic virus	Soybean aphid	
America	4.6	2.1	35.7
Brazil	2.0	/	35.5
Argentina	2.2	/	16.5
China	2.7	3.5	8.3

Contact us

Institute of remote sensing and digital earth Chinese academy of sciences

No.9 Dengzhuang South Road, Haidian District,
Beijing 100094, P.R.China.

<http://rscrop.com/>

<http://www.rscropmap.com>

<http://www.wechat.com/en/>



Chinese

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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.

Contact us **Email:** rscrop@radi.ac.cn

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Corresponding author

Professor Wenjiang Huang

Institute of Remote Sensing and Digital Earth,
Chinese Academy of Sciences

Email: huanwj@radi.ac.cn

Tel: +86-10-82178178

FAX: +86-10-82178177

Main contributors

Chinese contributors: Yingying Dong, Huichun Ye, Yue Shi, Qiong Zheng, Huiqin Ma, Linyi Liu, Jingcheng Zhang, Jingfeng Huang, Xiangqun Nong, Bo Liu, Bei Cui, Linsheng Huang, Juhua Luo, Xiaoping Du, Xiaodong Yang, Yanhua Meng, Hong Chang, Qing Zhang, Dacheng Wang, Gang Sun, Dailiang Peng, Longlong Zhao, Wei Feng, Chao Ding, Xianfeng Zhou, Qiaoyun Xie, Weiping Kong, Cuicui Tang, Fang Xu, Jianli Li, Wenjing Liu, Junjing Lu, Bin Wu, Naichen Xing, Furan Song, Chuang Liu, Chao Ruan, Yun Geng, Yu Ren, Jing Jiang, Zhaochuan Wu, Anting Guo, Yu Jin.

Foreign contributors: Belinda Luke, Pablo Gonzalez-Moreno, Sarah Thomas, Timothy Holmes, Bryony Taylor, Feng Zhang, Hongmei Li, Wenhua Chen, Jason Chapman, Martin Wooster, Bethan Perkins, Hugh Mortimer, Jon Styles, Andy Shaw, Liangxiu Han, Yanbo Huang, Ruiliang Pu, Jadu Dash, Stefano Pignatti, Giovanni Laneve, Raffaele Casa, Simone Pascucci.