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香蕉寒冻害等级指标及灾损指标的初步研究(PDF)

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Title: Preliminary study on grade and loss indices of banana’s chilly and frozen damage

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关键词: 香蕉; 寒害; 冻害; 等级; 灾损; 指标

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摘要: 基于地理自然致灾和人工胁迫致灾试验、大田灾情调查、历史灾情反演、文献查阅等集成构建技术,分别建立了香蕉辐射型、平流型寒冻害等级指标及灾害损失指标,并规范了香蕉寒冻害等级下受害表观症状。这一结果对开展香蕉寒冻害动态监测预警与灾损量化评估等专项气象服务,以及开展香蕉寒冻害灾情调查和实施防寒减灾措施等均有积极的指导意义。

Abstract: Based on the integrated construction technology of geographical natural disaster-causing experiments and man-made disaster experiments, field disaster investigations, historical disaster inversion and literature consultation, a radiation and advection chilly/frozen damage grade and loss indices of banana were established, and the banana chilly/frozen damage apparent symptoms were formulated too. This result has a positive significance for special meteorological service of banana chilly/frozen damage dynamic monitoring and early warning and

loss evaluation, as well as for the banana chilly/frozen damage investigation and chilly/frozen damage reduction measures.

参考文献/REFERENCES

[1] 庞庭颐, 宾士益, 陈进民. 香蕉越冬低温指标的初步鉴定[J]. 广西气象, 1990, 11(3): 43-45. PANG Tingyi, BIN Shiyi, CHEN Jinmin. Study on the low temperature index in winter of banana [J]. Journal of Guangxi Meteorology, 1990, 11(3): 43-45. (in Chinese)

[2] 庞庭颐. 荔枝等果树的霜冻低温指标与避寒种植环境的选择[J]. 广西气象, 2000, 21(1): 12-14. PANG Tingyi. Frostbite low temperature index and selection of planting environment escaping cold for fruiters such as litchi[J]. Journal of Guangxi Meteorology, 2000, 21(1): 12-14. (in Chinese)

[3] 黄朝荣. 南宁市香蕉冷害指标及防御措施探讨[J]. 广西农业科学, 1990(3): 106-109. HUANG Chaorong. Study on the index of chilling injury and the defense to banana in Nanning City[J]. Guangxi Agricultural Sciences, 1990(3): 106-109. (in Chinese)

[4] 黄朝荣. 气象条件对香蕉生长和产量影响初步分析[J]. 中国农业气象, 1993, 14(2): 7-10. HUANG Chaorong. Analysis on the effects of meteorological conditions to banana growth and produce[J]. Chinese Journal of Agrometeorology, 1993, 14 (2): 7-10. (in Chinese)

[5] 张建平, 黄朝荣. 广西植蕉区香蕉越冬气温条件初探[J]. 广西农业科学, 1992(5): 212-214. ZHANG Jianping, HUANG Chaorong. Study on the temperature conditions in winter of banana planting areas in Guangxi[J]. Guangxi Agricultural Sciences, 1992(5): 212-214.(in Chinese)

[6] 刘玲, 高素华, 黄增明. 广东冬季寒害对香蕉产量的影响[J]. 气象, 2003, 29(10): 46-50. LIU Ling, GAO Suhua, HUANG Zengming. Impacts of cool injury in winter on banana yields in Guangdong Province[J]. Meteorology, 2003, 29(10): 46-50. (in Chinese)

[7] 邹瑜, 吴代东, 牟海飞, 等. 广西香蕉寒害冻害等级指标及发生规律研究[J]. 西南农业学报, 2011, 24(3): 941-944. ZOU Yu, WU Daidong, MOU Haifei, et al. Research on grade index and occurrence law to banana chilling and freezing injury in Guangxi[J]. Southwest China Journal of Agricultural Sciences, 2011, 24(3): 941-944. (in Chinese)

[8] 霍治国, 杜尧东, 姜燕, 等. 香蕉、 荔枝寒害等级. 中华人民共和国气象行业标准QX/T 80-2007. HUO Zhiguo, DU Yaodong, JIANG Yan, et al. Grade of cold damage for banana and litchi. The People’s Republic of China Meteorological Industry Standard, QX/T 80-2007. (in Chinese)

[9] 杜尧东, 毛慧琴, 刘锦銮. 华南地区寒害概率分布模型研究[J]. 自然灾害学报, 2003, 12(2): 103-107. DU Yaodong, MAO Huiqin, LIU Jinluani. Study on probability distribution models of cold damage in south China[J]. Journal of Natural Disasters, 2003, 12(2): 103-107(in Chinese)

[10] 杜尧东, 李春梅, 毛慧琴. 广东省香蕉与荔枝寒害致灾因子和综合气候指标研究[J]. 生态学杂志, 2006, 25(2): 225-230. DU Yaodong, LI Chunmei, MAO Huiqin. Disaster-inducing factors and integrated climatic index for banana and litchi chilling injuries in Guangdong Province[J]. Chinese Journal of Ecology, 2006, 25(2): 225-230.(in Chinese)

[11] 冯颖竹, 梁红, 黄璜. 广东冬季寒害指标研究[J]. 自然灾害学报, 2005, 14(1): 59-65. FENG Yingzhu, LIANG Hong, HUANG Huang. Study on index for winter’s chilling damage in Guangdong Province[J]. Journal of Natural Disasters, 2005, 14(1): 59-65.(in Chinese)

[12] 杜尧东, 李春梅, 毛慧琴, 等. 广东省香蕉寒害综合指数的时空分布特征[J]. 中国农业气象, 2008, 29(4):467-471. DU Yaodong, LI Chunmei, MAO Huiqin, et al. Temporal and spatial distribution of integrated chilling injury index for banana in Guangdong Province[J]. Chinese Journal of Agrometeorology, 2008, 29(4): 467-471.(in Chinese)

[13] 徐宗焕, 林俩法, 陈惠, 等. 香蕉低温害指标初探[J]. 中国农学通报, 2010(1): 205-209. XU Zonghuan, LIN Liangfa, CHENG Hui, et al. Primary research on index of freeze banana[J]. Chinese Agricultural Science Bulletin, 2010(1): 205-209. (in Chinese)

[14] 何燕, 谭宗琨, 冯原. 1999年严重霜冻、 冰冻天气对广西农业的影响[J]. 广西气象, 2000, 21(1): 6-8. HE Yan, TAN Zongkun, FENG Yuan. The effects of serious frostbite and freezing weather on Guangxi’s agriculture in 1999 [J]. Journal of Guangxi Meteorology, 2000, 21(1): 6-8. (in Chinese)

[15] 何燕, 潭宗琨, 欧钊荣, 等. 2008年初低温冻害对广西亚热带水果生产的影响[J]. 中国果业信息, 2008, 25(8): 20-25. HE Yan, TAN Zongkun, OU Zhaorong, et al. The influence of low temperature and freezing injury early in 2008 to subtropics fruit produce in Guangxi[J]. China Fruit, 2008, 25(8): 20-25. (in Chinese)

[16] 何燕, 苏永秀, 李政, 等. 基于GIS的广西香蕉种植生态气候区划研究[J]. 西南农业大学学报: 自然科学版, 2006, 28(4): 573-576. HE Yan, SU Yongxiu, LI Zheng, et al. Ecological and climate division of banana planting in Guangxi based on GIS[J]. Journal of Southwest Agricultural University: Natural Science. 2006, 28(4): 573-576. (in Chinese)

[17] 刘长全. 香蕉寒害研究进展[J]. 果树学报, 2006, 23(4): 448-453. LIU Changquan. Advances in research on chilling injury in banana[J]. Journal of Fruit Science, 2006, 23(4): 448-453. (in Chinese)

[18] 植石群, 刘锦銮, 杜尧东, 等. 广东省香蕉寒害风险分析[J]. 自然灾害学报, 2003, 12(2): 113-116. ZHI Shuquan, LIU Jinluan,

DU Yaodong, et al. Risk analysis of cold damage to banana in Guangdong Province[J]. Journal of Natural Disasters, 2003, 12(2): 113-116. (in Chinese)

[19] 莫泰义. 广西亚热带作物研究所作物遭受霜冻调查[J]. 广西热作科技, 2000(2): 23-25. MO Taiyi. Investigation of crops were suffer from frost in Guangxi subtropical crops research institute[J]. Guangxi Tropical Agriculture, 2000(2): 23-25. (in Chinese)

[20] 涂悦贤, 林举宾, 麦建辉. 90年代以来几次冬季寒害对广东农业生产的影响与对策[J]. 中国农业气象, 1997, 18(03): 51-55. TU Yuexian, IIN Jubin, MAI Jianhui. The influence of winter cold calamity in the 1990s to agricultural production of Guangdong Province and the countermeasure[J]. Chinese Journal of Agrometeorology, 1997, 18(03): 51-55. (in Chinese)

[21] 包辉昌, 刘世业, 何鹏. 不同寒害冻害天气类型对广西香蕉生产影响的初步分析[J]. 安徽农业科学, 2008, 36(23): 9953-9954. BAO Huichang, LIU Shiye, HE Peng. Analysis on the effects of different chilly Injury and frozen injury weather styles to banana produce in Guangxi Province[J]. Journal of Anhui Agri.Sci. 2008, 36(23): 9953-9954. (in Chinese)

[22] 林贵美, 李小泉, 韦绍龙, 等. 2011年早春我国香蕉寒害调查及寒害后恢复对策[J]. 南方农业学报, 2012, 43(11): 46-49. LIN Guimei, LI Xiaoquan, WEI Shaolong, et al. Investigation on chilling affected banana plantations during early spring season and restoration strategies[J]. Journal of Southern Agriculture, 2012, 43(11): 46-49. (in Chinese)

[23] 杨年珠. 中国气象灾害大典[M]. 广西卷. 北京: 气象出版社, 2007: 345-358. YANG Nianzhu. Chinese Meteorological Disasters Ceremony [M]. Volume of Guangxi Beijing: China Meteorological Press, 2007: 345-358. (in Chinese)

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