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## 近50年华北平原干热风时空分布特征(PDF)

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Title: Spatiotemporal distribution characteristics of dry hot windy days in North China Plain in recent 50 years

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关键词: 干热风; 华北平原; 气候变化; 区域分异

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摘要: 干热风是影响华北平原冬小麦生长发育及产量形成的重大农业气象灾害之一, 利用华北平原48个站点1961-2008年的逐日气象资料, 分析了近50年来各站点的干热风(高温低湿型/雨后青枯型)日数及区域分异规律, 结果表明: 就地理空间而言, 华北平原干热风日数总体上呈现中部高南北低的分布趋势; 在发生时间上, 除南部个别地区有增加的趋势外, 大部分区域干热风日数呈明显的递减趋势。进一步的分类研究则表明: 高温低湿型的与干热风总体时空分布趋势相近, 而雨后青枯型虽然也呈下降趋势, 但下降幅度远小于干热风总体情况, 并且在南部、西北部日数反而呈现增加趋势。了解干热风的时空分布特征, 可为进一步建立干热风监测预警模式奠定一定的理论和应用基础, 并可为当地农业生产决策提供参考。

Abstract: Dry hot windy days (DHD) is one of the main agrimeteorological disasters which happened mainly in May and June in the North China Plain (NCP), and can influence severely the growth development and yield of winter wheat. Using daily precipitation, temperature and wind speed data of 48 weather stations in North China Plain from 1961 to 2008, this paper analyzed the spatial and temporal variation of DHD in recent 50 years. Results show that: Spatially, DHD is higher in

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the middle area and lower in the southern and northern area; temporally, DHW is decreased obviously from 1961 for the most part of NCP except the southern plain. There are two kinds of DHDs: the first kind is hot and low humidity, and the second kind is high hot after rain (causing immature death). Spatiotemporal distribution of the first kind is similar to the general DHD, while the second kind decrease more slowly in the middle area and increase in southern and northwestern area. Characteristics of DHD spatial and temporal distribution provide a scientific basis for development of DHD monitoring and early warning system, and give a reference to local decision-making on agricultural production.

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