

## 沈阳地区农作物生长季热量资源变化特征

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## Characteristics of heat resources during crop growth season in Shenyang region, Liaoning province

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**摘要** 利用1958-2009年沈阳地区7个气象站逐日平均气温资料,采用常规统计方法分析了农作物生长季界限温度的热量资源变化趋势。以此为地方在气候变暖的环境下,调解农业种植结构,掌握因升温所带来的利弊关系,促进农业经济稳步发展。结果表明:沈阳地区农作物生长季各界限温度普遍存在始日提前、终日推后,持续时间延长,积温明显增多的变化趋势。 $\geq 0^{\circ}\text{C}$ 持续日数趋势延长11 d,活动积温趋势增加 $340^{\circ}\text{C}\cdot\text{d}$ ;  $\geq 5^{\circ}\text{C}$ 持续日数趋势延长13 d,积温趋势增加 $359^{\circ}\text{C}\cdot\text{d}$ ;  $\geq 10^{\circ}\text{C}$ 持续日数趋势延长12 d,积温趋势增加 $305^{\circ}\text{C}\cdot\text{d}$ ;  $\geq 20^{\circ}\text{C}$ 持续日数趋势延长8 d,积温趋势增加 $326^{\circ}\text{C}\cdot\text{d}$ 。初(终)日的地域分布特点为城市早(晚)于乡村、南部早(晚)于北部;不同界限温度下的积温变化特征为城市多于乡村、南部多于北部。

**关键词:** [沈阳地区](#) [热量资源](#) [界限温度](#) [持续日数](#) [积温](#)

**Abstract:** Based on daily mean air temperature data from 7 weather stations in Shenyang from 1958 to 2009, the heat resources characteristics for the different critical temperatures during crop growth season were analyzed by the conventionally statistical method. Under the global warming background, the analytical results were favorable to regulate the agricultural planting structure, master the disadvantageous and advantageous relations caused by warming and promote the local development of agricultural economy. The results indicate that the beginning day and ending day of various critical temperatures during crop growth season is ahead and delays, respectively. The duration is prolonged and accumulated temperature increases obviously. The lasting days of  $\geq 0^{\circ}\text{C}$ ,  $\geq 5^{\circ}\text{C}$ ,  $\geq 10^{\circ}\text{C}$  and  $\geq 20^{\circ}\text{C}$  accumulated temperature extend 11 days, 13 days, 12 days and 8 days, and their active accumulated temperature increase  $340^{\circ}\text{C}\cdot\text{d}$ ,  $359^{\circ}\text{C}\cdot\text{d}$ ,  $305^{\circ}\text{C}\cdot\text{d}$  and  $326^{\circ}\text{C}\cdot\text{d}$  respectively. The beginning days of various critical temperatures are earlier in city or in the south than in county or in the north, while the ending days are later in city or in the south than in county or in the north. Accumulated temperature changes of different critical temperatures are larger in city or in the south than in county or in the north.

**Keywords:** [Shenyang region](#), [Heat resources](#), [Critical temperature](#), [Lasting days](#), [Accumulated temperature](#)

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