

研究报告

气候变化对我国华北地区冬小麦发育和产量的影响

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摘要 验证作物模型在我国华北冬小麦主产区是否适应的基础上, 采用作物模型与气候模式相结合的研究方法, 定量化地模拟预测了未来100年气候变化对华北冬小麦生产的影响. 结果表明, 从2000~2004年, 华北地区冬小麦产量的模拟值与实测值的变化趋势基本一致, 且生育期和产量变化不大. 未来100年内华北地区冬小麦的生长期可能会有所缩短, 平均缩短8.4 d; 产量也会有不同程度的下降, 平均减产10.1%. 适当采取应对措施可以有效降低冬小麦的减产趋势.

关键词 [气候变化](#) [作物模型](#) [冬小麦](#) [发育](#) [产量](#)

分类号

Effects of climate change on winter wheat growth and yield in North China

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Abstract

With the combination of crop model and climate mode, this paper simulated and predicted the effects of climate change on the winter wheat production of North China in future 100 years. The results showed that from 2000 to 2004, the variation trend of simulated winter wheat production in North China was accordant with the measured one, and the difference of winter wheat's lifecycle and yield was not obvious. In the future 100 years, the lifecycle of winter wheat would be shortened by 8.4 days, and its yield would be decreased to different extent, with 10.1% as the average. If proper measures such as adjusting crop parameters and management measures were adopted, the decline of winter wheat yield could be mitigated effectively.

Key words [Climate change](#) [Crop model](#) [Winter wheat](#) [Growth](#) [Yield](#)

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