

研究论文

# 小麦增小穗育种方法与新种质资源拓宽研究

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**摘要** 为探求小麦超高产育种的新途径, 通过以“种内相对较少小穗早熟类型与相对较多小穗晚熟类型多次杂交形式”逐步完善了小麦双显性阶梯式增小穗育种新方法, 获得了早熟较多小穗(27~30个小穗)和晚熟多小穗(30~38个小穗)的新种质系列, 发现小麦中存在着显性可增性多小穗基因。进一步研究表明, 新种质具有三个特点: 一是多小穗性状呈显性可增性遗传特征; 二是幼穗分化速率显著提高, 比对照增加21.73%; 三是籽粒日灌浆量强度大, 形成大粒而饱满。同时还研究了栽培措施与产量潜力。

**关键词** [小麦](#) [多小穗](#) [新种质](#) [幼穗分化](#) [籽粒灌浆](#) [产量](#)

分类号

## A Breeding Method for Increasing Spikelet and Studies on Creation of New Germplasm Resource in Wheat

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**Abstract** The aim of the study is to create a new genetic resource and to solve problem about late maturing and withered grain in more spikelet wheat, and to set up a new method for high yield breeding in wheat. The new method is called double dominant by stages increasing spikelet breeding method. It is set up by three crossing with a few spikelets but early ripe variety (line) and a more spikelets but late ripe wheat. Double dominant is more spikelets and early maturing to combine and to show clearly hybrid vigor in F1. By stages is to do more crossing time to step by step increasing No. spikelets. By three stages crossing, the main results of the study are as follows: 1. The new genotypes were developed and its number of spikelets has been raised from 24 to 38, and early ripe genotypes with 27~30 spikelets. 2. A dominant spikelet gene has been discovered in wheat. 3. The new genotypes have a high rate of spikelet initiation. It is 21.73% higher than that of regular varieties (ck). 4. The genotypes have a fast grain full stage. 5. The relation of cultivation condition and potential of yield has been studied too.

**Key words** [Wheat](#) [More spikelet \(multispikelet\)](#) [Germplasm](#) [Spikelet initiation](#) [Full grain](#) [Yield](#)

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