

数量性状发育遗传模型及其分析方法的研究进展 Advance in Developmental Genetic Models and Analysis Methods for Quantitative Traits

叶子弘, 朱军 YE Zi-hong, ZHU Jun

浙江大学农学系, 杭州, 华家池校区, 310029 Agronomy Department, Zhejiang University, Hangzhou, Huajiachi Campus, 310029, China

收稿日期 修回日期 网络版发布日期 接受日期

摘要 发育遗传模型是同时反映性状遗传和发育本质、提供影响遗传变异及调整发育进程的有关因素的信息的模型。建立在群体遗传学基础上的直接效应模型适用于单一基因控制的简单性状。渐成模型将遗传变异分解成直接分量和渐成分量(母体效应和互作效应), 能更好地反映有机体遗传和发育的生物学机制。生长轨迹模型有效地综合了复杂性状各分量的发育动态, 可获得连续的、综合的、详细的、动态的发育信息。条件遗传分析方法不仅可以估算特定时间段的净效应, 且可将净效应分解为不同遗传分量, 了解各效应分量的相对贡献。

Abstract: Developmental genetic models and analysis methods for quantitative traits are presented. Developmental genetic models should reflect the genetic and developmental essence, and provide the information of the factors influencing the genetic variation and the developmental process. Direct effect models, which based on the population genetics, may be suitable to analyze simple traits with single gene. Epigenetic models can decompose the whole genetic variation into direct and epigenetic components (maternal effects and epigenetic interaction effects), so that biological mechanism can be better understood. Growth trace models effectively synthesize the developmental dynamics of components of complex traits. With them, continuous, compositive, detailed, and dynamic information of development is available. Conditional analysis method can not only estimate the net effects in a specific time interval, but also depose them into genetic components and help to appreciate the contributions of different effects.

关键词 [数量性状](#) [发育遗传模型](#) [分析方法](#) **Keywords** [quantitative traits](#) [developmental genetic models](#) [analysis methods](#)

分类号

Abstract

Key words

DOI:

通讯作者

扩展功能

本文信息

- ▶ [Supporting info](#)
- ▶ [PDF\(0KB\)](#)
- ▶ [\[HTML全文\]\(0KB\)](#)
- ▶ [参考文献](#)

服务与反馈

- ▶ [把本文推荐给朋友](#)
- ▶ [加入我的书架](#)
- ▶ [加入引用管理器](#)
- ▶ [复制索引](#)
- ▶ [Email Alert](#)
- ▶ [文章反馈](#)
- ▶ [浏览反馈信息](#)

相关信息

- ▶ [本刊中 包含“数量性状”的相关文章](#)
- ▶ 本文作者相关文章
- [叶子弘](#)
- [朱军YE Zi-hong](#)
- [ZHU Jun](#)