前插式直齿双控制分插机构设计与运动分析Design and Kinematic Analysis of Double Controlled Forward Transplanting Mechanism with Spur Gears

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关键词： 高速插秧机 分插机构 运动学分析 设计

摘 要： 阐述了水稻高速插秧机前插式直齿双控制分插机构设计方法和工作原理，建立了机构的运动学分析模型，使用ADAMS软件对该机构的运动进行了优化和仿真,获得了分插机构的运动轨迹和运动特性曲线。结果表明该机构能够实现插秧时秧爪所需的主要运动学目标。The design method and working principle of forward transplanting mechanism with spur gears was discussed, and the analytical model of mechanism kinematics was built. By using ADAMS, the motion simulation and optimization of transplanting mechanism were realized. At the same time, the motion trajectory and motion curves of transplanting mechanism were obtained. The result confirmed that the mechanism could meet the kinematic goals while transplanting.

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