

3WDZ-型自走式棉花打顶机设计 Design of WDZ Self-propelled Cotton Top Cutting

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摘要: 阐述了3WDZ-型自走式棉花打顶机的主要技术参数和主要部件的设计及结构特点。论述了打顶机械系统的特点, 研究开发了棉花打顶装置高度自动升降闭环控制系统。采用激光、超声波传感器对带茎秆的棉花进行了打顶高度测量试验, 试验结果表明激光传感器比超声波传感器测量的棉株高度误差小, 打顶控制系统和打顶机械系统能够满足棉花打顶的农艺要求。 The main technical factors and structure of the 3WDZ-6 type cotton top cutter was introduced. The characteristics of the mechanical system were presented, the research on automatic and closed-loop control system, which adjusted according to cotton height were also done. The cotton height experiment was tested using laser and ultrasonic sensors; the experimental results showed that the measuring error rate of the laser sensor was smaller than that of the ultrasonic sensor. The control and mechanical systems would meet the cotton top cutting agricultural requirements.

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