联合收获机粮食产量分布信息获取技术 Yield Distribution Information Measurement for Grain Combine Harvester

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关键词： 精细农业 粮食产量 分布信息 全球定位系统 小波滤波 流量传感器

摘 要： 针对精准农业田间信息获取技术的研究，提出了一种基于称重法的联合收获机粮食产量分布信息测量方法，可以提高联合收获机粮食流量监视的准确性。利用传统联合收获机的粮食传输特点，采用螺旋输送称重式原理组成联合收获机产量流量传感计量，解决了计量系统与动力直接传输相结合的技术问题，借助于GPS定位信息实现了联合收获机粮食流量动态计量以及田间粮食产量分布信息的测量。 In order to acquire field information in precision agriculture, a new measurement method of grain yield distribution is suggested based on weighing device. The new method could increase the accuracy of grain flow monitoring. According to grain transmission characteristics of the traditional combine harvesters, a new kind of grain flow sensor is developed with spiral propulsion weighing device. The device solves the several problems in present measurement system of grain flow such as direct power transmitting and effective signal detecting. Together with GPS positioning information, dynamic measurement of yield distribution information for grain combine harvester is realized.

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