农作物喷雾靶标自动探测器设计与应用　Design and Application of Crop Automatic Target Detection Device

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关键词：　作物 目标探测 对靶喷雾 红外辐射 设计

摘　要：　针对当前红外探测控制系统易受外界环境因素干扰、通用性差的缺陷，采用双红外发射、优化光路、增加接收面积，对红外靶标自动探测系统的光学部分进行了改进，并将整体探测装置改进为独立分体单元，增加了红外靶标自动探测装置的可移植性和通用性。试验结果表明：探测距离提高了48.96%，靶标间距识别的灵敏度提高了12.04%。　The infrared detecting system was hard to work well in short detectable distance and complex circuit. The double-infrared emission was adopted for improving the optical path and increasing the receiving area. The optic circuit of infrared detecting system for automatic target spraying was also improved by changing the whole detecting device into separated parts, by which increased portability and transferability of infrared detecting system for automatic target spraying. Test results showed that the detection performance increased by 48.96%, sensitivity of the space between two spraying targets increased by 12.04%.

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