基于机器视觉的棉种破损检测技术 Detection of Damaged Cottonseeds Using Machine Vision

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关键词：　棉种 破损 机器视觉 识别

摘　要：　研究了破损棉种的机器视觉识别方法，采用均值、方差、均方比等统计特性参数，计算棉种边界破损参数。通过实验确定均方比分类阈值为0.58，将棉种分为破损棉种和正常棉种。选取正常棉种330粒、破损棉种110粒，利用该检测系统进行检测，其识别精度达93%。 The objective of this study is to develop image algorithms for sorting broken cottonseeds. An automatic detection system based on machine vision was designed to distinguish normal cottonseeds from broken ones. Image algorithm was developed with introduction of three statistical characteristics, which includes mean, variance and the ratio of mean to variance. Image algorithm testing on a validation data showed that broken seeds were distinguished from normal ones with accuracy of up to 93%.

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