Presenting a Machine Vision System in Application of Wheat Sorting

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Abstract

The application of machine vision is often routine life. Today, the needs for storing large quantities of agricultural production and for fast transmission through international communication networks are very necessary. This paper study a brief explain of machine vision in processing focusing on agriculture application and also the details analysis of application in sorting of wheat. In this work we introduce application of machine vision system for grading problems in agriculture. Instead of a careful evaluation of a given quantity over a reduced number of samples with high cost dedicated equipment, we propose to measure the quantity with less precision but over a much bigger number of samples. The advantage of our procedure is that very low cost vision equipment can be used in this case. For example, a standard scanner can be used as an integrated illumination plus acquisition hardware. This system is aimed at the quantification of the amount of other seeds or materials present in a production batch of wheat seeds. To this end arbitrarily divided green seeds in several classes, with a decreasing amount of green pigment in each class.

Keywords: Machine Vision, Wheat, Sorting

1. Introduction

Automated grading and sorting of agricultural products are one the most interest because of increased demand in different quality food with relative affordable prices by the different group of customers belongs to different living standards. Machine vision systems have been used increasingly in the food and agricultural industry over the last decade, mainly for inspection and evaluation purposes. They advantages over the traditional methods are multiple, including velocity, economy, repeatability and objectivity.