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# Classification of Glutinous rice RD6 Grain Using Machine Vision and Support Vector Machine

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We report here the use of machine vision and support vector machine for automatic identification of Glutinous rice RD6. This project is motivated from the problem of maintaining purity of RD6 seed stock, since they can mutate back to its parent KDML105. Seed stock is needed to be checked to ensure that contamination percentage does not exceed the excepted value. We use flat bed scanner to capture the image of rice seeds. The grain features, i.e. grain length and width, seed area, perimeter length, circularity, centroid position relative to the interception of length and width, are extracted. Support vector machine is used to find the hyperplane to separate the features of RD6 and its parent. Our experiments of 500 seeds of RD6 shows that the accuracy of our classification system can reach 0.5%, which satisfy the requirement of pure seed stock.

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