

Volume 2, Issue 6, June 2022

Rice Grains Quality Assess and Categorization using Image Processing Technique

Pramodkumara M¹ and Prabhudeva S²

Student, Department of Computer Applications¹ Professor & Director, Department of Computer Applications² Jawaharlal Nehru New College of Engineering, Shivamogga, Karnataka, India pramodmlg854@gmail.com and prabhudev@jnnce.ac.in

Abstract: Rice is the most consumable food. Rice quality assessment in manually is complex, time consuming, and prone to inaccuracy due to human perception. The most crucial factor in rice is the quality. Image processing techniques offer a wide range of applications for overcoming these manual processing difficulties and achieving good quality. To assess the quality of various grains samples, to process and enhance the digital images with in a spatial domain on each grains of different samples is to determine its quality, size used, assess the quality of rice. However, the quality is handled automatically. Each grain's boundary area is identified by evaluating the Rice grains are classified based on their fundamental grain size and shape utilizing an image processing approach with edge detection. The efficiency of image processing minimizes the time required to execute a task.

Keywords: Quality, grain evaluation, Grading, Rice grain, Image processing, length, breadth.

REFERENCES

- [1]. R. Pazoki, F. Farokhi, Z. Pazoki, "Classification of Rice Grain Varieties Using Two Artificial Neural Networks (MLP and NeuroFuzzy)", The Journal of Animal & Plant Sciences, pp. 336-343, 2014.
- [2]. L.A.I. Pabamalie, H.L. Premaratne, "A Grain Quality Classification System", International conference on information society USA, pp. 56-61, 2010.
- [3]. K. R. Bhattacharya, Rice Quality: A Guide to Rice Properties and Analysis. Amsterdam, The Netherlands: Elsevier, 2011. T. Brosnan and D.-W. Sun, "Improving quality inspection of food products by computer vision—A review," J. Food Eng., vol. 61, no. 1, pp. 3-16, Jan. 2004.
- [4]. C.-J. Du and D.-W. Sun, "Recent developments in the applications of image processing techniques for food quality evaluation," Trends Food Sci. Tech., vol. 15, no. 5, pp. 230-249, 2004.\
- [5]. Leng Yan, Hong De-lin, "Grain Quality and Genetic Analysis of Hybrids Derived from Different Ecological Types in Japonica Rice (Oryza sativa)" Rice Science, Elsevier Internatioanl research journal, Vol 11, pp.165-170, 2004.
- [6]. Jagdeep Singh Aulakh, Dr. V.K. Banga, "Grading of rice grains by image processing", International Journal of Engineering Research & Technology (IJERT), Vol. 1, pp 1-4, June – 2012.
- [7]. P. Neelamegam; S. Abirami, K. Vishnu Priya, S. Rubalya Valantina, "Analysis of rice granules using Image Processing and Neural Network", Conference on Information and Communication Technologies (IEEE), pp. 879-884, 2013.
- [8]. Vinita shah, Kavindra jain and Chetna v. Maheshwari, "Non-destructive quality analysis of kamod oryza sativa ssp indica (indian rice) using machine learning technique", International Conference on Communication Systems and Network Technologies, pp. 95-99, 2013.
- [9]. The figure 2. Referring from the site: https://www.statista.com/statistics/255945/top-countries-of-destinationfor-us-rice-exports-2011/

IJARSCT



International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)

Volume 2, Issue 6, June 2022