

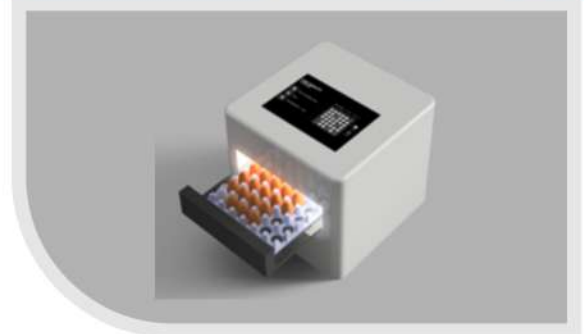
TECHNOLOGY DEVELOPMENT PROGRAM

AgriTech



Egg Quality Tester

Hardware Software codesign for a low cost egg quality prediction and anomaly detection



Issue Being Addressed

- ▶ The process of checking the quality of an egg and predicting the success rate of hatching is currently a challenging and time-consuming task

Key Feature of The Technology/Product /App Which Is Being Developed

- ▶ The proposed solution is to design a low-cost mini egg grading machine that can be used to select eggs suitable for hatching at home or small poultry farms.
- ▶ System will extract spectral information, such as the absorption and reflectance of light at different wavelengths.
- ▶ This spectral information can be used to identify and quantify the chemical composition of the egg, including proteins, lipids, and pigments.

CPS Relevance

- ▶ Incorporate machine learning algorithms to improve the accuracy of the prediction system. Collect more data to train and test the machine learning models.
- ▶ Fine tune the parameters of the machine learning models to optimize the performance.

Impact & Benefits

- ▶ Reduced resource wastage
- ▶ Lower carbon footprint
- ▶ Enhanced breeding program
- ▶ Improved genetic selection
- ▶ The Product can be used by individuals or small hatcheries/farms.
- ▶ Yield will increase profit too

Team

- ▶ Anuroop K B
Chief Innovation Officer
- ▶ PI: Dr. Ragesh G K
Assistant Professor
IIIT-Kottayam
- ▶ CHANAKYA Ph.D. Fellowship

Targeted Customers & End Users

- ▶ Hatcheries
- ▶ Small poultry farms
- ▶ Backyard Farmers

Commercialization Status

- ▶ The model is being deployed to certain poultry and hatcheries.
- ▶ Integrating processing systems to create a closed loop architecture.