

Controlling Food Adulteration in Public Food Grain Distribution

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Introduction

The intent of this project proposal is to address and try to minimize the food adulteration and contamination of the ration distributed to BPL card holders by deploying smart sensing devices with Internet of Things (IoT) to preserve the quality and quantity of food grains stored at warehouse and packaging with appropriate quantity and assigning barcode for each package and commodity. The BPL card holders will be advised to open the sealed package after the ration card is validated.

Purpose of the project:

The purpose of this project is to address food adulteration in the ration being distributed through Fair Price Shops (FPS) to BPL card holders.

- Check the quality of the food grains before being packaged.
- Generate barcode once the quality check is passed.
- Scan the barcode before delivering to the BPL card holder.

How it works:

At present the ration supplied to BPL card holders through FPS is of very low quality. Usually the food grains are distributed loosely and this gives room to adulterate the food at various stages, be it at the warehouse , FPS shop and everywhere.

With this project, we are proposing to change the distribution system, by packaging the ration in a secured packing after checking the quality of the commodity and sealing with authentication by assigning a bar code. The barcode will be scanned and the type of commodity, its weight, location from where it was delivered and to whom it was delivered would be stored in cloud.

Process flow:

- The food stored in the warehouse is scanned for checking the quality. If the food grains contains any foreign bodies, it will be identified and discarded. Also the system checks the freshness of the food. If the quality check is passed, the food grains is packaged in secured packing.
- The packaged commodity is sealed and barcode generated and assigned. The barcode helps in identifying the source warehouse from where the package originated. This can be used later if any malpractice is identified so that action can be taken against authorities at that warehouse.
- The package is delivered to FPS for distributing to BPL card holders.
- The ration card of the BPL card holder is verified and the quantity of ration allocated is determined.
- The sealed package is handed over to the card holder after scanning the barcode. The type of commodity, its weight, location from which FPS was it delivered and to whom it was delivered will be recorded.