4. Post-Harvest Management

4.1 Project 04 (ICAR Project Code: IXX12322): Standardization of Post-Harvest Packaging Technology for Tuberose and Jasmine

4.1.1 Technology for Tuberose and Jasmine Packaging

Studies on post-harvest packaging of tuberose and jasmine loose flowers were undertaken. Survey was conducted in farmer's field of Bhor, Daund and Purandar tahshil of Pune district to assess the post-harvest loss and packaging methods for loose flowers. After carrying out detailed survey on farmer's field, it was found that the farmers of Pune region packed tuberose and jasmine loose flowers traditionally in gunny bags, urea bags and news papers (Fig. 4.1.1.1). Farmers are not using any modern packaging system for packaging of tuberose loose flowers. Due to lack of proper packaging, the weight of loose flowers is reduced by 20-30 % of their original weight, after 12 hrs of harvesting.

Fig. 4.1.1.1. Traditional methods of loose flowers packaging

By considering all the problems associated with post harvest packaging of tuberose flowers, a CFB package (30x20x10cm) for packaging of tuberose loose flower by using Auto CAD (Fig. 4.1.1.2) was designed. CFB box was designed by considering the four basic standards: Board styles, Flutes, Dimensions and Edge crush test. Double or triple wall board style with a combination of different fluting, such as A-flute and C-flute between the liners were taken into consideration. Edge Crush Test (ECT) is the standard by which box strength is measured. We have also considered Aluminum-foils and butter paper for inner lining of box.

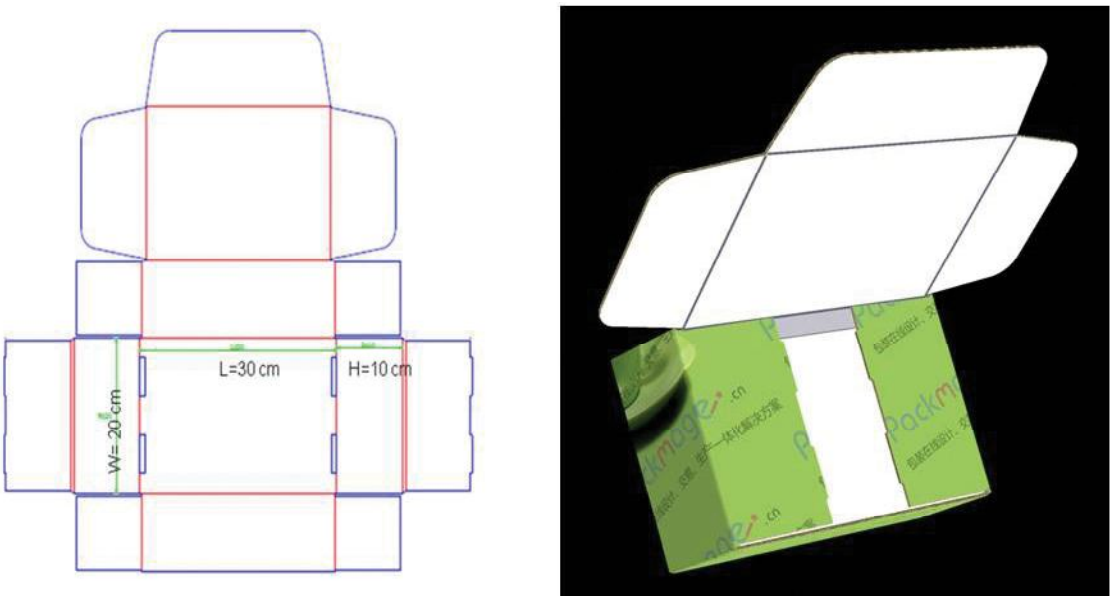

Fig. 4.1.1.2. Detailed drawings of packaging with dimentions

4.1.2 Development of Loose Flower Harvester

In India Loose flowers are used for making garlands for worship, religious function and extraction of pigments. Generally these flowers are harvested manually and require more labour. There is need of mechanization in harvesting of flowers to minimize the dependence on limited resources such as labour, time and reducing the cost of production for enhancing farm income. So considering all these factors manually operated loose flower harvester has been designed particularly for marigold and chrysanthemum. Dimensions of the harvester are 30x25x15cm (Fig. 4.1.2). The flower harvester consists of cutting mechanism, a flower collector and a handle.

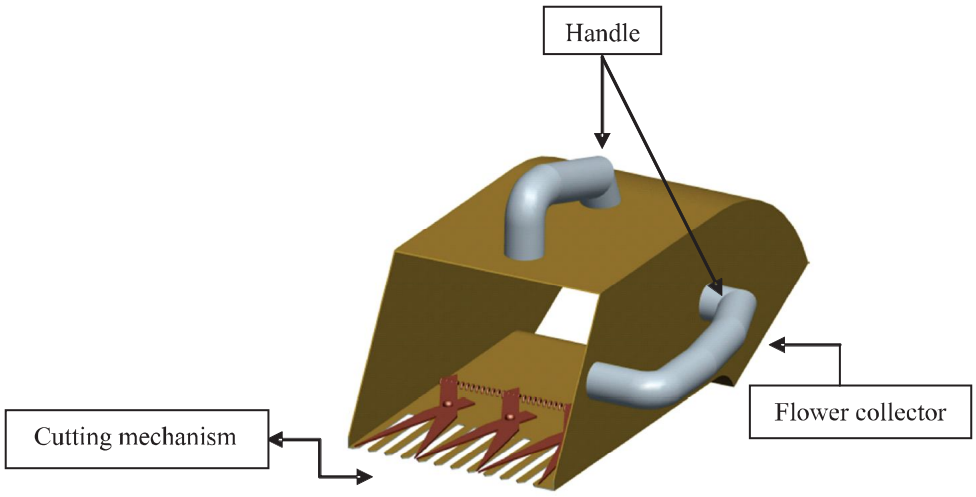

Fig. 4.1.2. Loose flower harvester