

## CHAPTER 1

### INTRODUCTION

Cashew a native of Eastern Brazil was introduced to India by the Portuguese nearly five centuries back. Cashew is the third largest edible tree nut in the world. India has been the dominant player in the cashew trade and has also pioneered the cashew processing and exports. In addition, India is the largest producer of cashew kernels and the largest area holder of this crop in the world.

#### 1.1 Cashew Kernel Grade:

India is a pioneer in cashew processing and has been the first country to hit the world market with cashew kernels. The raw cashew nuts collected from the growing areas are moved to the factories for processing. It is ensured that the raw nuts are thoroughly cleaned and are free from all foreign matter before they are processed. Grades based on the Size, Shape, and color of the cashew kernels are graded into white or scorched wholes, pieces, splits, butts etc.

The Government of India Act prescribes 33 different grades of cashew kernels of which only 26 grades are commercially available and exported. W- 320 are the most popular among cashew kernels and also the most available, worldwide. Scorched wholes are another grade of cashew kernels. They are prepared by subjecting the kernels to a longer duration of roasting, whereby they attain a slight brown color. They however have all the other characteristics of white kernels including nutritional qualities. Butts, splits and pieces are priced low and are ideal for cooking, preparation of sweets and savory snacks and so on. Today, various kinds of cashews are available in the market with different qualities. To ascertain the quality, grade standard have been designed by considering the color and the size (weight) of the cashew kernel as important characteristic as shown in Table 1.

Table -1: Cashew Kernels(White Wholes)

| Grade | Count per 454 gms | General Characteristic                                                                                                                                                                                                                                                                                          |
|-------|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| W-180 | 170-180           | Cashew kernels shall have been obtained through shelling and peeling cashew nuts. Shall have the characteristic shape; shall be white, pale ivory or light ash in colour reasonably dry and free from insect damage, damaged kernels and black or brown spots. The kernels shall be completely free from testa. |
| W-210 | 200-210           |                                                                                                                                                                                                                                                                                                                 |
| W-240 | 220-240           |                                                                                                                                                                                                                                                                                                                 |
| W-320 | 300-320           |                                                                                                                                                                                                                                                                                                                 |
| W-450 | 400-450           |                                                                                                                                                                                                                                                                                                                 |
| W-500 | 450-500           |                                                                                                                                                                                                                                                                                                                 |

The different steps in cashew processing using flow chart are shown in below.

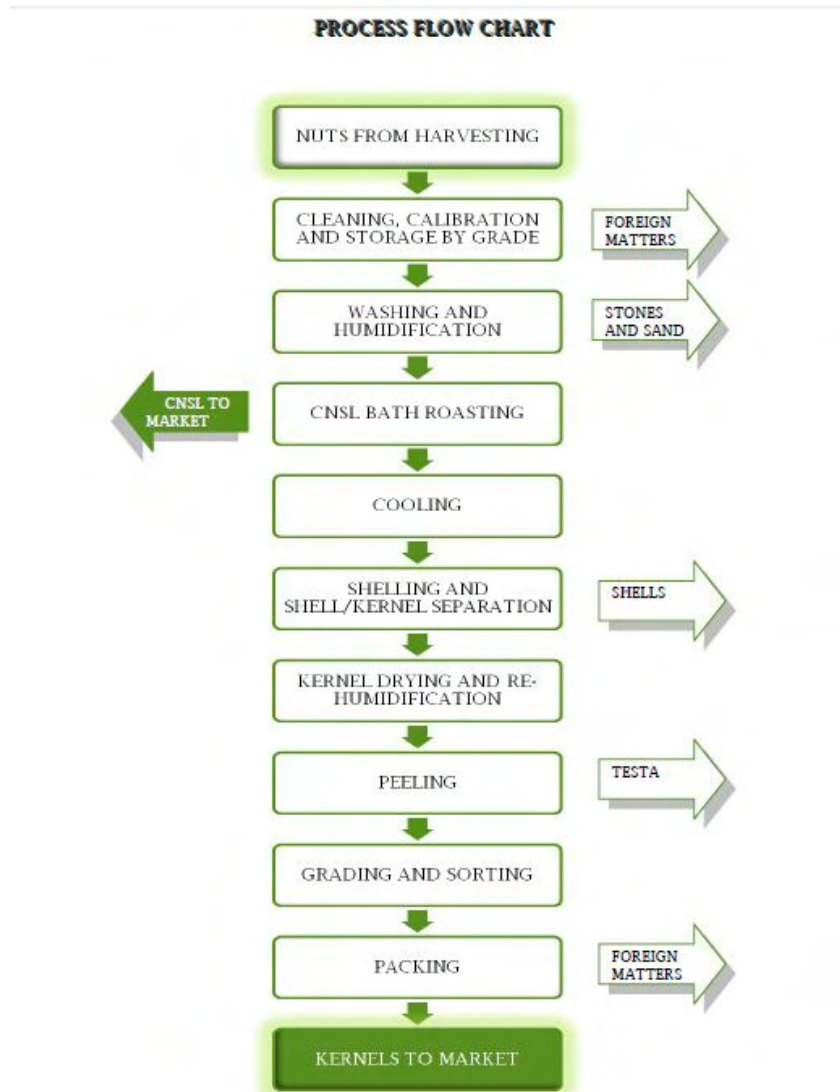


Fig 1.1 Process flowchart

Grading of cashew kernels is based on inspection of physical quality attributes such as color, shape, and size. By using these physical attributes, a trained person determines the cashew kernel of which class (i.e., white wholes). The Table 1 illustrates the Grade designations and definitions of quality of cashew kernels.

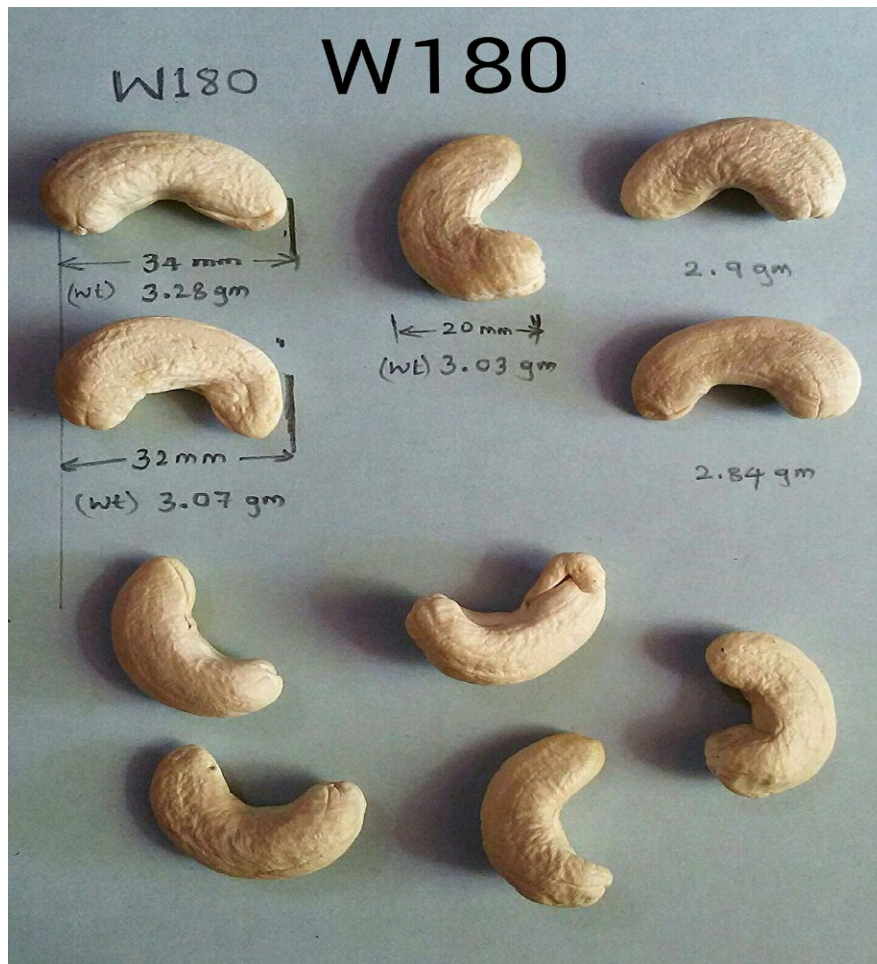


Fig 1.2 Cashew of grade W180

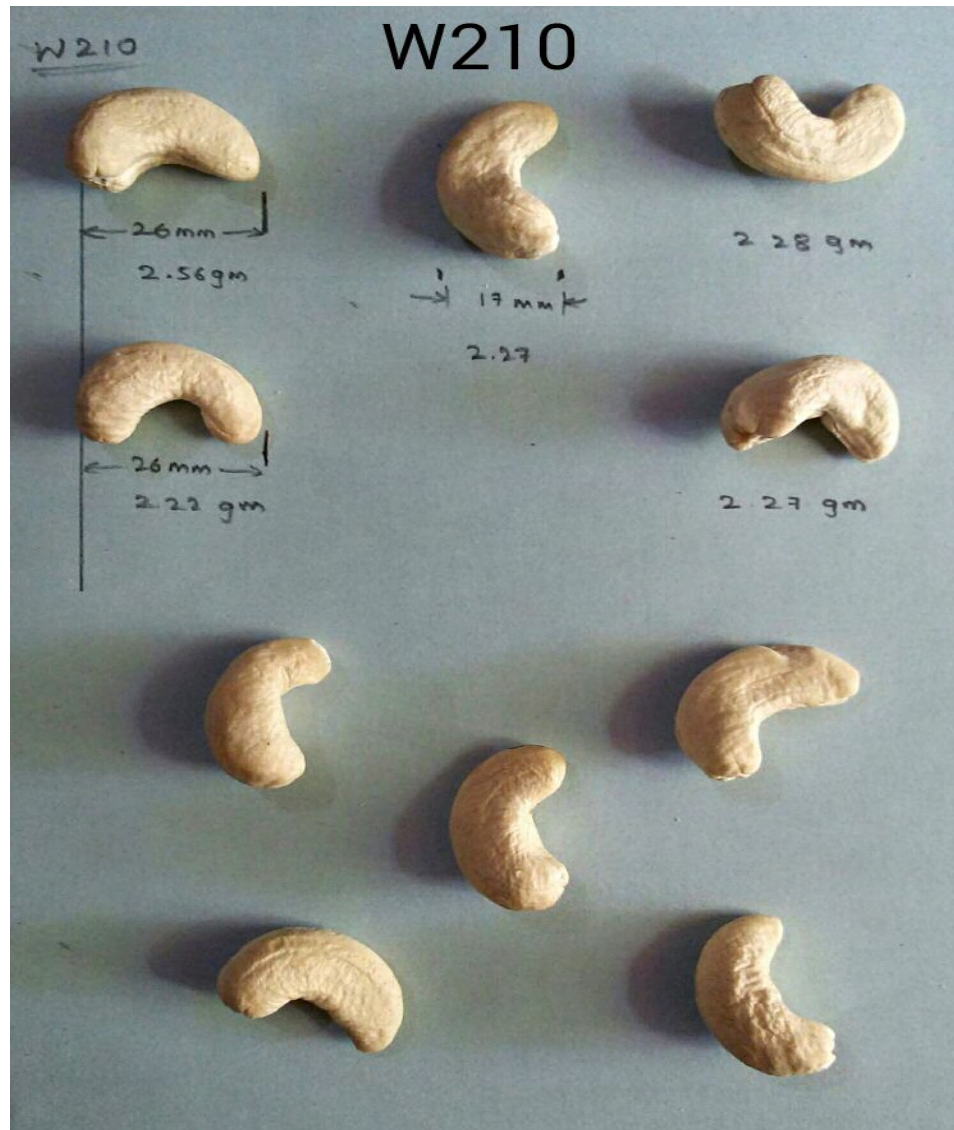


Fig 1.3 Cashew of grade W210



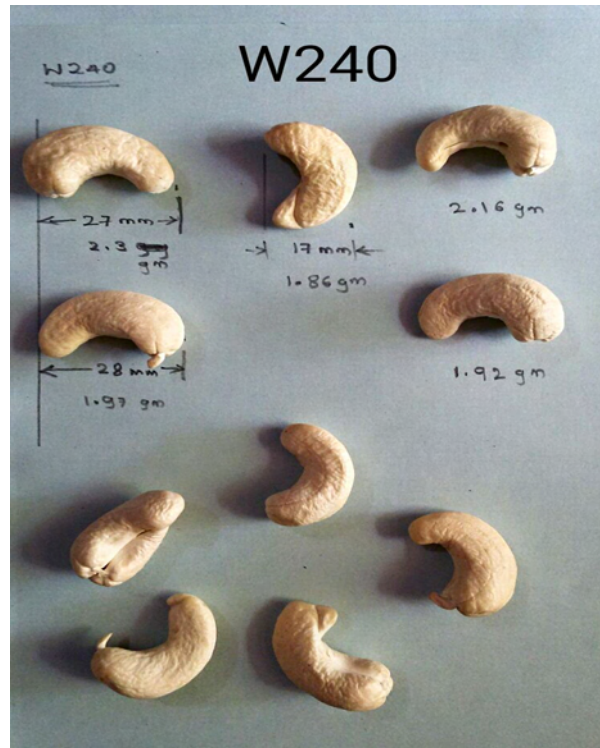


Fig 1.4 Cashew of grade W240



Fig 1.5 Cashew of grade W320

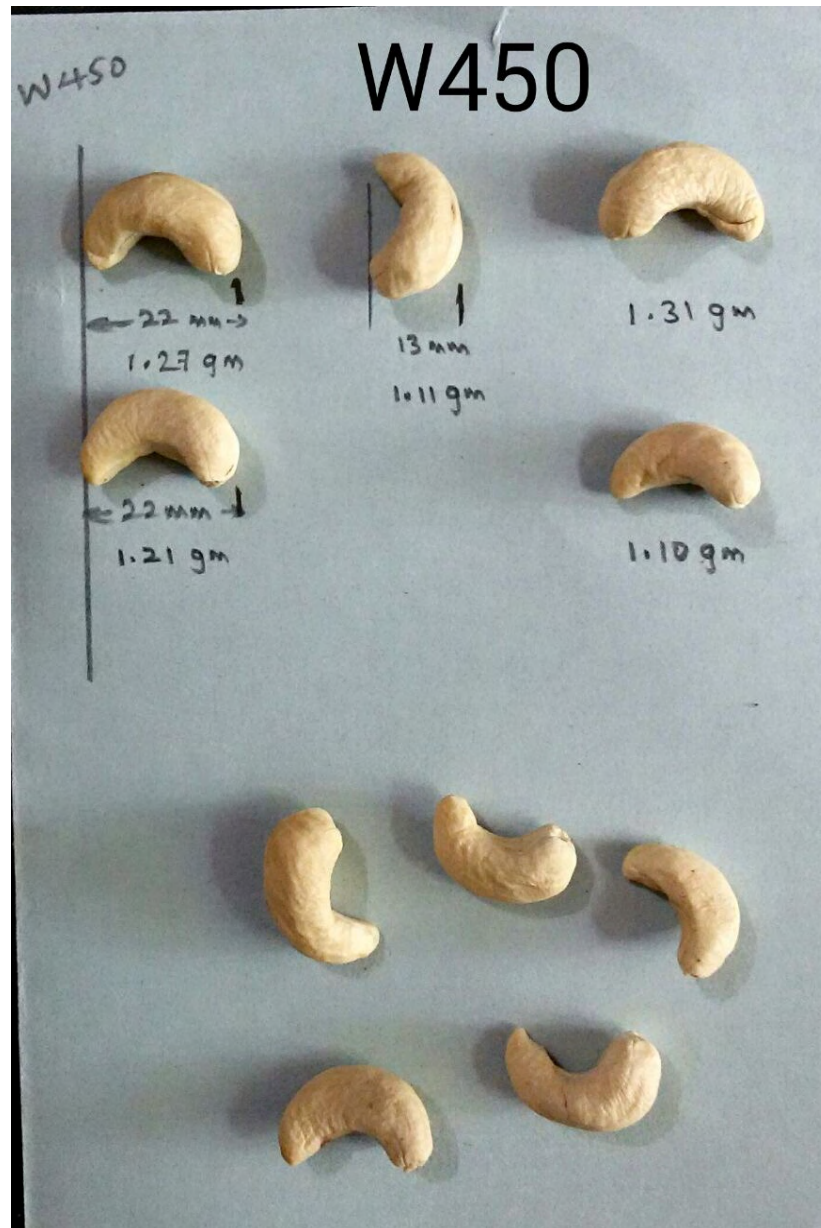


Fig 1.6 Cashew of grade W450

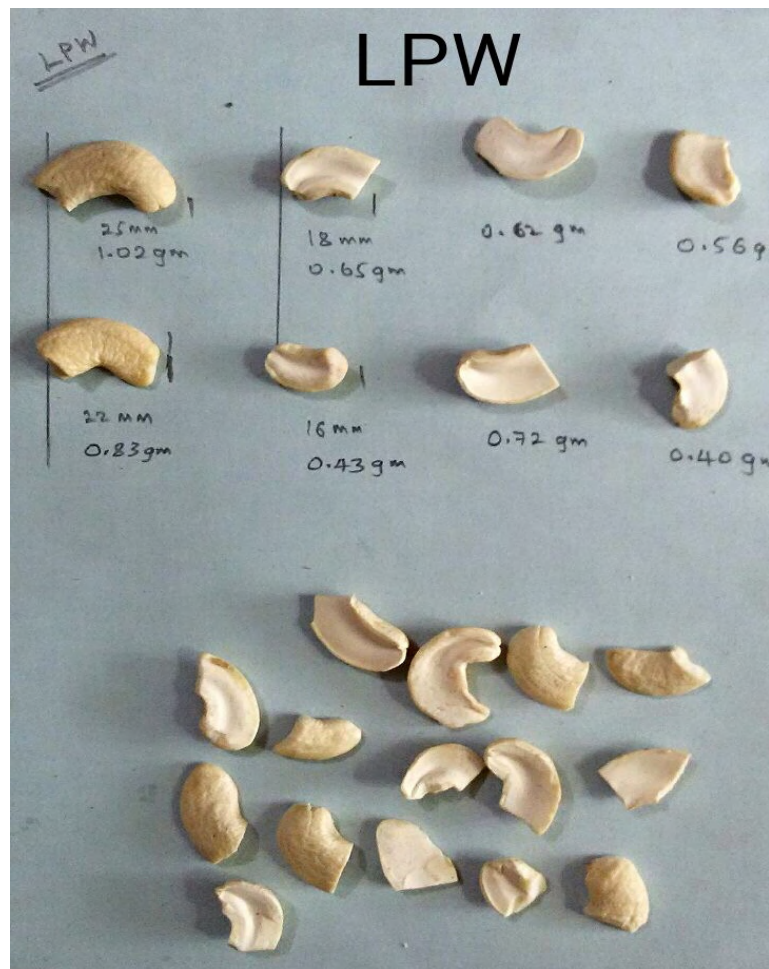


Fig 1.7 Cashew of grade LPW



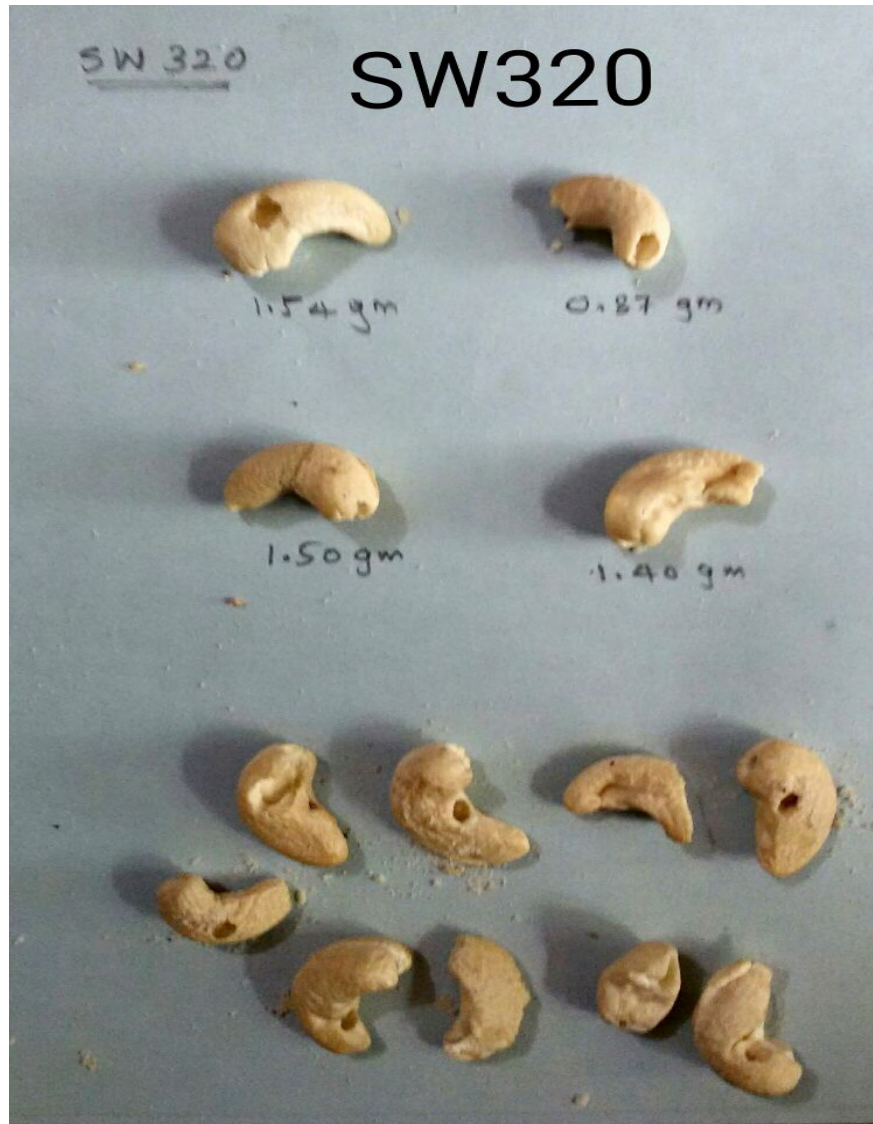


Fig 1.8 Cashew of grade SW320