

## Studies on the Fruit Diameter Grading Machine for Plum

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### Summary

The cultivated area of plum trees was about 2100 hectares in Taitung. The fruit was harvested for processing crisp plum before the end of March. The oval shape plum with large ratio of major to minor axis was about 60%~70% ripeness. No suitable plum grading machine is available at the present day. The disc grading machine with capacity of 200~250 kg/hr was not acceptable to farmer. A fruit diameter grading machine for plum was developed to meet demands for rapidly and accurately processing plum during the busy harvesting session.

The developed fruit diameter grading machine graded Mei fruit into five grades of below 20 mm 、20~23 mm 、23~26 mm 、26~29 mm and above 29 mm. To cooperate with the 500kg/hr transporting capacity of the small conveyer , the grading machine adopted 1500~1700rpm motor speed. The average accurate grading rate was above 85%, and the loss of damaged or bruised plums was 3%.

**Key words:** Plum ,Fruit diameter ,Grading machine.

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