

## **Abstract**

The research has the aim of introducing mechanized yards for the harvest of chestnuts and ‘marroni’ (*marroni* chestnut variety is the most appreciated and delicate available), which can reduce times and costs of the harvest, without compromising the quality of the product.

In a recent paper (Monarca et al., 2003) authors reported the result of harvest and postharvest tests on chestnut fruits (*Castanea sativa*); two mechanical harvesters, properly equipped to fulfill these requirements, were therefore set up starting from two prototypes of local machine shops. The research is concerned also with the ‘marroni’ chestnut variety, the most appreciated but also the most delicate one, and with other recently introduced harvesters (Monarca et al., 2004).

Previous tests (Monarca, 1996; Monarca and Massantini, 1996) have shown how, rather than increasing the harvesting power of the machines, the introduction of mechanised yards set the evident problem of reducing or making the mechanical damages on the fruits as compatible as possible from an economic point of view. Between year 1995 through 1999 a specific study on the contact between the fruits and the mechanical parts of the harvesters was carried out by the authors and some adjustments were appointed to the harvesters, with a remarkable decrease or the level of the damage (Biondi et al., 2001).

In the year 2004 authors have followed their researches testing new machines designed for chestnut harvesting.

The results show how for ‘marroni’ and chestnut harvest these machines can effectively reduce the costs without having any consequences on the quality and the marketability of the picked fruits.