

Maturity Indices for Spine-Gourd (*Momordica diocia* Rox. Ex Willd) to Enhance the Shelf Life in the Local Market

J. P. Sumanaratne¹, R. W. M. R. K. Wickramasinghe², L. G. Sujeewakumary³,
W. A. D. S. Abeysekara¹ and K. K. P. Rathnayaka¹

¹Regional Agricultural Research and Development Center, Aralaganwila ²Department of Agricultural Engineering, Faculty of Agriculture, University of Peradeniya

³Horticultural Crops Research and Development Institute, Gannoruwa, Peradeniya

Spine-gourd (*Momordica diocia* Rox. Ex Willd) is rare and under-utilized vegetable crop preferred by many people. Its immature berries harvested mainly from naturally grown in shrub jungles and Chena cultivations of low country dry zone during rainy season (*maha*) are available at the local market which claims around Rs. 120.00 /Kg. As the both bitter gourd and spine gourd are used in the treatment of stomach ailments and diabetes in folk medicine, have been popular vegetables since ancient times. Ripening fruits of these gourds contain inhibitory compounds, which affect glucose metabolism. It has also been recognized as a vegetable having high demand in the local as well as overseas markets.

The techno-guides for year-round cultivation of Spine-gourd have been introduced in 2001 by the Department of Agriculture. Further four gynocious (y) varieties viz *Thumbica*, *Golika*, *Wisal*, *Kesara* with androcious (c t) variety of *Perakum* have been released in 2004 after domestication, evaluation and selection. At present the cultivation is being popularized gradually among the farmers. However, the very short shelf life of berries in the local market found to be a major problem resultant of harvesting at improper maturity stages. Therefore, series of experiments were carried out to find out maturity indices to overcome the problems associated with harvesting age of berries, at the Regional Agriculture Research and Development Center: during the last few years. The results show that the berries of spine gourd are climacteric and climacteric initiation takes place from 13th day after pollination. There is hardly any objective physical property related to the optimum maturity other than length and diameter of berries. In order to increase the shelf life, the berries should be harvested on the 12th day after the pollination.

Key words: Maturity indices, Shelf life, Spine-gourd