

Productivity and efficiency of watermelon farms in Malaysia

R.M. Lin

Acta Horticulturae 975: 593-600. 2013..

Abstract

A primary survey involving 49 watermelon farmers operating in two seasons in 2004-2005 was conducted with the objectives of assessing farm productivity and efficiency factors. Data analysis indicated that the individual farm total productivity (TP) values ranged from 0.66 to 4.91. The mean TP for the farms sampled was 2.05. The TP for the watermelon sub-sector in 2004-2005 at 1.78 was considered to be good for agriculture investment. An ordinary least square procedure (OLS) undertaken revealed that younger and higher income farmers tended to be more productive than older and lower income farmers. The input factors of labor, capital and fuel, positively influenced the farms output. However, expenditure on plastic cover for weed control negatively influenced farm output indicating an inefficiency factor. The computed Kopp and Timmer technical efficiency measure (TE) revealed that the sample farms had a mean efficiency level of 46% with a standard deviation of 0.18. The productivity and efficiency of the watermelon sub-sector could be improved by increasing yield and revenue through the adoption of new technology, the use of good seeds and by reducing production costs. Alternative cost saving technology for plastic covers should be developed through R&D to improve the productivity and efficiency of watermelon farms in the country.