ABSTRACT

BUDHY JASA WIDYANANTA Motion-Mode Echocardiography Parameter as an Indicator of Potential Performance of Indonesian Race Horse. Under direction of DENI NOVIANA and R. HARRY SOEHARTONO

Kuda Pacu Indonesia (KPI) has become our popular race horse as well as our local research resources. It came from a selective breeding programme of the thoroughbred (THB) stallion and the local pony mare up to the third (G3) or fourth crossing generation (G4). The third or fourth generation crossed to each other, creating a new blood line called KPI. M-mode echocardiography is a highly valuable technique to predict the horse potential performance through evaluation of the heart size since a giant heart has a strong correlation with high race performance of the THB. This research was conducted to find out KPI myocardial thickness, intracardial dimension, cardiac volume, cardiac function index and heart size measurements values to predict KPI potential performance through M-Mode echocardiography technique. The result was compared to THB values in order to evaluate the potential performance of KPI. The result of this research showed that the KPI echocardiography values and KPI heart size was smaller than THB therefore KPI potential performance were not equal with THB. Heart size evaluation should be considered on the selective breeding program of KPI.

Key word : KPI, M-mode echocardiography, echocardiography values, heart size, potential performance.