Carcass and Beef Characteristic from Brahman Cross Steers Fattened in Feedlot Prepared for Traditional Market

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ABSTRACT

Beef cattle feedlot is a fast growing industry in Indonesia. The industry supplies beef for particular market (hotel, restaurant and institution) as well as traditional market. This study was aimed to examine carcass and beef characteristics from Brahman Cross (BX) steers slaughtered at different slaughter weight, and also fat thickness categories prepared for traditional market. The study involved 40 heads of feeder cattle of Brahman Cross steer fattened on concentrate based ration and slaughtered at four slaughter weight categories (301-350 kg, 351-400 kg, 401-450 kg and 451-500 kg), and three fat thickness categories (2.5-4.5 mm, 5.0-7.0 mm and 7.5-9.5 mm). The carcass characteristics observed included hot carcass weight, dressing percentage, twelfth rib fat thickness, loin eye area, estimated lean weight and percentage and estimated fat weight and percentage. The beef characteristics observed included meat tenderness, cooking loss, water holding capacity, marbling score, meat and fat colors. The experiment was set up in a completely randomized design with slaughter weight category, and also fat thickness category as the treatment. Results of the study indicated that slaughter weight category significantly ($P<0.05$) affected hot carcass weight, estimated lean and fat weights, while dressing percentage, twelfth rib fat thickness, estimated lean and fat percentages were not significantly influenced by slaughter weight category. Fat thickness category did not have significant effects on hot carcass weight, dressing percentage, rib eye area and lean weight but this fat category significantly ($P<0.05$) affected estimated lean percentage, estimated fat weight and percentage. Neither slaughtered weight nor fat thickness categories had obvious effects on beef characteristics. It was apparent that slaughter weight and fat thickness categories were not a limiting factor for beef quality traits but the carcass productivity traits.

Key words: Brahman cross steer, fattening, carcass and beef characteristics, traditional market

INTRODUCTION

Local cattle have been primarily supplying beef for traditional market. The high demand for beef has stimulated the fast growing feedlot industry using imported feeder cattle from Australia, which amounted to 400,000 heads annually (Direktorat Jenderal Peternakan, 2008). Cattle feedlot industry in Indonesia has grown rapidly in order to fulfill quality beef for supplying particular market such as hotels, restaurant and institution. Recently, the feedlot industry also supplies traditional market since there was a shortage of local cattle. Halomoan *et al*. (2001) reported finished cattle at lighter slaughter weight, approximately 372 kg, for traditional market and heavier slaughter weight, approximately 511 kg for particular market. Carcass weight and fat thickness have been identified as indictors of a carcass' productive traits (Johnson *et al*., 1997; Priyanto *et al*., 1997; Priyanto *et al*., 1999; Hafid and Priyanto, 2006). The two factors have long been used as a basis of beef carcass evaluation (Kempster *et al.*, 1982). The following study examined the effects of slaughter weight and fat thickness categories on carcass and beef characteristics from Brahman Cross (BX) steers fattened in feedlot.

MATERIALS AND METHODS

Cattle and Procedures

The study involved 40 heads of 2 year-old Brahman Cross steers with initial live-weight averaging 220 - 335 kg. They were fattened on concentrate based ration containing 14 % crude protein and 75 % TDN for approximately two months. The steers were prepared for traditional market and sequentially slaughtered at four