The Agriculture, Forestry and Fisheries Research Information Technology Center
2008

ABSTRACT

Fatty acid composition and consumer's palatability of Japanese brown beef fattened under grazing

Yasutake, S.(Kumamoto-ken. Agricultural Research Center, Koshi (Japan)); Kajiya, Y.; Ogata, M.;

In Aso region of Kumamoto prefecture, there are 23,000 ha grassland in which produced rouphage has mainly used as the resource for mainly beef cattle production by grazing and harvesting. We have investigated about not only calf production but also beef production by grazing to utilize these grassland effectively. In the present study, in order to clarify the advantageous properties of the Japanese brown beef fattened under grazing, fatty acid composition of subcutaneous fat from the beef produced by grazing with concentrate (GS) and housing after grazing with concentrate (HS) was examined, and consumer's palatability of beef produced by GS, HS and grazing without concentrate (GN) were tested. 1. Fatty acid composition. The proportion of oleic acid (C18:1) of GS was higher than that of HS, which brought the higher proportion of unsaturated fatty acid of GS than HS, and higher US/S (unsaturated fatty acid / fatty acid) of GS than HS. In the proportion of conjugated linoleic acid (CLA c9t11-C18:2) with the cancer prevention effect, GS was higher than HS significantly (p0.05). The n-6 /n-3 ratio (n-6 unsaturated fatty acid / n-3unsaturated fatty - acid) of GS was higher than that of HS significantly (p0.01). These results suggested that it would bring the favorable properties (palatability and healthiness) to the meat from Japanese brown cattle fattened under grazing throughout all fattening period. 2. Consumer's palatability. In the investigation of the consumer's palatability, beef with white fat color was preferred in the visual comparison of GS and HS raw meat. However, GN raw meat with dark red meat color and yellow fat color was acceptable to the panellers in the case tested the meat concerned only. Moreover, in the overall palatability there were many panellers who liked the GN beef. From these results, the beef of Japanese brown cattle fattened under grazing may be expected to be acceptable to consumers.

END