UGAP2018

1. ULUSLARARASI GAP TARIM VE HAYVANCILIK KONGRESİ

25 - 27 NİSAN 2018

HARRAN ÜNİVERSİTESİ - ZİRAAT FAKÜLTESİ - OSMANBEY YERLEŞKESİ - ŞANLIURFA

1ST INTERNATIONAL GAP AGRICULTURE AND LIVESTOCK CONGRESS

APRIL 25 - 27, 2018

HARRAN UNIVERSITY - FACULTY OF AGRICULTURE - OSMANBEY CAMPUS - SANLIURFA - TURKEY

ÖZET BİLDİRİ KİTABI

ABSTRACT BOOK

ISBN 978-975-7113-64-5

ORAL PRESENTATIONS

Conjugated Linoleic Acid in Milk and Dairy Products

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Abstract

Conjugated linoleic acid (CLA), a natural component of foods derived from ruminant animals, is a fatty acid composed of 18 carbon atoms and containing various isomers depending on the cis and trans configuration of the two double bonds. Among the CLA isomers, those having the most biological activity are cis-9, trans-10 and trans-11 and cis-12. Most of the CLA isomers are composed of the cis-9, trans-11 isomer. This isomer is also called "rumenic acid". Rumenic acid accounts for about 90% of total CLA in beef and milk. The wide variety of benefits of CLA results from the separate or common effects of each or some of the isomers. In general, CLA promotes the immune system and enhances the development and growth. It also has anti-carcinogenic, fat and cholesterol-lowering effects, anti-arteriosclerotic, anti-oxidant, anti-diabetic, signal transduction, anti-bacterial, free radical scavenger and anti-oxidative effects.
Milk and milk products containing significant amounts of essential fatty acids constitute 70% of total CLA intake in human nutrition. The amount of CLA in the composition of the milk varies depending on animal species and the animal's dietary pattern. The highest amount of CLA is found in sheep's milk, which is followed by cow's and goat's milk. The technological processes applied during the production of dairy products and the cultures used cause the changes in the amount of CLA. In this study, studies on CLA in milk and dairy products have been reviewed.

Key Words: Conjugated linoleic acid, milk, dairy products