

GROWING TREND FUNCTIONAL FOOD



Functional food production from
goat milk and lamb meat

400%

*Lambs chops are 400% richer for
CLA and 1 glass of goat milk
provides recommended adult daily
CLA intake with strategic
feeding and breeding*



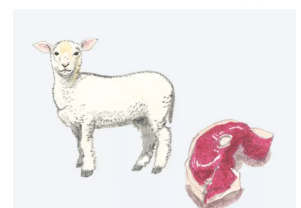
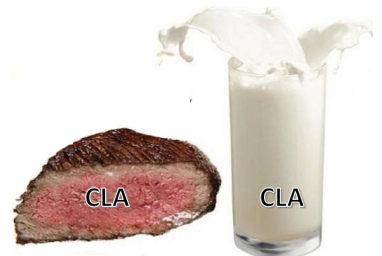
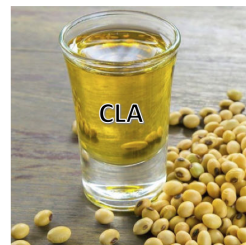
GOAT MILK AND LAMB MEAT CAN BE HEALTHIER

Dairy products and meat from ruminant animals
have conjugated linoleic acid (CLA).

CLA has many health benefits. CLA can be
increased by feeding animals which changes the
rumen environment and the production of
biohydrogenation of fatty acids.

Diet can increase CLA in milk 8 to 10-fold.

We investigated strategies to produce goat milk
and lamb meat with higher CLA content to
provide new marketing opportunities.



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To do list;

Can CLA in goat milk and lamb meat be enriched by feeding strategy in intensively managed flock/herd?

- i) What is the proper concentration of CLA source in feed?
- ii) Will CLA have negative effect on animal health?
- iii) What is the consumer acceptability of CLA enriched milk and meat?
- vi) What is the cost of feed for enriching CLA content of goat milk and lamb meat?
- v) What is the health benefit of CLA enriched goat milk and lamb meat?

What Is CLA ?

Conjugated linoleic acid, or CLA, is a type of polyunsaturated fat, specifically an omega-6 fatty acid. It's a form of linoleic acid, which is the most common omega-6 fatty acid found in foods. The most important CLA isomers are called "c9, t11" and "t10, c12."



THE BENEFITS OF.. CLA

FAT LOSS

INCREASES METABOLIC RATE
ENHANCES MUSCLE GROWTH
NON STIMULANT FAT BURNER

IMMUNE SYSTEM

LOWERS CHOLESTEROL
HELP PREVENT DIABETES
ANTI-OXIDANT

NATURALLY OCCURRING
FREE FATTY ACID

↑ IMPROVES
BODY COMPOSITION

IMPROVES LEAN MUSCLE MASS

LARGER AMOUNTS FOUND
IN GRASS FED MEAT



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RESPONSE OF GOAT AND LAMB TO DIETARY CLA FEEDING REGIME

1

Lambs had a higher average daily gain weights

2

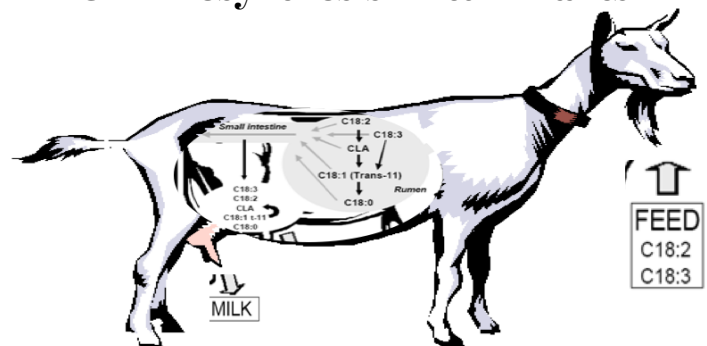
Supplementation of CLA source in diet improved meat colours

3

Soybean oil feeding had no detrimental effects on protein and fat content of milk.



CLA Biosynthesis in Ruminants



Regarding functional foods definition and emphasizing its importance, manipulation of small ruminant diets in order to production of enriched food products as functional foods, would cover multidiscipline aspects of the procedure which could be includes animal nutrition science, biomedical science and health science.

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INNOVATION TO ENHANCE FARM SUSTAINABILITY

Dairy products and meat from small ruminants are important sources of nutrients, supplying high quality protein, energy, and a variety of minerals and vitamins.

Consumption of CLA-enriched milk could provide considerable benefits for human health, strategies to produce milk with higher CLA content provide new marketing opportunities.

Farmers switching their production into value added products can benefit more of new marketing opportunities to enable their farm sustainability.



1

CLA added diet effectively unfold the anti-carcinogenic and anti-obesity properties of produces lamb meats.

2

The highest milk CLA content (>1000mg/l) was obtained with 3% SO supplementation started 8 weeks after kidding and fed for 4 weeks.

3

Breeds of sheep and goats, and management should be considered to implement CLA enriching feeding protocols.



GOAT MILK AND LAMB MEAT ARE THE MAJOR DIETARY SOURCES OF CLA, AND ITS CONCENTRATION IS OF GREAT INTEREST TO HUMAN HEALTH.

THANKS:



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