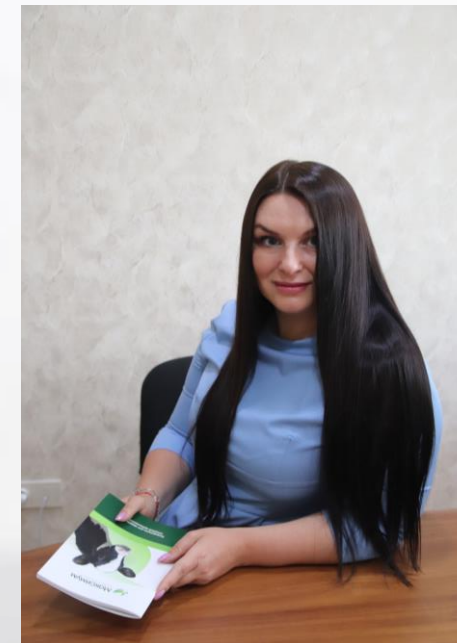


Topic :
«Health&Wellness as a
driver for the development
of a new generation of
multifunctional dairy
products"»



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What do people today know about nutrition?

- There must be a balance between the incoming energy and the energy consumed by the body;
- There are "harmful" and "healthy" foods;
- It is necessary to take care of the condition of the microbiome. The metabolism, the work of the immune system and the development of risks of many diseases depend on it;



What do people today know about nutrition?

- When processing any raw material, changes occur, often accompanied by the loss of healthy substances;
- Deficiency of vitamins, macro- and microelements leads to psychological and physiological disorders, reduction of the immune system defense, rapid fatigue, decreased concentration of attention, vision loss, apathy, or the occurrence of aggressive behavior and so on.



What do people today know about nutrition?

- There is an individual intolerance to certain protein and carbohydrate components of food and allergy to them;
- Insufficient fiber content leads to a destructive work of the gastrointestinal tract, dysbiosis, decreased functions of the immune system.



A promising niche for the development of the dairy industry- multifunctional products and superfoods

Multi-functional products are products used to reduce the risk of various diseases, maintain and improve health.

Superfoods are natural food products with an increased concentration of useful substances.



- ✓ Improving the immune system;
- ✓ Reducing the risk of diseases (osteoporosis, cardiovascular diseases);
- ✓ Reducing the risk of diabetes;
- ✓ Improving digestion.

How can we enrich dairy products and how can we modify them?

Enrichment of dairy products:

- Probiotics
- Prebiotics
- Vitamins
- Protein
- Minerals (calcium)

Technological modification:

- Creation of low-fat products;
- Products without the use of sugar or with a reduced sugar content;
- Production low-lactose products by the method of enzymatic modifications;
- Creation of innovative resource-saving technologies (whey drinks, desserts, puddings, mousses).



Lactose-free cheeses

There are several mechanisms of positive effects of probiotics on the body:

Inhibition of the growth of potentially harmful microorganisms as a result of the production of antimicrobial substances; competition with them for adhesion receptors and nutrients; activation immune-competent cells and immune stimulation. Restoration and optimization of the functioning of the biofilm lining the mucous membrane of the digestive tract. Stimulating the growth of representatives indigenous "friendly" flora as a result of the production of vitamins and other growth-stimulating factors; normalization of pH; neutralization of toxins.



Development of a yogurt series,
fortified with probiotics

There are several mechanisms of positive effects of probiotics on the body:

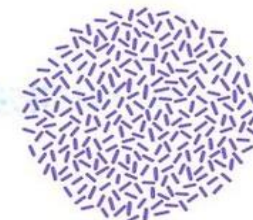
A change in microbial metabolism leading to an increase or decrease in the synthesis and activity of bacterial enzymes and, as a result, the production of corresponding metabolites (for example, glutamine, arginine, vitamins, peptidoglycans, etc.), which have the ability to directly interfere with the metabolic activity of cells of the corresponding organs or after penetration into the blood and other biological fluids of the macroorganism. to modulate its morphokinetic characteristics, physiological functions, biochemical and behavioral reactions.



LACTOBACILLUS



LACTOCOCCUS



PROPIONIBACTERIUM



STREPTOCOCCUS
THERMOPHILUS



BIFIDOBACTERIUM



BULGARICUS

There are several mechanisms of positive effects of probiotics on the body:

Other mechanisms (direct effects of probiotics after their absorption from the digestive tract on the enzymatic and other cellular responses of hormonal, nervous, excretory, immune and other organs and tissues).



Positive effects of prebiotics

Milk with lactulose is a unique product for maintaining human health and immunity. Lactulose has pronounced prebiotic properties, that is, it stimulates the growth and activity of beneficial intestinal microflora, thereby having a beneficial effect on the digestive system and the human body as a whole. Lactulose milk is an ideal product for those who struggle with intestinal dysbiosis and restore immunity during and after antibiotic treatment. The recommended daily dose of lactulose (2 g) contains 200 g of milk.



Positive effects of prebiotics

Yogurt, sour cream and kefir products with pectin.

Being a soluble dietary fiber, pectin has an extremely positive effect on the human body: it has prebiotic properties, is able to enhance the feeling of satiety, slow down the glycemic reaction, and lower blood cholesterol levels. The prebiotic properties of pectin have been scientifically proven: it is known that it promotes the growth of beneficial microflora in the human intestine and thereby increases the body's immunity as a whole.



Positive effects of prebiotics

In addition, when broken down in the colon, pectin forms low-molecular-weight fatty acids (for example, lactic, acetic, propionic, butyric), which also has a positive effect on the human body. Pectin is practically not absorbed by the digestive system and is an enterosorbent, i.e. it is able to bind and then remove many harmful substances from the human body: radionuclides and salts of heavy metals, for example, lead. It is especially useful for people working in industries with harmful working conditions and residents of large cities.



Positive effects of vitamins and minerals in dairy products

People of all ages need additional sources of vitamins and minerals in their diets. The complex of vitamins for enriching drinking milk consists of vitamins A, B1, B2, and C.



Mechanisms of positive effect of high-protein dairy products

Milk proteins effectively prevent the loss of muscle mass, and they also improve the state of the cardiovascular system, increase the overall antioxidant activity in the body, and stimulate immune responses.

Due to the content of whey proteins and casein, milk protein has many useful properties, including support for muscle growth, weight loss, strengthening the immune system and bones.



High-protein cottage cheese products



High-protein puddings and whey smoothies, fortified with protein, probiotics and fiber

Camel milk hard cheese - an innovative superfood of a new generation



Our technologists have developed a technology for the production of semi-hard cheese from camel milk with good organoleptic characteristics

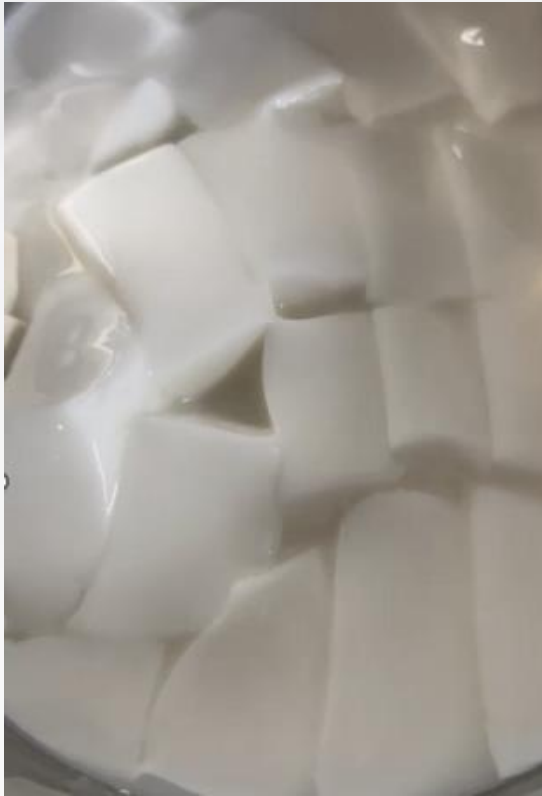
Camel milk in the cheese industry



Benefits of Camel milk:

- Easy to digest, due to a unique fatty acid profile;
- Rich composition (vitamin B PP, C, E, iron, calcium, lactoferrin);
- High protein content

Production of hard cheese from camel milk



In the process of producing hard and semi-hard cheese from camel milk it is very important to choose the right enzyme, coagulation modes and starter cultures.
The prototype for this cheese is the traditional cheese-making technologies used in Altai.

thanks for the attention!



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