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USEFUL PROPERTIES OF THE AMARANTH PLANT

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Annotation
The article provides information on the role of the medicinal plant amaranth in the food industry and medicine. In addition, opinions are expressed about the composition of amaranth oil.

Keywords: amaranth, medicinal plants, raw protein, agriculture, feed, amaranth flour.

Introduction

In ancient Slavic medicine, amaranth was used as an anti-ageing agent. It belongs to the amaranth family (Amaranthaceae). Small grain - 1800 weighs 1 gram, grows up to 2-4 meters and bears fruit in 3.5 months. It produces good honey during the flowering period. Amaranth grows in South America and has been used by local people as a cultivated plant for 8000 years. Later, amaranth spread to North America, India and Asia, reaching China. It is now popular as a grain and vegetable crop among the highlanders of India, Pakistan, Nepal and China.
Introduced to European countries such as Russia and Ukraine, the plant is widely used in medicine, cooking, cosmetology, industry, agriculture and other sectors of the economy. In some countries, it is also grown as an ornamental plant for its colourful flowers and leaves. It has 65 varieties and more than 900 species [1].

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Fig. 1. Amaranth plant

In terms of its biochemical composition, amaranth is a valuable plant for obtaining high-quality feed. Depending on the growth phases in the blue mass of amaranth (in terms of absolute dry weight): crude protein 15.6-16.75%, fats 2.4-2.8%, coarse fiber 16.0-21.7%, calcium 2.1-2.6%, phosphorus 0.2-0.21%, carotene up to 200 mg / kg. For comparison: in the phase of milky hardening of corn kernels, the blue mass retains 2.5 times less protein than amaranth or 7.5-8% of the dry mass.

Flour and leaves from amaranth seeds, as you know, are of high quality, useful nutritional value, amaranth oil is rich in iron, phosphorus, potassium, vitamins B1, B2, E and D groups, phospholipids, phytosterols (Fig. 2).

Рис.2. Мука из амаранта

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New technologies of intensive livestock raising allow to dramatically increase the number of cattle, even in very narrow areas, under different storage conditions and using the industrial feed. In such conditions, high-quality feed is the main factor in preserving the health of animals. Improving the feed production system, improving the composition of the feed base and researching new feed resources and feed production technologies are key issues in meeting the biological needs of animals for high-quality feed.

One promising way to increase the nutritional value of feed rations is the inclusion of various methods of preparation of feed, including extruded concentrate feed, which increase the nutritional value of the animal, ensuring its complete digestion. The high level of vitamin C and carotene in amaranth is an important factor in maintaining the health of animals and poultry.

Amaranth is healthy food for pets and poultry. If in addition to feed 25% of the green mass of amaranth is given, lambs will grow 1.5-2 times faster, nutria and rabbits 2-3 times faster, cows will give milk, and fat content will increase dramatically. A piglet receiving amaranth experienced in practice an increase of 60 kg of live weight in 4 months. Amaranth attracts the attention of agricultural workers, research practitioners for its rich protein content, high yield, high content of many vitamins and mineral salts.

It is considered the leading raw material not only for food and nutrition but also an invaluable medicinal plant. Its body, leaves and grains are used as invaluable animal feed. The high content of unique nutrients and a record level of protein ensure very fast and safe growth of lambs, calves and chickens, dramatically increasing animal obesity, increasing the amount of cow's milk and its fat content. Amaranth goes well with corn, which solves the problem of year-round feeding. The high content of sugar and protein in amaranth in the green mass of corn makes silage more nutritious.

Conclusion

In animal husbandry, green mass and amaranth is high-energy protein and vitamin feed, especially for breeding cattle. It is a nutritious vitamin feed for poultry and has been shown to have a significant effect on egg production. It is also an invaluable raw material for cosmetology. In short, the cultivation of amaranth plays an important role in agriculture and animal husbandry. Biologically active components in its composition prove this.

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