ETHIOPIAN INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY RESEARCH

eISSN: 2349-5715 pISSN: 2349-5707

Volume: 10, Issue 12, Dec-2023 SJIF 2019: 4.702 2020: 4.737 2021: 5.071 2022: 4.919 2023: 6.980

THE EFFECT OF FERULA ASSAFOETIDA GRAIN ON THE ORGANISM OF KARAKOL SHEEP

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Annotation. In the article, in order to prevent poisoning with cow's grain, it is recommended to add bentonite to the diet of Karakol sheep at 1 g/kg of live weight.

Key words: ferula assafoetida, sheep, azkamar bentonite, clinical signs.

In the territory of cattle-breeding cooperative farms in the Kyzylkum region of our republic, ferula assafoetida constitutes 25-35% of the ration of sheep, camels and cattle.

Among the nutritious plants in the desert, ferula assafoetida is considered rich in nutrients according to its chemical composition, it contains 8.3% protein, 22.8% protein, 11.2% dissolved sugar, and depending on the season of the year, leaves, dry branches and stems, and seeds are all It was noted that it is consumed by animals in unlimited quantities and especially that its seeds are part of foods that accumulate a lot of fat. [1,2,3,4,5,6].

Many scientists have found that due to the high content of protein, sugar, protein and fat in *ferula assafoetida*, if consumed in moderation by animals, it has a positive effect on their organism and productivity.

However, it should be noted that coumarin and other biologically active substances contained in it can have a negative effect on the animal's body when it is consumed excessively by animals.

Due to the medicinal properties of the biological substances contained in the ferula L. family, which is especially common in Central Asia, it is used in the preparation of many pharmaceutical drugs and has been widely used in the treatment of people for many years, especially in medieval medicine.

Therefore, Ferula assafoetida, belonging to Ferula L type, belongs to the group of terpenoid plants from which biologically active substances are extracted, and is of great interest in the production of new pharmaceutical drugs [7,8,9].

106 species of these plants belonging to the Ferula L family, which are used as a source of food in animal husbandry and beekeeping, medicine and raw material in industry, grow in Central Asia and Kazakhstan. along with its indicators, there is information that some of its species are toxic to the animal body. Because of this, in cattle breeding, which is one of the main areas of pasture livestock breeding in our Republic, among sheep diseases, there are diseases of unknown cause, and these diseases cause great economic damage to cattle breeding cooperative farms. In the literature, there is no clear and scientifically based information about the effect of the seeds of F. assafoetida, which is widespread in the Kyzylkum region, on the body of Karakol sheep. That's why scientific tests were conducted to study the area of distribution of *ferula assafoetida*, the accumulation of biologically active substances in its various vegetative parts during different vegetation periods, and the effect of its seeds on the body of black sheep after ripening.

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Research object and methods. Taking into account that sheep and other animals consume coumarin, terpenes and biologically active substances contained in the *ferula assafoetida* plant, chronic experiments were conducted at the Amir Temur company farm specializing in cattle breeding, Jondor district, Bukhara region, in order to study the effect of *ferula assafoetida* grain on the body of Karakol sheep. For the experiments, 15 Karakol sheep with a live weight of 34-35 kg were divided into 3 groups of 5 heads based on similar pairs.

Karakol sheep in the control group of the experiment received 18 kg of mixed feed as part of the ration of each animal for 60 days. During this period, animals of the first group consumed 9 kg of mixed fodder and 9 kg of *ferula assafoetida* grain, and during the experiment, 270 grams of coumarin, terpene and other biologically active substances or 128.5 mg/kg of live weight per day were recorded in the body of each animal.

The animals of the second experimental group each received 9 kg of mixed feed and 9 kg of *ferula assafoetida* grain and additional 1 g/kg of live weight of Azkamar bentonite for 60 days. It was found that terpenes and other biologically active substances decreased.

Through experimental scientific researches, the effect of *ferula assafoetida* grain on the clinical-physiological condition of snow sheep, daily growth, body weight and morphological indicators of blood was studied.

Clinical-physiological parameters and food intake of the animals of the second group, which were given *ferula assafoetida* grain and additional Azkamar bentonite, were compared with the control group during the experiment, and no significant differences were noted between them.

However, in the animals of the first group, which received 150 grams of *ferula assafoetida* grains daily and received 128.5 mg/kg of live weight per day or a total of 270 grams of coumarin and other biologically active substances during the experiment, clinical signs characteristic of poisoning, impaired movement coordination, eye enlargement of the pupils, diarrhea, increased heart rate and breathing rate, and a foul smell of sputum when exhaling were noted.

When the daily growth of the animals in the similar experiment and the control group was analyzed month by month, the daily growth in the animals of the control group was the same 260 grams. This indicates that they are carrying out normal life processes in their body.

When the daily weight gain of sheep in the second experimental group was compared with the control group, it was found that the daily gain increased by 265 grams or 1.9% in the first month and decreased by 215 grams or 5.8% in the second month.

It was found that in the animals of the first experimental group, the daily growth decreased by 5.8% in the first month of the experiment, and by 17.3% in the second month compared to the animals of the control group.

The analysis of the data mentioned above indicates that the daily growth of Karakol sheep increased for 30 days and then decreased. In our opinion, it is the response of the body to the biologically active substances contained in the *ferula assafoetida* grain and their high cumulative nature in organs and tissues.

Changes in hematological indicators in experimental animals are also characterized by an increase in the amount of biologically active substances contained in *ferula assafoetida* grain in the body.

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When hematological tests were carried out in the experimental animals, the main changes in the morphological parameters of the blood were shown in Karakol sheep, which were given 150 grams of *ferula assafoetida* grain mixed into the diet or 128.5 mg/kg of coumarin, terpene and other biologically active substances.

In the Karakol sheep of the first experimental group, the beginning of morphological changes in the blood was manifested on the 20th day of the experiment, in which it was noted that EChT increased by 10.5% compared to the beginning of the experiment. The erythrocyte sedimentation rate (EChT) was shown to increase by only 2.9% in the animals of the second experimental group receiving 1 g/kg live weight of Azkamar bentonite in the diet.

During the experiments, it was noted that the amount of erythrocytes, leukocytes and hemoglobin in the blood of the first group of animals decreased by 21.1, 15.4 and 9%, respectively, compared to the beginning of the experiment.

At the end of the second group of animals in the experiment, the sedimentation rate of erythrocytes increased by 34.2% compared to the beginning of the experiment in the first group of animals.

It should be noted that at the end of the experiment, the rate of sedimentation of erythrocytes in the first group of animals increased by 34.2% compared to the beginning of the experiment. In the morphological parameters of the blood of Karakol sheep, which received 150 grams of *ferula assafoetida* grain and 1 g/kg of live weight of Azkamar bentonite, the signs of poisoning were reduced.

In our tests, the decrease in the number of leukocytes in the animals of the first group of experiments indicates a violation of their formation in lymphoid tissues, which showed that on the 20th day of the experiment, the number of eosinophils decreased by 25%, the number of rod-shaped neutrophils decreased by 25%, and the amount of monocytes decreased by 21.5% compared to the beginning of the experiment. By the end of the experiment, the number of rod-shaped neutrophils decreased by 19.8%, lymphocytes by 14.9%, and monocytes by 28.6% compared to the beginning of the experiment.

By the end of the experiment, the number of eosinophils in the blood of the second group of animals decreased by 16.7% compared to the beginning of the experiment, while lymphocytes and monocytes increased by 6.6 and 20.8%, respectively.

Thus, when *ferula assafoetida* grain containing 3% of biologically active substances growing in Kyzylkum region of our Republic was added to the ration of Karakol sheep for 60 days, it had a negative effect on clinical-physiological indicators and morphological indicators of blood.

In conclusion, it can be said that Azkamar bentonite, with its high adsorption properties, actively absorbs biologically active substances contained in *ferula assafoetida*, reduces their toxicity, and protects animals from poisoning.

Summary. In order to prevent poisoning with kavrak grain, Azkamar bentonite is recommended to add 1 g/kg live weight of bentonite to the diet of Karakol sheep, taking into account the active absorption of toxic biological substances contained in *ferula assafoetida***.**

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