

of soybean seeds by the increase of protein content or oil. For successful breeding programs it is very important to understand the biochemical mechanisms of the accumulation of protein and oil in soybean

Sucrose analysis at the 2-3-4 weeks after flowering showed increase glucose oxidase activity in each subsequent week sampling.

Analysis of the amino acids profiles showed their range: aspartic acid 1.5-5.5 g/l; glutamic acid 0.25–1.57 g/l; phenylalanine 0.49–7.5 g/l; arginine 0.3–0.5 g/l; methionine 0.65–1 g/l; valine 0.15–2.45 g/l; 0.35–1.7 g tryptophan/L; tyrosine 0.75–1.01 g/l; asparagine 0.9–1 g/l.

According to the amino acids content in mature soybean seeds is noticed the presence of tryptophan, tyrosine and methionine. For the standards Misula, Lastochka and Zhansaya – tyrosine and tryptophan.

The high content of total essential amino acids (EAA) was observed in the next varieties: B48/232; ZR13; ZR38; B37/153; V10/1012; A8/2-2; A9-562, notably Phenylalanine, Valine, Isoleucine.

Distinct correlation was established between the concentration of asparagine and total amino acids content in soybean samples.

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Histochemical studying of ovaries in sheep of different breeds after hormonal treatment in oestrus season



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The study of histochemistry methods consists in ability to localize substance and biochemical reactions in fabrics, cages and organoids non-destructive normal structure. Histochemistry analysis provides information about physiological activity and pathosis. This specific advantage is extremely needed at the study of such organ as an ovary the structure of that is difficult and quickly changes depending on the biological rhythms of organism. Biochemical methods of *in vivo* and *in vitro* appear unable find out structural subunits responsible for certain physiological functions. The research object the ovaries of adult (4-6) ewes of edible served and Kazakh fine-fleece breeds. The investigated material was got astral season September-October months.

The exposure of general proteins histochemistry reaction was conducted by Danieli with bromophenol and for determination of glycosaminoglycans used reaction by Stidmen. Histochemistry treatments of material were conducted by the traditional methods of microscopic technique of preparation of thin cuts. The viewing and photographing of histological preparations carried out through the light microscope.

The result of undertaken morphological studies the picture of organs of animals at application of follicle stimulating hormone showed the histochemistry changes of ovaries depending on the dose of the entered preparation for the sheep of different breed. The histochemistry reaction with alcian blue was observed that sour mucopolysaccharides is widely presented in fabrics of ovary. The follicle liquid and glycosaminoglycans. Analysis histochemistry

reaction with bromophenol blue and alcian blue showed that total proteins and sour mycopolisaccharides met in the shells of ovule, in follicle liquid and in stroma of organ.

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Histological researching of ovaries in sheep of different breeds in oestrus season



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The sheep breeding one major agriculture industries of Kazakhstan. The study of reproductive organs in morphofunctional plan taking into account the terms of maintenance, feeding reproducing organs. The aim of research is an exposure of histological features structure of ovaries for animals, study to influence on histostructure organs-targets products and hermoplasm. Morphofunctional state of genital organs at morphological level will allow deeper to understand the role of hormones animal organism to reproduce posterity.

This work morphological changes of ovaries are investigated the sheep of Kazakh fine-fleece breeds (Edilby) and after hormonal treatment season. For stimulation of superovulation were used hormonal preparation: Pluset is gonadotropic preparation hypophysar hormones enter in the complement of that – folliclestimulating and luteinizing. Studies were undertaken on 10 adult (4-6) ewes of Kazakh sheep (Edilby) breeds. The object of histological research the ovaries of sheep, got in season September and October months.

Research results showed that in stroma of organ of sheep breed there is a great number atretic follicle, mainly, that are the source of estrogens, necessary for a normal process ripening of oocytes. The amount of natural and prepopulated follicles increased at hormonal stimulation of sheep, resulted in superovulation and considerable increase of fecundity of sheep. Sheep of Kazakh fine-fleece breed in age 3th and 8-years-old are apt at reproduction, because normal development of follicles goes to their ovaries. At hormonal stimulation of sheep Kazakh fine-fleece breeds the amount preovulated follicles increased, that resulted in superovulation and considerable increase of fecundity of sheep.

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Biotechnological production and application of betalain pigments for food plants



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Pigments are present in all living matter and provide glamorous colours and play fundamental roles in the development of organisms because of public awareness of their health benefits. As known, pigments prefer in natural products have antioxidant, antimicrobial and antimutagenic activities. Betalains alter the anthocyanins in flowers and fruits of plants. Betalains are natural pigments whose colours range from red-violet betacyanins to