THE RESULTS OF THE DETERMINATION OF THE UREASE ACTIVITY IN SOY FEED

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Soy is the most valuable leguminous culture. In the seed of soy there is a valuable albumen part of that presents to a 35-40 %, fat - 18-28 %, carbohydrates - 22-35 %, including saccharoses 3,3-13,5 %, vitamins E, B1, B2, B3, rich composition of amino acids, microelements and extract substances - 10-15 %. After amino acid composition a soy-bean albumen is approached to squirrel of animal origin and well mastered by the organism of animals. Quality soy-bean forage is characterized by the high level of digesting squirrel (88-90 %), almost at the level of fish flour (88-92 %), by considerable content of irreplaceable amino acids, foremost, the sharp deficit of that is observed a lysin in most vegetable forage.

Next to it soy contains in the composition anti-nourishing substances that in the process of making of forage necessarily must be inactivated. Among them the inhibitors of proteases, that reduce proteolitic activity of enzymes of Trypsinum and chymotrypsin that conduces to violation of digestion. In the bobs of soy active there is an enzyme ureaze that destroys quality proteins and amino acids of feed in an organism and converts them into a poisonous substance - ammonia. Ureaze of bobs of soy in the stomach of animal slits the urea of gastric juice, what does alkaline an environment round the particle of feed that prevents to the action of pepsin.

The index of activity of ureaze gives an opportunity an indirect method to estimate necessary degree of treatment of bobs of soy and is the criterion of estimation of degree of rendering of anti-nourishing substances harmless. As an increase of activity of уреази in soy-bean forage foods can be reason of not only decline of increase of body of animals weight but also strengthening of catalytic processes in the organism of animals and to hydrolysis disintegration of urea that can cause poisoning, it is necessary to conduct permanent control of forage after an index activity of ureaze.

The article presents the results of the determination of urease activity in soybean feed. During 2014 year in the laboratory of control of feed additives and premixes, which is accredited in system ISO / IEC 17025, were investigated 72 samples (unprocessed and extruded soybean soy-bean meal and pomace), that was received on
the sampling control from farms of different ownership forms. It was found out that in 14 of them, that is 19.4%, the urease activity was higher than declared value. The determination of the urease activity in extruded soybean, soybean meal and pomace did not correspond to the requirements quality certificate, respectively, 23.5, 12.1, 33.3% of samples. The urease activity in them was from 2.11–2.33, 0.24–0.9, 0.30–1.83 pH units, respectively.

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