RESEARCHES OF CUTTING OF THE ESOPHESOPULA AS A COMPONENT OF THE PROCESS OF ITS CLEANING

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The analysis of the mechanization of the meat by-products peeling process, which showed the relevance of developing equipment for the peeling of mucous by-products, is carried out. With this goal in mind, the results of a study of the cleaning process of mucous by-products by the example of beef and pork esophagus are presented. The results of experimental studies of the process of cutting the esophagus of pork and beef with tubular and flat knives are presented. The significance of the influence of factors on the cutting process is estimated, data on the cutting force relative to cutting the esophagus in cramped conditions with a cylindrical knife are obtained depending on the initial temperature of the raw material, the angle of sharpening of the cutting edge of the knife blade. The results showed the advisability of using cylindrical knives in the designed apparatus, despite the significantly greater significance of the cutting force compared to flat knives. Cylindrical knives can achieve the desired result when removing the serous membrane. Analytical dependencies between quality indicators and outgoing process parameters allowed us to determine the appropriate combination of parameters of rational indicators of cutting force at different sharpening angles of the cutting edge of the knife blade. Data were obtained on the dependence of cutting the esophagus of pork and beef at different initial temperature indicators of raw material. The obtained data confirmed the assumption regarding the possibility of processing raw materials in a frozen state, which does not violate the technological requirements for the by-products processing. The data obtained confirmed the possibility of constructing an apparatus for meat by-products peeling.

Keywords: cutting process, beef esophagus, serous membrane, sharpening angle, cylindrical knife, cutting force.