

## THE EFFECT OF AGE, SEX AND REGION ON HISTOLOGICAL STRUCTURES OF THE ESOPHAGUS IN BROILER CHICKENS

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**Abstract.** The purpose of this study was to determine the influence of age, sex and region factors on the histological structures of the esophagus in broiler chickens. 24 *Ross* broiler chickens (12 males and 12 females) were used. The chickens were allocated to one of three age groups; 3–7 days, 21–28 days, 49–56 days. The cervical and thoracic esophagi of all birds were used. The general histological characteristics of the esophagus were similar to those of the other birds. No significant histological differences in esophageal structures exist between the sexes. In all three age groups except the *tunica submucosa*, the other layers of esophagus were more developed in the thoracic region than that of the cervical region of the organ. The glandular units of simple branched *mucosal glands* which were more in thoracic part of esophagus than its cervical part were 7 or more around an *esophageal crypt*. Lymphatic tissues were not observed in the lamina propria of both regions of esophagus. An unusual finding of the esophagus in broilers was the presence of a capsule of reticular, elastic and collagenous fibres which separated the *mucosal glands*. By increasing age, all the histological layers of esophagus were increased.

**Keywords:** age, broiler chickens, esophagus, histology.