

	262,5±2,05	284,5±3,08***	318,2±3,08***
/	375,1±2,79	355,7±2,58***	354,2±2,64***
, %	76,6±0,23	75,6±0,22	75,4±0,23
,	222,18±1,12	221,85±1,17	221,83±1,13
-, %	13,84±0,51	14,46±0,48	15,34±0,40*

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JERUSALEM ARTICHOKE'S FLOUR INFLUENCE ON PORK QUALITY

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Lately, in order to reduce fodder consumption, the prime cost of pork, and protect pigs from some digestive tract diseases, probiotics and phytobiotics or its' mixtures were started to being used [6]. Jerusalem artichoke (*Helianthus tuberosus L.*) is rich in the carbohydrate inulin [3]. Jerusalem artichoke contains from 20.4 to 31.9 pct. dry matter, which mainly consists of carbohydrates. In the soluble carbohydrates' composition there are derivatives of inulin: fructooligosaccharides, reducing sugars (glucose and fructose) and saccharose [1]. The addition of fructooligosaccharides to the diet of monogastric animals brings out several metabolic and physiologic

changes, including improvements in feed efficiency, reduced diarrhea, and reduced smell in feces, that have been attributed to a change in the make-up of the intestinal microflora population [3].

The aim of this research was to estimate the influence of Jerusalem artichokes' tubers flour on porks' quality.

The research was accomplished in 2013 at the Laboratory of Meat Characteristics and Quality Assessment of LSMU Veterinary Academy. The research was accomplished with landrace breeds' pigs, piglets were divided into 2 groups – experimental and control, with 16 weaned off piglets in each group. Each piglet from experimental group were individually additionally fed 150 g of Jerusalem artichoke's flour every day. The piglets were grown until they reached 95-100 kg of body weight. Slaughter and post-slaughter processing was accomplished in accordance with the EU regulations binding in the meat industry.

Samples were taken from dorsal loins' muscle *m. longissimus dorsi*. All the studies were performed 48 hours after the slaughter. Quality characteristics included the amount of dry matter, cooking loss, water holding capacity, dip of water, color intensity, pH, amount of fat, amount of ash and tenderness, and were performed according to generally accepted methods.

The R statistical package version 2.0.1. was used to estimate data. Differences were considered significant with $p < 0.05$.

After an analysis of porks' chemical composition, it was estimated that the experimental pigs groups' meat had statistically reliably 2.22 pct. ($p < 0.001$) less amount of dry matter. Experimental groups' meat had 1.25 pct. lower pH value than control groups' pigs meat ($p < 0.05$). The amount of intramuscular fat was different fractionally, it was 0.82 pct. ($p < 0.05$) less in the meat of experimental groups' pigs. According to De Smet et al., (2004), nutrition and breed of animals has a great influence upon the amount of fat and composition of fatty acids in the muscular tissues of meat [2].

The meat of pigs which were fed with Jerusalem artichokes was more pale: L* (brightness) was 0.04 pct. bigger, a* (ruddiness) – 0.74 pct. less and b* (yellowness) – 0.50 pct. less than in control group. Farnworth E.R. et al., (1992) established, that pigs which were fed with Jerusalem artichoke had significantly ($p < 0.001$) lighter, more brown and green, but less yellow colour manure [4].

Dip of water in the meat of experimental group's pigs was 0.39 pct. bigger, the coherence of water – 2.11 pct. ($p > 0.05$) bigger and cooking loss – 1.57 pct. less ($p > 0.05$). Meat which has less loss of weight during cooking is more valuable [5]. The meat of pigs which were fed with Jerusalem artichokes' tubers flour distinguished by 1.80 pct. ($p < 0.05$) bigger ten-

derness, but less amount of ash (3.91 pct., $p < 0.05$) and proteins (0.66 pct., $p < 0.05$).

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IN VITRO ANTIOXIDANT ACTIVITY OF VARIOUS EXTRACTS OF WHOLE PLANT OF CONVULVULUS PHRYGIUS BORNM., ENDEMIC TO TURKEY

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Turkey has for several reasons such as it is the meeting place of three phytogeographical regions (the Euro- Siberian, Mediterranean and Irano-Turanian regions), Anatolia forms a bridge between Southern Europe and the flora of South-West Asia, many genera and sections have their centre of diversity in Anatolia and species endemism is high, a particularly interesting flora. Therefore, the flora of Turkey there are more than 9000 plant species and about 3000 are endemic[1].

Convolvulus is a genus of approximately 250 species of flowering plants in the *Convolvulaceae* family, commonly known as bindweeds, some of which occur in Mediterranean regions [2]. In Turkey, this genus is represented with 33 species, 9 of which are endemic [1].

In this study, antioxidant activities of various solvent extracts (methanol, ethanol, acetone and benzene) obtained from aerial parts of *Convolvulus phrygius* were determined. Antioxidant properties of various extracts from *C.phrygius* were evaluated by using 2,2-diphenyl-1-picrylhydrazyl (DPPH) and α -carotene-linoleic acid assays. In addition, total phenolic con-