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Influence of slaughter age of stirks of Ukrianian beef breed on their meet productivity

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Investigated the performance of slaughter bulls Ukrainian meat breed, depending on their age. It is found that the highest yield of carcass, slaughter pulp of premium and first grade observed at the age of 22 months. Contents of internal fat and tendons bundlese, pulp premium and first grade with age have tends to increase. Net increase with increasing age of bulls slaughtered reduced.

Weight before slaughter, carcass yield, carcass weight pair, a net increase

At the present stage of beef cattle breeding it is necessary to know the regularities of animals’ meet productivity in ontogeny. It will allow forecasting this factor depending on age, live weight and breed. That is why the problem of substantiation of optimal slaughter age of stirks of Ukrainian beef breed remains significant.

The data considering meat productivity of the stirks of Ukrainian beef breed from stud farm “Volia”, Cherkassy region were used as the material for research. From birth to weaning offsprings were kept at their mothers. From the age of one month they were fed with additional concentrated food and hay. Animals that achieved the age of 8 months were chosen to go through an experiment according to their own productivity; this experiment lasted until they were 24 months old. Over the period from 8 to 16, from 8 to 18, from 8 to 20, from 8 to 22 and from 8 to 24 months every stirk correspondingly used 2178, 2783, 4186, 4448 and 6076 fodder units.The assembling animals into groups for analysis of slaughter results was

conducted according to the method of balanced groups-analogues. Difference between study animals according to the age in groups estimated 5 %. Net increase (increase of carcass weight on the assumption of one day of life) was estimated according to the requirements of ICAR. To estimate the beefiness of animals we used muscular-bony relation, which was accounted by dividing muscular tissue weight by weight of bones and index of muscular tissue, which was determined by dividing muscular tissue weight by total mass of bones, connective and fat tissue. The results received in the research were computed biometrically.

The difference between actual weight and live weight after period of fasting at all age periods estimates from 2,1 to 5,3 %, except stirks in the age of 20 months, theirs difference estimated 7,6 %. The growth of the stirks during the researched periods was uneven. If the animals accumulate body weight until 22 months, but with different intensity, then after that they finish their battening. The live weight gain over the age from 22 to 24 months, comparing to preceding age periods is the lowest. The slaughter weight, comparing to 16 months increases unevenly. Over the age from 16 to 18 months it increased by 8,0 %, from 18 to 20 months by 4,0, from 20 to 22 by 11,0 %. Over the age from 22 to 24 months it decreases. Carcass weight of stirks, with aging, increases by means of more intensive muscular tissue gain and to a lesser degree – by means of bones and tendons gain.

The highest (62,7 %) carcass yield was observed at the age of 22 months. Out of researched attributes, the most significant changes were experienced by fat content, which is explained by biological specificity of animals to reserve nutrients during intensive feeding and waste them during the periods of adversity and also by age-specific changes of metabolism. The internal fat content is increased with aging, the highest point is observed in the age of 24 months. The slaughter yield amount varies from 62, 8 to 65, 4 % but the highest slaughter yield is in stirks at the age of 22 months.

The aging changes of slaughter yield in animals are explained by uneven growth and development of separate tissues. The high slaughter yield in stirks at the age of 22 months and comparatively low in stirks at the age of 24 months is caused,

in the first case by inconspicuous gain of live and carcass weight and in the second one by large storage of visceral fat. As a result the slaughter yield in animals is increased with aging. With increase of years of animals the relation between different tissues in carcass changes. The mass ratio of crumb is not essentially changed. Thus crumb yield is the highest (79,9 %) at the age of 18 months, and the lowest (77,0 %) at 20 months. The crumb yield of superior and first quality increases with aging. The proportion of veins and ligaments tends to increase with aging.

The crumb weight in semi-carcass in the 24 months animals increased, comparing to the 16 months animals by 1, 29 times, bones weight correspondingly by 1, 27 times. At the same time during the estimation of animals' meat productivity, an essential importance is acquired by skeleton of the animal, because it is better to receive animals for further slaughtering which have optimal content of bones. The percentage of bones yield in semi-carcasses of stirks depends on the age and ranges from 18,4% to 16,3%. This index in stirks, with aging decreases by an average from 17,7% (16 months) to 17,0% (24 months). Muscular-bony relation ranges from 4,2 to 4,9. Its quantity tends to increase with aging of animals. Specificities of changes of value index of muscular tissue in the young from 16 to 24 months were not found.

Conclusions

1. The net increase in the stirks of Ukrainian beef breed, with aging decreases.
2. The content ratio of crumb of superior and first quality and also visceral fat tends to increase, with aging of stirks.
3. Further investigations should be directed onto determination of optimal live weight before slaughtering of stirks of Ukrainian beef breed.

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