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### HUNTING INDUSTRY EFFICIENCY IMPROVEMENT BY TROPHY BUSINESS DEVELOPMENT

The current stage of development of hunting in Belarus can be called transition from extensive to intensive development of wildlife, from the predominance of public hunting animals to state public with a maximum commercialization. It is important to determine the impact of this transition.

As a result of studying the experience of the trophy case in Europe, assess the situation with growing trophies in Belarus and comparing the results of certain conclusions that allow us to say that a problem is detected in hunting activities – against the background of a relatively small number of red deer observed withdrawal from the male population with high trophy qualities horns without regard to their maximum ages, which in turn leads to significant losses in the reproductive process of the population.

**Introduction.** As a result of studying the experience of trophy business in Europe, assessment of a situation with trophies growing in Belarus and comparison of the results some conclusions are made which allow saying that a problem in a hunting industry management has been revealed - on the background of relatively small number of red deer (*Cervus elaphus*) there is a tendency of elimination of males with high trophy quality of antlers from the population without taking into consideration their maximal age that in its turn leads to considerable loss in reproductive process of the population.

The purpose of the research – assessment of the modern situation and working out the approach to a trophy business of Belarus.

Tasks of the research included studies of previous and modern tendencies in trophy business of Europe and Belarus and measures on management improvement of the trophy animals population.

**Main part.** Methods of research included finding the information on trophy business in Europe, material analysis, revealing of problems and measures offering on improving the present situation in trophy business in hunting industry of Belarus.

Attitude to trophies and trophy hunting in Europe was not the same, it was gradually forming together with hunting ethics.

Tribes, occupied Central and Western Europe by different ways, were mainly farmers. For the elite hunting was a kind of pleasure and physical training. With baroque style and hunting rising to the level of a social status attribute, elite competed not only in the number of hunted game which they could offer to their quests but also as trophies, in particularly, antlers of red deer. Weight and number of prongs were thoroughly recorded. The best of them were built up on finely cut heads which still decorate walls of European castles.

Primitive worship of trophies disappeared with social revolutions at the beginning of the XIX century because of rarity of game and poor quality of trophies. Nevertheless, by the end of

the XIX century when there appeared a lot of the hoofed again and virgin corners of lands became accessible due to rail ways and ships, rush for trophies resumed. By the end of the 20 ss. of the XX century with the support of the new-founded International Council for Game and Wildlife Conservation (CIC) in Paris the first assessment formula for trophies competition was worked out. Worship of trophies reached its zenith in 1936 in International hunting show in Berlin.

Saving of trophies and trophy shows can be very important mechanism of management of wild hoofed. Trophies of the fixed age are reliable parameters of prosperity of population and main object of sociobiological control for population.

According to modern knowledge, the system of trophy selection is out-of-date. Hunting for males only by probable signs of antler shape can help nothing if such signs cannot be identify with females. In general, genetic diversity of trophies is much more than the frames are being fixed by artificial categories of ideal trophies.

In the last decades racing for trophies even more increased by means of “biotechnical” technology with the help of which “trophy” animals are literally “being fed” (including hormone additives). As a result, bulls become bearers of monstrous mega-trophies; they are (for big money) set out in open-air cages under the shots of “hunters”. A German chemist Franz Vogt was a pioneer in the field of intensive biotechnics. The main point of Franz Vogt’s works was in the fact that body weight of adult red deer inhabiting in different quality biotopes can vary five times over: from 70 kg in bad industrial areas to 350 kg in the Carpathians. Starting his experiments, Franz Vogt turned to the technologies with oil-bearing-crop seeds where sesame seeds turned out to be the best. Nourishing diet of deer resulted to a considerable increase of prongs and their mass. One-year-old deer often had branched antlers instead of “awls” (at present, using open-air cages for growing the hoofed, it is an absolutely common phenomenon).

During the “fattening” Vogt deer had such a big number of prongs that do not occur in Europe. The experiments showed the possibility of achieving more than double of a “normal” size of deer body over a period of five generations. In the third generation when the experiments were interrupted by the war, red deer reached their full body weight of 300–350 kg, and their antlers were as heavy as 11–14 kg. Average dead weight of roe deer (*Capreolus capreolus*) rose from 15 to 26 kg while antler mass made 600–700 g.

The maximal weight of antlers of caged deer made 14 kg and had 247 scores (it is less than the heaviest antlers known in the world, obtained near Warsaw in 1654 and now being kept in the famous collection of Moritzburg castle near Dresden; their weight is 19,9 kg and they have 26 prongs). Modern farmers use intensive technologies as well. As a result of the work in some farms special breeds of red deer were obtained who less resemble their fellow-brothers (as for the shape of the antler) living under natural conditions. Such kind of animals is received as a result of not a selection but as a genetic engineering, i.e. by means of not only selecting but also interference in genotype of the animal.

Slovakian experts in gamekeeping under the management of P. Hell (2008) made a research of the best (golden) trophies exhibited during the last 40 years in Slovakia and the Czech Republic. It turned out to be that the quality of Slovakian trophies (as for the score and number of prongs) remains rather stable. Antlers of Czech origin scores are becoming higher during the last years.

Analyzing the experience of super-trophies growing, it is necessary to underline that intensification of trophies growing with the help of a special additional fertilizing, as a rule, was carried out only for caged growing. Under the natural conditions this method gives considerably worse results mainly because under the conditions of free growing there is no a possibility to actively use a special fertilizing for animals intensively. But the main reason for receiving “super-trophies” under the free conditions – it is the absence of intentional crossbreeding of animals. Crossbreeding under the free conditions takes place at random. Control for appointment of certain males is only possible in this case during the pairing. But even in this case possibility of pairing of undesirable males from selective point of view with females is not excluded. Inheritance of undesirable trophy signs is also possible via females. It is practically impossible to single out undesirable trophy signs in females according to external features. In this connection selecting under the free conditions is connected with lots of difficulties and will last for a rather long period. Under the free growing of ani-

mals an absolute majority of authors [1, 2] while talking about a trophy trend of the hunting put into the first place such notions as a sex-age structure of a herd, quality of lands, density of the animals population and a specific age of animals.

At present trophy hunting is a “hunting for animals with high trophy qualities”. These changes in hunting provoked a sharp demand in trophies. Trophy business appeared: a price for a trophy was fixing in accordance with its quality. Existing trophy system – commercial and competitive spiritually and essentially – provokes hunting for the largest animals with record-breaking antlers. With borders opening foreign tourism has increased including a hunting one.

In hunting industry of Belarus the stuff in its majority is characterized by a low qualification of experts in gamekeeping and huntsmen. Animals are not specially grown as trophies, for a rare exception, trophy hunting became destructive for the population. At a low number of the hoofed groups of hunters quickly get all adult males at a local area during a rutting season. Mass hunting for the best begetters causes irreparable damage to gene pool of the antlered ruminants, whose males have maximal developed antlers in middle, the most productive age.

Operated regulatory system does not provide preservation of resources and gene pool of hunting animals. Rules for hunting and hunting industry management considerably increase regulatory standards of legal hunting for wild hoofed males. Night-sight during the hunting is not prohibited and game has not chances to survive. Culling does not practically take place. In current licence system selective hunting for the hoofed in hunting farms is not real as permissions for hunting for large game is individual and hunters try to use them for hunting for the best quality trophy animals. Therefore, if we really want to achieve improvement of population quality, this system needs changing as well as regulations and hunting period and a bag rate.

Level of population reproduction should be increased. It is rather possible to realize maximal reproductive potential under the following conditions: in populations adult mainly middle-aged females will predominate; animals will be provide with good quality feed and water; females will not experience lack of adult males; mortality among underyearling will be reduced.

The last condition is achieved by means of the decrease of hunting for adult females by hunters, number of predators’ regulation and abundant dieting in winter.

Main principals of the wild hoofed trophy selection are well known. The largest, the strongest, vigorous middle-aged animals with maximal re-

productive potential are left for a breed and the worst by quality are, on the contrary, removed from the population. [3].

Selective hunting for the underyearling is not complicated as in autumn and winter a family stay together and there is a possibility for comparison. The weakest calf is shot in spite of the gender, in case of twins - one calf is taken away, in case of triplets - two calves are taken away. One-year-old animal units are especially thoroughly selected – it is quite real to identify their potential trophy quality.

It should be noted that the price for an elite male for the population and a hunting sector many times exceeds the sum which can be received for a trophy, therefore, good quality animals are preserved as much as possible and, in case of necessity, taken away only after rutting.

Selective hunting for inferior adult males is completed till rutting period.

In modern hunting sector it is difficult to do without genetic control for population. As it is seen

from the world experience, molecular-genetic methods allow reliably assess quality of animals.

**Conclusion.** It is necessary to re-orientate trophy hunting into a predominant hunting for old males. To achieve this, it is necessary to change a system of trophies assessment by means of including into it additional (score) criterion – the age of the hunted animal.

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