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THE IMPACT OF SEA HYDROBIONT ADDITIVES ON DUCKS

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Sea hydrobiont additives both protein-mineral and mineral when used in the amount of 10% in ducks ration produce positive effect on their productivity without reducing body weight gain. Moreover, the additives ensure a higher rate of ducks survival when raised and a slight gaining of average daily live body weight.

Key words: *sea hydrobionts, mineral additive, protein-mineral additive, sea water, "Iodine", ducks.*

Introduction. Recently the production of livestock production has decreased in the country. It accounts for the reduction of animal and bird livestock, fodder production, the proportion of protein-mineral food of animal origin. In this regard the problem of surching alternative animal feed resources is becoming particularly important. Sea hydrobionts (such as mussels, seeweed and sea water) possessing sustainable proteins and valuable biodiversity crucial for growth and development of animals and birds are suggested to be one of such precious sources. Using sea hydrobiont forage in poultry farming is of crucial importance as it is one of the fastest-growing branches of animal industry [1 - 3].

Materials and methods. The study focuses on sea hydrobiont additives both protein-mineral and mineral produced according to our own designed technology by means of shredding mussels primary processing and agrarian wastes (iodine). And their partial hydrolysis to a paste-like [4-5] consistency including the study of ducks fattening process. To consider the impact of hydrobionts 400 ducks at the age of 180 days were selected for the study. They were divided into 5 groups: 1 control groups and 4 test groups 80 ducks in each.

At the time of the study all the ducks were kept in the same conditions and provided with staple livestock ration used and balanced in farming in accordance with existing norms [6]. The study of sea hydrobionts impact ducks productivity was carried out under existing instructions and regulatory documents [7].

Study results. All the paultry during the study was provided with the diet accepted by agriculture and balanced on the essential nutrients according to current regulations. After the comparative period of the study the diet of the experimental ducks was partially replaced with fodder paste as it is showed in the research scheme presented in Table 1.

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Table 1

Research scheme.

№	Groups	Study periods and ration	
		Comparative (180-210)	Basic (210 - 360)
1	Control	SR	SR
2	Experimental	SR	90% SR+10% PMA
3	Experimental	SR	100% SR+10% PMA
4	Experimental	SR	90% SR+10% MA
5	Experimental	SR	100% SR+10% MA

N.B: SR – staple ration; PMA –protein-mineral additive; MA – mineral additive.

The study of influence of marine hydrobionts on ducks productivity presented in Table 2 showed that theenrichment of the ration by protein-mineral and mineral additives (in the period the ducks were from 210-360 days old) under the suggested method had a positive impact on ducks productivity regardless the kind of additive.

Table 2

Impact of sea hydrobiont additives on ducks productivity, M±m, n - 80

Category	Groups				
	1	2	3	4	5
Initial live body weight, g	2985+4,16	2980±2,14	2985±3,12	2987±4,62	2990±2,16
Final live body weight in % before control	3425±6,21	3720±2,17	3840±4,24	3524±6,12	3580±6,21
In % before control	100,0	108,6	112,1	102,8	104,5
General live body weight gain, g	440+2,12	740±6,17	885±3,14	537±4,17	590±4,32
%	12,8	19,8	29,6	15,2	18,3
Average daily live body weight gain, g	29,3±0,71	49,3±0,51	59,0±0,72	35,8±2,11	36,7±0,12
%	100,0	16,8	20,1	12,2	12,5
Livestock conservation in %	90,0	97,5	97,5	93,2	95,0

As is seen from the tabfr, at the end of the study the given additives increased live body weight of ducks by 2,8-12,1% depending a kind of additive. General live body weight gain grew by 2,4-6,8% and conservation rate improved by 3,2-7%. The analysis of the study results reveled 2 main patterns proving the reliability of our previous studies on broiler chickens and ducks. The first pattern proves that marine hydrobiont additives contribute to duck productivity increase compared to the control and the second pattern confirms that the enrichment of the ration by additives impoves the productivity increase more actively compared to the partial replacement of the ration by the same additives.

Conclusions:

1. Sea hydrobiont additives produced according to our own technology can be used when raising broiler ducks as non-traditional source of proteins and minerals for staple ration.

2. Enreaching the ration of ducks by protein-mineral and mineral additives in the amount of 10% or replacing the ration by the same amount of the additives allows to increase their body weight gain by 2,4-16,8% as well as relative growth and conservation rate.

3. Feed additives produced from marine hydrobionts comply with all the veterinary and sanitary requirements regarding their safety and quality and could be used in animal production.

4. Protein-mineral and mineral additives produced from marine hydrobiont wastes will provide the basis for increasing and extending availability of food for the poultry through non-traditional products.

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Данкевич Н. І., Розум Є. Ю. Вплив кормових добавок із морських гідробіонтів на продуктивність качок.

Кормові добавки з морських гідробіонтів, білково-мінеральна і мінеральна, при використанні їх в кількості 10% в раціоні качок позитивно впливають на продуктивність. Не знижують приріст живої маси, а сприяють збереженню поголів'ю качок при вирощуванні, та незначних середньодобових приростів живої маси.

Ключеві слова: *морські гідробіонти, мінеральна добавка, білково-мінеральна добавка, морська вода, "йодка", качки.*

Данкевич Н. И., Розум Е. Ю. Влияние кормовых добавок из морских гидробионтов на производительность уток.

Кормовые добавки из морских гидробионтов, белково-минеральная и минеральная, при использовании их в количестве 10% в рационе уток положительно влияют на производительность. Не снижают прирост живой массы, а способствуют сохранению поголовья уток при выращивании, и незначительных среднесуточных приростов живой массы.

Ключевые слова: *морские гидробионты, минеральная добавка, белково-минеральная добавка, морская вода, "йодка", утки.*