

INDICATORS SLAUGHTERING YOUNG RABBITS WHEN USING FEED WITH DIFFERENT FAT SOURCE

R. SCHASLYVYJ, graduate student *

M. GOLUBEV, candidate of agricultural sciences

The results of the scientific and economic expertise to determine the effect of different sources of fat in compound feeds for growing rabbits on the performance of their slaughter. It was found that the use of feed with soybean oil and total fat 3% per 100g of feed increases the mass-slaughter of rabbits at - 1.6%, carcass kidney at - 2.1%, liver - 6.9% of the length of the muscle back to - 2.1% yield on a carcass - 2.1%.

Keywords: rabbits, live weight, crude oil, oil, feed, mixed fodder

Feeding rabbits is a complex mechanical, chemical and microbiological processes involved in sequential digestion, absorption and utilization of nutrients and feed due to or dependent on the age characteristics [5, 6]. In young rabbits various gastrointestinal develop gradually. Found that in rabbits the formation of the alimentary canal to the consumption of fodder plant is completed in three months age [9, 10]. A characteristic feature is the frequent feeding rabbits food intake in small portions. With free access to food ingestion rate of adult rabbits is an average of 25 - 30 times per day with duration of eating 5 - 10 min. Young animals consume more feed, which is associated with anatomical and physiological and age characteristics of the structure and functions of its alimentary canal. In particular, one-month old rabbits from weaning krolematki reception frequency feed is 50-60 times a day, which decreases to normal adult rabbits at 3.5 months of age [1, 4, 7].

To ensure a high level of metabolism in highly productive breeds of rabbits the energy level of the diet should be at least 65% of its total nutritional value. The main

* Scientific adviser – I. Ibatullin.

source of energy for the rabbits are carbohydrates and fats feed. Metabolizable energy content in dry substance of the feed depends on the digestion and utilization - on the physiological state, age, rabbits and their metabolic rate in the body. In rabbits energy nutrient feed is used intensively. In particular, one day in the body 60-75-day-rabbit protein deposited in about 1/3 in fat - 2/3 of the energy nutrients and 90-105-day age - 1/4 and 3/4, respectively [8]. Good nutrition organism rabbits possible provided balanced diets for all the nutritional value of considering limiting the maximum number of feed components and their digestibility [2, 3]. On the efficient use of nutrients diet rabbits predominate other farm animals. In this regard, the aim of our study was focused on establishing the optimal source of fat in compound feeds for growing rabbits for meat production.

Material and methods of research. Experimental studies were carried out at the Department of animal nutrition and feed technology to them. PD Wheat National University of Life and Environmental Sciences of Ukraine. At 42 days of age were selected 80 goals rabbits hybrid Hyplus, of which the principle of analogy was sformovaly four groups - the control and three experienced by 20 goals (10 females and 10 males) each.

Feeding livestock experimental rabbits using complete pelleted feed, the composition of which differed only in the source of fat in accordance with the scheme of the experiment (Table. 1).

1. Experimental scheme

Group	Source fat fodder
Control: 1	Sunflower oil
Research: 2	Palm oil
3	Soybean oil
4	Rapeseed oil

Crude fat level in the diet of the experimental groups of animals was adjusted by addition of sunflower, palm, soybean and rapeseed oils in feed. For prescription used mathematical optimization techniques to the software package Win Mix 3.0 (Table. 2).

2. Feed composition and content of energy and batteries, %

components	alimentation	batteries organism	alimentation
barley	21	Exchange energy, MJ	9,8
wheat	14	crude protein	17,0
corn	5	crude fat	3,0
wheat bran	8	crude fiber	14,0
soybean hulls	29	calcium	0,86
sunflower husk	6	phosphorus	0,52
sunflower	11	sodium	0,22
oil	1	Vitamin A, IU	6000
premix	5	Vitamin D, MO	1000
-	-	Vitamin E, mg	30

To determine the morphological composition of the carcass and chemical composition of longissimus dorsi in 84-day-old scored four animals in each group (two males and two females), followed by section and weighing of individual organs. The live weight of rabbits selected for slaughter was average for the group. At the same time studied the morphological and biochemical indices of the blood of animals. Statistical data processing was performed on a PC using the software MS Excel.

The results of research. As a result of experiment, it was found that the source of fat in the fodder for rabbits affects the performance of their slaughter.

To study the development of the internal organs and body parts rabbits when fed them to feed with different sources of crude oil in 84-day-old's spent their control slaughter (Table. 3).

3. Indicators slaughter of young rabbits, g ($M \pm m$)

indicator	Group			
	First	Second	Third	Fourth
slaughter	2997,5±15,07	2939,0±16,36*	3045,5±9,00*	2951,0±15,77
weight	1689,2±14,54	1615,8±16,22*	1725,9±9,09	1630,9±8,53*
Carcass kidney	105,0±0,82	102,8±0,75	107,3±0,75	102,0±0,91
The longest dorsi	9,3±0,29	9,1±0,09	9,5±0,17	9,2±0,27
heart	80,2±1,14	77,8±1,52	85,8±1,18*	76,8±0,90
liver	20,8±0,61	19,0±0,69	21,9±0,35	19,2±0,68
stomach	13,3±0,33	13,1±0,78	13,5±0,58	13,5±0,38
lungs	2,0±0,35	1,9±0,11	2,2±0,32	2,0±0,21
spleen	20,7±0,54	20,1±0,65	20,9±0,57	20,4±0,26

*p<0,05 compared with the control group.

Mass slaughter rabbits third group was more on 1,6% ($p < 0,05$), and the second at least 1,9% ($p < 0,05$) compared with control animals. It was found that the use of feed soybean oil significantly affects the yield of edible parts (Figure 1).

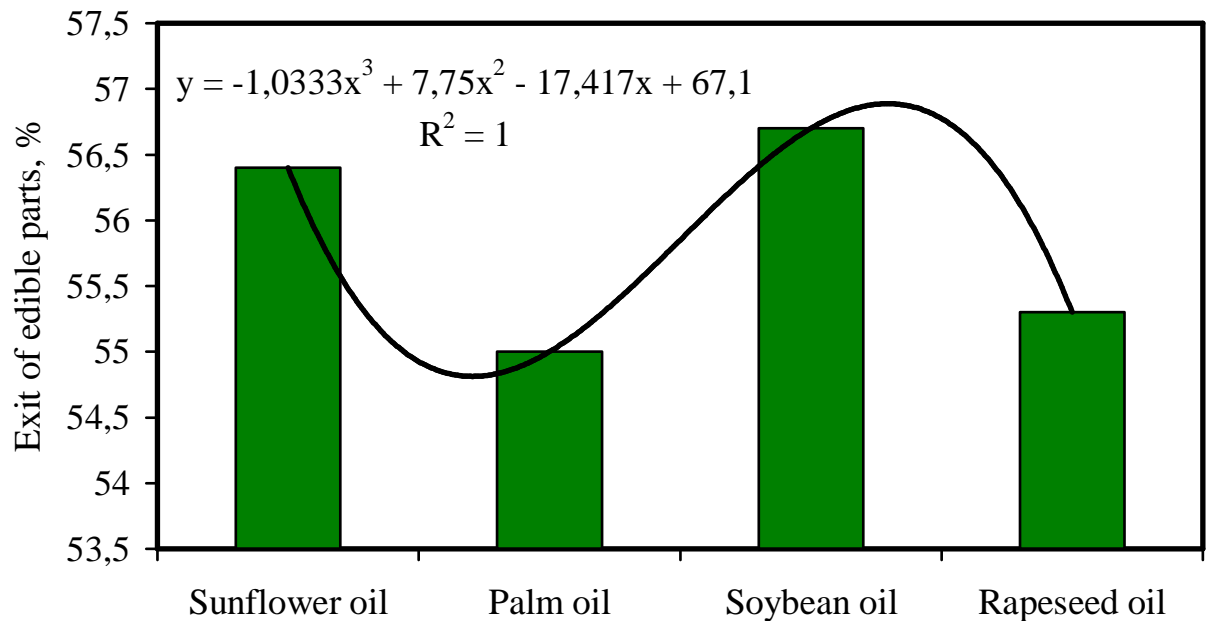


Figure 1. The relationship between the source of vegetable oils and yield of edible parts

It should be noted that the use of feed with different sources of crude oil has different effects on carcass weight kidney. So this figure in rabbits third group was more control by 2,7%, while the second and fourth, respectively, less than 4,3% and 3,4% ($p < 0,05$). The difference in weight of carcasses and edible parts significantly affected the output of products of slaughter (Fig. 2).

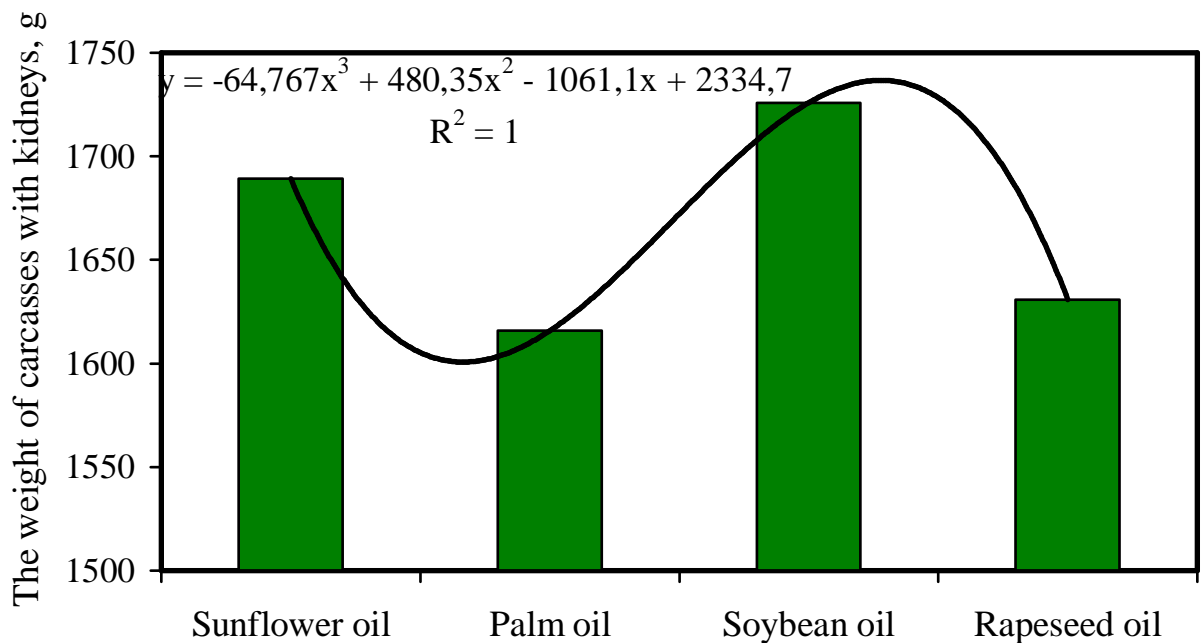


Figure 2. The relationship between the source of vegetable oil and carcass weight of kidney

An analysis of the anatomical components of the carcass found an increase in the mass of the longissimus dorsi in animals of the third group. They exceeded the control group counterparts on this indicator by 2.1%. Weight of liver in the animals of the third group was greater for 6,9% ($p < 0,05$), while the animals of the second and fourth groups, respectively, at 2.9% and 4.2% compared to the control.

Found that feeding fodder with different sources of fat resulted in a change of relative indicators slaughtering rabbits (tab. 4).

4. Output of products slaughter of young rabbits, %

indicator	Group			
	First	Second	Third	Fourth
Output: slaughter	56,4±0,44	55,0±0,37	56,7±0,36	55,3±0,54
longest back muscles	6,2±0,031	6,3±0,072	6,2±0,057	6,3±0,024
heart	0,55±0,019	0,56±0,008	0,55±0,010	0,56±0,015
liver	4,75±0,070	4,82±0,141	4,97±0,057*	4,71±0,071
lung	0,78±0,025	0,82±0,057	0,78±0,035	0,83±0,024
spleen	0,12±0,022	0,12±0,008	0,13±0,019	0,12±0,013
kidney	1,23±0,043	1,24±0,051	1,21±0,032	1,25±0,023

* $p < 0,05$ compared with the control group.

The tendency to a decrease in performance of beef output in rabbits by feeding them with animal feed containing palm and rapeseed oils. This second indicator animals, and fourth groups compared with the control group was analogous to 1.4-1.9% less.

Conclusions

1. The use for the cultivation of animal feed with soybean fat content significantly improves the quality of their killer rabbits, whereas the use of palm and rapeseed oil leads to a reduction of their slaughter qualities.

2. Experimentally proved the feasibility of using complete pelleted animal feed with soybean oil and crude fat content of 3%. Feeding the rabbits in the 43-84-day-old feed with soybean oil and fat content of 3% increases the mass-slaughter of rabbits at 1.6%, carcass kidney - 2.1%, liver - 6.9%, the longest soft dorsi - 2.1%, carcass yield - 2.1%.

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ПОКАЗНИКИ ЗАБОЮ МОЛОДНЯКУ КРОЛІВ ПРИ ВИКОРИСТАННІ КОМБІКОРМІВ З РІЗНИМИ ДЖЕРЕЛАМИ ЖИРУ

Р. А. Щасливий, М. І. Голубєв

Наведено результати науково-господарського дослідження впливу різних джерел жиру в комбікормах для молодняку кролів на показники їх забою. З'ясовано, що використання комбікорму з соєвою олією та загальним вмістом жиру 3 % у 100г комбікорму сприяє збільшенню передзабійної маси кролів на – 1,6 %, тушки з нирками на – 2,1 %, печінки на – 6,9%, найдовшого м'яза спини на – 2,1 %, виходу тушки на – 2,1 %.

Ключові слова: кролі, жива маса, сирий жир, олія, комбікорм

ПОКАЗАТЕЛИ УБОЯ МОЛОДНЯКА КРОЛИКОВ ПРИ ИСПОЛЬЗОВАНИИ КОМБИКОРМОВ С РАЗЛИЧНЫМИ ИСТОСНИКАМИ ЖИРА

Голубев М.И., Щасливый Р. А.

Приведены результаты научно – хозяйственного опыта по определению влияния различных источников жира в комбикормах для молодняка кроликов на показатели их забоя. Установлено, что использование комбикорма с соевым маслом и общим содержанием жира 3% способствует увеличению предубойной массы кроликов на – 1,6%, тушки с почками на – 2,1%, печени на - 6,9%, длиннейшей мышцы спины на – 2,1%, выхода тушки на – 2,1%.

Ключевые слова: кролики, живая масса, сырой жир, масло, комбикорм