

THE VERIFY OF PROBIOTIC PREPARATE IN FATTENING OF HYBRID HUBBARD JV MALES

UTILIZAREA PREPARATELOR PROBIOTICE ÎN CREȘTEREA ȘI ÎNGRĂȘAREA HIBRIZILOR HUBBARD JV MASCULI

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Using of probiotic preparates in present time very actual especially from spectacle of poultry practice in which realised increasingly on base of large-scale production conditions. So with increased severity in this manner orientated breeds to secure optimal breeding conditions in combination with high stocking density expanded possible risk health complications connecting with following fall of utility with eventual loses population and economical character. Rightly probiotics fulfils very significant role in prevention against infected diseases as well as positive effect on utility animal parameters. In experiment we tested effect of probiotic Bio-Plus 2B on basic parameters of Hubbard JV males fattening. Broiler chickens were divided into two group - control (feed mixtures without probiotic) and experimental (feed mixtures with added tested preparation in quantity 400 g.kg or 1.28×10^6 spores in gram of feed). From spectacles of observed parameters, with exception average live weight, where we founded in last week statistically significant difference ($P < 0.05$) in benefit of control, we recorded at both groups equal tendency in reached average values. Effect of probiotic manifested in largest rate in 3. week, when we founded statistically significant difference ($P < 0.05$) at same parameter in benefit of experimental group.

Key words: *probiotics, broiler chickens, fattening parameters*

Introduction

With increasing concern about antibiotics resistance, the ban on sub-therapeutic antibiotics usage in Europe, there is an increasing interest in finding alternatives to antibiotics in poultry production. Probiotics are one of the approaches that have a potential to reduce chances of infections in poultry and subsequent contamination of poultry products (Ahmad, 2006).

Probiotics are defined as feed additives that contain live micro organisms and promote beneficial effects to the host by favouring the balance of the intestinal microbiota (Fuller, 1989).

Copolla and Turnes (2004) determined, that the term probiotic stems from the Greek and means “in favour of life”, it is antonym is antibiotics, which means “against life”.

Merten (2002) formulated effect of probiotic preparate on humans and animals to following points:

- adherence to the binding sites of the intestinal epithelium (competition with pathogenic bacteria)
- direct antagonism through the production of bactericidal substances
- stimulus to the immune system
- facilitating the digestion and absorption of nutrients
- suppression of ammonia production, which might be toxic to intestinal cells
- neutralization of enterotoxins

The aim of this study was determined effect of probiotic preparate BioPlus 2B on basic fattening parameters of broiler chickens.

Materials and Methods

The experiment realised in half-operation conditions experimental base of Department of Poultry Science and Small Animal Husbandry of Slovak University of Agriculture in Nitra in three-floor cage technology. Tested probiotic preparate BioPlus 2B contented two probiotic strains *Bacillus licheniformis* and *Bacillus subtilis*. Totally 180 one day broiler chickens male hybrid Hubbard JV divided between two groups:

Control group - without addition of probiotic preparate BioPlus 2B

Experimental group - feed mixture with probiotic preparate BioPlus 2B addition (400 g per kg of feed or 1.28×10^6 spores in gram of feed).

In this experiment we used feed mixtures without animal products and contented following components:

	Start	Growth
Maize [%]	45.000	48.375
Wheat [%]	15.501	16.000
Soya extract scrap 47% [%]	36.000	32.000
Calcite [%]	1.684	1.350
Mono calcite phosphate [%]	1.000	1.400
Feeding salt [%]	0.400	0.300
Lysine 99% [%]	0.150	0.250
Methionine 99% [%]	0.150	0.200
MMD-03 poultry [%]	0.055	0.065
Blend-05 BR1-3 [%]	0.040	0.045
Betafine S1 [%]	0.020	0.015

The average body weight of growing broiler chickens we measured every week. We appreciated basic fattening parameters in this experiment:

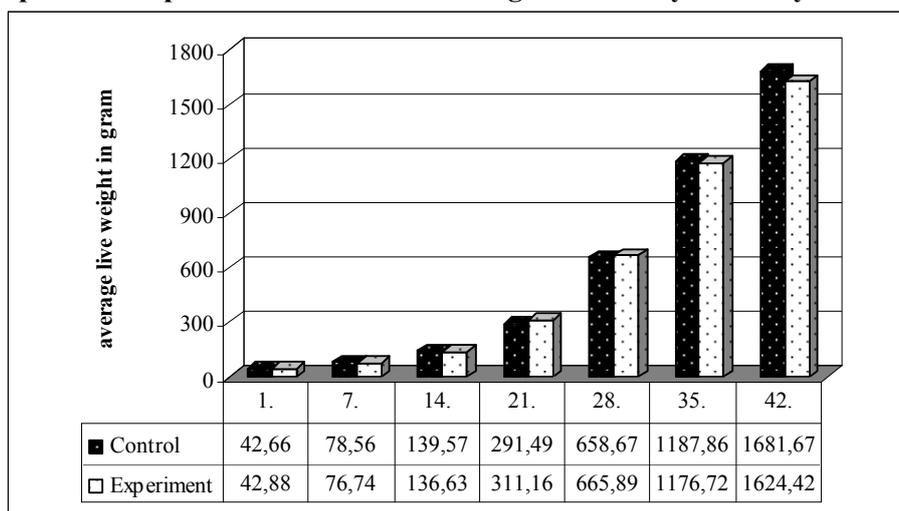
- average live weight (g)
- average daily gain (g)
- feed consumption (kg)
- mortality (%)

Effectuality of fattening was evaluated by European Production Efficiency Factor (EPEF).

Results and Discussions

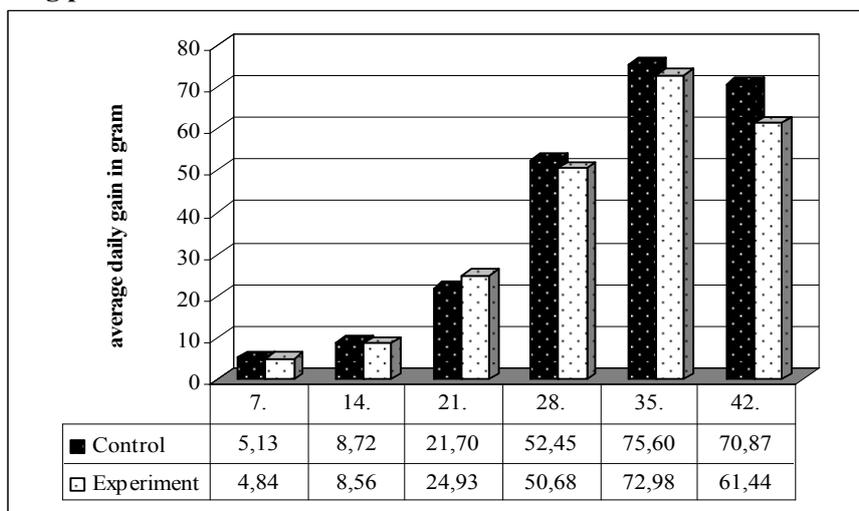
As shown in Graph 1 we found that the probiotic prepare no effected live weight to 14 day of age. Live weight of broiler chickens in 21 day of age in experimental group was higher in comparison with control group and difference was statistically significant ($P < 0.05$). In 28 and 35 day of fattening period we observed no statistically significant difference between groups. However, broiler chickens raised in control group without addition of probiotic prepare were higher compared with experimental group and difference between these groups was statistically significant ($P < 0.05$).

Graph 1 Comparison of broiler chickens growth ability from day 1 to day 42



We determined that average daily gain in control group was higher to 14 day of age. Opposite tendency we registered in 21 day of week when experimental group with addition of probiotic prepare achieved higher value of average live weight gain. Last three weeks of fattening period broiler chickens raised in control group predominate over control group (Graph 2).

Graph 2 Comparison of average live weight gain broiler chicken during fattening period



The feed consumption no positive affected by addition of tested probiotic prepare - in control group we found lower value of this parameter (1.69 kg) whilst feed consumption in experimental group with addition of probiotic in drinking water was 1.76 kg. Difference between both groups achieved 3.98 % in benefit of control group.

During over fattening period we recorded any mortality in both groups growing broiler chickens.

On basic of achieved value of EPEF we can state higher value of Production Efficiency Factor in control group without addition of probiotic prepare (237.24) in comparison with experimental group (219.89).

Conclusions

The results of this study show that supplementation of probiotic in broiler feed mixtures caused no improvement in performance of broiler chickens. We found lower values of average live weight and higher value of feed consumption in experimental group compared with control group. Effect of probiotic prepare manifested only in half of fattening period when we observed high statistically significant difference in benefit of experimental group.

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Utilizarea preparatelor probiotice este foarte actuală în special în creșterea păsărilor unde se utilizează în scară din ce în ce mai largă. În acest fel orientarea crescătorilor este pentru prevenirea îmbolnăvirilor și îmbunătățirea eficienței economice. Pentru prevenirea diferitelor boli infecțioase, probioticele au un rol semnificativ și dau rezultate pozitive asupra diferiților indici productivi. În experimentul nostru noi am testat efectul probioticului Bio-Plus 2B asupra indicilor productivi ai hibridului Hubbard JV. Puii au fost împărțiți în două loturi experimentale: martor (fără probiotic în NC) și lotul experimental (cu 1.28×10^6 spori/gram de furaj). Diferențe semnificative ($P < 0.05$) s-au observat în ultima săptămână în favoarea lotului martor. Efectul intens al probioticelor a fost observat la trei săptămâni când diferențele au fost semnificative ($P < 0.05$) în favoarea lotului experimental.

Cuvinte cheie: probiotice, pui de carne, indici productivi