

## INFLUENCE OF SOME EXTRACTS FROM MEDICINAL PLANTS USED AS THE MAIN GROWTH BIOSTIMULATORS METABOLIC INDICATORS THE BLOOD IN BROILERS

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### Abstract

*This study presents the changes of some blood parameters of broiler hens following administration in drinking water of medicinal plants in the form of hydroalcoholic extract. Plants used in this experiment are: echinacea, sea buckthorn and artichoke. These plants were used as hydroalcoholic extracts and administered (in a concentration of 1%) in the drinking water of broiler chickens. The research was conducted on a number of 120 broilers ROSS 308 hybrid belonging, which were purchased at one day. Experiment duration was 42 days, and measurements were made at the age of 21 and 42 days of broiler hens. The final conclusion is that phytoadditives used in this experiment did not significantly affect the studied blood parameters.*

**Key words:** medicinal plants, broiler hens, blood profile.

### INTRODUCTION

The objective of the current study was to determine the effects of Echinacea, Sea buckthorn and Artichoke extracts effect upon the some blood parameters at broiler hens.

It was intended to study these factors because the extracts, herbs used to prepare extracts that contain a number of components that have toxic effects when administered in large quantities affecting the liver and muscles.

### MATERIAL AND METHODS

In the following experiment there had been used 120 broiler hens, which were taken under observation at the age of one day, belonging to hybrid Ross-308 and they were divided into four experimental group, 30 birds/group. All the four trial took advantage of the some type of nutrition, but at trials L2, L3, L4 were administrated in the drinking water also a phytoadditive, so: L2 (hydroalcoholic extract of Echinacea 1 %, L3 (hydroalcoholic extract of Sea buckthorn 1 %, L4 hydroalcoholic extract of Artichoke 1 %.

The adopted technology was that of raising broiler hens at land. The housing was made in separate compartments on trials, having a range of 12 broilers/m<sup>2</sup>, but in the same cottage, taking advantage in this way by the same climate and growth technology. The lightening methods were in this order: 23 hours of light and one hour of dark.

The experimental periode was 42 days. During the experiment were used combined nutritions matching for each moment, periode of growth.

Blood samples were collected from 8 broiler hens (4 pullets and 4 cockerels) in each experimental group at the age of 21 days and 42 days. Samples were sent to a specialized laboratory for determination of blood parameters studied in this experiment.

## RESULTS AND DISCUSSION

Blood metabolic profile provides important information about the effects used in this experiment phytoadditives growth stimulators.

The values obtained are included in the tables below.

*Table 1*

Primer markers of the methabolic blood profile (Age 21 days)

Specification	L1	L2	L3	L4
Total lipids mg/100ml	469	484	435	441
Total cholesterol mg/100ml	184	198	194	128
Triglycerides mg/100ml	100	96	103	88
STGO U/l	295	227	220	213
STGP U/l	12	15	18	8
Amilase U/l	375	396	216	136

*Table 2*

Primer markers of the methabolic blood profile (Age 42 days)

Specification	L1	L2	L3	L4
Total lipids mg/100ml	481	476	439	452
Total cholesterol mg/100ml	193	184	173	145
Triglycerides mg/100ml	100	94	101	91
STGO U/l	286	231	228	217
STGP U/l	14	16	12	9
Amilase U/l	364	383	222	129

Following the results obtained from the four groups was found not significantly different. However, as expected total cholesterol and triglycerides were lowest in group 4, group that received the hydroalcoholic extract of Artichoke phytoadditive. (Fig. 1 and Fig. 2.).

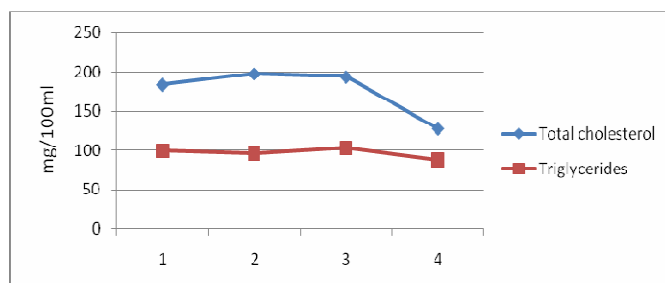


Fig. 1. Graphical representation of triglycerides and total cholesterol values in the four experimental groups at the age of 21 days

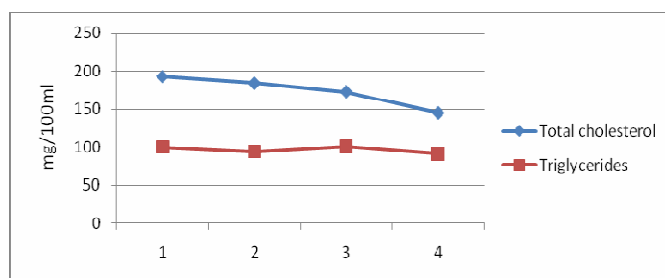


Fig. 2. Graphical representation of triglycerides and total cholesterol values in the four experimental groups at the age of 42 days

## CONCLUSIONS

Following the results obtained it can be concluded that the doses of feed additives based on hydroalcoholic extracts of Echinacea, Sea buckthorn and Artichoke used did not significantly influence the values of haematological parameters studied. The results are in line with the benchmarks in the literature (4, 8).

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