

The Effect Chitosan Supplementation in The Diet on Fat and Cholesterol Levels of Duck Blood

Surahmanto, A. Pagala, N. Sandiah, and Fitrianiingsih

CHITOSAN SUPPLEMENTATION IN THE DIET OF FAT AND CHOLESTEROL LEVELS OF DUCK BLOOD.

Surahmanto, Amrullah Pagala, Natsir Sandia, Fitrianiingsih
 Faculty Of Animal Science Universitas Halu Oleo

SUMMARY

This study aims to determine the diet that supplementation of chitosan extracted from shrimp head waste of skin and shell crab on blood cholesterol levels and duck fat. This research animals faculty, department of fisheries laboratory, chemistry laboratory, and southeast Sulawesi health office laboratory. The study is based on completely randomized design, and if treatment will significantly further test least significant difference (LSD). This research was conducted with 3 replications and 4 treatment. Where R1 is no treatment (control) 100% basal diet, R2 = basal diet + 0.5% chitosan, R3 = basal diet + 1% chitosan, and R4 basal diet + 1.5% chitosan. The parameter measured were blood cholesterol levels, triasilgiserida, HDL, and LDL duck. Based on the analysis range of treatment with chitosan supplementation in the significantly ($P < 0,05$) on blood cholesterol levels of duck with the highest average value obtained from each treatment were R1 = 148,67mg/dl, R2 = 144,33 mg/dl, R4 135,33 mg/dl, a clan R3 = 134,67 mg/dl. The results of analysis that shows the range of chitosan supplementation in the diet significantly ($P < 0,05$) on of triasilgiserida duck with the highest average is R1 = 127,67 mg/dl, R2 124,33 mg/dl, R3 = 102,67 mg/dl, and R4 = 117 mg/dl variety of analysis that showed that chitosan supplementation in the diet significantly ($P < 0,05$) on HDL levels duck with the highest average is R4 = 45 mg/dl, R3 = 42,67 mg/dl, R2 = 32 mg/dl, and R1 = 31,33 mg/dl. In conclusion of this study was chitosan supplementation in the diet had significant effect on blood cholesterol levels of duck, where the optimal level of use chitosan is at the level of 1%.

PROCEDURE

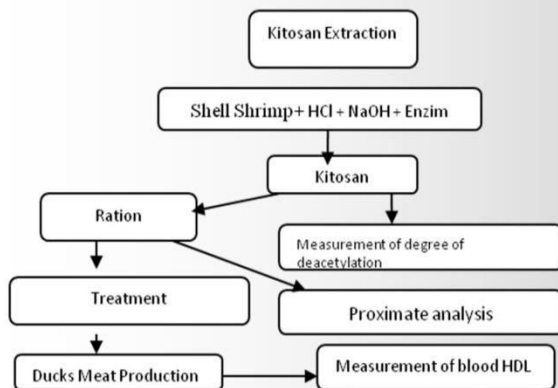


Figure 1. Schematic of Research Activities In the chitosan supplementation ration Against Fat And Cholesterol Levels Blood Ducks

CONCLUSION

- Supplementation with chitosan at various levels in the ration ducks significant effect on the binding of cholesterol levels and blood fat ducks.
- Chitosan supplementation in the diet can raise levels of HDL (good kolesterol) duck blood
- Chitosan can bind optimal lipid levels and blood cholesterol ducks by administering chitosan 1% in the ration.

RESULT

Table 1. Cholesterol levels in the blood of ducks (Mg / dl) were given chitosan supplementation in the diet

Repetition	Treatment			
	R1	R2	R3	R4
I	180	133	156	140
II	163	152	143	131
Mean	148,67	144,33	134,67	135,33

Table 2. Triasilgiserida levels in duck blood (mg / dl) were supplemented with chitosan in the ration

Repetition	Treatment			
	R1	R2	R3	R4
I	108	122	128	130
II	169	131	85	125
Mean	127,67	124,33	102,67	117

Table 3. Levels of HDL in the blood of ducks were given supplementation of chitosan in the ration

Repetition	Treatment			
	R1	R2	R3	R4
I	31	33	45	53
II	31	31	51	32
Mean	31,33	32	42,67	45

Description:

- R1 = 100% Basal ration
- R2 = Basal ration + 0.5% Chitosan
- R3 = Basal ration + 1% Chitosan
- R4 = Basal ration + 1.5% Chitosan