

# The Influence of Biopolym-Granulate on Performance of Fattening Cattle

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## Abstract

On the two farms were conducted operational trials with application preparation Biopolym-granulate in fattening cattle. The experimental groups were injected preparation by adding the mixed ration. Bulls were weighed regularly and after the experiments were collected and analyzed samples of meat. Experimental groups were killed in 520 days of age after control) over 600 days). In experimental groups were found value higher protein, lower fat value, significantly higher binding capacity of added water. Hence I better sensory value of meat of slaughtered animals, even when the net value weight was compared with the control group lower.

**Keywords:** fattening bulls Biopolym-granulate, meat quality.

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## 1. Introduction

The animal is used by many drugs. At present, research and practice focuses on verification of natural substances. The aim of experiments was to verify Biopolym granulate preparation for fattening bulls.

Bialgin hydrolysates are product from brown seaweed *Ascophyllum nodosum*, obtained in clean coastal waters around Iceland and the beaches of northern Scotland. It's already validated and proven spectrum of activity linked to the successful application of algae and algal products in therapeutic areas in both human and veterinary medicine - and in gastroenterology, and gynecology, traumatology, dermatology and in dental surgery [1, 2, 3]

The spectrum of this series of important and effective products we can give biostimulativ particular reference to the basic type Biopolym - a version of its FZT granulate and both destined for oral administration, either through drinking water

(Biopolym FZT) as well as in the feed (Biopolym granulate and Biopolym FZL).

Biopolym-granules has the same mikrobiostimulative and redevelopment properties, such as liquid Biopolym FZT, but it is finalized in granular form (granules with a diameter of 1-2 mm). It is intended for application to dry bulk feed. Onset of action is slower.

## 2. Materials and methods

In two cooperating farm (West Bohemia and South Bohemia region) enterprises were selected in fattening bulls, two experimental groups and one control group. Given that in fattening is a common water supply to individual drinkers in the pens was chosen Biopolym-use granular formulation, was highly ornate weighing separately for each pen on the week ahead, according to the methodology submitted. The prescribed quantity for experimental pen was blended into mixed ration. Czech Pied breed bulls were weighed regularly every three months. Blood samples were collected for analysis and bulls were

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selected for each group of tests performed cutting meat in slaughterhouses and meat samples for determination of selected physical and chemical parameters in accordance with prescribed methodologies UKZUZ.

### 3. Results and discussion

The difference between the average initial weight and average weight at the last weighing Average value of the experimental and control groups, without taking into account the impact of age and genetic disposition are presented in Table 1a and 1b.

**Table 1a.** Results of the weight of fattened bulls enterprise A (JC)

N=20	Initial weight (kg)	End weight (kg)	difference
Experimental group	385	625	240
Control	283	484	201

**Table 1b.** Mass results fattened bulls firm B (ZC)

N= 23	Initial weight (kg)	End weight (kg)	difference
Exp.1	385	555	175
Exp.2.	283	477	194
Control	440	594	154

The data loggers ammonia and carbon dioxide, located in the barn were no significant differences in measured values between control and experimental pen of bulls.

Average results of increases in firm control groups were in A 0.797, 1.044, 1.195 kg per head per day and in the experimental group were 0.830, 1.231,

1.479 kg per head per day. These lead to the results of analyzes of meat listed in Tables 2, 3 and 4 in company B, the results of each control variable. Higher increases were observed in the lower weight categories. Analyses of blood and flesh are still being evaluated.

**Table 2.** The resulting parameters of meat in slaughterhouses

Control Groups 8 bulls				
	increment.	Skin	Fats	hJOT_0
average	624.72	59.61	9.61	445.53
s.er	32.34	6.26	2.93	29.25
min	578.14	52.30	5.60	404.70
max	688.59	73.30	13.70	493.72
Experimental group8.bulls				
	increment.	Skin	Fats	hJOT_0
average	484.17	46.13	3.89	255.04
s.er	22.53	4.37	1.67	10.75
min	450.91	40.00	1.35	238.53
max	521.65	53.00	5.85	272.30

**Table 3.** Results of chemical analysis of meat Control Groups 8 bulls

Control Groups 8 bulls				
	Dry matter	Fats	Proteins	Resid.N
average	25.97	2.24	20.93	3.35
s.er	1.14	1.19	0.51	0.08
min	24.05	0.73	19.86	3.18
max	27.93	4.62	21.49	3.44
Experimental group 8 bulls				
	Dry matter	Fats	Proteins	Resid.N
average	24.50	1.47	20.99	3,36
s.er	0.57	0,57	0.59	0.10
min	23.68	0.41	19.75	3.16
max	25.51	2.21	21.59	3.45

**Table 4.** The resulting value added water binding capacity, pH and temperature of the meat

Control Groups 8 bulls			
	Binding cap._S_1	pH_S_1	temp_S_1
average	25.32	5.51	12.41
s.er	3.73	0.09	3.53
min	19.41	5.41	7.30
max	31.99	5.66	15,30
Experimental group8.bulls			
	Binding cap._S_1	pH_S_1	temp_S_1
average	40.51	5.69	12.26
s.er	30.87	0.19	0.75
min	16,22	5.44	11.40
max	108.42	6.05	13.60

When we evaluated the results of analyzes of meat have a lower representation tallow, lower representation in meat fat and higher protein content. Increase to significantly higher binding capacity of added water in meat. The results correspond with those reported by Jeroch et al. (1999) [4] and Illek (2007) [5]. Results of analyzes of meat from the company B were affected by higher weight at slaughter This should match the value I better sensory meat, but significantly increased representation in cutting fat meat, which coincides with Jeroch (1999) [4] and Perry et al. (2002) [1].

#### 4. Conclusions

When evaluating the results of fattening bulls after pellet preparation Biopolym results were live weight gains and qualitative parameters of meat better compared to control groups.

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