Butirex C4

The effect of Butirex C4 at different levels in the diet on health and performance of piglets

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The aim of this study was to measure the influence of Butirex C4 at different inclusion levels in diets of post-weaned piglets on performance and health of the animals.

Butirex C4 in piglet's diets:

- Promotes body weight gain.
- Improves intestinal health and development.
- Increases nutrients digestibility.

METHODS, MATERIAL & RESULTS

- In total, 48 piglets were used at weaning (24 d of age and 6.56 kg BW) in a commercial farm in Serbia.

- Piglets were divided in 3 groups → Different levels of Butirex C4: 0, 3, and 5 kg/ton. The Control group of piglets was fed with the standard diet. Experimental groups were fed with the same diet but with 3 and 5 kg of Butirex C4, respectively.

- Measurements:
  - At 38, 46, 57 and 78 days of age, BW of the piglets was recorded. From these data ADG was determined by period and cumulatively. Feed intake was measure for overall period. Then, ADFI and FCR were determined cumulatively.
  - At the end of the trial (78 d of age) 6 piglets from each group were slaughtered, and intestinal samples were collected to measure weight of different segments, villi development, and flora content.

RESULTS

PERFORMANCE RESULTS

- Body weight showed differences at 46 days of age (after prestarter period) increasing the differences with the age (from 4 to 11% of difference between Control and 3 kg/ton of Butirex C4).

- Daily weight gain of piglets fed Butirex C4 was significantly higher ($P < 0.05$) than the piglets in the control group. However, different inclusion of Butirex C4 didn´t show differences.

- From 24 to 78 d of age, ADFI was higher in the control group than animals fed diet with Butirex C4. Usually Butirex C4 stimulate feed intake in the first weeks and not affect in the intake in starter period.

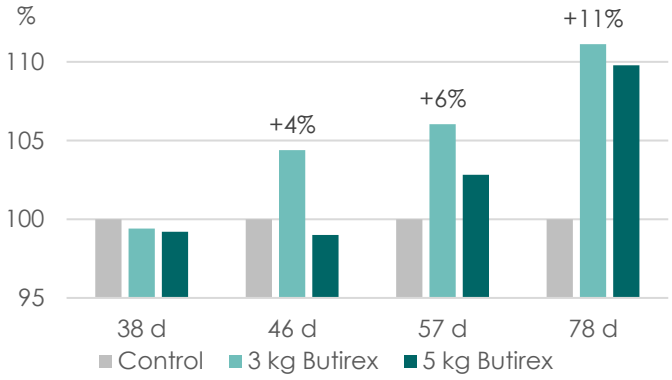
- Feed conversion was better in piglets fed diet with Butirex C4 than control group (14-17%).

Table 1. Effect on growth performance

Group	ADG (g)	ADFI (g)	FCR
Control	474 b	905	1.91
BC4 3 kg/mt	540 a	854	1.58
BC4 5 kg/mt	532 a	868	1.63

P<0.05 (a;b);

Figure 1. Body weight variation vs Control (%)



INTESTINAL PARAMETERS RESULTS

- Empty weight of intestinal segments at 78 days of age were higher in piglets fed diet with Butirex C4 than the control group of piglets, except for the weight of the colon, showing inverse result. These results may indicate a better mucosa development in piglet fed Butirex C4.

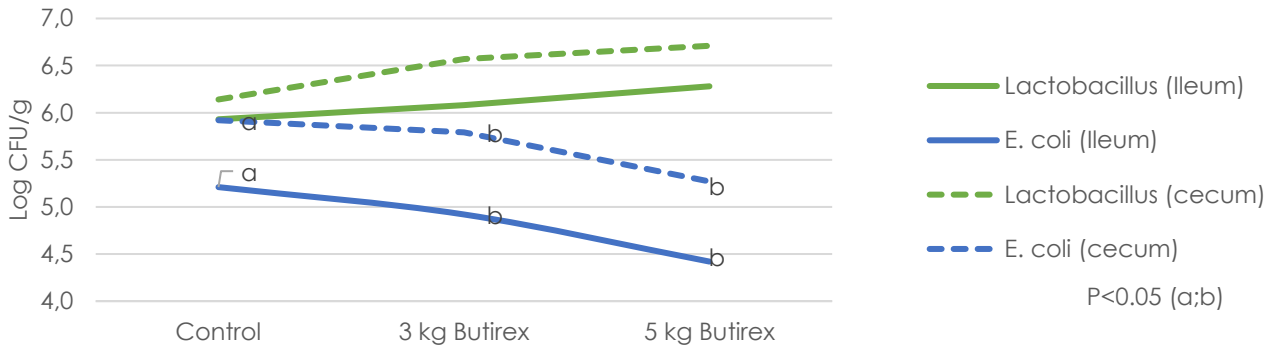
Table 2. Intestinal weight (g)

	Duodenum	Jejunum	Ileum	Cecum	Colon	Total
Control	30.1 b	942.6 b	36.1 b	51.4 b	417.4 a	1478 b
BC4 3 kg/mt	38.9 a	1165.0 a	40.3 a	59.5 a	400.5 b	1704 a
BC4 5 kg/mt	39.7 a	1167.0 a	39.7 a	60.4 a	397.1 b	1704 a

P<0.05 (a;b);

- The results shown a reduction of *E. coli* in the ileum and cecum content when Butirex C4 was included. Also, an increase for *Lactobacillus* level related with Butirex C4 inclusion was observed.

Figure 2. Microbiology count in ileum and cecum (Log cfu/g)



- A higher level of Butirex C4 in the diet increased villi height in the ileum. And villi width in the ileum of piglets fed Butirex C4 at 5 kg/tn was higher than the other groups.

Figure 3. Ileum morphology, (µm)

CONCLUSION

The addition of Butirex C4 in piglet diets

- Improves growth performance.
- Play a specific roll in the intestinal mucosa, and villi development, and modulate the intestinal microflora.