

THE ADDITION OF HYDROCHLORIC AC INCREASES USEFULNESS OF AQUAFEDS FOR THE INTENSIVE FEEDING OF CYPRINIFORM FISH

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Intensive feeding of cypriniform fish with commercial feeds often results in phosphorus deficiency, followed by the appearance of body deformities or poor disease resistance. Improving the availability of phosphorus in fish diets can increase the quality of fish, reduce production costs and waste, helping to mitigate environmental pollution. The use of HCl as feed additive seems a simple and cost effective way to achieve these goals.



TABLE 1. Effect of the addition of 1.5% HCl to dry commercial aquafeeds on the performance of different cypriniform fish in the RAS

Species	Growth rate of body weight	Growth rate of total length	Condition factor	Feed conversion ratio	Incidence of body deformities	Immunity
barbel (<i>Barbus barbus</i>)	↑	↑	0	↓	0	n/a
chub (<i>Squalius cephalus</i>)	↑	↑	0	↓	0	n/a
common carp (<i>Cyprinus carpio</i>)	↑	↑	↓	↓	↓	↓
common dace (<i>Leuciscus leuciscus</i>)	0	0	↓	0	0	n/a
crucian carp (<i>Carassius carassius</i>)	0	0	↓	0	↓	n/a
rudd (<i>Scardinius erythrophthalmus</i>)	0	0	0	0	↓	n/a
tench (<i>Tinca tinca</i>)	↑	↑	↓	↓	↓	↑
vimba bream (<i>Vimba vimba</i>)	0	0	0	0	0	↑

↑ - increase, ↓ - decrease, 0 – no significant effect.

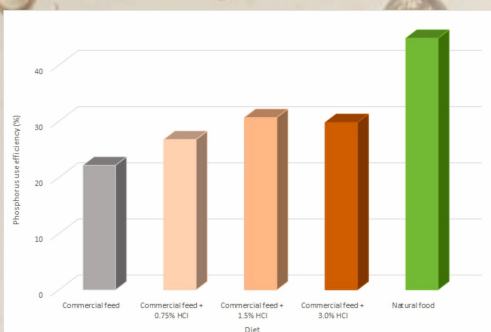


Fig. 1. Mean phosphorus use efficiency (PUE) in juvenile tench fed a dry diet with different additives of HCl or natural food.