MarinBio®

Pro-Aqua™

Probiotic for Aquaculture

100% Digestable

Pro-Aqua™ is microencapsulated form of living and sporulated cells enabling to boost growth performance, feed utilization, immunity and disease resistance of both cultivated freshwater and marine fish species.

www.marinbio.com.tr

PRO-AQUA

Probiotic microencapsulated for use in aquaculture nutrition

Composition:

BACTERIAL STRAINS	
Strain name	Concentration(CFU/kg)
Lactobacillus plantarum MBS -LP -01	6,8 x 10^{12}
Lactobacillus casei ATCC7469	
Enterococcus faecium CCM 6226	
Bacillus subtilis MBS BS 01	
Pediococcus acidilactici 30005	
ENZYMES (IU/kg)	
Alpha amylaze	1000
Beta xylanase	8000
Beta glucanase	5000
Protease	1000
ORGANIC ACIDS (mg/kg)	
Acetic acid	5000
Formic acid	2000
Citric acid	4000
Propionic acid	4000
MINERALS (mg/kg)	
Magnesium sulphate	800
Potassium phosphate	500
Sodium sulphate	600
Calcium chloride	200

Recommended use

Application	Unit	Species	Dosage	
			Maintenance	During treatment
Mixed in the complete feed	4 kg/ton	Freshwater	4 kg/ton	6 kg/ton
		Marine	4 kg/ton	8 kg/ton

KEY BENEFITS

- Promotes disease resistance through immunomodulation
- Improves gut barrier function
- Reduces organic matter in pond sediments
- Increases growth performance
- Reduces feed conversion ratio
- Increases survival rate

Shelf-life and Storage conditions

24 months. Keep it in a dry place at room temperature below 25 °C by avoiding the exposure to sunlight.

Heat Stability

Cells are microencapsulated. They resist up to 95 °C for 15 min.

Package size

5 and 25kg bags

Materials and Methods

The trials were carried out at the Artvin Hatchery of the Kuzuoglu Aquaculture Company. Weight gains and mortality rates were recorded for 20 days on 115 000 trout with an initial weight of 320 grams. In order to determine the optimum dosing amount on the fish and to understand whether the amount of live probiotic applied has a direct effect on the metabolism, Pro-Aqua™ was mixed in 2 different ratios of 2 kg and 4 kg per ton of food and applied to two groups. No intervention was made on the feed to be used in the control group.

Table 1. Production performance of probiotic treated Rainbow Trout on August, 2022.

	Pro-Aqua ™ 4 kg/ton	Pro-Aqua™ 2 kg/ton	Control Group
Feeding amount (kg)	46,78	46,75	46,80
Initial Weight (kg)	0,32	0,32	0,32
Final Weight (kg)	0,97	0,92	0,90
Weight gain (kg)	0,67	0,60	0,58
FCR*	0,71	0,80	0,88
Mortality Rates (%)	11,24	14,28	18,89

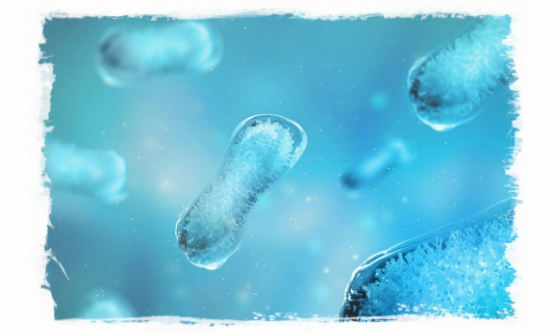
*** Feed conversion ratio: Feeding amount/wieght gain**

Results

Maximum weight gain and the lowest mortality rate was observed on 4 kg/ton Pro-Aqua™ treated feed. Value differences between groups were significant illustrating a 20% on feed conversion ratio between 4 kg and control group. Mortality rates were 40 % and 25 % lower in 4 kg and 2 kg probiotic applications, respectively.

Conclusion

Increasing the probiotic cells inoculation amount had a dramatic effect on FCR and mortality rates. The optimum amount of the dosage has been decided as 4 kg/ton Pro-Aqua™. As a futuremark of this trial, higher inoculation percentage can be applied depending on the decision of company production team. MarinBio claims that increased amount of product usage will not generate any side affects on fish metabolism.



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