ABSTRACT: A 12-week feeding trial was conducted with 87 g rainbow trout to evaluate the effects on growth performances, feed efficiency and nutrient digestibility of adding α-mannanase and α-galactosidase enzymes, solely or in combination. Seven diets were prepared by adding α-mannanase, α-galactosidase and mixed enzyme at two different levels (1 g/kg and 2 g/kg) to control diet (without enzyme) including soybean meal. Mixed enzymes (1 g/kg, 2 g/kg) were prepared by adding α-mannanase and α-galactosidase at the same doses (0.5+0.5 g/kg and 1+1 g/kg). At the end of the experiment, addition of α-mannanase, α-galactosidase and mixed enzyme to diet containing 44% soybean meal had no significant effects on growth performance and gain:feed (p>0.05). In addition, adding α-mannanase, α-galactosidase and mixed enzyme in different rations to trout diets had no affect on nutrient digestibility and body composition (p>0.05). (Key Words: Rainbow Trout, Oncorhynchus mykiss, Soybean Meal, Growth, α-Mannanase, α-Galactosidase, Enzyme)