Summary: The aim of the present study was to examine the effects of the diets based on soybean meal supplemented with exogenous enzymes on growth performance, feed utilization, apparent digestibility and waste output of nitrogen and phosphorus in gilthead sea bream (Sparus aurata) culture. Diets consisted of 40% fish meal (FM) and 25% dehulled hexane extracted soybean meal (SBM) in commercial feed (TM) and 25% fish meal (FM) and 40% dehulled hexane extracted soybean meal (SBM) in control group (CO), and diet supplemented with enzyme 1 (PRT= Protease; 2 g/kg -1), diet supplemented with enzyme 2 (MIX; cellulose, xylanase, endo-ß-1,3:1,4-glucanase; 2 g/kg -1) and diet supplemented with enzyme 3 (PHY: Pyhtase; 2 g/kg -1). A stocking design at 55 fish each tank, gilthead sea bream (initial weights 89.50±1.5 were randomly total of 825 fish allocated into 15 tanks and fed five experimental diets. While weight gain (125.00–133.50) and specific growth rate (0.42–0.50) were statistically similar (P>0.05), feed efficiency ratio (2.52-2.90) and condition factor ....