This study aimed to estimate the nutrition costs for athletic horses at a training center in Ourinhos-SP. Data on horse breeding and nutrition were collected. The costs were calculated using the methodology of the Institute of Agricultural Economics (IEA-SP). The property has 40 animals and 24 of these are in the competition phase. The total costs of production result in R$ 1,053,622.83, divided into direct, indirect and remuneration of production factors. For the remuneration of production factors, the basic interest rate of the economy, Selic, estimated at 7.5% in October 2017, was used. The capital remuneration represents interest on capital employed in the raising. The variable that has the greatest impact on costs is the production of concentrated feed for high performance animals, equivalent to R$ 471,774.00, representing 49.9% of the cost of production and 72.8% of the nutrition costs. In addition, hay and alfalfa are provided to animals every day, representing 5.5% of the total cost of production, and 8.0% of the nutrition costs, representing R$ 51,840.00 a year. In addition, the animals receive the following supplements: Muscle, Glicopan and Electrolytic (only on competition days), representing a cost per year of R$ 72,000.00; R$ 13,680.00 and R$ 10,368.00, respectively, considering two competitions per month, the amount spent is R$ 96,048.00. These costs with supplementation represents 10.2% of the production costs, and 14.8% of the nutrition costs. The total nutrition cost is R$ 648,462.00, representing 61.5% of the total cost of production, confirming that the cost with the nutrition of the athletic animal is the variable with the greatest impact on the operational cost of the property.

**Keywords:** competition animals, high performance horses, production costs