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Abstract: A rearing experiment was carried out to examine the effect of water temperature on the growth of the Black Sea turbot, *Scophthalmus maximus*, at ambient temperature (mean $15.2 \pm 0.6^\circ\text{C}$), 18, 20, 22 and 24°C with fish of 34.4 ± 9.9 g initial body weight. The experiment lasted 30 days and the fish were fed to satiation three times a day with a commercial pelleted diet. Survival rates starting with the control group were 100, 83.4, 68.4, 3.4, and 1.7%, respectively. Although the mean weights of the groups were very similar at the beginning of the experiment, they had become markedly varied by the end. The growth rate gradually decreased with increasing temperature, and the highest specific growth rate of 2.2% was observed in the control group reared at ambient temperature, and the growth was negative in the 22 and 24°C groups. For all temperature groups, the daily feeding rates varied between 2.3 and 2.8% of body weight, and the food conversion ratio of the control group was significantly lower than that of the other groups ($P < 0.05$). In conclusion, it seems clear that the rearing temperature of the Black Sea turbot juveniles should not exceed 18°C .

Key Words: Turbot, *Scophthalmus maximus*, Temperature, Growth, Feeding, Conversion Rate, Survival Rate, Black Sea.

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