Passage III

Amphiprion percula, a species of clownfish, are kept in many home aquariums. Two experiments were conducted to determine how diet and stocking density (number of fish per liter of seawater, fish/L) affect the specific growth rate (SGR; percent increase in length per day, percent/day) in *A. percula*.

Experiment 1

Each of 12 identical 15 L tanks received 10 L of seawater having a salinity of 33 parts per thousand (ppt), a temperature of 27°C, and a pH of 8.2. Salinity, temperature, and pH were kept constant over the course of the experiment. *A. percula* of similar lengths were selected, and their lengths were measured, in cm, with a ruler. Then they were equally distributed among the tanks at a stocking density of 1 fish/L. The tanks were then divided equally into 4 groups.

For 4 months, each group was fed a different diet (Diets Q–T). Each group was fed the same mass of food 3 times daily. At the end of 4 months, the length of each fish was measured, in cm, with a ruler, and the SGR of each fish was calculated. The average SGR was then determined for each group (see Table 1).

Table 1

Diet	Average SGR (percent/day)
Q	0.30
R	0.40
S	0.50
T	0.35

Experiment 2

The procedures for Experiment 1 were repeated except that each group was kept at a different stocking density, 0.5 fish/L, 1 fish/L, 2 fish/L, or 3 fish/L, and all fish were fed Diet T. At the end of 4 months, the average SGR was determined for each group (see Table 2).

Table 2

Stocking density (fish/L)	Average SGR (percent/day)
0.5	0.50
1	0.35
2	0.25
3	0.20

Tables adapted from João Chambel et al., "Effect of Stocking Density and Different Diets on Growth of Percula Clownfish, *Amphiprion percula* (Lacepede, 1802)." ©2015 by Springer.

12. Which of the following statements about the relationship between the number of *A. percula* per tank and the average SGR is consistent with the results of Experiment 2? On average, as the number of *A. percula* per tank increased, the average SGR:

F. increased only.
G. decreased only.
H. remained the same.
J. varied with no general trend.

© 2026 by ACT Education Corp. All rights reserved.