

Impact of PHYTOCEE® on Growth Performance of Shrimp with High Stock Density Stress

OBJECTIVE

To assess the synergetic effect of PHYTOCEE® on growth performance parameters of shrimp (*Litopenaeus vannamei*) reared under high stock density stress conditions.

MATERIALS AND METHODS

The experimental shrimp were reared under standard rearing conditions. 30 shrimp/aquarium and 45 shrimp/aquarium were reared as normal and high stock density stress conditions respectively. The shrimps were divided in to 9 groups based on different combinations of Vitamin C and PHYTOCEE® as follows; G1-1000+0 g/ton (Vit. C+PHYTOCEE®), G2-1000+1000 g/ton, G3-750+1000 g/ton, G4-500+1000 g/ton, G5-250+1000 g/ton, G6-0+1000 g/ton, G7-2000+0, G8-1000+2000 g/ton, G9-0+2000 g/ton. The duration of treatment was 8 weeks. The growth performance parameters viz. mean weight (g), specific growth rate (% per day), and FCR were evaluated.

RESULTS

Effect of PHYTOCEE® on growth performance parameters

Groups	Mean Weight (g)	SGR (% per day)	FCR
G1-VC+PHY (1000+0 g/ton)	9.69 ^c	3.41 ^{de}	1.42 ^a
G2-VC+PHY (1000+1000 g/ton)	10.09 ^b	3.48 ^{bc}	1.28 ^{de}
G3-VC+PHY (750+1000 g/ton)	9.97 ^{bc}	3.46 ^c	1.32 ^{cd}
G4-VC+PHY (500+1000 g/ton)	9.96 ^{bc}	3.43 ^d	1.34 ^{bc}
G5-VC+PHY (250+1000 g/ton)	9.74 ^c	3.40 ^e	1.38 ^{ab}
G6-VC+PHY (0+1000 g/ton)	9.64 ^c	3.41 ^{de}	1.40 ^a
G7-VC+PHY (2000+0 g/ton)	10.63 ^a	3.57 ^a	1.24 ^e
G8-VC+PHY (1000+2000 g/ton)	10.76 ^a	3.58 ^a	1.16 ^f
G9-VC+PHY (0+2000 g/ton)	10.18 ^b	3.49 ^b	1.28 ^{de}

VC, Vitamin C; PHY, PHYTOCEE® ; SGR, Specific growth rate; FCR, Feed conversion ratio

Different letters in the same column differ significantly, p<0.05 based on least significant difference (LSD)

CONCLUSIONS

PHYTOCEE® as a top-up (2 kg/ton) with Vitamin C (1 kg/ton) resulted in augmentation of growth performance parameters of shrimp.

OUTCOME

Hence, supplementation of PHYTOCEE® along with Vitamin C could be suggested for augmentation of shrimp productivity reared under high stock density stress conditions.