SUMMARY
The findings of the various experiments conducted during the course of this study are summarised below.

The growth rate of fishes treated with testosterone propionate was significantly higher than the control. The highest growth was observed with 4 ppm TP, followed by 3 ppm. TP at 5 ppm begins to suppress growth. Feed consumption, conversion efficiency and apparent nutrient digestibility were higher in the fish fed 4 ppm TP. GSI of treated fish increased significantly from that of the control, maximum being in 4 ppm TP. RNA/DNA ratio and digestive enzyme activities increased with an increase in growth. An increase in muscle protein and lipid were observed following TP administration. The residual hormone present in the body of the fish was completely eliminated on the 30th day after cessation of hormone treatment.

In prawn, a diet containing 3 ppm TP brought about the highest growth; a reduction in growth was observed at higher dosages of 4 ppm and 5 ppm, but being higher than the control. Feed consumption, conversion efficiency and nutrient digestibility increased due to TP incorporation in the diet. VSI and GSI of treated fish showed significant difference from control. Nucleic acid content as well as digestive enzyme activities increased in the prawns fed with TP. Protein content increased in TP treated prawns, maximum being in those exhibiting superior growth. Hormonal residues were completely eliminated from the body on the 30th day, after hormone feeding was stopped.

Diethylstilbestrol (DES) administered at 2 ppm through the diet promoted significantly superior growth in pearlspot. Higher dosages such as 3, 4 and 5 ppm inhibited growth. DES stimulated high feed consumption, conversion efficiency and nutrient digestibility. GSI of treated fish showed significant increase from that of the control. Digestive enzyme activity increased in low (1 ppm and 2 ppm)
level of DES treatment and decreased at high (3, 4, and 5 ppm) levels. RNA content increased with increasing growth rate. Muscle protein and lipid contents increased significantly in the treated fish while other parameters did not show significant changes. Residual DES found in the muscle serum was completely eliminated on the 20th day after hormone withdrawal.

In prawn, 4 ppm DES induced better growth, high conversion efficiency and nutrient digestibility. Body tissue indices did not show significant changes. Digestive enzyme activity was higher in the intestine, followed by stomach. RNA and DNA contents increased concomitant with increase in growth rate. No residual DES was found in the prawns on the 20th day after stop feeding the DES incorporated diets.

The diet containing 10 ppm HCG produced maximum growth in pearlspot. With higher dosages (12.5 ppm and 15 ppm), growth was suppressed. However, it was higher than that of the control. Feed consumption, conversion efficiency and nutrient digestibility increased in the HCG treated fish. VSI decreased, which GSI increased in the fishes showing maximum growth. Digestive enzyme activities were high in HCG treated fishes. Liver RNA and DNA contents were higher than muscle RNA and DNA contents. Residual HCG found in the muscle serum was completely eliminated from the body on the 20th day after stop feeding hormone diets. Higher muscle protein content was observed in pearlspot followed by HCG administration.

HCG at 12.5 ppm level was found to be the optimum dosage required to enhance maximum growth in white prawn. Feed consumption, protein efficiency ratio and nutrient digestibility increased in prawns fed HCG. Digestive enzyme activities and nucleic acid contents were high in \textit{P.indicus} treated with HCG. Residual HCG found in \textit{P.indicus} declined to the level of the control on the 20th day after withdrawal of the hormone incorporated diets.
The yolksac larvae of pearlspot treated with higher dosages (0.08, 0.09 and 0.1 ppm) of L-thyroxine underwent complete mortality in the 2nd week after starting the experiment, while dosages of 0.06 and 0.07 ppm suppressed growth. The dosage of 0.05 ppm induced maximum growth, high conversion efficiency, better nutrient digestibility and RNA/DNA ratio. Digestive enzyme activities and muscle protein content increased in fish receiving low doses of L-thyroxine supplementation.

Thyroxine treated prawns were found to be very active, healthy and grew faster. Prawns fed thyroxine at 0.04 ppm exhibited superior growth. Higher dosages such as 0.06 ppm and 0.07 ppm led to growth suppression, while still, dosages (0.08, 0.09 and 0.1 ppm) proved detrimental. High feed conversion efficiency, nutrient digestibility, digestive enzyme activity, RNA/DNA ratio and muscle protein content were observed in prawns fed 0.04 ppm thyroxine.

All levels of the various hormone combinations produced better growth than control, it being maximum in the treatment 1.5 ppm TP + 5.0 ppm HCG. Feed consumption, conversion efficiency, nutrient digestibility, enzyme activity, RNA/DNA ratio were high in fish under all hormone combinations. VSI and HSI did not show significant changes between treatments and control. GSI showed significant increase in fish that exhibited maximum growth. Muscle protein content increased, while lipid, glycogen and fibre contents did not vary due to the supplementation of hormone combinations through the diet.

In prawn, a diet containing the combination of hormones DES (1 ppm) + HCG (5 ppm) brought about maximum growth. Feed consumption, conversion efficiency and nutrient digestibility were high in the combination treatments. Digestive enzyme activities and RNA/DNA ratio were maximum in the prawn fed combination of hormones. Carcass protein content increased in treated prawn, while other biochemical parameters did not show variation from that of the control.
In pearlspot, 750 ppm carnitine resulted in maximum growth and high feed conversion efficiency, nutrient digestibility and digestive enzyme activity. Lipase activity and lipid digestibility increased with an increase in the dosage of carnitine in the diet. HSI and GSI of treated and control fishes did not vary. VSI of treated fish showed significant changes from the control. Muscle protein content increased and lipid content decreased. L-carnitine stimulated lipid metabolism and reduced the unnecessary accumulation of lipid in the tissues.

Prawns that consumed 500 ppm carnitine showed higher growth. Specific growth rate and survival were maximum under 500 ppm carnitine treatment. Feed conversion efficiency, assimilation efficiency and lipid digestibility increased due to carnitine supplementation in *P.indicus*. Digestive enzyme activities and nucleic acid contents were high in carnitine treated prawns. Carcass lipid depletion was noticed. Protein content increased following carnitine treatment.

The results of the present study already indicate that both steroid and protein hormones as well as L-carnitine act as growth promoters in pearlspot and white prawn. Since there was no earlier studies on the effect of such growth promoters in these two species, the results obtained in this investigation should prove useful in the culture of pearlspot, *Etroplus suratensis* and white prawn, *Penaeus indicus*. 