

# Ornamental fishes

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8. WEEK: FRESHWATER ORNAMENTAL FISH KEEPING

# WEEKLY TOPICS (CONTENT)

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<b>1. Week</b>	Ornamental fishes: General information
<b>2. Week</b>	Information on commercially valuable ornamental fish species
<b>3. Week</b>	Biology of ornamental fish (freshwater, brackish-water and marine, species.
<b>4. Week</b>	Popular ornamental fish species for culture.
<b>5. Week</b>	Candidate ornamental fish species for culture.
<b>6. Week</b>	Culture environment.
<b>7. Week</b>	Physical, chemical and biological requirements of Ornamental fish
<b>8. Week</b>	Freshwater ornamental fish keeping
<b>9. Week</b>	Brackishwater fish species keeping.
<b>10. Week</b>	Marine ornamental fish keeping.
<b>11. Week</b>	Feeding, reproduction, larva and fry rearing for freshwater ornamental fishes.
<b>12. Week</b>	Feeding, reproduction, larva and fry rearing for Brackshwater ornamental fishes.
<b>13. Week</b>	Feeding, reproduction, larva and fry rearing for marine ornamental fishes.
<b>14. Week</b>	Ornamental fish welfare and sustainable culture practices.

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Issues to be considered in the breeding of freshwater fishes

Osmoregulation and discharge in freshwater environment

Osmoregulation and respiration in freshwater environment

Nutrient requirement in freshwater environment

Growth in freshwater environment

Reproduction in freshwater environment

Larval development in freshwater environment

Fry breeding in freshwater environment

Juvenile breeding in freshwater environment

Market size breeding in freshwater environment



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Freshwater fish physiology

Osmoregulation

Blood serum parameters

Haematological parameters

Hormones

Stress

Immunostimulants

Disinfection



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Blood circulation

Circulatory system

Heart

Blood vessels

Capillaries

Gills

Primer lamella

Seconder lamella

Gas exchange



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Mineral exchange

Mineral uptake

NaK ATPase

Liver enzymes

Digestive tract

Digestion

Assimilation

Absorption

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Diet composition

Protein

Amino acids

Essential amino acids

Lipid

Fatty acids

Essential fatty acids



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Diet composition

Minerals

Essential microelements

Vitamin

Essential vitamins

Vit A

Vit D

Vit E

Vit K

Vit C

Vit B and other vitamins

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Water exchange rates

Feeding time

Foods specific for species

# References

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Boyd, C. E. (1982). Water quality management for pond fish culture. Elsevier Scientific Publishing Co..

Hunter, G. A., & Donaldson, E. M. (1983). 5 Hormonal Sex Control and its Application to Fish Culture. In Fish physiology (Vol. 9, pp. 223-303). Academic Press.