

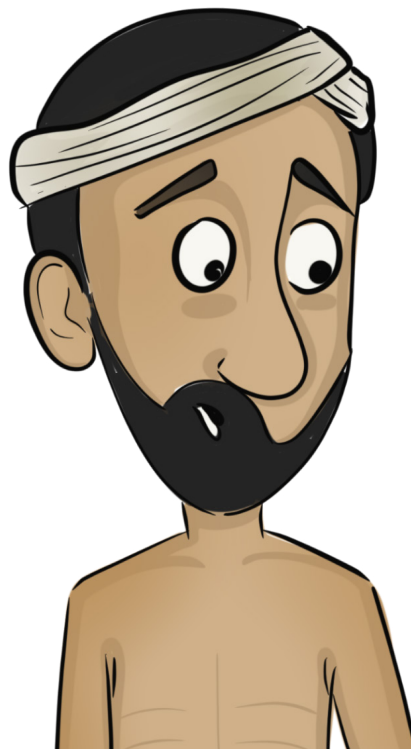
# Species Wise Identification of Fish Seed

Do you know how to **identify & select different fish species for pond-based aquaculture?**



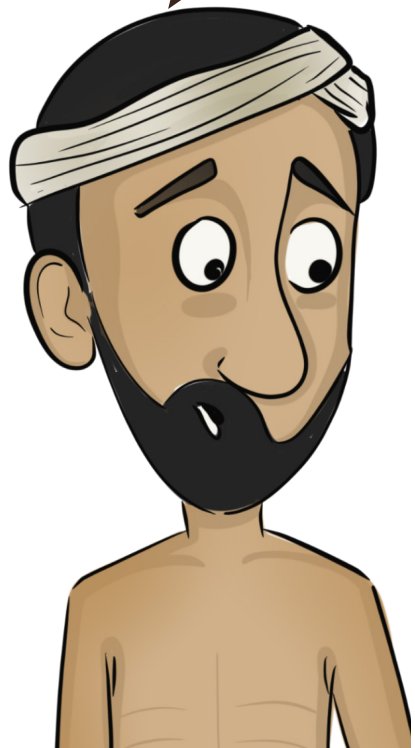
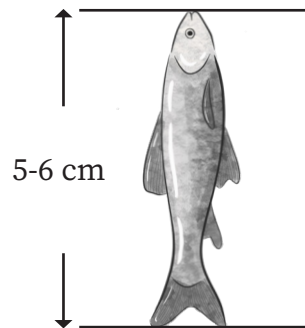
**How can I select fish species for aquaculture?**

- Fast growing species
- Herbivorous feeding habit
- Readily accept external feed
- Resistance to diseases and parasites
- Relative ease of breeding in captivity
- Capacity to tolerate a wide range of environmental parameters
- Good consumer demand & Fetch Good market rate
- Good table quality (flesh quality)  
High fecundity (Egg laying capacity/kg of female fish),
- Relatively low cost of production/ kg of fish
- Compatible to other cultivable species



**Baideo, what is a fingerling? And how do I identify different species from fingerling?**

- Fingerling is a fish with length roughly equal to a finger (5-6 cm).
- 60-70 day post hatching, they show morphological features which we use for identification
- Fingerlings are appropriate size for stocking in grow out ponds



**Mrigal, Bottom Feeder**

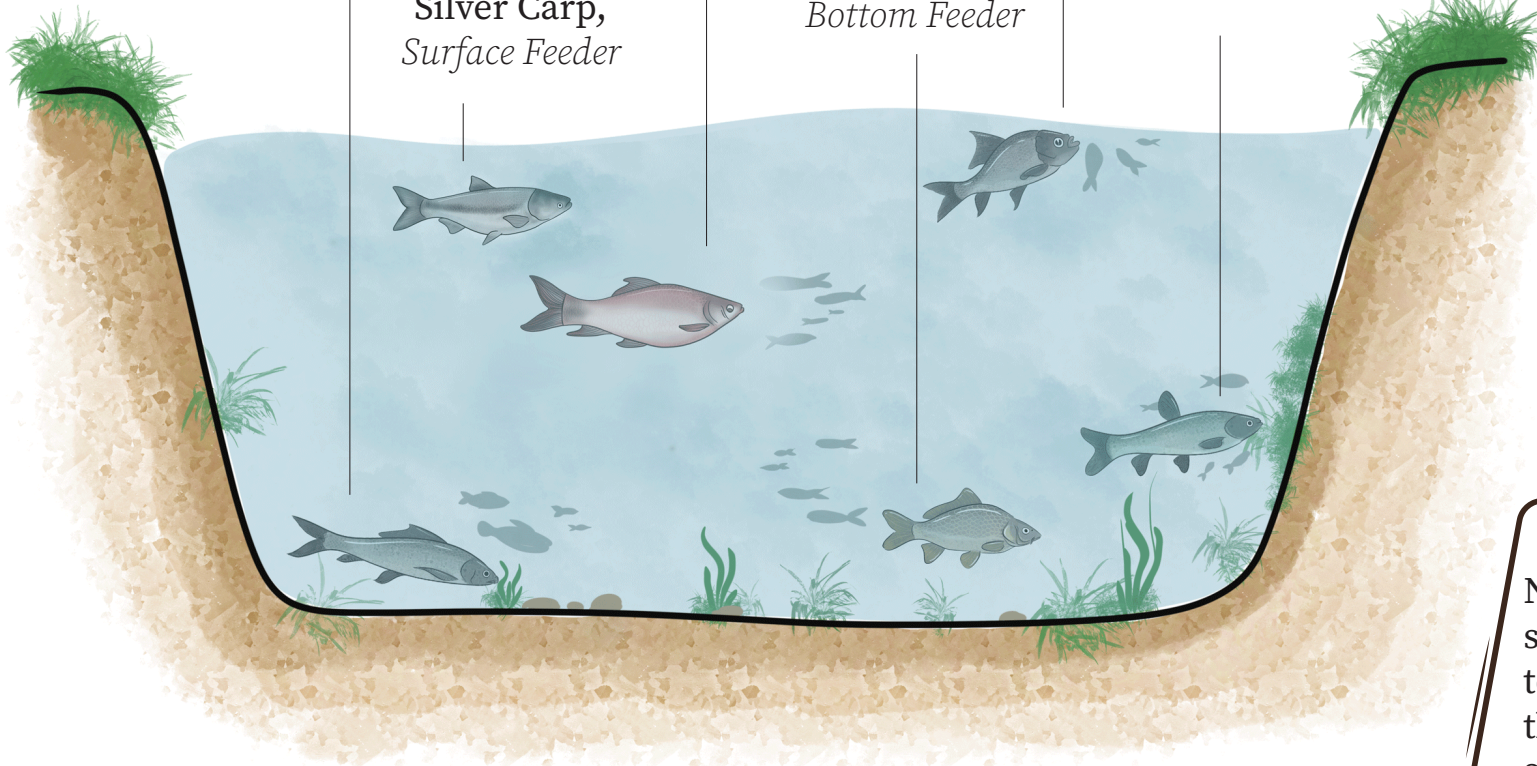
**Catla, Surface Feeder**

**Rohu, Column Feeder**

**Grass Carp, Aquatic Grass Feeder**

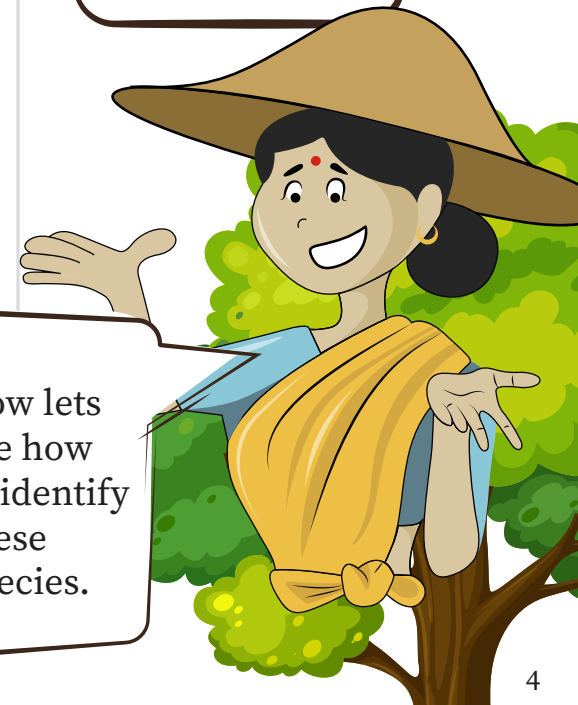
**Silver Carp, Surface Feeder**

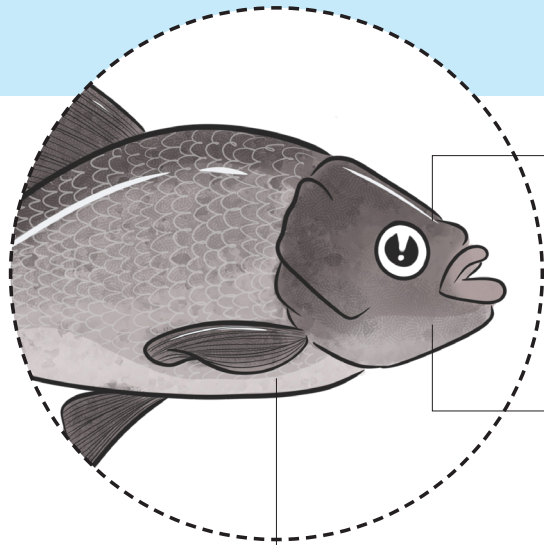
**Common Carp, Bottom Feeder**



Various species have different feeding habits as shown. Depending on consumer demand & availability of seed, we can have species combination in the pond.

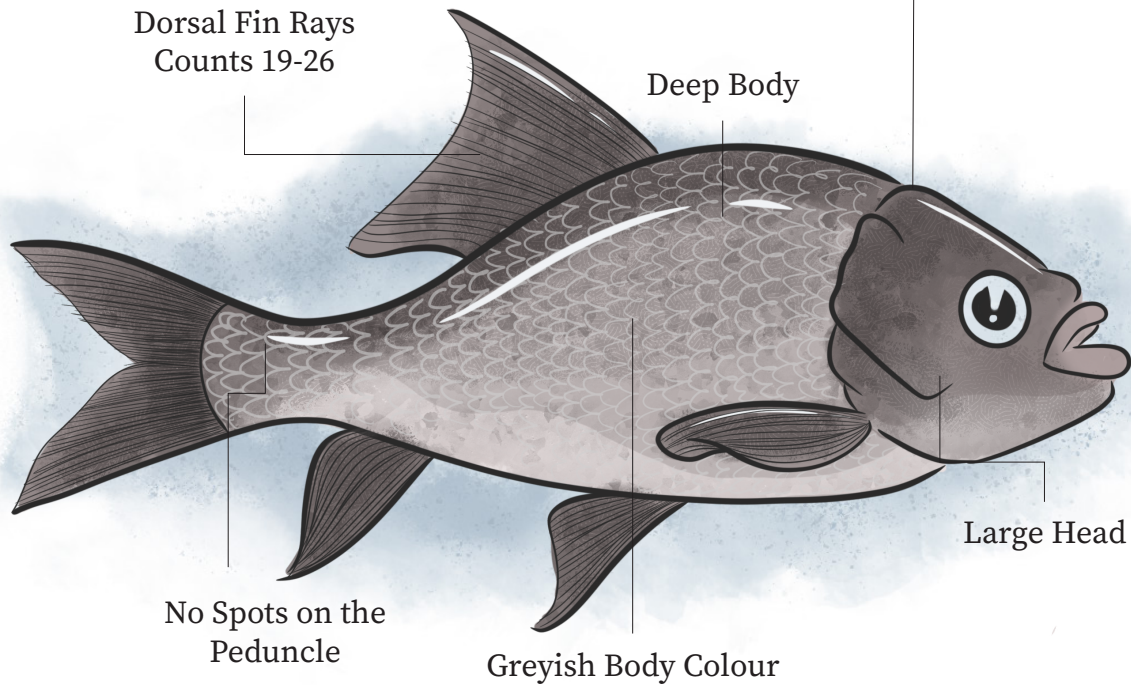
Now lets see how to identify these species.





No Barbels

Upturned Mouth



Dorsal Fin Rays  
Counts 19-26

Deep Body

Large Head

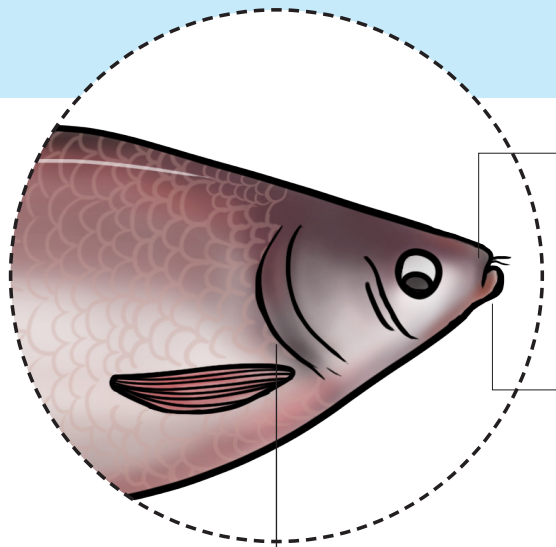
No Spots on the  
Peduncle

Greyish Body Colour

### **Catla** (*Catla catla*)

Known as the Great Indian carp, Catla fish is one of the commonly grown freshwater fish in India, used as the surface feeder component in carp polyculture systems.





Both the Lips  
Fringed & Thick

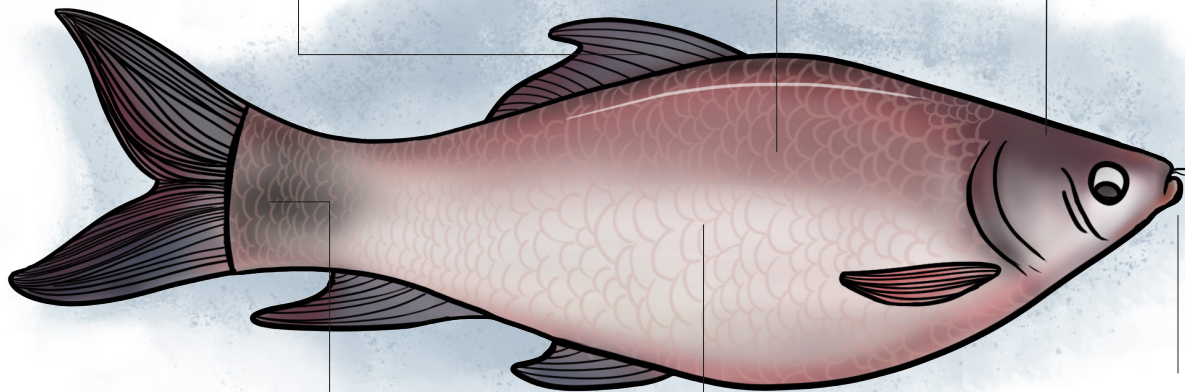
A Pair of  
Maxillary  
Barbels

**Rohu** (*Labeo rohita*)

Rohu is an important aquacultured freshwater species used as the column feeder component in carp polyculture systems.

Dorsal Fin Rays  
Counts 12-15

Body Elongated, Slender,  
& Spindle shaped

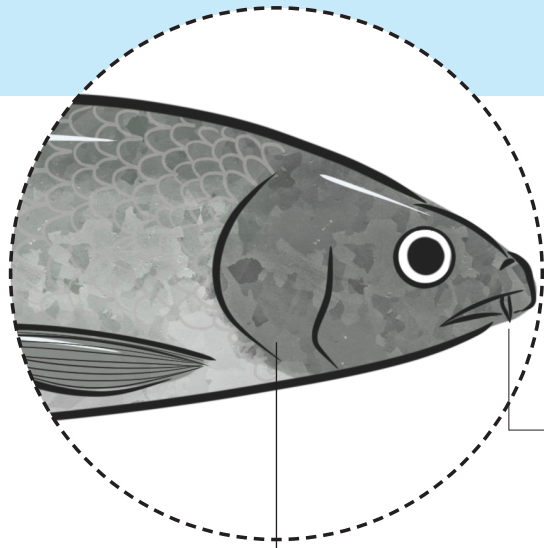


Oval Shaped Transverse Dark Patch  
on the Caudal Peduncle Regions

Scale with Reddish Tinge

Inferior Mouth

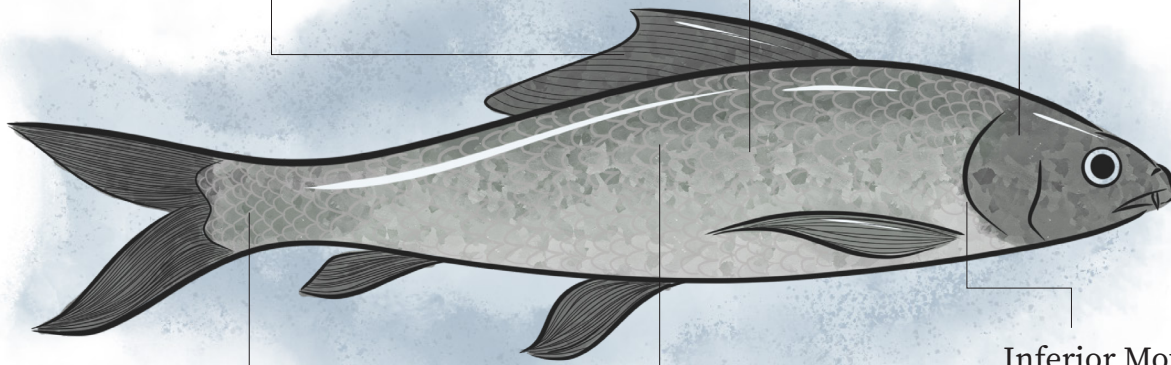




Mouth Terminal Wide,  
Lips without Fringe

Dorsal Fin Rays  
Counts 12-15

Body Slender, &  
Elongated.



Inferior Mouth

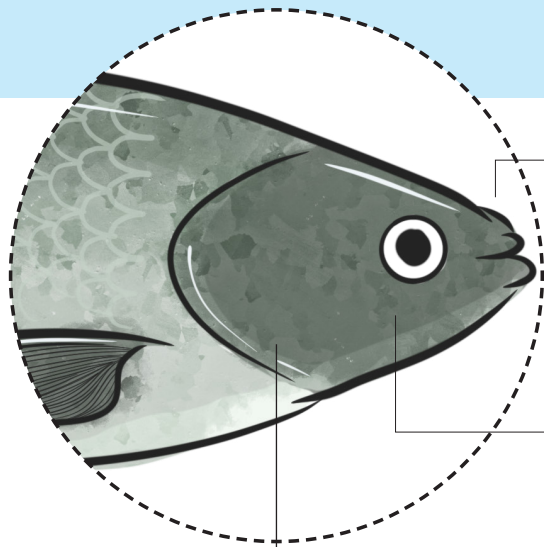
Light Diamond Shaped Patch on  
the Caudal Peduncle

Scale with Reddish Tinge

### **Mrigal** (*Cirrhinus mrigala*)

Mrigal the third most important species, is used as the bottom feeder component in carp polyculture systems.

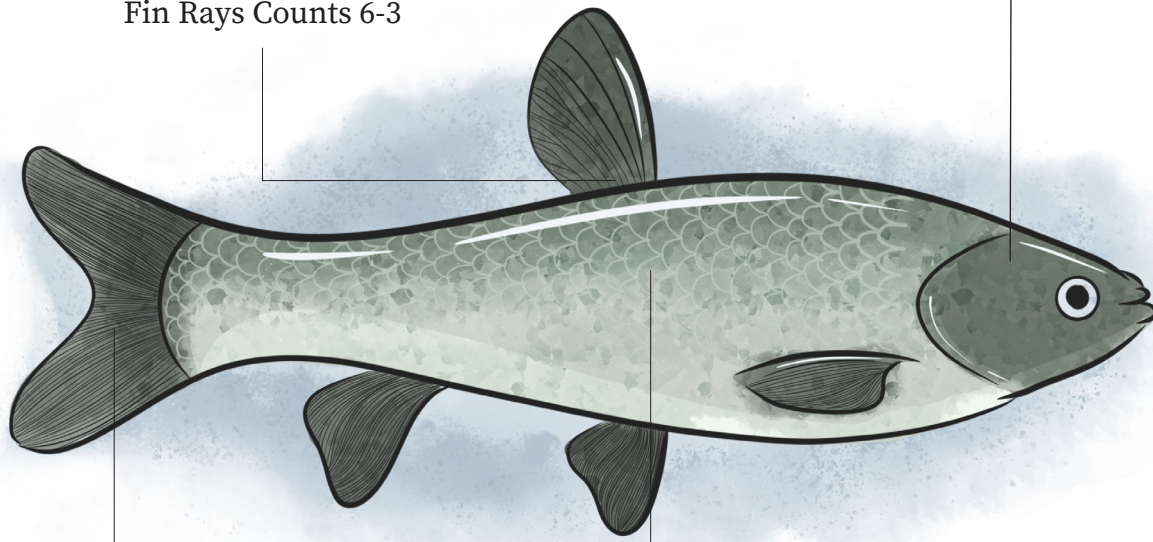




No Barbels

Mouth Terminals  
with Thin lips

3 Spines & Dorsal  
Fin Rays Counts 6-3



Tip of Dorsal & Anal  
Fins are Round

Scales with Greenish Tinge

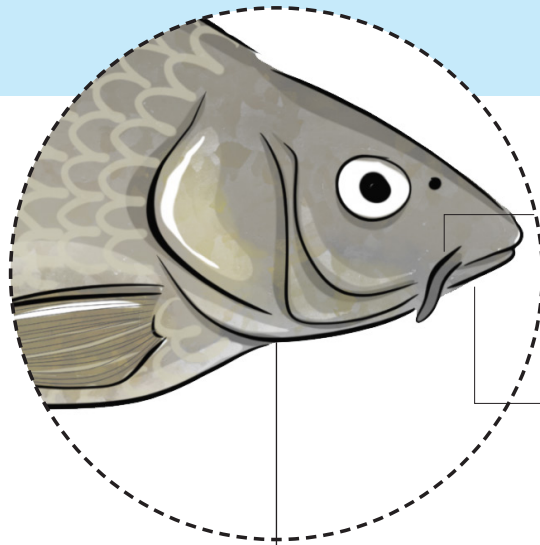
### Grass Carp

*(Ctenopharyngodon idella)*

Grass carp is used to feed on aquatic plants hence called grass carp.



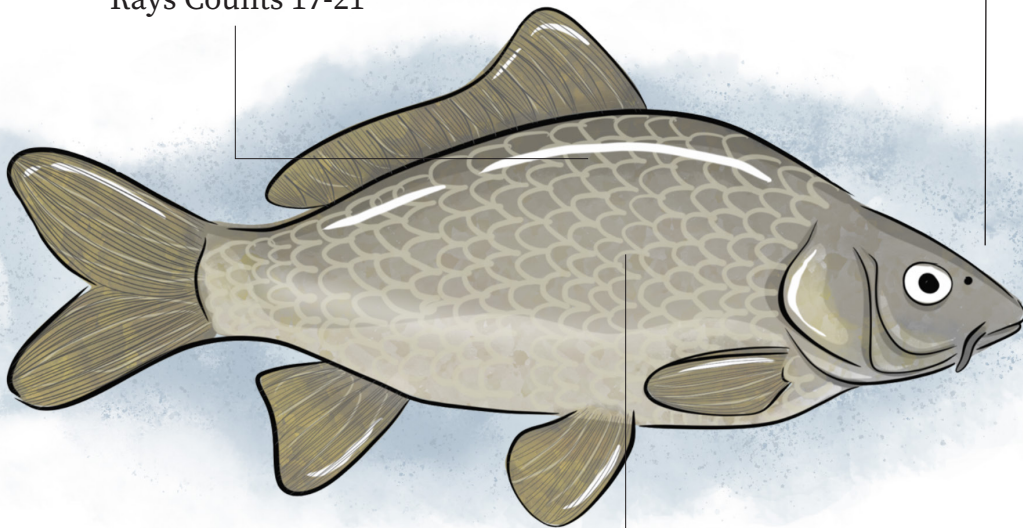




2 Pair Barbels

Large  
Protruding  
Mouth

3 Spines & Dorsal Fin  
Rays Counts 17-21

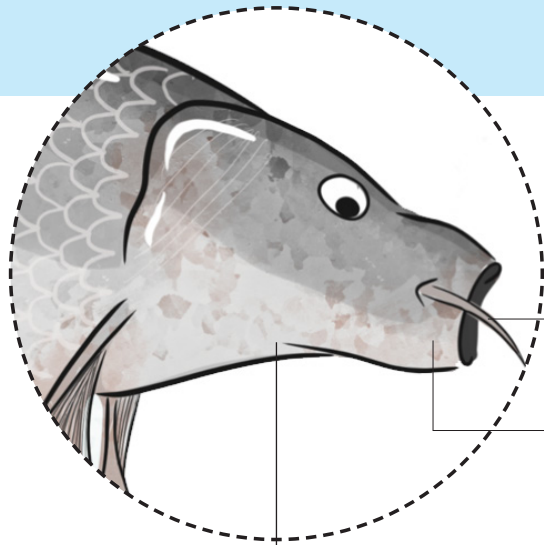


Bulging Belly

### **Common Carp** (*Cyprinus carpio carpio*)

Common carp can be identified with its bulging belly hence also known as big belly carp.

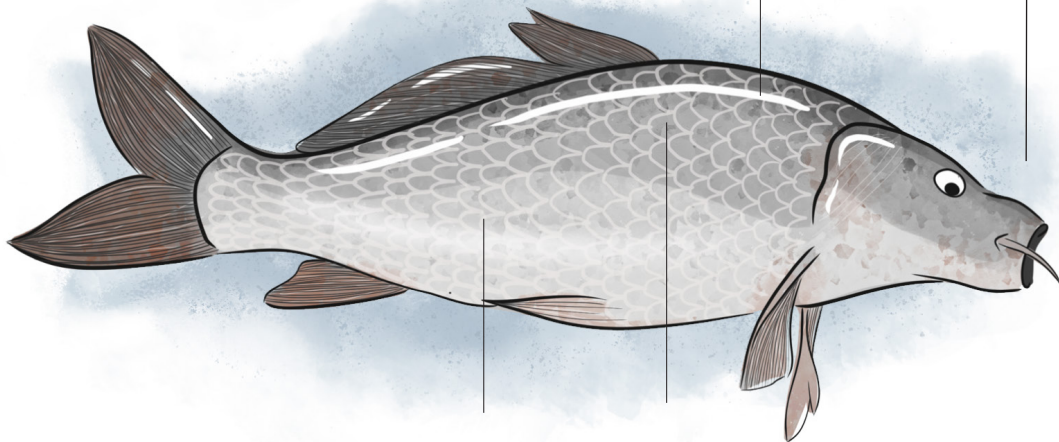




2 Pair Barbels

Large Protruding Mouth

Elongated, & Sleek Body



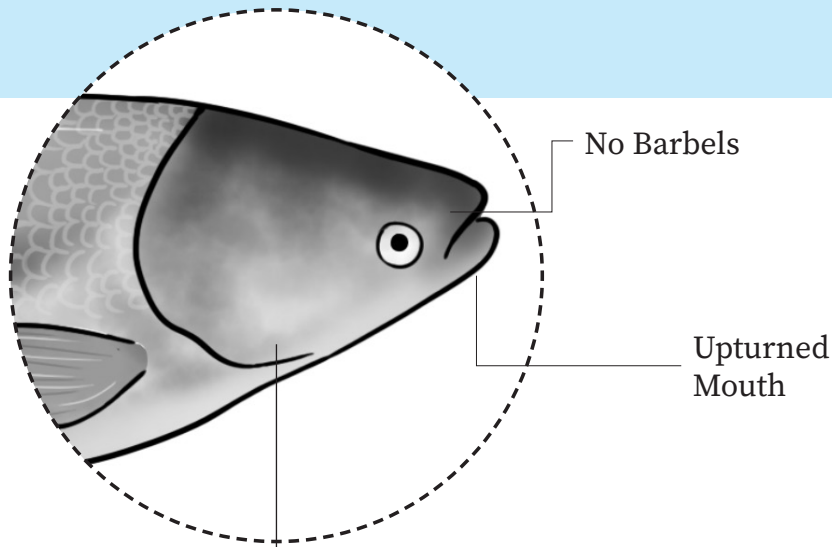
Belly is Smaller than Existing Strain

Silver Grey in Colour

### Amur Common Carp (*Cyprinus carpio*)

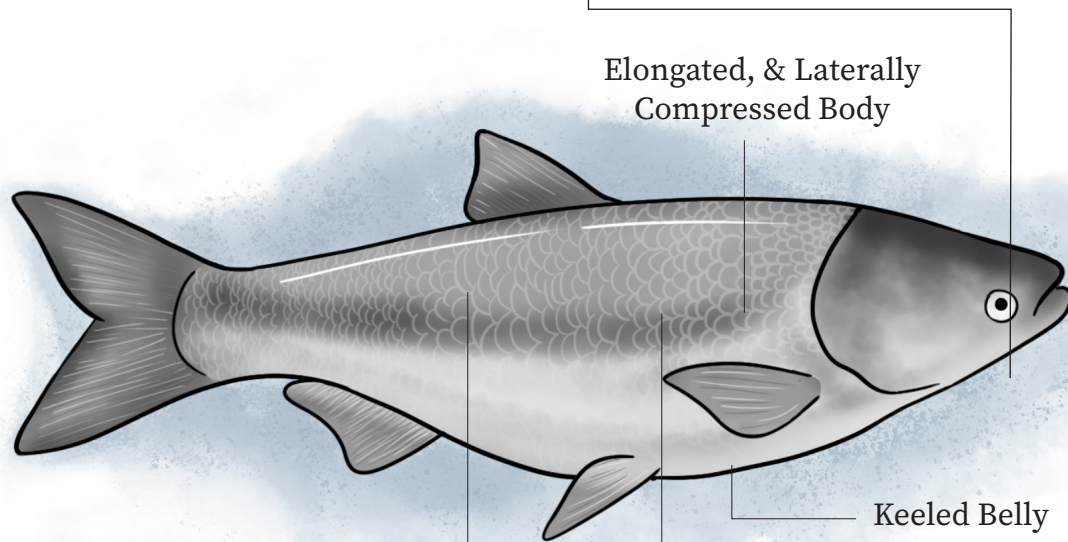
This is a genetically improved variety of common carp which is omnivorous & accepts external feed.





**Silver Carp** (*Hypophthalmichthys molitrix*)

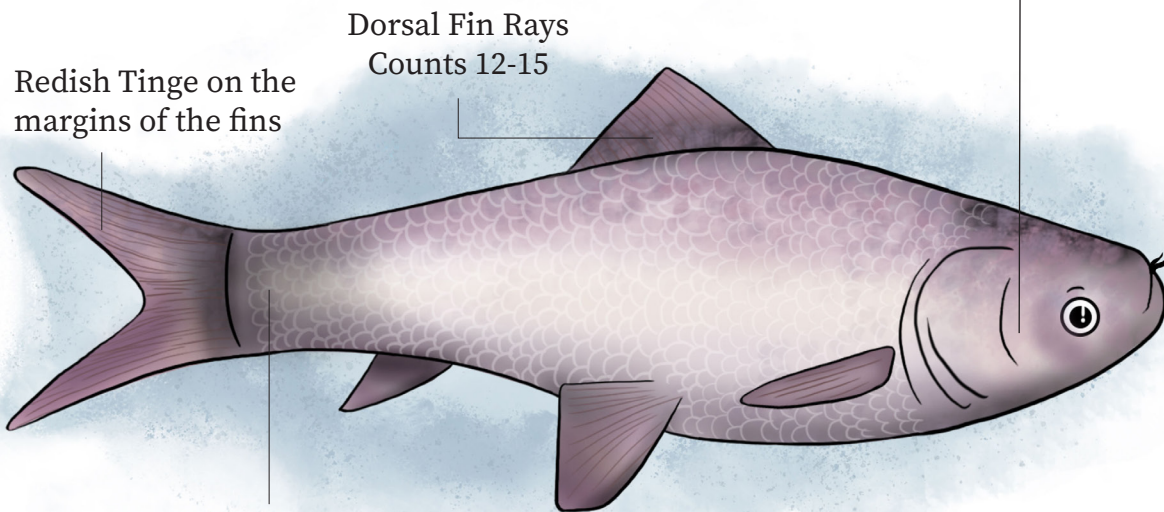
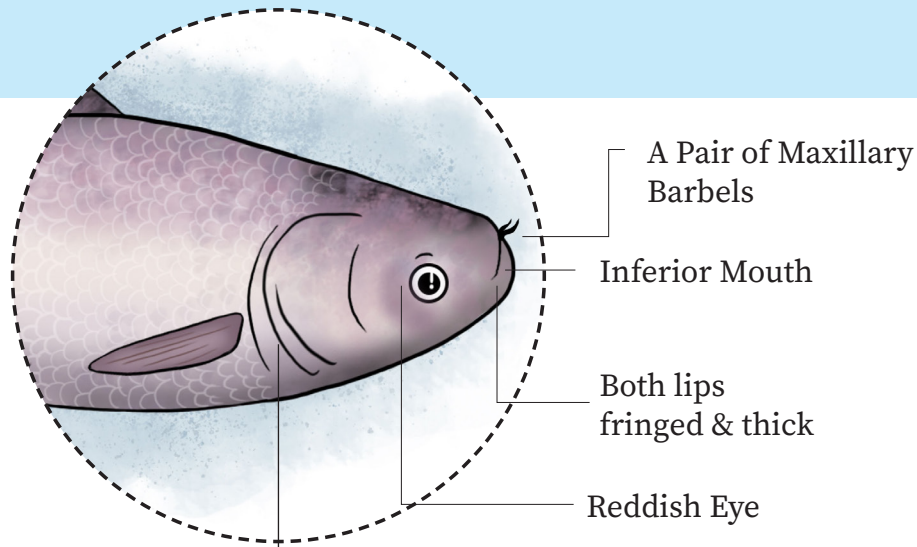
Silver carp is a surface feeder with phytoplankton as main food.



Scales Small in Size

Silvery Grey in Colour





Oval Shaped Transverse Dark Patch on the Caudal Peduncle Region

### Jayanti Rohu (*Labeo rohita*)

Genetically improved species of rohu which feeds on detritus (dead organic matter) & plankton in column zone.



## Different Species Combination & Ratio

Species Combination	Species	Stocking Ratio	Remarks
2 Species	Catla & Rohu	50:50	They can utilize both phyto & Zooplankton Efficiently
3 Species (Only IMC)	Catla, Rohu, & Mrigal	30:40:30	Best combination for effective utilization of food resources in pond
3 Species (Only Exotic Carps)	Silver Carp, Grass Carp, & Common Carp	40:30:30	In this combination, there is no species that can utilize Zooplankton
4 Species	Catla, Rohu, Mrigal, & Common Carp	30:40:15:15	Use of bottom feeders need based
6 Species (Most recommended; subject to availability of seed of all species & feed for grass carp)	Catla, Rohu, Mrigal, Silver Carp, Common Carp, & Grass Carp	30:40:10:5:10:5	Grass Carp will be a good choice if aquatic plants are present in the pond as it can control excessive growth of aquatic plants in pond

**Here is a guide for combination of species and their composition for efficient production.**



**Happy harvesting!**