



THE FATFISH

EXTRUDED FLOATING FISH FEED

COMPLETE NUTRITION FOR ALL GROWTH STAGES OF FISH

THE FATFISH is a premium fish feed brand manufactured in the Arab Republic of Egypt for the Diamond Group.

Available as extruded sinking or floating pellets, **THE FATFISH** feed is created by experts, engineers and vets to provide your fish farms with the best FCR and most cost efficient best nutritional value for money.

THE FATFISH provides complete nutrition for all growth stages of fish: Fry, Fingerlings, Juveniles and Adults.

THE FATFISH feed is available with customised protein levels that work best for your farming - ranging from 18 - 45% Protein, and is available in sizes including 1.5mm, 2mm, 3mm, 4mm and 4.5mm depending on your requirements.

Why is **THE FATFISH** feed your best choice for your farmed fish?

INGREDIENTS: Fish Meal, Poultry Meal, Corn Gluten, Soybean Meal, Yellow Corn, Wheat Bran, Rice Bran, Fish Oil, Plant Oil, Vitamins, Minerals, Premixes and Amino Acids.

EXPERIENCE: With our expert experience exceeding three decades in the production of animal feed and fish feed, we are well equipped to understand and serve all your needs, and help you even plan for your expansions or new projects.

FCR: Feed conversion ratio (FCR) is the conventional measure of livestock production efficiency: the weight of feed intake divided by weight gained by the animal. Lower FCR values indicate higher efficiency. FCRs are typically 1.0-2.4 for farmed fish and shrimp. In the context of aquaculture, the F.C.R. is calculated as follows: F.C.R. = Feed given / Animal weight gain. In other words, the F.C.R. is the

mathematical relationship between the input of the feed that has been fed and the weight gain of a population. There are no measurement units used in writing the F.C.R.

$$\text{Protein retention} = \frac{(\text{g protein in edible portion})}{(\text{g protein in feed})}$$

$$= \frac{(\text{edible portion}) (\text{g protein per 100 g of edible portion})}{(\text{FCR}) (\text{g protein per 100 g feed})}$$

COST EFFICIENCY: With a premium supply chain serving our production needs, and state of the art production facilities that are almost 00% automated, whilst being monitored and controlled by some of the region's best quality offers and laboratory personnel, we know we provide you the best quality. But we also do that at the best prices. For us to gain, you have to gain - and when you do - we do. That is our guarantee.

Product Quality, Certifications, Approvals:

Our product is recognised and approved by Egypt's highest authorities, including:





THE FATFISH

EXTRUDED FLOATING FISH FEED

COMPLETE NUTRITION FOR ALL GROWTH STAGES OF FISH

SIZE/STAGE	% BODY WEIGHT	CRUDE PROTEIN %	CRUDE FAT %	FIBER %	PHOSPHORUS %	DIGESTIBLE ENERGY (KCAL/KG)
0.1 - 5g	-10	50	7.5	4	1.3	3,400
0.5 - 10g	6-8	35-40	8	4.5	1.2	3,300
10 - 35g	3-5	32	8	5	1.2	3,300
35g to market		25-30	8	5	1.2	3,300
Broodstock		30	8	5	1.2	3,300

PROTEIN:

The most expensive component in fish feed is protein. Its quality depends on the amino acids that the protein provides and how far it secures the fish growth requirements.

ENERGY AND PROTEIN-ENERGY RATIO:

For the optimum diet, the ratio of protein to energy must be determined independently for each fish species. Diets with excessive energy levels may result in decreased feed intake and reduced weight gain.

LIPIDS:

Lipids (fats) are high energy nutrients that can be utilized to partially spare (substitute for) protein in aquaculture feeds. Lipids have about twice the energy density of proteins and carbohydrates.

Lipids typically make up 7-15% of fish diets, supply

essential fatty acids and serve as transporters for fat soluble vitamins.

VITAMINS:

Vitamins are organic compounds necessary in the diet to support normal fish growth and health. They are often not synthesized by fish and must be provided in the diet. Deficiency of each vitamin has specific symptoms, but reduced growth is the most common symptom of any vitamin deficiency.

MINERALS:

Minerals are inorganic elements necessary in the diet for normal body functions. Common dietary macro minerals are calcium, sodium, chloride, potassium, chlorine, sulphur, phosphorous and magnesium. These mineral regulate osmotic balance and aid in bone formation and integrity.



THE FATFISH

EXTRUDED FLOATING FISH FEED

COMPLETE NUTRITION FOR ALL GROWTH STAGES OF FISH

FEEDING STRATEGIES	SIZE OF FISH	FEEDING
Fertilization and supplemental feeding	Fry	10-5% BW
	Fingerlings	5-3
	Juvenile	3-2
	Market Size / Breeder	3-2
Complete feeding	Fry	30-15% BW
	Fingerlings	10-15
	Juvenile	10-15
	Market Size /Breeder	5-2

SIZE OF FISH	FEEDING FREQUENCY
Fry	Minimum of 4 times to 8 times/day
Fingerlings	2-4 times/day
Juvenile	2-4 times/day
Adult	2-4 times/day

FEATURES	BENEFITS
Selective ingredients used	Quality of feed assured
Strict quality control	
High quality protein with balanced digestible amino acids	Better nutrition from feed
Modified fat for better utilisation	
Proper utilisation of feed	Optimum water quality
Helps remove gases	
Faster growth	More crop cycle at lower cost
Lower FCR (Feed Conversion Ratio)	
Confirms immunity boosting	Less disease occurrence



THE FATFISH

EXTRUDED FLOATING FISH FEED

STORAGE:

- Store fish feed in a cool dry place away from direct sunlight
- Bags should not touch the floor, or wall—best stored stacked on wooden pallets
- Best results when using first-in-first-out

FEEDING MANAGEMENT:

- Always consider the following factors: weather, water quality, fish eating situation
- Feed the fish according to their observed appetite—do not over feed
- Feed ration should be determined based on total fish body weight
- Try to spread the feed as evenly as possible to decrease dominance

BODY WEIGHT:

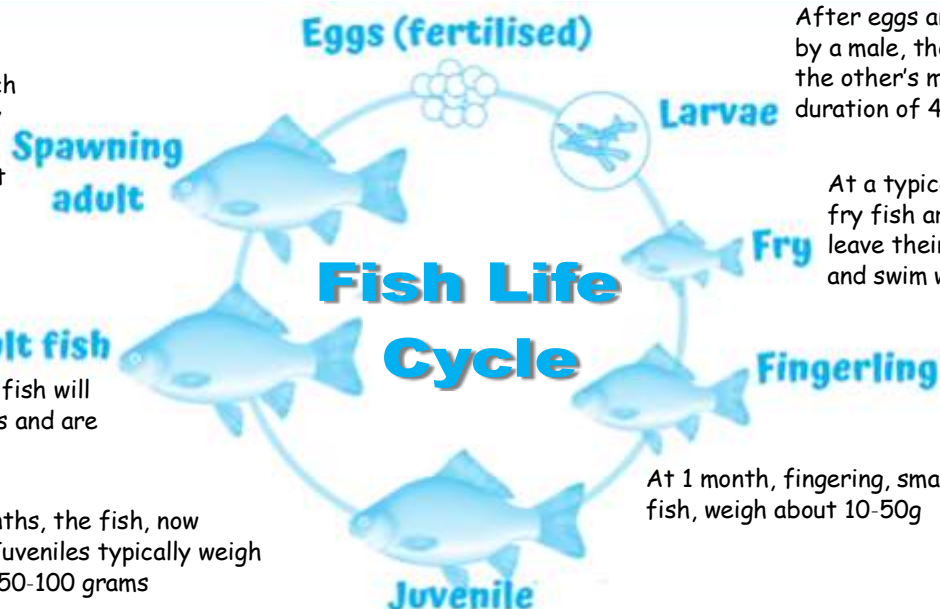
Sample fish every 2-3 weeks to calculate average weight increase to adjust feeding ration

WATER QUALITY:

Always monitor the water quality and if parameters exceed their limits, corrected measures should be carried out according to the below table:

WATER QUALITY PARAMETER	RECOMMENDED VALUE	CORRECTED MEASURES
Oxygen (mg/l)	> 4	Increase aeration, water exchange
NH3 (mg/l)	< 0.07	Increase water exchange Use denitrifying probiotic
Nitrate (NO2) (mg/l)	25-50	
Nitrate (NO2) (mg/l)	< 4	
Ammonium (NH4) (mg/l)	100-200	

Once female fish reach a weight of 250g they can start to reproduce; typically at an age of 4-5 months



After eggs are fertilized by a male, they are kept in the other's mouth for a duration of 4-8 days

At a typical age of 1- weeks, fry fish are big enough to leave their mother's mouth and swim with other fry

At 7-9 months, mature fish will weigh at least 500 grams and are now known as adults

At 1-3 months, the fish, now known as Juveniles typically weigh between 550-100 grams

At 1 month, fingerling, small young fish, weigh about 10-50g



THE FATFISH

EXTRUDED FLOATING FISH FEED

Water Quality Parameters for 7 Popular Aquatic Species for Aquaponics

Fish type	Temperature °C		Ammonia NH ₃ -N (mg/L)	Nitrite NO ₂ -N (mg/L)	DO (mg/L)	% Crude Protein (at grow out)	Grow out Growth rate (grams/moth)
	Vital	Optimal					
Common Carp (Cyprinus Carpio)	4-34	25-30	<1	<1	>4	30-38	600 grams in 9-11 months
Nile Tilapia (Oreochromis Niloticus)	14-36	27-30	<2	<1	>4	28-32	600 grams in 9-11 months
Channel Catfish (Ictalurus Punctatus)	5-34	24-30	<1	<1	>3	25-36	400 grams in 9-10 months
Rainbow Trout (Oncorhynchus Mykiss)	10-18	14-16	<0.5	<0.3	>6	42	1000 grams in 14-16 months
Flathead Grey Mullet (Mugilecephalus)	8-32	20-27	<1	<1	>4	30-34	750 grams in 9-11 months
Giant River Prawn (Macrobrachium Rosenbergii)	17-34	26-32	<0.5	<4	>4	35	25 grams in 9-11 months
Barramundi (Lates Calcarifer)	18-34	26-29	<1	<1	>4	38-45	400 grams in 9-10 months

WATER QUALITY PARAMETER	RECOMMENDED VALUE	CORRECTIVE MEASURES
Oxygen (mg/l)	> 4	Increase aeration, water exchange Decrease feeding
NH3 (mg//l)	< 0.07	Increase water exchange Use denitrifying probiotic
Nitrate (NO2) (mg/l)	25-50	
Nitrate (NO2) (mg/l)	< 4	
Ammonium (NH4) (mg/l)	100-200	



THE FATFISH

EXTRUDED FLOATING FISH FEED

FEEDING RATE, FREQUENCY AND TIMING

Feeding rates and frequencies are in part a function of fish size. Small larval fish and fry need to be fed a high protein diet frequently and usually in excess. Small fish have a high energy demand and must eat nearly continuously and be fed almost hourly. Feeding small fish in excess is not as much of a problem as overfeeding larger fish because small fish require only a small amount of feed relative to the volume of water in the culture system.

As fish grow, feeding rates, frequencies and feed protein content should be reduced. However, rather than switching to a lower protein diet, feeding less may allow the grower to use the same feed (protein level) throughout the grow-out period, thereby simplifying feed inventory and storage.

Never overfeed your fish: Uneaten food waste from over-feeding can consume a substantial amount of oxygen as it begins decomposing.

In addition, decomposing food can increase the amount of ammonia and nitrite to toxic levels in a relatively short period of time.

Remove uneaten food after 30 mins: In general fish will normally eat all they need to eat in a 30 minute period. After this length of time, remove any food left uneaten to prevent it sinking to the bottom and decomposing. If uneaten food is found, lower the amount of feed given the next time.

1. Always feed the fish at the same time and in the same part of the pond. Fish will learn where to go to get their food.
2. Do not overfeed: Too much food will not be eaten but will decay and will use up oxygen during the decaying process.
3. Monitoring their dissolved oxygen if the pond regularly, ponds with low DO concentration, fish will eat less and they will not convert food to flesh efficiency,
4. Do not feed the fish for about 24 hours before harvesting or transporting. When the fish eat, they void the waste into the water. The combination of food and waste makes the waters turbid and increases the stress that is already placed on the fish by the breeding and harvesting process.
5. Always have routine pond cleaning and stock inventory. Aquatic macrophytes remove inorganic nutrients and limit phytoplankton growth.
6. Keep a daily record of feeds given and of fish mortality. It would determine efficiency of a feeding program and would help one to interpret if the business was successful or not.
7. Avoid overstocking the pond. It deteriorates water quality, increases metabolic waste build up and lead to poor utilization of supplemental feeds.

PRODUCED BY:



PRODUCED

FOR:



The Diamond Group

PRODUCT MATCHING, IMPORT & EXPORT

CONTACT US: THE DIAMOND GROUP

M: +201006156182

M: +201025583336

E: info@thediamondgroup.org

W: www.thediamondgroup.org