

## Aquaculture: definitions and systems

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Any human means to improve growth of a given organism in a given area

Any means to improve fish production than that of the production naturally found.

Man's attempt through inputs of labor and energy to improve the yield of useful aquatic organisms by deliberate manipulation of their rates of growth, mortality and reproduction (Reay, 1979).

Aquaculture is the farming of aquatic organisms including fish, molluscs, crustaceans and aquatic plants. Farming implies some form of intervention in the rearing process to enhance production such as regular stocking, feeding, protection from predators etc. Farming also implies individual or corporate ownership of the stock being cultivated (FAO, 1988).

Aquaculture is the water farming activities where some sorts of controls (mostly based on environmental principles) are exercised over the organisms and environment with a view to earn profit (Grover *et al.*, 2000).

Culture system	Different activities of fish culture					
	Pond preparation	Stocking density	Fertilizer application	Feed application	water / oxygen supply	Fish harvesting
Extensive system	Weed fish and aquatic weeds are not removed	Uncontrolled	No fertilizers are applied	No fish feed are applied from external resources	No oxygen is supplied	Irregular harvest
Improved extensive system	Weed fish and aquatic weeds are removed	Semi controlled	Fertilizers are applied irregularly	Fish feed are applied irregularly	No oxygen is supplied	Fish harvest several times a year
Semi intensive system	Weed fish and aquatic weeds are removed	Controlled	Fertilizers are applied regularly	Fish feed are applied regularly	Oxygen is supplied if necessary	Fish are partially harvested with irregular restocking several times a year
Intensive system	Complete removal of weed fish and aquatic weeds	Controlled with high stocking density	No fertilizer are applied	Balanced diet / feed are applied	Full time arrangement for oxygen supply	Fish are partially harvested with regular restocking several times a year

## Feed application under different culture systems

Fish culture management system	Requirement of natural food (%)	Requirement of supplementary / balanced food (%)
Extensive system	100	0
Improved extensive system	70	30
Semi intensive system	50	50
Intensive system	0	100

### সারণী-৯: মৎস্যচাষের উল্লেখযোগ্য প্রজাতি ও চাষ পদ্ধতি

প্রজাতি	চাষের প্রধান জোড়	চাষের প্রধান ইনটেনসিটি
কাতলা ( <i>Catla catla</i> )	পুকুর	সেমি-ইনটেনসিভ
মৃগেল ( <i>Cirrhinus mrigala</i> )	ঐ	ঐ
রুই ( <i>Labeo rohita</i> )	ঐ	ঐ
মাগুর ( <i>Clarias batrachus</i> )	ঐ	সেমি-ইনটেনসিভ ও ইনটেনসিভ
কালিবাউস ( <i>Labeo calbasu</i> )	ঐ	সেমি-ইনটেনসিভ
শিং ( <i>Heteropneustes fossilis</i> )	ঐ	ঐ
বিগহেড কার্প ( <i>Aristichthys mobilis</i> )	ঐ	সেমি-ইনটেনসিভ
গ্রাস কার্প ( <i>Ctenopharyngodon idella</i> )	ঐ	ঐ
কমন কার্প ( <i>Cyprinus carpio var. communis</i> )	ঐ	ঐ
সিলভার কার্প ( <i>Hypophthalmichthys molitrix</i> )	ঐ	ঐ
ব্লাক কার্প ( <i>Mylopharyngodon piceus</i> )	ঐ	ঐ
মিরর কার্প ( <i>Cyprinus carpio var. specularis</i> )	পুকুর/ধানক্ষেত	ঐ
থাই পান্ডাস ( <i>Pangasius pangasius</i> )	পুকুর	সেমি-ইনটেনসিভ ও ইনটেনসিভ
পাবদা ( <i>Ompok pabda</i> )	ঐ	সেমি-ইনটেনসিভ
স্বরপুঁটি ( <i>Barbodes gonionotus</i> )	পুকুর/ধানক্ষেত	ঐ
তেলাপিয়া ( <i>Oreochromis niloticus</i> )	পুকুর/ধানক্ষেত, খাচায় চাষ	সেমি-ইনটেনসিভ ও ইনটেনসিভ
গলদা চিংড়ি ( <i>Macrobrachium rosenbergii</i> )	পুকুর/ধানক্ষেত	উন্নত এক্সটেনসিভ ও সেমি-ইনটেনসিভ