Sustainable and organic aquaculture

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Advantages and disadvantages of aquaculture

SL	Advantages	Disadvantages
1	Food and nutrition security	Infrastructure affects biodiversity
2	Income generation/Livelihood	Untreated effluent adversely affects ecosystem
3	Enterprise development	Entrance of new pathogen through exotics
4	Export earning	Transfer of diseases and parasites from farm to wild

Sustainable aquaculture

There are four conditions:

1. Technology should be sound
2. Technology should be environment friendly (less/no pollution)
3. Technology should be economically viable
4. Technology should be socially acceptable

Organic aquaculture

- Aquaculture intensification results in accumulation of high levels of antibiotics, residues of pesticides/ harmful chemicals and heavy metals causing a great damage to environment
  Three 3 tons of wild fish is used to produce feed for the production of 1 ton of farmed fish which depletes the natural stock available in wild

- To increase production, fast growing exotic fish varieties are farmed which results in weakening of the native species and transfer of disease from farmed aquatic animals to wild fish

- Organic aquaculture is the only solution to increase fish production in sustainable and environment friendly manner

- This method of culture farms the aquatic organisms in condition similar to that of the natural environment

- As in case with the other forms of food production industries there is some consumer interest in organic aquaculture

- Organic aquaculture is production of high quality foods in a stable aquatic ecosystem by managing the natural resources and environment without any negative effects and to secure the genetic diversity and richness of species in a native system

Principles of organic aquaculture

The main principles of organic aquaculture are as follows:

- Monitoring of environmental impact
- Natural breeding procedures without use of hormones and antibiotics
- No use of inorganic fertilizers
- Integration of natural plant communities in farm management
- No synthetic pesticides and herbicides
- Feed and fertilizer from certified organic agriculture and fisheries
- Organic criteria of sustainability for fishmeal sources
- Absence of GMOs(Genetically Modified Organisms) in stocks and feed
- Stocking density limits
- Restriction of energy consumption (e.g. regarding oxygenation)
- Preference for natural medicines
- Processing in approved organic facilities