



Case study 3 : Aquaculture IIFSA-Aquaculture Venture

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India | South Region | Andhra Pradesh | IIFSA | Akbar Ali

Initiative Overview

Venture: Akbar Ali is promoting the “Information and Inputs for Sustainable Aquaculture” (IIFSA) is a India based aquaculture service company, that provides expert advice, technology transfer and aquaculture farm management services to new and existing aquaculture farms. IIFSA is based in Andhra Pradesh, was established in 2009 under AC&ABC scheme of the Indian government. IIFSA holds strong, well-known brand names and its product line ranges from soil management, natural feed management, supplementary feed management, water quality management, aquaculture animal health management etc., to solve all aquaculture problems.

Agripreneur: After completion of B.F.Sc (Bachelor of Fisheries Science), from the Acharya N.G.Ranga Agriculture University, College of Fishery Science, Muttukur, Nellore District, in July 2002, Mr. Akbar Ali took the AC&ABC training and has 14 years’ of experience in the aquaculture sector now. He has experience in developing and implementing programs for aquaculture farmers. He has hands-on experience in coordinating and planning aquaculture development programs involving financial management, community relations and volunteer development.



“By using feed formulations knowledge, farmers are preparing own feeds and this is helping ‘Farm made feed’ concept (self-sustainability)

Akbar Ali”

Challenges

- Unnecessarily farmers are using antibiotics and chemicals to control disease in aquaculture systems.
- Lack of knowledge on water and soil quality management.
- There is no system to provide advisory service at the time of farm emergency situations.
- There is no system to work 24X7 days for aquaculture solutions.
- Lack of awareness on feed formulation and also right feeding.
- Huge technology gaps in aquaculture system.
- Lack of knowledge on plankton production.
- Lack of knowledge on Good Manufacturing Practice (GMPs) in aquaculture.
- Lack of knowledge on site selection and pond construction.

Solutions

- Establishing Aquaculture One Stop Solution (AOSS) centers.
- Virtual Aquaculture Advisory Service (VAAS) established
- EMI service (Emergency Management Information service) is a 24X7 emergency service.
- Training for farmers and farm supervisors.
- Using web based platform to disseminate all aquaculture related information.
- Virtual software (V-Software) ICT enabled extension system.
- Lab consultancy service.
- E-shopping and e-news.
- Conducted demonstration programs on fish seed treatments.

Results

- 4 working AOSS centers for providing services to >10000 farmers.
- Stopped using unnecessary antibiotics and chemicals in aquaculture pond systems.
- Through the training programs, farmers learned the GMPs in all steps of farming.
- Through fish seed treatment, >70% of parasitic disease problems have reduced.
- Regular water and animal health check-up (Lab Consultancy).
- With help of web based system and virtual software, the farmers are in the status of utilizing international opportunity in aquaculture



Detailed description of venture established

Mr. Akbar Ali initiated a venture called "Information and Inputs for Sustainable Aquaculture-IIFSA" in 2009. With his field experience and motivated by his father made him an entrepreneur to better serve the farmers in all aspects of farming. In 2009, they started providing laboratory services to all aquaculture farmers surrounding akividu village, Andhra Pradesh (A.P). From 2010, IIFSA started using ICT (Information Communication Technology). With the help of ICT tools, they established 2 more business units (Eluru , in A.P State and Puri, in Orissa State) and recently in 2015 one new unit was started at Nellore, A.P. At present they have 4 business units (virtual service centres) and with all 4 units, IIFSA is covering directly, registered ponds in 15,200 acres

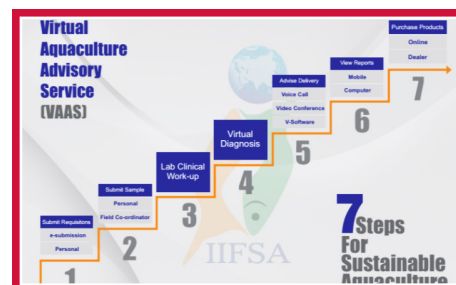
of aquaculture and indirectly > 20,000 acres of aquaculture where the farmers are getting laboratory service benefits. Now IIFSA is having a team of experts on available resources utilization for carryout suitable farming practices in a sustainable manner. IIFSA is always ready to work to produce aquaculture based food and develop entrepreneurship models in aquaculture sector.

IIFSA provides a full range of consultancy services and project management expertise in all aspects of aquaculture. They use ICT for accuracy and fast service delivery.

- Aquaculture site search and analysis
- Farm design and construction
- Water and soil quality analysis
- Fish and shrimp disease diagnosis
- Aquaculture pond management services
- Technical training and teaching
- Pond inputs supply for treating identified problems

IIFSA are manufacturing and supplying pond inputs to start aquaculture farming and also mange diagnosed problems in farming system.

- Water testing kits
- Water buffers
- e-manures
- e- min
- e- feeds and
- All necessary products involved in aqua farming.



Virtual Aquaculture Advisory Service

Virtual Aquaculture Advisory Service by IIFSA is a virtual web-enabled platform, which provides a link between farmers and certified aquaculture experts for extending crop and location based advisory services. The virtual platform offers consulting an expert by submitting service requisition along with samples for farm advice through selected AOSS Centers. This process involves 7 steps:

- Submit Requisition ; a. E-submission, b. Personal
- Submit Sample : a. Personal, b. Field Coordinator
- Lab Clinical Work-up
- Virtual Diagnosis
- Advise Delivery: a. Voice Call, b. Video Conference, c. V-Software
- View Reports: a. Mobile, b. Computer
- Purchase Products: a. Online, b. Dealer (AOSS)



These advise reports are available in V software. General farmers can access these reports anytime within 48 hrs. Registered farmers can access these reports at any time during the crop period. Field coordinators help farmers in bringing samples to AOSS and also act as a bridge between farmer and AOSS center.

• Aquaculture site search and analysis

When considering any new aquaculture project, one of IIFSA's first action is to visit the place of the proposed project. After conducting meetings with the client, IIFSA aquaculture site search expert, will then begin the

exploratory process and seek to identify high potential fish or shrimp farming sites, giving priority to sites owned by the client, whenever appropriate to the situation. In making "Aquaculture site search and analysis report", IIFSA study the below factors,

- Ecological factors
- Soil
- Water
- Land
- Climate
- Biological and operational factors
- Economic and social factors



- **Water and soil quality analysis**

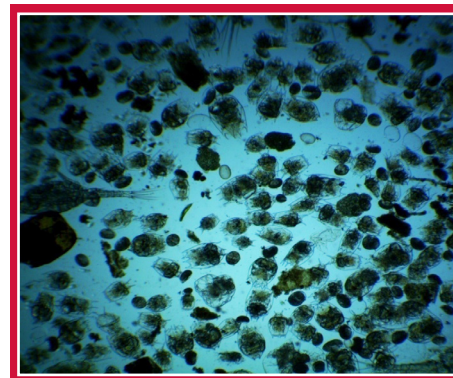
IIFSA's modern, well equipped water quality laboratory can undertake all statutory marine and fresh water analyses in standard methods and many non-standard techniques, which are of value to statutory bodies, water companies, aquaculture companies and aqua culturists.

IIFSA provides advice on water collection protocols if you wish to take samples yourselves and deliver these to them and in some circumstances can provide water sampler, containers and method for collection. If there are significant numbers of samples, IIFSA may be able to collect them free of charge. Alternatively IIFSA can conduct the sampling regime and process the samples on the farmer's behalf.

- **Feed analysis and formulation**

Following points to be careful in fish feed formation:

- Cost of feed ingredients.
- Nutrient content of feed ingredient.
- Nutrients requirement of the animal (protein, energy, vitamins, minerals, amino acid, etc.).
- Availability of nutrients to the animal from various feed materials.
- Ability of the cultured organism to utilize nutrients from various ingredients as well as prepared diet.
- Expected feed consumption.
- Feed additives needed and type of feed processing desired



Challenges

Constraints faced

- Unnecessarily farmers are using antibiotics and chemicals to control disease in aquaculture systems.
- Lack of knowledge in water and soil quality management.
- There is no organization to support the farmers in all steps of farming, in providing pond based technical advisory service and pond inputs.
- There is no system to provide advisory service at the time of farm emergency situations.

Lessons learned

- The need for professional service and preventive maintenance has increased in the last few years as a consequence of more advanced technology and equipment in the aquaculture industry.
- Regular service and preventive maintenance will help secure a predictable and reliable production.
- Function as a support platform where customers can find all relevant information and easily get in touch with the experienced service team and also use the virtual service platform for better and quick service.

Overcoming obstacles

- Aquaculture company and solutions make it easy for farmers and the fish industry service providers, to get the technical knowledge and benefit through various techniques to identify the gaps and obtain instant solutions.

Initiatives taken

- Establishing Aquaculture One Stop Solution (AOSS) centers.
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Innovations to resolve constraints

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Results

Impact

- Four working AOSS centers providing services to more than 10,000 farmers
- Stopped using unnecessary antibiotics and chemicals in aquaculture pond systems.
- IIFSA is covering all services across more than 30,000 acres WSA
- Farmers are now utilizing the virtual advisory services in all steps of farming
- Through the training programmes, farmers learned GMPs in all steps of farming

Outcomes

- Farmers are using their mobile phones to view their pond based lab clinical reports and advise reports, and this feature is helping farmers to understand better about his pond aquaculture system.
- Through fish seed treatment more than 70 percent of parasitic disease problems reduced.
- By regular water and animal health check-up (Lab Consultancy) more than 80 per cent of mortality and risk minimized.

Conclusion

IIFSA is an inspiration globally. Its vision is to make people aware of the importance of fish in their diet and how to implement aquaculture technology as a tool to produce it on a sustainable basis; to provide advisory and laboratory services along with necessary pond inputs at all steps of farming. By making farmers IT friendly in aquaculture solutions, we can increase the number of successful aquaculture experts in the society

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