

Live Fish Carrier System (LFCS)- A new invention for increasing fish farmers' income

It is a well-known fact that live fish are preferred to the iced fish by the fish eaters owing to the guarantee of freshness that remains with the live fish by default. This is the reason why a live fish always has a higher value than an iced fish in the market and when sold alive it always fetches almost double price compared to the iced fish. Keeping this fact in view, ICAR-CIPHET Ludhiana has developed a system for transporting fish in live condition in order to help farmers by selling their produce in live condition and earn more income. This technology was developed under a project funded by National Fisheries Development Board (NFDB), Hyderabad. This system is based on an electric vehicle, thus environment-friendly and non-polluting. The system is named as "Live Fish Carrier System (LFCS)" which runs solely by DC power drawn from four lead acid batteries. By one time charging, it can run about 80 km with a total carrying capacity of 500 kg. It has all facilities including aeration, filtration and ammonia removing to keep fish alive during transportation with less than 1% fish mortality per trip of 40 km with carps of 0.5-1.5 kg individual weight. The vehicle is useful for both freshwater and saltwater fishes to transport fish in live condition. The capacity of the present system is 100 kg live fish per trip, however this capacity can be increased by enhancing the carrying capacity of the vehicle. LFCS has following utilities

1. Live table fish transportation from culture pond to retail market.
2. Live fingerlings transportation for aquaculture.
3. Live brood fish transportation for breeding purposes.
4. Ornamental fish transportation for commercial purpose.
5. Transportation of live fish for research purpose.
6. Transportation of live fish for conservation purposes such as river ranching.
7. The LFCS may also be used as mobile fish selling shop by fish retailers.

As LFCS has ample potential to increase fish farmers' income, ICAR-CIPHET (Ludhiana) has licensed this technology to the firm mentioned below through ICAR AgrInnovate India (New Delhi) on non-exclusive for mass production of LFCS.

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A patent application for LFCS was also filed earlier to Indian Patent Office. This technology has also been accepted by International Fund for Agricultural Development (IFAD) for further promotion.

The cost of present vehicle is approx ₹2.0 lakh for the complete system. The payback period is only 0.21 years (2.5 months), Discounted Payback Period is 0.3 years (3.59 months), the Internal Rate of Return (IRR) of LFCS is 354.5% indicating highly profitable venture.

E-Magic Electric is the only authorized firm for manufacturing and selling LFCS in India as of now, hence any interested farmer/ entrepreneur / govt. organization may place their order directly to M/s E-Magic Electric. The inventor of LFCS, Dr. Armaan U. Muzaddadi, Principal Scientist (ICAR-CIPHET PAU Ludhiana -141004 Mob: 9530926962, Email: drarmaan@gmail.com) may be contacted for technical guidance.



Live Fish Carrier System in Fish Market at Ludhiana



Complete Live Fish Carrier System with Non-Stackable Aerating Container (NSAC)