

SEA STAR INC

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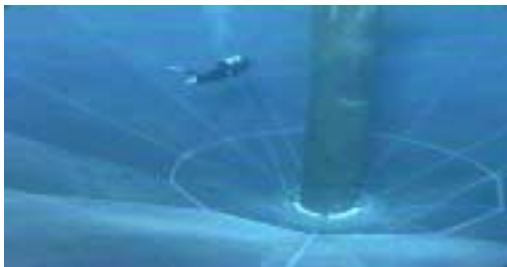
OCEAN RANCHING

(PROJECT ANDROMEDA)

The exploitation of marine animals to feed coastal communities has been documented as far back as the Roman Empire. Indigenous Indians have been known to establish crawls that prevented their catch from returning to the ocean. This practice is probably the first effort to control marine resources for the purpose of harvesting.

Most coastal fish farming operations have required the use of large tracts of land to excavate for the installation of ponds. These areas usually are located in dried up wetlands or manmade ponds. Normally this type of operation requires the pumping of saltwater into the ponds and a return of the effluent to the ocean. Land based operations requires a treatment plant to be attached to the return water to preclude the introduction of toxic levels of effluent. Salinity, PH, Temperature, and several other factors, associated with land-based operations, this is necessary to ensure the survival of the species that are grown. Large pumps with alternates and power requirements with stand-by generators are rather costly variables. These costs must be attributed to the final product, which has determined the market price of production. Most operations are located in foreign countries that have low, if any at all, environmental regulations. These countries are learning the hard way what occurs when uncontrolled coastal fish farming operations deposit their effluent in pristine waters. The results are devastating, habitats are decimated, and toxic base is created where microorganisms threaten man himself.

A new approach to fish cages has revolutionized how fish are raised in cage culture. The design¹

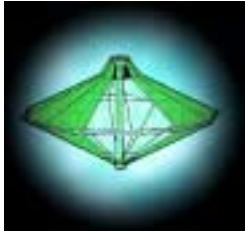


incorporates a rigid buoyant frame with radials to symmetrically support taut exterior netting. This hydrodynamic shape has been proven to be superior from prototype through final product and field trials compared to existing systems. This design has also enhanced the, grow-out health of the species farmed, immunity to predation, ability to withstand severe weather, and mitigate the environmental impact on the

ecosystems.

¹ Photograph compliments of Oceanspar Technologies

The design of this Sea Cage™² is such that, stocking of fingerlings, feeding, through grow-out, sampling and harvest requires very little human intervention, which minimizes stress on the species grown. Environmental impact is minimized by the negligible footprint on the ocean floor, while providing a shade, which performs the same effect as a fish attractor. The dilution achieved at a depth of 100'-0", with a constant current, mitigates the impact of defecation.



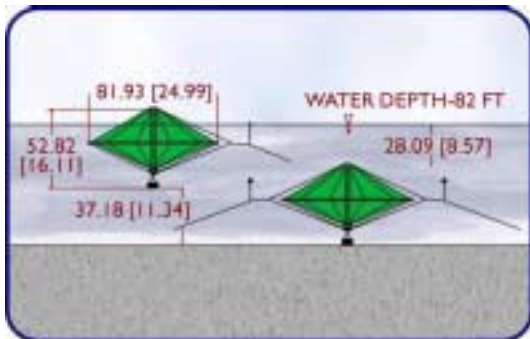
The Mutton Snapper³, quality, high dollar finfish, our area are our choice for the This species has been deemed commercial cultivation.⁴ The propensity for producing controlled conditions, 75.7% achieved naturally.⁵



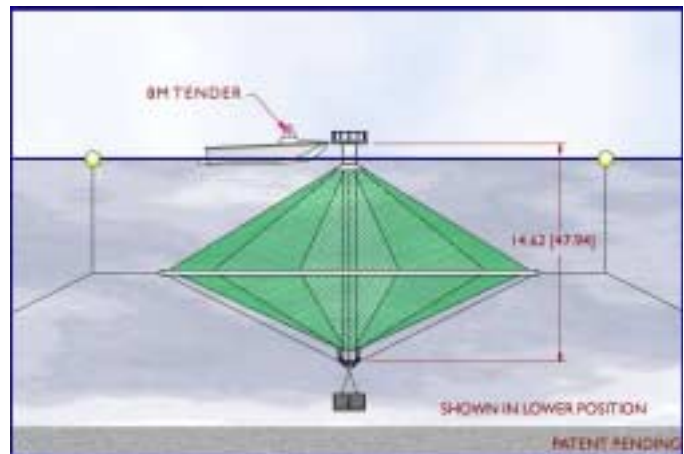
Lutjanis analis, a high and an endemic species to ocean ranching operation. a prime candidate for adult female has a 500,000+ eggs and under fertilization rate, can be

Mutton Snapper has shown that it has a low Feed Conversion Ratio, a measurement used to calculate an organisms' ability to convert feed into muscle weight. The organisms with a low number are considered to exemplify a higher survival rate.

Sea Star Inc. proposes to install a Sea Station™⁶, on the ocean floor preferably on the 22-fathom line. The attached map designates the proposed area. We feel that this area is the most suitable for lowest environmental impact, because any effluent will be transported to the deep and away from coral reefs and coastal areas by an average 1.7 knot current year round. This area has a drop off that achieves 3000'-0" in lees than one nautical mile.



The cage will be placed at a depth of 100'-0" to 132'-0" below sea level. This will allow a draft of 50'-0" to 82'-0" above the cage for

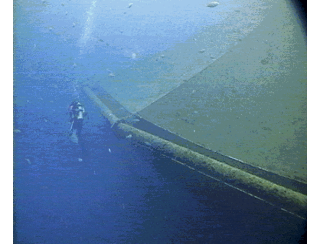


² Photographs compliments of Oceanspar Technologies
³ Photographs compliments of NOS\NOAA\Benthic Habitat Mapping\Caribbean\PR,USVI
⁴ Watanabe et al
⁵ Watanabe et al
⁶ Photographs compliments of Oceanspar Technologies

maintenance or accidental traffic. Also at this depth pilfering will be less likely to occur. The cage may be raised or lowered to stock, sample and harvest at will



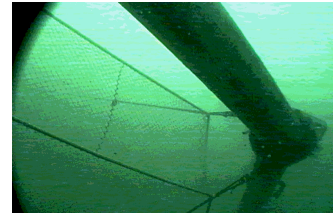
The 3000 cubic meter cage⁷ can hold 120,000 finfish and have been stocked with as many as 170,000. The stocking density is determined by the size of the stock at desired market size. Feeding is performed daily to ensure minimum grow out time.



The netting is a 35mm mesh and a smaller mesh is used for stocking of fingerlings.



Predators are hindered by the taut netting and the distance from rim to center spar.



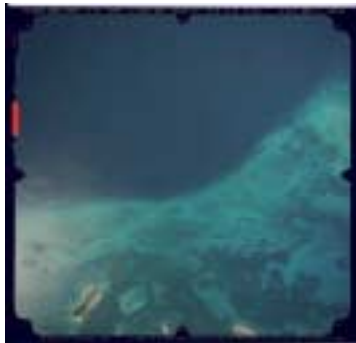
Mooring anchors are imbedded on the ocean floor for maximum life of installation.

Method of anchoring is designed for minimum impact on the environment and mitigation in the event of accidental cage detachment from mooring.



Harvesting methods can be executed from inside of the cage in the submerged environment forcing stock into a chamber with suction or in the surface mode and using a crowding technique.

Fingerling stock will be bought from off-island hatcheries who are currently producing 800,000 fingerlings per year.



Pelletized feed recommended by the supplier of the fingerlings will be purchased and stored for delivery to off-shore cage.

We will require 30 acres of ocean floor⁸. The scope of the mooring line exceeds 350'-0" on either side. This will provide us with a buffer zone and room for expansion. We are in the process of video taping the area to determine the parameters of a suitable bottom. We will require exclusivity to this area to preclude damage to the cage

⁷ Photographs compliments of Oceanspar Technologies

⁸ Photograph compliments of NOS\NOAA\Benthic Habitat Mapping\Caribbean\PR,USVI

and for the safety of the public

All species grown within the cage, will be exported, so as not to impact the local fishermen.

A controlled release into the local habitat for stock enhancement and public benefit will be performed.

We will request for consideration a waiving of fees from the government for a period not to exceed (5) five years, to allow for the development of this not for profit venture. We will require police protection in the event that pilfering becomes an issue.

We believe that we are on the threshold of a new era in Mariculture. To that end we are respectfully submitting our proposal for consideration. We propose to meet or exceed your requirements for this much needed endeavor. Thanking you in advance,

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