Comparison of Kelp Farming Array Types

Single-line Array

Total Cost: $4,696.32 (plus shipping) **Cost of Gear per Foot:** $11.74/ft.

Assembly & Deployment Notes	Maintenance Notes	Advantages/Benefits
The single-line array is very easy to build and deploy.	It's easy to monitor and maintain as well, thanks to the simplicity of its design.	The single-line array has the lowest upfront costs and is a great option for early efforts at a new farm site.
It requires only two anchors and deployment can usually be done with a smaller boat than required by larger arrays.	Adjusting tension and maintaining desired growline depth is straight-forward.	It is the best option for determining site suitability for a desired species without investing in a larger system.

5-Line Array

Total Cost: $7,557.80 (plus shipping) **Cost of Gear per Foot:** $7.56/ft

Assembly & Deployment Notes	Maintenance Notes	Advantages/Benefits
Welded spreader bars are expensive and require some engineering.	Spreader bars need to be cleaned of unwanted growth periodically.	5-line arrays are easy to adjust, as tensioning one anchor line effectively tensions five growlines.
Spreader bars can be rather awkward and cumbersome to deploy and remove.	Once deployed, it is easy to tension lines.	Close line spacing helps farmers more efficiently utilize acreage of an aquatic farm lease.

Catenary Array

Total Cost: $26,120.07 (plus shipping) **Cost of Gear per Foot:** $2.61/ft.

Assembly & Deployment Notes	**Maintenance Notes**	**Advantages/Benefits**
Catenary arrays require engineering knowledge to build, and because of the required precision, it's not recommended to build your own.	It can be challenging to inspect and maintain line depth if not properly tensioned. Installing "set" lines helps maintain line depth evenly across the array.	Close line spacing helps farmers fully utilize an aquatic farm lease and produce maximum crop yields.
This is the heaviest system due to array size. All 25 growlines can be pre-assembled and transported in a brailer bag but a hoist is required for loading.	With so many lines closely spaced, it requires careful note-taking and ways of marking lines for growth monitoring, etc.	Catenary arrays are readily tensioned using deadeye tensioners on the mooring lines.

Please note: *We are not focusing on biomass yields of each array here because we believe the main factor affecting the variable productivity of each array system was the variable seed quality we started with. When we measured growth rates on lines from each array that were seeded with similarly high-quality spools, we saw fairly uniform numbers, averaging approximately 5.8 lbs./ft.*

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