ChitoNet vs. Realistic Aquaculture Monitoring: Cost Analysis

5-Year Cost Comparison (Medium Farm, 10 Ponds)

Monitoring Method	Initial Investment	Annual Cost	5-Year Total	ChitoNet Savings	Savings %
Self-testing + Periodic Lab	¥30,000	¥83,000	¥445,000	**¥416,000**	**93.5%**
Outsourced Service	¥0	¥120,000	¥600,000	**¥571,000**	**95.2%**
ChitoNet	¥10,000	¥3,800	¥29,000	—	—

Cost Breakdown

Current Industry Standard (Self-testing + Periodic Lab):

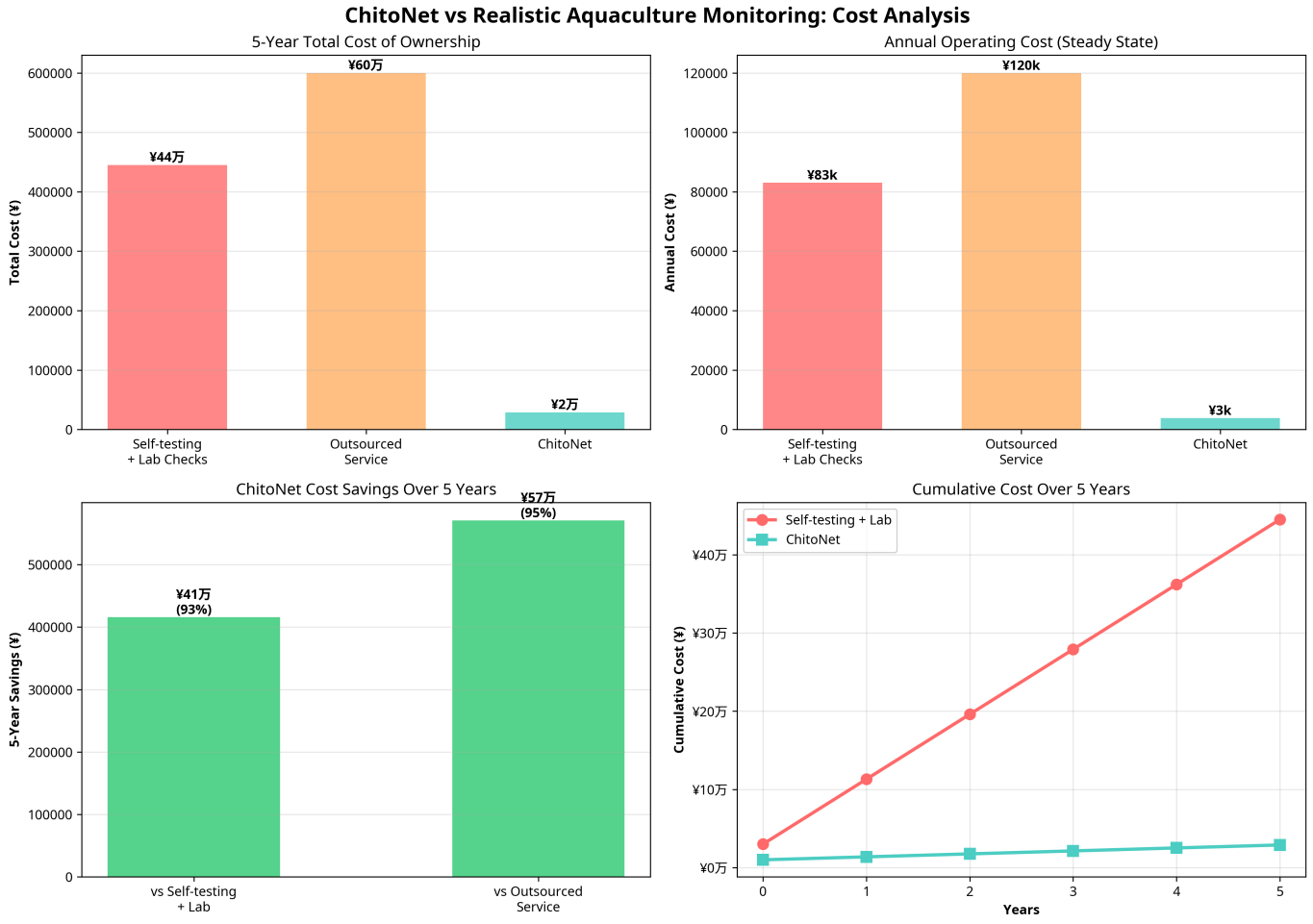
- Initial equipment investment: ¥30,000
- Annual test kit & reagent consumables: ¥8,000
- Annual periodic lab analysis (monthly/quarterly): ¥75,000
- **Total annual: ¥83,000**

ChitoNet System:

- Hardware (sensor): ¥5,000
- ML Model (one-time): ¥5,000
- Annual maintenance & calibration: ¥1,000
- Annual cloud storage & platform: ¥2,400
- Annual chitosan & bentonite refills: ¥400
- **Total annual: ¥3,800**

Annual Savings (After Year 1)

Comparison	Annual Savings	Savings %
vs Self-testing + Lab	**¥79,200**	**95.4%**
vs Outsourced Service	**¥116,200**	**96.8%**



References

[1] SGS Group. "Water Quality Testing."

[2] ProcurementIQ. "Water Quality Testing Services – Market Intelligence."

[3] Alibaba.com. "Multi Parameter Water Quality Analyzer."