```
SPEC ID       : QLA-BP-E069CCBA5B20                                RESONANCE     : 9.2 / 10.0 CR
ATTRIBUTED TO : Extracted in text                                  CALIBRATED    : 2026-10-21
NODE ENDPOINT : https://qualia-teal.vercel.app/idea/8b2dc3c2-9ebd-4e18-b8bb-e069ccba5b20
```

Root-to-Refinery Optimization

[THE MECHANICS:]

This model applies industrial supply chain decentralization to agricultural waste management by integrating high-frequency spectral imaging with modular biomass fermentation. By deploying hyper-local, containerized processing units directly at the harvest point, non-marketable "ugly" carrots are instantly decomposed into high-purity beta-carotene extracts and cellulose-based bioplastics. The system utilizes real-time crop health data to dictate processing parameters, transforming discarded biomass into standardized industrial feedstock before spoilage occurs.

[UTILITARIAN VALUE:]

Eliminates the logistical cost of transporting low-margin, high-volume agricultural waste while simultaneously creating a secondary revenue stream from crop residuals that would otherwise incur disposal fees.

[TARGET ECOSYSTEM:]

Large-scale commercial agriculture and the sustainable bioplastics manufacturing sector.

INTERACTIVE 3D TERMINAL & SOVEREIGN CRAFT ECOSYSTEM LINKS

1. Inspect Live 3D Simulation, Crash-Test BOM & 1-Click Claim/Delist:
   https://qualia-teal.vercel.app/idea/8b2dc3c2-9ebd-4e18-b8bb-e069ccba5b20
2. Commission Verified Modular Sound & 3D Artisans (USD Bounties on Roily):
   https://roily-app.vercel.app/?tab=feed
3. Source Direct B2B Manufacturing & Code Execution (0% Tax on DealOff):
   https://deal-off.vercel.app/?from=qualia&title=Root-to-Refinery%20Optimization&bounty=250
4. Hardware Unit-Economics Essays & Original Books by C.J. Night:
   https://cjnight.substack.com