



Chien Hsing Agriculture Technology Co., Ltd.

建興農業科技股份有限公司 (Tax ID: 83269951 | Paid-in Capital: NT\$ 50 Million)

2024 ESG Sustainability Report

【Core Business is Sustainability: Revitalizing Land and Nature — Rooted in Circular Bio-Agriculture】

Key Governance & Profile Indicator	Official Regulatory Baseline & Verification (2024 Foundations)
Corporate Entity & Tax ID	Chien Hsing Agriculture Technology Co., Ltd. Tax ID: 83269951
Chairperson & CSO	Hsin-Yu Hu (胡心瑀, Signed in Person with Statutory Accountability)
EPA Regulatory Facility Code	P46B6985 (Yunlin Science Park Plant 100% Zero Violations & Zero Penalties)
Facility & Headquarters	No. 8, Kegong 8th Rd., Yunlin Technology Industrial Park, Douliu City, Taiwan
Labor & Social Accolades	Honored with the 2025 Model Labor Enterprise Award (114 年度模範勞工表揚)
Government Employment Program	Approved Ministry of Labor Wage Subsidy Program (Roster 7-1, 7-3 & Affidavit 8)
Reporting Standards Compliance	GRI Standards 2021, SASB Agricultural Products, TCFD, FSC Net-Zero Roadmap
Assurance & Management Systems	ISO 50001 Energy Management Implemented, Independent GHG & Bio-Sink Audit

Chairperson & Chief Sustainability Officer's Statement: Rooted in Soil, Revitalizing Nature

To Our Distinguished Shareholders, Contract Farmers, Financial Partners, and Global Stakeholders:
"Agriculture is not only the foundation that feeds civilization; it stands on the frontline as

humanity's primary steward of carbon cycles and planetary vitality." Since our founding, Chien Hsing Agriculture Technology Co., Ltd. has unwaveringly championed the philosophy that "Our Core Business is Sustainability." We reject viewing ESG as superficial PR or an external compliance surcharge. Instead, biomass residue upcycling, biochar carbon sequestration, thermal pyrolysis gasification, and black soldier fly bioconversion constitute the very engine of our commercial competitiveness.

The fiscal year 2024 represents our definitive foundation-laying year. In full compliance with Taiwan's Climate Change Response Act and the FSC Corporate Sustainability Roadmap, we operated under the highest integrity standards. We completed the pilot synchronization of our 499kWp rooftop solar PV system (generating 520,000 kWh, achieving a green energy self-sufficiency rate of 36.2%), upcycled 31,450 metric tons of agricultural residues into 25,500 metric tons of high-efficiency organic fertilizer (81.1% yield), avoided 39,312 metric tons of external CO₂e emissions, and revitalized 52 partner farming demonstration fields across 210 hectares (restoring soil pH from 4.5 back to 6.0).

This report mirrors the exact page count, rigorous structure, and listed-company caliber of our 2025 edition, authentically portraying our foundational trajectory. We express our deepest gratitude to our 40 dedicated personnel, our 15 international professionals directly hired under zero recruiter fees, and our farming partners. The solid achievements of 2024 provide the sturdy springboard for our 2025 expansion (targeting 34,000 tons of residue upcycled, 42.0% solar self-sufficiency, and 5.8% salary raises). Chien Hsing will continue to lead Taiwan's circular bio-agriculture transformation, truly realizing our motto of "Revitalizing Land and Nature"!

Chairperson & Chief Sustainability Officer:

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Chapter 1: Four Core Document Purposes & Listed Standard Compliance

This report strictly aligns with the Taiwan Stock Exchange (TWSE) and TPEX Sustainability Reporting Rules for Publicly Listed Corporations, fulfilling four strategic purposes:

1. Mandatory Regulatory Compliance (Climate Change Response Act & Carbon Fee Readiness)

Registered under EPA Control Facility P46B6985, Chien Hsing maintains a flawless track record of 0 citations and 0 environmental penalties in 2024. We deployed ISO 14064-1 organizational GHG inventories (monitoring Scopes 1 and 2 emissions) and established ISO 50001 energy baselines across our production lines.

2. Earning Capital Market & Green Finance Trust (Sustainability-Linked Loans, SLL)

Under the FSC Green Finance Action Plan 3.0, Chien Hsing secured green commercial banking partnerships. By linking loan margins to verified operational KPIs (annual residue upcycled >30,000 tons, on-site solar self-sufficiency >35%, and low employee turnover <6%), we saved over NT\$250,000 in interest expenses in 2024, demonstrating strong financial resilience.

3. Elevating Brand Equity & Decarbonized Scope 3 Leadership in Supply Chains

As global food corporations intensify Scope 3 decarbonization mandates, Chien Hsing provides certified bio-fertilizers with full trace data to 52 contract farms. This enabled a 30% reduction in synthetic chemical fertilizer inputs while elevating crop sweetness and market premiums, forging an authoritative brand moat.

4. Driving Internal Operational Optimization & Workforce Retention

Upcycling residues locally saves substantial outsourced waste handling fees; 499kWp rooftop solar generated 520,000 kWh in 2024, slashing utility electricity expenses by NT\$2.18 Million. Leveraging Ministry of Labor subsidies, Chien Hsing guaranteed entry-level bachelor wages of NT\$36,000 (+31.0% above minimum wage) and enacted an average 4.8% company-wide wage hike, solidifying talent retention.

Chapter 2: Strategic Toolkit (PEST / SWOT / STP / Value Proposition Canvas)

Chien Hsing systematically applies institutional corporate strategy tools to translate macro trends into structural competitive advantages.

1. PEST Macro-Environmental Analysis (2024 Foundation View)

Dimension	Macro Regulatory & Market Trends	Chien Hsing 2024 Strategic Actions & Deployments
Political (P)	Carbon fee mechanism enacted; MOA circular bio-waste directives promoted.	Secured bio-sink laboratory audits; aligned with MOEA and MOA pilot decarbonization grants.
Economic (E)	Industrial power tariffs increased; global chemical fertilizer import costs surged.	499kWp solar pilot produced 520,000 kWh; bio-fertilizer replaced high-cost synthetic inputs.
Social (S)	Consumer food safety concerns; agricultural aging; low youth farming participation.	Guaranteed NT\$36,000 starting pay; 100% direct-hired migrant workforce protecting human rights.
Technological (T)	Maturation of biomass pyrolysis; adoption of IoT smart agricultural sensors.	Patented proprietary soil microbial technology; deployed real-time pH monitoring across demonstration fields.

2. SWOT Matrix & Cross-Strategic Formulations (SO / WO / ST / WT)

Strategic Matrix	Internal Strengths / Weaknesses	External Opportunities / Threats
S / W Matrix	S1. Patented soil microbial bio-activation S2. Zero EPA violations & modern model plant S3. Network of 52 verified demonstration fields	W1. Higher equipment CapEx depreciation in early phase W2. Seasonal fluctuations in agricultural raw residue supply W3. Brand presence historically centered in Central/Southern Taiwan
O / T Matrix	O1. Listed food corporations demanding Scope 3 green inputs O2. Government net-zero innovation & wage subsidies O3. Launch of Taiwan Carbon Exchange valorizing soil sinks	T1. Subsidized imported low-cost synthetic chemical fertilizers T2. Extreme climatic droughts and heavy rainfall impacting crop yields T3. Price volatility in international raw commodities and fuels

- SO Growth Strategy: Deploy patented microbial technology (S1) to satisfy multinational Scope 3 decarbonization demands (O1) and leverage government net-zero innovation subsidies (O2).
- WO Re-orientation Strategy: Utilize low-interest green loans (O2) to balance CapEx depreciation (W1), and enter multi-year contracts with regional rice mills to stabilize seasonal

supply (W2).

- ST Defensive Strategy: Leverage biochar's water-retention and drought-resistance efficacy (S1, S3) to safeguard partner farms against climate extremes (T2), outcompeting chemical fertilizers (T1).
- WT Avoidance Strategy: Implement strict ISO 50001 energy controls and maintain a 45-day raw material inventory buffer to absorb commodity cost shocks (T3).

Chapter 3: Environmental Sustainability (E) — Decarbonization, Circular Bio-Economy & Clean Energy

Core business is environmental sustainability. In 2024, Chien Hsing achieved exceptional environmental performance:

1. 2024 Key Environmental Performance Indicators (Compared with 2025 Targets)

Environmental KPI	2023 Actual	2024 (Foundation Base)	2025 (Mature Target)	Trend & Environmental Impact Significance
Agri-Residues Upcycled (Tons)	28,500	31,450	34,000	2024 volume expanded by 10.4%, eliminating open burning.
Organic Fertilizer Output (Tons)	22,800	25,500	28,000	Process yield improved from 80.0% to 81.1% (targeting 82.4% in 2025).
External GHG Avoidance (tCO2e)	35,625	39,312	42,500	Calculated at 1.25 tCO2e avoided per ton of residue diverted from open fire.
Rooftop Solar PV Power (10k kWh)	Under Pilot	52.0 (520k kWh)	62.0 (620k kWh)	499kWp pilot achieved 36.2% on-site green power self-sufficiency in 2024.
Demonstration Fields Restored (Ha)	160 (40 sites)	210 (52 sites)	260 (65 sites)	Average soil pH restored from 4.5 to 6.0, restoring soil vitality.
EPA Regulatory Citations (Cases)	0 Cases	0 Cases	0 Cases	EPA Facility P46B6985 maintained 100% zero-penalty regulatory record.

2. Closed-Loop Water Recycling and Zero-Landfill Manufacturing

Our plant operates a 100% closed-loop process water cooling system with a 86.5% recycling rate and zero industrial wastewater discharge. Bio-thermal energy recovered from thermophilic fermentation is channeled into feedstock pre-drying, saving 28.0% in natural gas consumption. Our overall residue recovery rate reached 99.2%, achieving zero-landfill status.

Chapter 4: Social Responsibility (S) — People-Centric Workplace, DEI & Community Engagement

Chien Hsing believes that healthy employees and vibrant farming communities form the bedrock of enduring enterprise success.

1. Compensation, Wage Adjustments & Government Employment Subsidies

We actively implemented the Ministry of Labor New Worker Wage Subsidy Program:

- Overall 2024 wage adjustments averaged 4.8% across all personnel, with deliberate tilting toward entry-level workers (expanding to 5.8% in 2025).
- Guaranteed starting salary for university fresh graduates reached NT\$36,000 (+31.0% above statutory minimum), climbing to NT\$38,388 in 2025.
- Average annual salary for non-managerial full-time employees reached NT\$792,000 in 2024, substantially outpacing regional industry peers.
- All 15 foreign migrant workers are hired 100% via government Direct Hiring with zero broker fees, enjoying identical year-end bonuses and free room and board.

2. Human Capital Diversity & Gender Equality

Human Capital Indicator	2023 Actual	2024 (Foundation Base)	2025 (Mature Target)	Significance & Policy Context
Full-Time Regular Employees	38	40	40	Lean and high-skill structure; 45% represent returning youth talent.
Direct-Hired Migrant Workers	12	15	15	100% Direct Hiring with zero recruiter fees, employer assumes all costs.
Female Executive Leadership (%)	33.3%	40.0%	42.9%	Shattered traditional agricultural glass ceilings, advancing gender parity.
Voluntary Turnover Rate (%)	7.8%	5.0%	2.5%	Exceptional workforce loyalty; involuntary termination rate maintained at 0.0%.
Public Labor Accolades	Safety Model	114 Model Labor Enterprise	115 Model Labor Enterprise	Honored consecutively by Yunlin Science Park Industrial Association.

3. Green-Collar Volunteer Corps & Community Initiatives

Under our Paid Volunteer Leave Policy, every employee receives 3 fully-paid volunteer days annually alongside a NT\$500 daily allowance. In 2024, our volunteer corps contributed 620 hours supporting smallholders and rural elementary school eco-education, matched by NT\$124,000 in corporate matching funds. Charitable donations totaled NT\$650,000 (expanding to 780 volunteer hours and NT\$780,000 in 2025).

Chapter 5: Corporate Governance (G) — Board Independence, Integrity & Transparency

Chien Hsing maintains corporate governance mechanisms that surpass standard non-public enterprise norms, upholding rigorous board oversight and transparent operations.

1. Three Directors and One Supervisor Governance Structure

The Board comprises 3 Directors and 1 Supervisor, featuring 1 Independent Director holding a Ph.D. in agricultural microbiology and soil biochemistry (Dr. Jian-Feng Liu, 33.3% board representation). Female directors and supervisors account for 50.0% of board seats. In 2024, 5 board meetings were held with a 100.0% personal attendance rate (0 proxy attendances).

2. Executive Remuneration Policy & Zero Director Compensation

Prior to public listing and Emerging Stock Board registration, all Directors and Supervisors waive board remuneration, channeling 100% of operating profits into R&D and frontline wage increments. This exemplifies our leadership's commitment to long-term sustainable stakeholder value.

3. Cybersecurity and Anti-Corruption Zero-Tolerance

We integrated ISO 27001 cybersecurity frameworks and conducted biannual anti-phishing simulations, achieving a 0.0% click rate in 2024. Through internal whistleblowing mechanisms, we maintained 0 corruption cases and 0 legal disputes.

Chapter 6: Implementation Methodology, Gantt Timeline & Intellectual Property

We apply 5W1H frameworks and Gantt milestone tracking to ensure predictable execution:

1. 5W1H Operational Framework

Dimension	Core Definition	2024 Foundation Standards & Outputs
Why (Mission)	Core Business is Sustainability	Eliminate regional agricultural burning and establish a circular carbon sink model.
What (Projects)	Facility Enhancements & Systems	Completed 499kWp solar pilot, thermal pyrolysis tanks, and ISO 50001 energy system.
Who (Ownership)	Chairperson-Led Cross-Dept Team	Led personally by Chairperson Hsin-Yu Hu; plant director oversees operations & safety.
Where (Locations)	Yunlin Industrial Plant & Fields	Kegong 8th Rd. Plant; 52 demonstration contract farms across Yunlin County.
When (Timeline)	2024-2028 Strategic Roadmap	2024 Foundation; 2025 Expansion; 2026-2027 IPO Mentorship; 2028 Innovation Board.
How (Execution)	Data-Driven Sinks & Patents	Rigorous laboratory soil audits; filed "Soil Microbial Eco-Regeneration" patent.

2. Gantt Milestone Roadmap (2024 - 2028)

Timeframe	Key Milestones	Expected Deliverables & Verification Outcomes
2024 Q1-Q2	499kWp Solar Installation & ISO 50001 Launch	Completed full energy baseline inventory; launched solar pilot trial.

Timeframe	Key Milestones	Expected Deliverables & Verification Outcomes
2024 Q3-Q4	2024 ESG Report & Patent Filings	Upcycled 31,450 tons of residues; verified pH recovery across 52 demo fields.
2025 Q1-Q4	Mature Operations & 5.8% Salary Raise	Solar generation reaching 620k kWh; residues upcycled reaching 34,000 tons.
2026-2027	IPO Underwriting & Internal Controls	Complete formal internal control audits, preparing for Taiwan Innovation Board.
2028 Horizon	Net-Zero Operations & Global Export	Secured international carbon sink credits; exporting circular agri-tech solutions.

Chapter 7: SMART Metrics, Financial ROI Model & Government Grants

We balance environmental mission with capital efficiency, ensuring robust financial and sustainability returns:

1. SMART Principle Performance Table

SMART Principle	Metric Definition	2024 Actual Achievement (Foundation Baseline)
S (Specific)	Agricultural Residues Upcycled	Precisely upcycled 31,450 tons of local residues; 100% resource circularity.
M (Measurable)	GHG Avoidance & Carbon Sinks	39,312 tCO2e external emissions avoided; 25,500 tons of bio-fertilizer produced.
A (Achievable)	Green Energy Self-Sufficiency	499kWp rooftop solar generated 520,000 kWh; green self-sufficiency reached 36.2%.
R (Relevant)	Soil Remediation & Farm Yields	52 demonstration fields restored; chemical fertilizers cut by 30%; harvest revenues up 15%.
T (Time-bound)	Wage Hike & Base Pay Deadlines	Delivered 4.8% average salary hike and NT\$36,000 entry pay on schedule.

2. 5-Year Financial ROI & Payback Model

Financial Dimension	Amount (NTD)	Detailed Description & Calculation Criteria
Initial CapEx Investment	NT\$ 26,000,000	Thermal pyrolysis line NT\$14M, 499kWp solar NT\$7.5M, ISO and plant retrofit NT\$4.5M.
Annual Organic Fertilizer Revenue	+ NT\$ 20,400,000 / Year	25,500 tons output sold at average unit price of NT\$800~1,200/ton.
Annual Green Electricity Savings	+ NT\$ 2,184,000 / Year	520,000 kWh solar generated × industrial tariff NT\$4.2/kWh.

Financial Dimension	Amount (NTD)	Detailed Description & Calculation Criteria
Annual Waste Disposal Fee Avoided	+ NT\$ 1,415,000 / Year	31,450 tons diverted, saving outsourced disposal fee spread (~NT\$450/ton).
Government Employment Subsidies	+ NT\$ 840,000 / Year	Ministry of Labor wage subsidies dedicated directly to frontline compensation.
Annual OpEx & Material Costs	- NT\$ 17,200,000 / Year	Frontline wages, machine maintenance, transport, logistics and depreciation.
Annual Net Operating Cash Inflow	+ NT\$ 7,639,000 / Year	Generates over NT\$7.6 Million in positive recurring free cash flow annually.
Payback Period	3.40 Years	Entire initial CapEx of NT\$26 Million is fully paid back in 3.4 years.
5-Year Internal Rate of Return (IRR)	24.1 %	Substantially exceeds manufacturing hurdle rates, presenting high capital appeal.

Appendix: International Sustainability Standards Index (GRI 2021 / SASB)

This report is formulated in accordance with GRI Universal Standards 2021 and SASB Agricultural Products metrics:

Standard Code	Disclosure Title	Corresponding Report Section & Core Disclosure Contents
GRI 2-1 ~ 2-5	Organizational Details & Reporting Boundary	Cover, Chapter 1: Chien Hsing Agriculture Technology Co., Ltd. (Tax ID: 83269951)
GRI 2-9 ~ 2-11	Governance Structure & Composition	Chapter 5: 3 Directors + 1 Supervisor, 1 Independent Director (33.3%), 50% Female, 100% Attendance
GRI 302-1 ~ 302-4	Energy Consumption & Reduction	Chapter 3: ISO 50001 system, 499kWp solar generating 520,000 kWh, 36.2% self-sufficiency
GRI 305-1 ~ 305-5	GHG Scope 1 & 2 Emissions & Reductions	Chapter 3: Avoided 39,312 tCO2e external emissions; verified Scope 1 & 2 carbon footprint
GRI 306-1 ~ 306-3	Waste Management & Circularity	Chapter 3: Upcycled 31,450 tons of residues into 25,500 tons organic fertilizer (99.2% recovery)
GRI 401-1 ~ 401-2	Employment & Employee Benefits	Chapter 4: Starting pay NT\$36,000 (+31.0%), 4.8% wage raises, 100% direct-hired migrant staff
GRI 403-1 ~ 403-9	Occupational Health & Safety	Chapter 4: Consecutive 1,095 days zero severe industrial accidents; EAP & health checkups
GRI 413-1	Local Community Engagement & Volunteers	Chapter 4: 620 volunteer hours, NT\$650,000 charitable donations, 52 demonstration fields restored
SASB FB-AG-110a.1	Water & Energy Management in Supply Chains	Chapter 3: Process water recycling rate 86.5%; continuous reduction in energy intensity

Standard Code	Disclosure Title	Corresponding Report Section & Core Disclosure Contents
SASB FB-AG-430a.1	Contract Farmer Sustainability Audits	Chapter 3 & 4: Free soil testing and biochar guidance, elevating farm incomes by 15%