2025

ICC-COGENT NEWSLETTER

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INTERNATIONAL COCONUT COMMUNITY 1969

COGENT
Coconut genetic resources for enhanced livelihoods

PREFACE

It is my immense pleasure to present the ICC–COGENT Newsletter 2025, a reflection of the shared dedication, scientific excellence, and collaborative spirit that continue to drive the global coconut community forward. This issue captures a pivotal year marked by renewed partnerships, strengthened research linkages, and a vigorous new phase of institutional coordination that reinforces our collective vision for a resilient, inclusive, and sustainable coconut sector.

The past year has witnessed significant milestones for COGENT and ICC. The formal handover of COGENT coordination to the ICC Secretariat in October 2024 signifies more than a seamless transition; it represents a deepened commitment to actively advancing the management of global coconut genetic resources. This integration has moved ICC and COGENT toward harmonized research, data management, and conservation frameworks—essential foundations for safeguarding the irreplaceable genetic diversity that underpins the coconut's future.

Equally inspiring are the scientific and development initiatives featured in this edition. We feature articles that demonstrate the power of innovation and partnership across the globe: from Thailand's proactive strategies for climate change adaptation in its prized aromatic coconut production, to emerging research in biotechnology and tissue culture, and vital collaborative regional actions addressing pest and disease management in the Pacific. These coordinated efforts are translating science and policy into tangible benefits for farmers, researchers, and communities alike.

Our collaboration with key international and national partners, including ACIAR, DFAT of Australia, CIRAD, FAO, Crop Trust, SPC, Alliance Bioversity International-CIAT, CPCRI-India, CRI-Sri Lanka, The Coconut Industry Board of Jamaica, PCA, KIK, CDB of India, BRIN, BRMP, PCAARD, and many others, continues to expand the boundaries of what is possible for coconut research and development. These powerful alliances reaffirm ICC's role as a unifying platform for collective action, accelerated knowledge sharing, and the effective translation of research into practical, on the ground impact.

As we move forward, our focus remains sharply defined: to foster science-based innovation, empower the next generation of youth and women leaders, and ensure that every coconut farmer benefits from a sustainable and equitable value chain. I extend my heartfelt appreciation to all our contributors, ITAG leaders, partner institutions, and the dedicated ICC–COGENT Secretariat team for their unwavering commitment to this vital shared journey.

Together, we are not just preserving the past-we are actively shaping a prosperous and sustainable future for the global coconut sector.

DR. JELFINA C. ALOUW
Director General,
International Coconut Community

Climate Change Adaptation in Thailand's Aromatic Coconut Production: Field Observations and Strategic Interventions

Dr. Anjana J. Atapattu[1] & Dr. K. B. Hebbar[2]

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Introduction

Thailand is a major contributor to the world coconut market, and climate change has caused significant challenges to the Aromatic Coconut Industry in Thailand. Recent field observations carried out in Ratchaburi and Samut Sakhon Provinces showed severe effects on productivity and quality, which need immediate adaptive measures.

This article provides recommendations for climate resilience and summarizes the key findings of the field visit.

Climate Change Impacts on Nut Production

Field evaluations were conducted in April 2025 to identify the environmental issues associated with aromatic coconut production. Environmental stress and physiological stress indices were used to determine these problems.

Physiological Stress Indices

Several physiological stress indices have been observed in coconut plantations, including a noticeable decline in flowering intensity and poor nut set, both of which directly affect the reproductive potential of the palms. These stresses also lead to reduced nut size and quality, lowering both market value and overall productivity.

The inspected plantations showed a significant decline in yield, indicating the incidence of stress conditions. Furthermore, it was observed that heat stress has affected the reproductive biology of coconut palms, disrupting regular developmental processes, limiting the potential yields.

Environmental Stress Indices

High temperature is one of the key environmental factors that trigger stress in coconut plantations. This adversely affects the pollination process, leading to reduced reproductive rates. In addition, low relative humidity interrupts the water relations of the palms, making it difficult to maintain their optimum physiological performance.

This stress is further enhanced by an increase in vapour pressure deficit (VPD), which alters stomatal behaviour, limiting gas exchange and reducing water use efficiency. Water shortages severely affect palm health, making them more vulnerable to environmental stresses and leading to a further decline in productivity.

Poor nut setting due to physiological stress

Strategic Interventions

Immediate Management Practices

Water Management Practices

Effective and efficient water management is the main immediate stress management technique in coconut plantations. Implementations of drip irrigation systems are recommended to ensure a precise and efficient supply of water directly to the root zone, minimizing losses. Water use efficiency can be further enhanced through strategic irrigation scheduling, based on crop water requirements and prevailing climatic conditions, to prevent both over and under irrigation. Additionally, proper basin management improves water retention around the palm base, increasing soil moisture availability and supporting palm health during dry periods.

Soil Health Enhancement

Enhancing soil health is another important immediate management strategy for sustaining coconut palm productivity under stressful conditions. Regular soil analysis at different depths can be used to determine the nutrient availability and overall soil status. To guarantee effective nutrient uptake, it is crucial to monitor important factors like pH, which should be kept within the ideal range of 5.5 to 7.5. Measuring electrical conductivity helps to detect potential salinity issues that could affect root functions, while assessing organic carbon content provides information on soil fertility and microbial activity. Together, these practices facilitate accurate soil management, promoting root health and improving plant resilience to stress.

Research Priorities

Plant Physiological Studies

Research priorities in the field of coconut physiology should focus on understanding how coconut palms respond to changing environmental conditions. Key areas include the study of stomatal responses to increasing vapour pressure deficit (VPD), which directly influence transpiration and gas exchange under stress. Determining the critical temperature thresholds necessary for successful nut set is important to predict and manage reproductive success under a warming climate. Additionally, studying the effects of heat stress on pollen viability provides information on potential disruptions in fertilization and nut setting. Such studies are essential for developing adaptive strategies to safeguard coconut productivity under climatic variability.

Future Directions and Collaborative Initiatives

The integration of climate-smart agricultural practices with genetic resource conservation offers a promising pathway for sustainable aromatic coconut production. A key innovation in this area

Visually observed symptoms affected by environmental stresses

is the COAXIM protocol, which enables mass clonal propagation, holds significant potential for multiplying climate-resilient coconut varieties rapidly. International collaboration through networks such as ICC-COGENT can assist in achieving these goals. Such partnerships will facilitate the exchange of genetic materials, transfer of technical expertise, development of climate adaptation strategies, and capacity building among stakeholders in coconut-growing regions.

Genetic Resource Management

One of the key research priorities for enhancing the resilience of coconut cultivation to climate stress is effective genetic resource management. This involves the identification of climate-resilient genotypes capable of withstanding heat, drought, and other environmental extremes. The conservation of existing genetic diversity within coconut germplasm is equally important, as it serves as a valuable reservoir of traits for future breeding programs. Simultaneously, the development of improved varieties through selective breeding or biotechnological approaches will have enhanced tolerance to abiotic stresses, higher yield potential, and broader adaptability, contributing to the continuing sustainability of coconut production systems.

Conclusion

The challenges facing the aromatic coconut industry in Thailand require an integrated and properly coordinated approach. Addressing immediate issues requires timely, effective management, while long-term success depends on consistent dedication to research, technology, and capacity building. Strong collaboration among research institutions, the private sector, policymakers, and farming communities is essential to promote innovation, share knowledge, and implement adaptive solutions across the value chain.

Capacity Building in Coconut Biotechnology

Dr. Vijitha R. M. Vidhanaarachchi
Former Head, Tissue Culture Division,
Coconut Research Institute (CRI),
Sri Lanka

In vitro culture techniques including embryo rescue, micropropagation, and germplasm conservation through cryopreservation have been tested and adopted by many coconut research groups worldwide. Although coconut is considered a highly recalcitrant crop to regenerate *in vitro*, considerable progress has been achieved over the past two decades.

Embryo rescue technology is commercially exploited and applied in many laboratories with varying levels of success to produce seedlings of high-value mutant coconut types. This technology has also been employed in international germplasm exchange programs and in the regeneration of cryopreserved embryos. Cryopreservation methods have been developed for the long-term storage of embryos, plumules, and *in vitro* shoot meristems, which are suitable for conserving material from genebanks. Cryopreservation of shoot meristem tissues excised from *in vitro* shoots or cauliflower-like proliferating meristem clumps facilitates the planting of identical clonal material after screening for field performance.

However, mass production of coconut plants through tissue culture remains a challenge, despite ongoing research in various laboratories worldwide. The potential of different explants, including plumule, seedling meristem, immature inflorescence, tender leaf, and unfertilized ovary, has been examined for micropropagation with varying degrees of success in different laboratories. These protocols still require validation and optimization to become commercially viable.

Research at CICY, Mexico, has reported a somatic embryogenesis protocol using plumule tissues, which is the first commercial application in coconut micropropagation. The clonal plants have been established in the field in Mexico, and *in vitro* plants were sent to Jamaica for further growth, acclimatization and field establishment. Axillary shoot formation, starting from *in vitro* seedlings or COAXIM, recently developed by the Alliance of Bioversity International and CIAT/KU Leuven (Belgium), holds commercial potential for mass clonal propagation of seed nuts. The tissue culture team at the Coconut Research Institute of Sri Lanka (CRISL) has developed a somatic embryogenesis protocol using ovary tissue, enabling the production of true-to-type clones of elite palms. Although these technologies have been published, replicating results in other laboratories has often failed, making widespread adoption difficult. Therefore, sharing detailed protocols along with technical know-how among laboratories is identified as a crucial step forward.

In recognition of the immense importance of these *in vitro* technologies, ICC-COGENT

The Tissue Culture Workshop, held in India on May 2022

ITAG4 was created to facilitate technology sharing and collaboration among researchers and academics involved in coconut tissue culture and cryopreservation. The 2nd Tissue Culture Symposium, organized by CICY, Mexico, was held virtually in early May, aiming to build the capacity of young researchers through technology sharing. This was followed by a five-day hands-on training workshop at CPCRI, India, also in May 2022. Resource persons from India, Sri Lanka, Belgium, the Philippines, and Vietnam attended, and tissue culture and cryopreservation protocols were demonstrated. Twenty-five participants from eight countries benefited from this workshop.

From September to November 2024, the International Training Course for Youth in the Coconut Industry, *"Empowering the Future of the Coconut Sector: A Youth-Led Transformation Program through Sustainable Partnerships,"* was held. Organized by ICC in collaboration with various research institutes and private sector partners, the program aimed to empower the next generation to take ownership of the industry through knowledge and skills to drive sustainable transformation. During the first component (online sessions), lectures were delivered on modules such as sustainable farming practices, breeding programs, sustainable development goals, product development, business and entrepreneurship, and trade and market access. The breeding module covered genetic diversity, conservation strategies, conventional breeding, and advanced techniques such as molecular breeding and tissue culture technology.

As a next step, component two, Physical Skills Development and Internship Programme, was conducted for selected participants. Under this internship program, three participants from two countries (Indonesia and the Solomon Islands) received six days of training at the tissue culture laboratory of the Coconut Research Institute, Sri Lanka. Simultaneously, Growrite Substrates (Pvt) Ltd., a leading coir-based manufacturer in Sri Lanka, provided training for four participants from Indonesia, Papua New Guinea, and Thailand. At CRISL, the candidates gained hands-on experience in coconut tissue culture and embryo culture techniques. They received lectures, practical demonstrations, hands-on training, and field visits, covering all aspects of the techniques including aseptic practices, growth media preparation, explant collection and culturing, subculturing for culture maintenance, plant acclimatization, and field evaluation. Upon completion, the trainees were confident in applying these technologies in their home laboratories.

The participants of Youth Empowerment Program

Pacific Islands Coconut Pest Management Conference Highlights Collaborative Action and Future Pathways

Dr. Jelfina C. Alouw[1] & Mr. Klaudio D. Hosang[2]

[1] Director General, International Coconut Community
[2] Administrative & Finance Director, International Coconut Community

Honiara, Solomon Islands 2–5 July 2024. Co-hosted by the Pacific Community (SPC) and partners at the Solomon Islands National University (SINU), the regional conference "Towards an Action Plan to Minimise the Impacts of Coconut Rhinoceros Beetle and Other Major Pests on Coconuts in the Pacific Islands" closed with a concrete programme for coordinated, science-based action across the Pacific. The International Coconut Community (ICC) contributed technical insights, facilitated prioritisation, and aligned outcomes with ICC's global mandate on resilient, inclusive coconut development.

Why this matters

Coconut is not only a way of life across the Pacific, it is a strategic export and a social safety net for smallholders. ICC data presented by Dr. Jelfina C. Alouw highlighted the scale and potential of the sector, including global export value estimates and quantified opportunities for Solomon Islands if pests are contained and farm productivity is raised. These figures framed the urgency for area-wide Integrated Pest Management (IPM), stronger biosecurity, and targeted investments.

Oryctes rhinoceros (left), *Brontispa longissima* (middle), *Rhynchophorus* spp. (right)

The threat landscape: what we're really up against

Conference discussions and ICC inputs converged on a shared risk picture:

- Coconut rhinoceros beetle (CRB, *Oryctes rhinoceros*) remains the most disruptive, driven by abundant breeding substrate (stumps, compost, sawdust piles), rapid reproduction, and long adult survival. The biology underscores why control must be landscape-level, continuous, and data-led.
- Coconut leaf beetle (*Brontispa longissima*) persists as a high-damage, invasive threat with clade-level differences in fecundity and spread, reinforcing the need for biocontrol and surveillance tuned to local ecologies.
- Red palm weevil (*Rhynchophorus* spp.)—with regional presence and lethal palm damage—demands rapid detection, sanitation, and quarantine enforcement to prevent establishment and spread.

Beyond single pests, delegates noted compounded damage from pest complexes and the need to

integrate farmer practices, natural enemies, and regulatory measures into a single, adaptive strategy.

What the conference delivered

1. A three-tier biosecurity backbone
   Participants endorsed a pre-border, at-border, and post-border framework: literature-driven risk assessments and contingency planning; strong inspection/diagnostics and inter-agency cooperation; and surveillance with rapid response and public awareness. This structure anchors early detection, fast containment, and sustained suppression.

2. Prioritised pest list + workstreams
   A facilitated, sticker-based exercise produced a regional priority set and assigned break-out groups to: (i) new research; (ii) field-based management/response planning; (iii) research–extension–farmer linkages. Each group conducted a stocktake of current capacities and gaps, responsibilities, and potential postgraduate topics and funding sources—turning ideas into an implementable pipeline.

3. Actionable evidence from case studies
   - Hawai'i CRB response: large-scale pheromone trapping, green-waste policy, palm injections, targeted fumigation, detector dogs, and relentless outreach. Findings: mass trapping is excellent for detection, not control; green-waste management and sanitation are decisive; policy timing matters. "What worked / didn't" now guides Pacific programmes.
   - Metarhizium-centred IPM (Vanuatu/PNG): field trials and infection data show the green muscardine fungus can be a core CRB biocontrol, with mobile container labs and bulking facilities planned to localise supply and reduce costs. Operational challenges (timing, storage, staffing, cyclones) inform realistic roll-out plans.
   - Maldives *Brontispa* biocontrol: dual releases of *Asecodes hispinarum* (larval) and *Tetrastichus brontispae* (pupal) parasitoids established successfully, with visible recovery of spear leaves and no re-importation required—an encouraging template for island settings.
   - Socio-economic lens (Fiji): 500-household analysis shows diversified, small-scale coconut enterprises underpin rural resilience; near-term income gains accelerate technology adoption. IPM uptake will rise when benefits are visible quickly and support services reach village level.

4. Field visit takeaways
   Participants observed cultural controls (sanitation, multi-cropping) and biocontrol (e.g., *Metarhizium anisopliae*) used in real-world CRB situations—grounding the plan in practical realities.

ICC's perspective and contribution

In "A review of the Global Occurrence and Distribution of Coconut Pests: Lessons for the Pacific," Dr. Alouw consolidated global distribution maps, productivity baselines, and an IPM roadmap that connects surveillance, GIS-based decision tools, community engagement, R&D, and regulatory support. ICC also contextualised trade and livelihoods: stable export growth with stagnant production in many countries due to pests, senile palms, planting material quality, and climate shocks—making pest management a precondition for productivity gains.

Our analysis: five design principles for Pacific-ready pest management

1. Area-wide first, plot-level second. CRB and *Rhynchophorus* biology guarantee re-infestation if only single farms are treated. Programme success hinges on sanitation at waste hubs (sawmills, composting sites, ports) and movement controls, not just farm spray calendars.
2. Source reduction beats symptom treatment. The best spend is on green-waste policy and logistics (hot composting, in-vessel composting, air curtain burners where feasible), backed by enforcement and service provision. Hawai'i's steep learning curve is instructive: policy lag increases costs later.
3. Biocontrol as infrastructure, not a pilot. *Metarhizium* works when supply chains work. Invest in local bulking capacity, stabilised formulations (e.g., oil-in-glycerol for better adhesion/heat tolerance), and quality assurance so field teams can apply consistently at scale and in season.
4. Detection is a system. Pheromone traps, camera traps, detector dogs, and community reporting must feed a single data backbone (GIS dashboard) with threshold-based triggers for response—turning surveillance into decisions, not just maps.
5. Adoption follows visible value. The Fiji study confirms: when farmers see near-term income or labour savings, they adopt. Align IPM with market access, input supply, and local leadership so benefits are shared and quick.

The Action Agenda (12 moves the region can implement now)

1. Constitute national CRB/*Rhynchophorus* task forces with clear Terms of Reference and delegated authority.
2. Codify green-waste standards (hot composting specs, quarantine compliance agreements) for ports, mills, nurseries, and construction sites.
3. Stand up *Metarhizium* bulking hubs (mobile containers; KIK/PNG and Biosecurity Vanuatu models) with regional QA.
4. Deploy an interoperable trap network (pheromone + camera traps), with digital field apps and weekly dashboards.
5. Open a "rapid-response toolbox" (palm injections, targeted fumigation, sanitation SOPs) with pre-approved protocols.
6. Institutionalise community reporting via hotlines/social channels; train arborists, landscapers, and farmers to recognise early signs.
7. Ringfence funding for postgraduate research on priority pests; fast-track topics identified in Session 6 group work.
8. Pilot "sanitation corridors" from high-risk nodes (ports, airports) to production zones, auditing breeding-site elimination quarterly.
9. Scale parasitoid releases for *Brontispa* where feasible, pairing with hygiene and nursery certification.
10. Adopt ICC's area-wide IPM playbook (assessment → surveillance → data-led IPM → capacity → policy → M&E), and benchmark annually.
11. Integrate gender and youth pathways into extension and enterprise support, mirroring observed role splits in household coconut work.
12. Create a Pacific Pest Intelligence Compact (SPC–ICC–national NPPOs) for shared risk analyses, emergency rosters, and pooled procurement.

What success looks like (KPIs the region can own)

- -50% active breeding sites at audited hotspots in 12 months.
- <7 days from first detection to field response in designated zones.
- >80% trap uptime and validated data sync weekly.

- +25% year-on-year *Metarhizium* field availability and verified application hectares.
- ≥3 postgraduate research outputs feeding national SOP updates per year.
- Demonstrated income lift in pilot communities adopting full IPM + market linkage bundles.

Conference highlights at a glance

- Day 3 (Session 5—Overcoming trade barriers): From holistic biosecurity to Hawai'i's response and Metarhizium operationalisation, plus socio-economic insights for farmer-centred design.
- Day 3–4 (Session 6 & Day 4 action planning): Prioritisation, stocktakes, responsibilities, and the action-plan scaffold; closing plenary consolidated next steps.

About the official ICC news release

The ICC news story captures the conference arc—leadership messages, the three-tier biosecurity approach, field visit learnings, and an implementation lens emphasising regional coordination and sustainable management. It aligns with the evidence base presented in sessions and ICC's global portfolio.

Acknowledgements

Hosts and contributors included SPC, ICC, AgResearch NZ, University of Guam, KIK PNG, University of Hawai'i, USDA, MFAT, CSIRO, East-West Center, The Nature Conservancy, Island Conservation, and the Sasakawa Peace Foundation.

Sources and materials used

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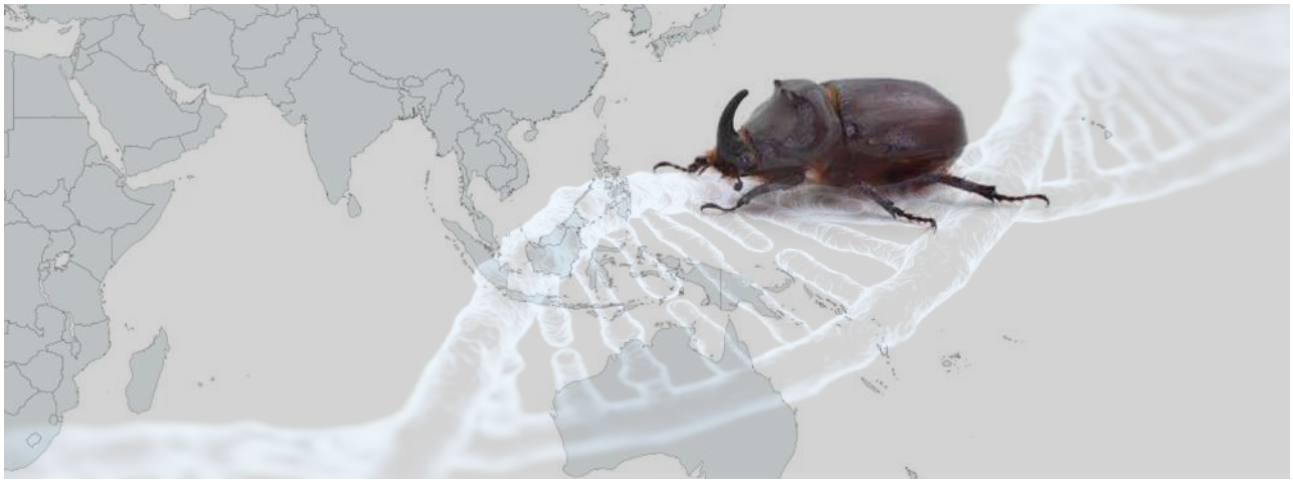
- Conference programmes & session materials (uploaded): Day 3 agenda and Session 5/6 content, final Day 4 programme, and slide summaries for biosecurity, Hawai'i response, *Metarhizium* IPM, socio-economics, and *Brontispa* parasitoids.
- Dr. Jelfina C. Alouw (ICC): *A review of the Global Occurrence and Distribution of Coconut Pests: Lessons for the Pacific* (presentation excerpts on production, export value, pest distributions, IPM framework, and country potentials).



Exploring Market Trend and Potential of Unique Coconut Varieties

Mr. Alit Pirmansah
Market & Statistics Director,
International Coconut Community

Coconut has long been referred as the "tree of life," providing food, shelter, and livelihoods across tropical regions. While most of the world knows coconuts through mainstream varieties used for copra, oil, milk, and desiccated products, there exists a fascinating diversity of unique cultivars with extraordinary qualities. These coconuts, often tied to specific geographies, are beginning to find their place both in domestic and global markets. They carry with them stories of tradition, culture, and science, while also offering new opportunities for innovation in food, health, and sustainability.

Makapuno and Kopyor

Among the most intriguing of these is the Makapuno from the Philippines. This coconut, the result of a rare genetic mutation, produces a jelly-like flesh rather than the firm kernel found in typical coconuts.

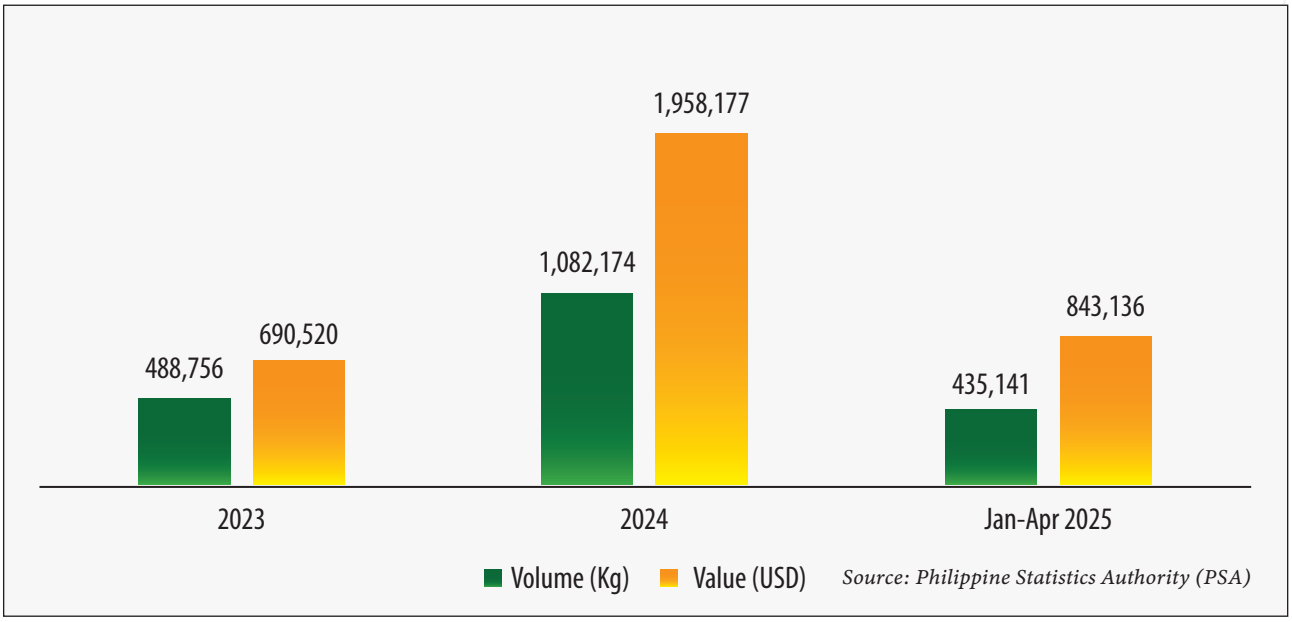


Figure 1. Export of Makapuno from the Phlippines, 2023-April 2025

Its creamy, almost custard-like texture has made it a prized ingredient in desserts, confectionery, and artisanal ice creams. Once limited in availability because of its rarity, scientific advances in tissue culture have made Makapuno cultivation more reliable, opening doors for broader markets.

In the global market, Makapuno has been gaining its popularity. The latest data show that the Philippines has demonstrated strong growth in Makapuno exports, signaling rising international demand for this unique coconut.

The sharp increase from 2023 to 2024 shows how global markets are embracing Makapuno, with early 2025 figures pointing to continued momentum. Makapuno has been widely shipped to 38 countries with US market as a primary destination. This growth highlights its potential as a flagship coconut export alongside other high-value derivatives.

A close relative in terms of traits is the Indonesian Kopyor, which produces a crumbly endosperm that is celebrated in local sweets and beverages. Like Makapuno, it is both a scientific curiosity and a cultural delicacy. What sets Kopyor apart even more is its exceptional market value: at the farmer level in Indonesia, Kopyor coconuts fetch about Rp 50,000 (USD 3.05) per nut, roughly ten times higher than ordinary coconuts. This remarkable premium reflects the rarity and desirability of Kopyor, underscoring its potential as a high-value specialty product in both domestic and international markets.

King Coconut and Nam Hom

In Sri Lanka, the King Coconut has earned a special place in both daily life and tourism. Recognizable by its striking orange husk, the King Coconut is valued for its naturally sweet and low-fat water. Long consumed fresh on the streets of Colombo and coastal towns, it is now emerging as a premium hydration product abroad.

King Coconut

Sri Lanka's King Coconut exports further illustrate both the opportunities and vulnerabilities of unique coconut varieties.

Exports peaked in 2023, but 2024 saw a notable drop in volume, not because of weaker demand but due to a shortage in supply caused by lower production levels. This highlights the delicate balance between natural production cycles and market potential. Despite the dip, the figures still underscore King Coconut's importance as a premium niche commodity, supported by strong consumer interest abroad.

Another unique and primum coconut is Nam Hom coconut from Thailand. It has become one of the country's most successful coconut exports, widely

Table 1. Export of King Coconut from Sri Lanka, 2021-June 2025

Year	Number of Nuts	USD (million)
2021	9,548,368	4.51
2022	10,872,878	6.51
2023	12,909,100	10.19
2024	8,007,031	6.75
Jan-Jun 2025	3,946,586	3.47

Source: Coconut Development Authority (CDA), Sri Lanka

recognized for its delicate pandan-like aroma and refreshing water. Its unique sensory profile has positioned Nam Hom as a premium coconut water variety, catering to international demand for authentic, natural beverages.

Exports of Nam Hom coconut to the global market reflect this growing demand, though with some fluctuations.

Exports peaked in 2023, surpassing 429 thousand tons, before recording a notable decline in 2024. This downturn was not due to weaker demand but was primarily the result of a drop in supply and production of Nam Hom coconuts. Despite this supply-side constraint, demand in international markets remains strong, with early 2025 figures pointing to a continued solid performance. It has been shipped to more than 65 countries around the world with China and US as primary destinations.

Nam Hom's premium status is reinforced by careful harvesting, rapid cooling, and specialized packaging methods that preserve its signature aroma—an intersection of tradition, science, and modern logistics. With rising global awareness of provenance and terroir, Nam Hom's story of aroma preservation and cultural identity continues to make it a valuable niche player, especially in the expanding coconut water segment.

Opportunities and Challenges

The growing appeal of these varieties reflects broader global trends. Plant-based diets, clean-label beverages, and sustainable beauty products are no longer niche markets but mainstream expectations. Coconut water has become one of the fastest growing categories in the beverage sector, and the introduction of unique varieties allows companies to add value through authenticity and sensory uniqueness.

Yet challenges remain. Limited planting material constrains scale, and in many cases advanced propagation methods such as embryo culture are needed to ensure reliable supply. Their delicate sensory qualities make them highly perishable, requiring investment in cold chains and innovative packaging. Market awareness is also a hurdle: while consumers in producing countries can easily distinguish a King Coconut from a standard nut, international audiences need education to appreciate these differences. Conservation of coconut germplasm is thus both a scientific and commercial necessity for long-term resilience.

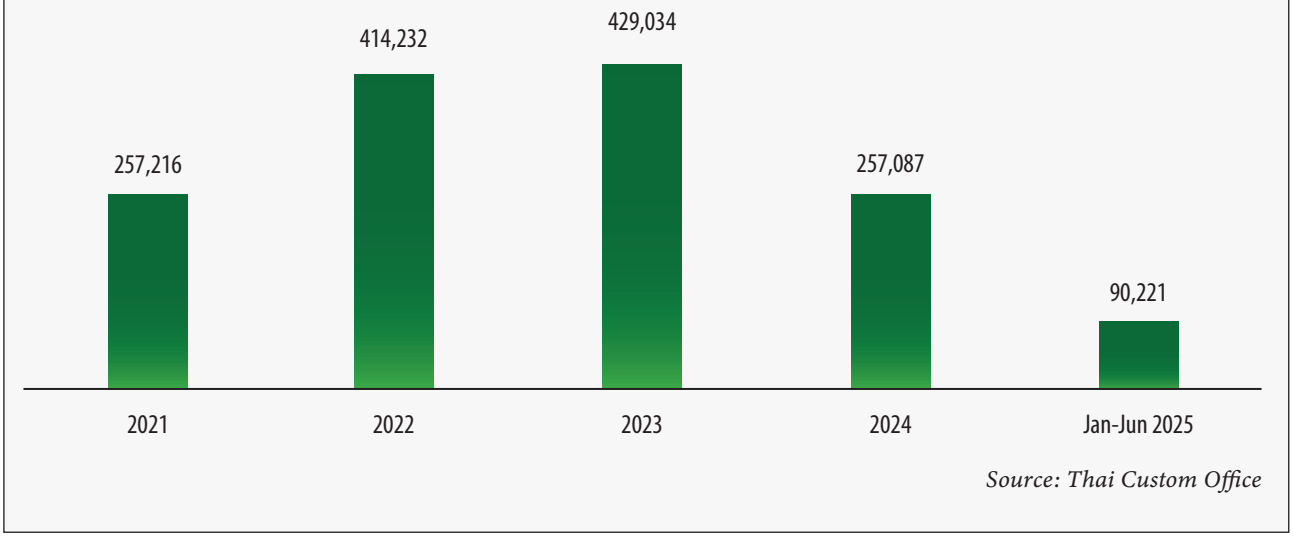


Figure 2. Export of Nam Hom coconut from Thailand (MT), 2021-June 2025

Highlight of Activities 2024

A New Chapter for COGENT: ICC Secretariat Assumes Coordination

Mr. A. H. N. Chinthaka
Deputy Director General, International Coconut Community

On **18 October 2024**, the International Coconut Community (ICC) hosted a landmark ceremony in Manado, Indonesia, marking the formal handover of COGENT Coordination from Mrs. Erlene Manohar to the ICC Secretariat. The event, convened at the Four Points by Sheraton and attended in hybrid mode, brought together representatives from COGENT member countries, International Thematic Action Groups (ITAGs), International Coconut Genebanks (ICGs), donor agencies, and international partners, underscoring the global significance of this transition

Honoring the Past, Embracing the Future

In her opening remarks, Dr. Jelfina C. Alouw, Director Genertal of ICC, highlighted the symbolic importance of the handover. *"This transition is not just a change in leadership, it symbolizes our collective commitment to advancing the coconut sector globally,"* she stated.

Dr. Alouw reflected on COGENT's journey since the 1990s, acknowledging the contributions of past leaders and partners, and outlining persistent challenges such as financial sustainability, standardized data management, and enhanced international collaboration. She stressed that progress in coconut genetic resources depends not only on hard work but also on *"strategic, collaborative, and sincere efforts that align with a shared vision for the future."*

Recognizing Leadership and Contributions

A highlight of the ceremony was the recognition of Mrs. Erlene Manohar's service as COGENT Coordinator over the past three years.

Speakers from member countries and partner organizations expressed deep appreciation for her stewardship, noting significant advances in research and development that benefitted farmers worldwide.

In her farewell remarks, Mrs. Manohar thanked colleagues and partners for their unwavering support. "*Together, we have laid the groundwork for a sustainable future for coconut production and innovation,*" she affirmed

Voices of Collaboration

The program also featured progress updates from ITAG leaders and special interventions from key stakeholders, including representatives of the Philippine Coconut Authority (PCA), the Ministry of Agriculture of Indonesia, FAO, CIRAD, Crop Trust, and SPC. Each emphasized the importance of collaboration, shared learning, and resilience in addressing the sector's evolving challenges and opportunities.

ICC Secretariat's Roadmap for COGENT

Looking forward, Mr. Nuwan Chinthaka, Deputy Director General of ICC, presented the proposed structure and roadmap for COGENT under the ICC Secretariat. His presentation reaffirmed ICC's commitment to strengthening the management system, fostering closer collaboration among member countries, and advancing shared goals in productivity, biosecurity, and genetic resource conservation.

Strengthening the Coconut Research Agenda: ICC and CIRAD Renew Partnership in Montpellier

Mr. A. H. N. Chinthaka
Deputy Director General, International Coconut Community

The International Coconut Community (ICC) delegation, led by its Director General, Dr. Jelfina C. Alouw, visited the headquarters of CIRAD (Centre de coopération internationale en recherche agronomique pour le développement) in Montpellier, France, for a landmark meeting marking the renewal and strengthening of collaboration between the two institutions.

During the meeting at CIRAD's facilities, Dr. Philippe Petithuguenin, Director of Research & Strategy at CIRAD, welcomed the ICC delegation and provided a comprehensive overview of CIRAD's role, mission, and ongoing activities. He emphasised the significance of enhancing the collaboration, in particular CIRAD's commitment to facilitating a quarantine centre for coconut germplasm exchange, a strategic step envisioned to advance germplasm exchange among international and national coconut gene banks.

Dr. Alouw expressed her gratitude for the warm reception and noted her appreciation for CIRAD's willingness to support the quarantine facility initiative. From CIRAD's side, Dr. Andrea Garavito presented a detailed exposition of CIRAD's programmes and activities. Meanwhile, Dr. Frederick Gay provided an overview of CIRAD's ABSys activities (Access and Benefit-Sharing system), and Dr. Gilles Trouche gave insights into the work of CIRAD's AGAP Institute. The researchers updated ICC on current coconut-related initiatives including missions to countries affected by lethal yellowing (Ghana, Mozambique), a coconut audit in Dominican Republic, biochar production from Nam Hom by-products, and exploratory missions on Bogia diseases and coconut pests in Papua New Guinea.

The visit concluded with a guided tour of CIRAD's laboratories and a modern, automated germplasm

conservation system, led by Dr. Garavito. This experience underscored the shared commitment of both ICC and CIRAD to deepen cooperation in coconut research and development.

This renewed partnership between ICC and CIRAD marks a significant moment in the global coconut research agenda. By aligning CIRAD's scientific capabilities with ICC's international mandate, particularly in germplasm exchange, capacity-building, and pest/disease research, the collaboration is well-positioned to deliver substantial benefits for member countries. As the joint actions unfold, the coconut sector stands to gain from strengthened linkages across science, policy and practice.

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