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COUNCIL OF PALM OIL PRODUCING COUNTRIES

INDUSTRY'S VIEW IN ADDRESSING YIELD STAGNATION

International Smallholders Workshop 2025

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"BREAKING THE STAGNATION IN OIL PALM FFB YIELDS IS NOT JUST ABOUT INCREASING PRODUCTIVITY—IT'S ABOUT SECURING THE FUTURE OF SUSTAINABLE AGRICULTURE, PROTECTING ECOSYSTEMS, AND EMPOWERING FARMING COMMUNITIES THROUGH INNOVATION AND RESILIENCE."

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PRESENTATION OUTLINES

"BREAKING THE STAGNATION IN OIL PALM FFB YIELDS IS NOT JUST ABOUT INCREASING PRODUCTIVITY—IT'S ABOUT SECURING THE FUTURE OF SUSTAINABLE AGRICULTURE, PROTECTING ECOSYSTEMS, AND EMPOWERING FARMING COMMUNITIES THROUGH INNOVATION AND RESILIENCE."

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INTRODUCTION

- Stagnation in oil palm FFB yields poses a serious threat to both the sustainability and profitability of the industry.
- This issue affects large-scale producers as well as smallholder farmers, creating widespread economic and environmental concerns.

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IMPORTANCE OF MAXIMIZING YIELD

- Maximizing yield is key to achieving both sustainability and profitability.
- Higher yields lead to:
  - i) More efficient land use
  - ii) Less pressure to clear forests
  - iii) Greater economic returns for farmers and companies
- This balance helps meet growing global demand while supporting environmental and social standards.

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UNDERSTANDING YIELD STAGNATION

Refers to a situation where the productivity of oil palm plantations, measured as the amount of fresh fruit bunches (FFB) produced per hectare, remains **flat or shows minimal** improvement over time despite the implementation of agricultural advancements, better management practices, or investment in technology.

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Why Oil Palm Yield Stagnation is a Critical Issue

Economic Impact

Directly affect the profitability

Global Demand

Stagnation in yields can lead to supply shortages

Environmental Concerns

Stagnant yields can push producers to clear more land to meet demand

Investor Confident

May deter investment in the sector due to perceived risks

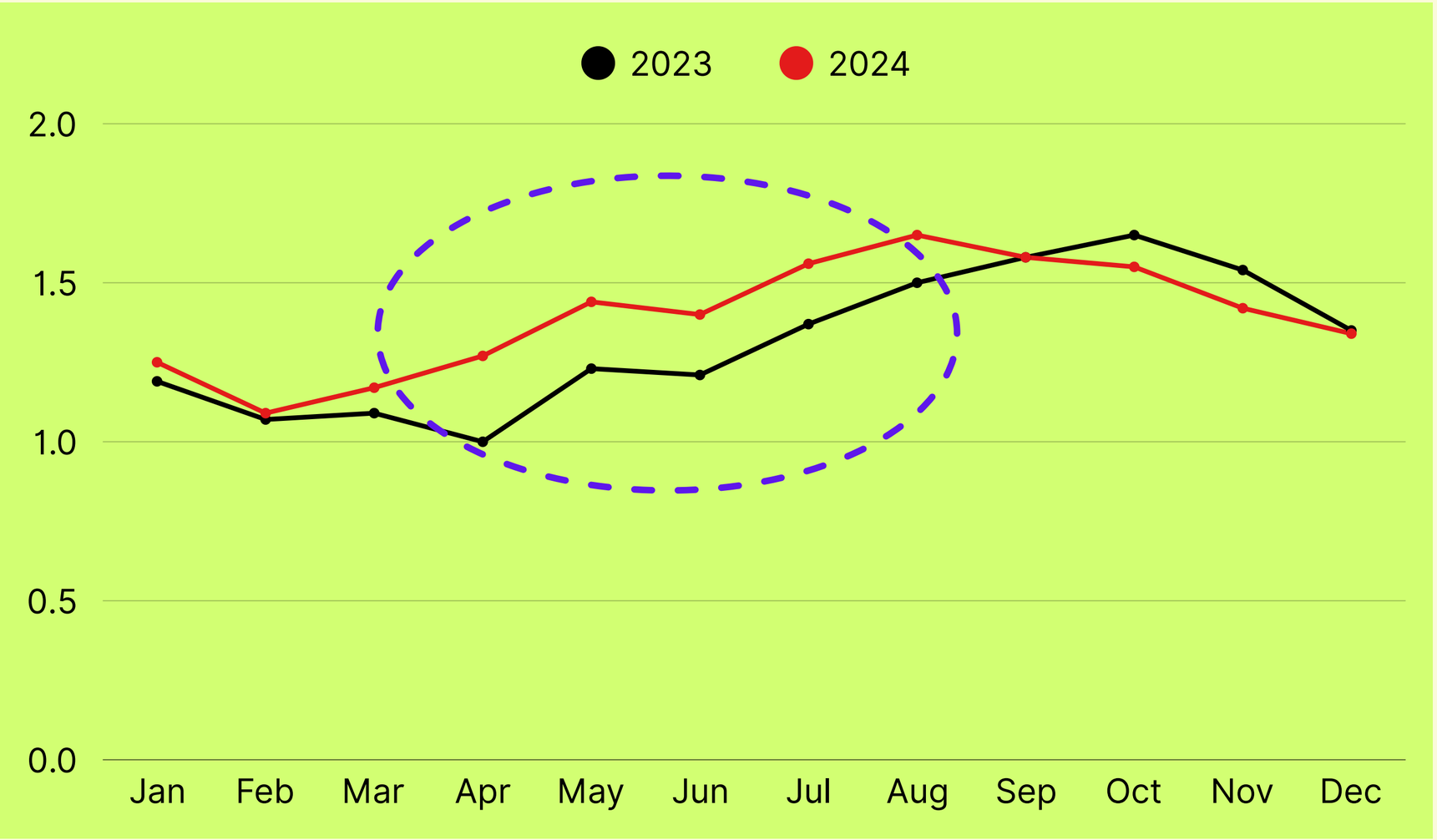
Food Security Issue

Used in a multitude of food product

Technology Adoption

Need for technological innovation and adoption

MALAYSIA: FFB YIELD , 2023 & 2024



Month	2023	2024	% Changes
Jan	1.19	1.25	▲ +5.0%
Feb	1.07	1.09	▲ +1.9%
Mar	1.09	1.17	▲ +7.3%
Apr	1.00	1.27	▲ +27.0%
May	1.23	1.44	▲ +17.1%
Jun	1.21	1.40	▲ +15.7%
Jul	1.37	1.56	▲ +13.9%
Aug	1.50	1.65	▲ +10.0%
Sep	1.58	1.58	— 0.0%
Oct	1.65	1.55	▼ -6.1%
Nov	1.54	1.42	▼ -7.8%
Dec	1.35	1.34	▼ -0.7%
Total Mt/Ha	15.78	16.72	▲ +5.62%

SOURCE: MPOB PALM OIL OUTLOOK,2024

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YIELD LIMITING FACTORS FOR OIL PALM PLANTATIONS

01

Genetic Limits

- Many existing oil palm varieties may have maxed out their yield potential, especially under current cultivation practices.
- Without introducing new high-performance hybrids or GM varieties, yield improvement may plateau even under optimal conditions.

02

Aging Plantations

- Oil palm trees are over 20 years old, entering senescence.
- Older palms yield less and are harder to harvest, directly lowering annual FFB productivity. This aligns with your trend of flat or only modest year-on-year yield increases.

03

Pest and Disease Pressure

- Infestations (e.g., rhinoceros beetles) and diseases (e.g., Ganoderma) are becoming more common.
- Yield losses can range from 10–30%, and smallholders often lack the resources for proper management, worsening the situation.

04

Climate Change

- Increasingly erratic rainfall, heat and droughts (especially during El Niño years) disturb growth and fruiting cycles.
- Yield losses can range from 10–40%, and smallholders often lack the resources for proper management, worsening the situation.

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YIELD LIMITING FACTORS FOR OIL PALM PLANTATIONS

05

Lack of Investment in Technology

- Insufficient investment in Precision agriculture and genetic improvements can lead to stagnation.
- Access to these technologies can be limited, especially Smallholders.

06

Market Fluctuations

- Economic pressures can lead producers to cut costs by reducing inputs like fertilizers or not investing in necessary upkeep, which can affect yield

07

Fragmentation of Land Holding

- Involvement of smallholders farmers in fragmented land holdings can diminish the economy of scale and efficiency needed to adopt best management practices effectively.

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Revitalizing Oil Palm Yields

Strategies and Innovations to Overcome Challenges in Oil Palm Production

Genetic and Breeding Innovation

Innovations in genetic breeding aim to develop high-yield, disease-resistant varieties. Biotechnological advancements, such as genome editing, hold promise for overcoming genetic limitations.

Improved Agronomic Practices

Optimizing agronomic practices, including soil management, fertilization, and irrigation, can revitalize plantation productivity. Precision agriculture techniques are increasingly adopted to tailor interventions to specific plantation needs.

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Revitalizing Oil Palm Yields

Strategies and Innovations to Overcome Challenges in Oil Palm Production

Replanting Strategies

Innovations in genetic breeding aim to develop high-yield, disease-resistant varieties. Biotechnological advancements, such as genome editing, hold promise for overcoming genetic limitations.

Improved Agronomic Practices

Strategic replanting with superior palm varieties is crucial. In the last decade, the age profile of oil palm plantations in Malaysia has shifted, with a significant percentage of plantations exceeding 20 years of age. Replanting rates have varied, with an average of 3% to 4% per annum in the last five years, highlighting the need for increased efforts.

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Revitalizing Oil Palm Yields

Strategies and Innovations to Overcome Challenges in Oil Palm Production

Sustainability and Certification Initiatives

The Malaysian Sustainable Palm Oil (MSPO) and Indonesian Sustainable Palm Oil (ISPO) certifications promote sustainable practices that can indirectly address yield stagnation by encouraging best practices and conservation efforts.

Technological Advancement and Digitalization

Technological innovations, such as AI, drones, and remote sensing, provide advanced monitoring capabilities, enabling real-time plantation management and early detection of yield-limiting factors.

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Revitalizing Oil Palm Yields

Strategies and Innovations to Overcome Challenges in Oil Palm Production

Enhancing Knowledge and Resources (Capacity Building)

Provide smallholders with education on modern agricultural practices and the benefits of sustainable farming. Ensure smallholders have access to necessary inputs like quality seeds, fertilizers, and equipment.

Climate Change Adaptation

Developing oil palm varieties that are more resilient to the adverse effect of climate change eg: changes in rainfall patterns and temperature extremes.

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CHALLENGES FACED BY SMALLHOLDERS

- Limited access to capital.
- Insufficient access to Technology.
- Lack of Quality Agricultural Inputs.
- Difficulty in Implementing Efficient Farming Methods.
- Limited training and support for sustainable farming practices.

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EMPOWERING SMALLHOLDERS: STRATEGIES FOR SUSTAINABLE GROWTH AND RESOURCE ACCESS

Enhancing Access to Resources

Providing smallholders with access to affordable credit, high-quality seeds, and fertilizers.

Strengthening Cooperative Models

Encouraging smallholders to form cooperatives to gain better bargaining power and share resources.

Policy Support

Governments should create enabling policies that support smallholders and foster sustainable growth.

Public-Private Partnerships

Facilitating collaborations between governments, private sector, and NGOs to support smallholder initiatives.

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CONCLUSION

- Both big plantations and smallholders recognize the importance of collaboration to share best practices and resources for improving yields.
- The adoption of innovative agricultural technologies and practices is seen as crucial for enhancing productivity in both sectors
- Sustainable farming methods are emphasized to minimize environmental impacts while maintaining efficient production.

CONCLUSION

- Investment in research and development is necessary to identify new techniques and crop varieties that can boost yield.
- Education and training programs targeted at smallholders are essential to equip them with knowledge of modern farming practices
- Policies that support fair pricing and access to resources are key to empowering smallholders.

IMPLEMENTATION: FOCUSED STRATEGIC INSIGHT

To overcome the stagnation in oil palm yields, a joint effort between large plantations and smallholder farmers is essential. This collaboration should focus on innovation, sustainability, and education. By implementing modern agricultural practices and supporting beneficial policies, the industry can boost productivity, ensuring environmental care and economic success for everyone involved.

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THANK YOU

INTERNATIONAL SMALLHOLDERS WORKSHOP 2025

02 May, 2025

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