Cost Competitiveness of Oilseeds Production in Major Exporting Countries

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Commercial partners

PIPOC 2017
November 15th

Agenda

1. Introduction – what is *agri benchmark*?
2. How to compare cost of production for different oilseeds?
3. How does a typical Malaysian plantation compare to other major oilseed producers?
4. Conclusions

Let‘s grow together.

We help to manage challenges in global agriculture

Many small creeks make the big river.

You need reliable and comparable data on farming systems to understand dynamics in crop production.

***agri benchmark* is there to satisfy this hunger for data and information.**

We compare apples to apples.

Because we collect data with globally standardized methods we deliver reliable and comparable results.

We dig deeper.

The unique depth and quality of our data guarantees appropriate support for your decision making.

What makes *agri benchmark* unique and valuable?

1. The only scientific, non-profit economic farm level data base with a uniform and globally comparable data.
2. The only farm level data based on production systems based on so-called “typical farms”.
3. Global network of production economists to educate and challenge scientific talent.
4. Option to establish a National Network of typical plantations for domestic and international benchmarking.
5. Collaboration with advisors and producers allows to identify and forecast producers adjustments to changing economic and technological framework conditions.

Annual meeting of global *agri benchmark* Partners

At the Borlaug Centre in Des Moines/IA USA

Major clients and research partners

McKinsey & Company

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How to allocate cost shares to a multi-output product?

1. All oilseeds are multi-output products:
   * Oils
   * Protein
   * Fiber/Kernel

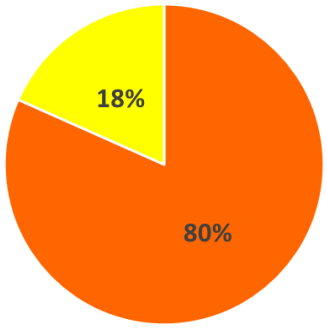
2. One can use
   * weight of components
   * economic value or
   * energy content

   to allocate (depends on purpose of the analysis)

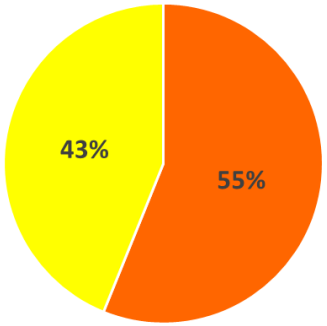
3. Since we are interested in profitability, economic value is most appropriate.

Shares of ingrediencies in oilseeds and value shares

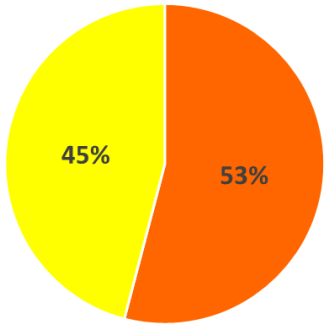
Share of weight of ingrediencies



Soybean meal
Soybean oil

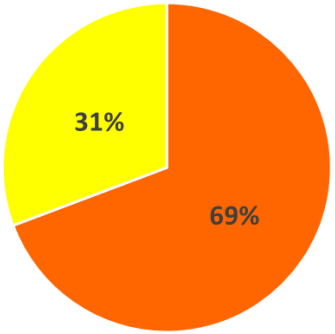


Rapeseed meal
Rapeseed oil

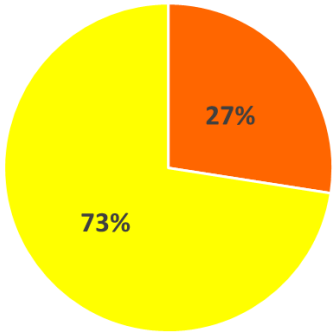


Sunflower meal
Sunflower oil

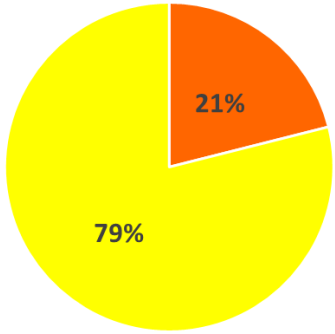
Share of economic value of ingrediencies*



Soybean meal
Soybean oil



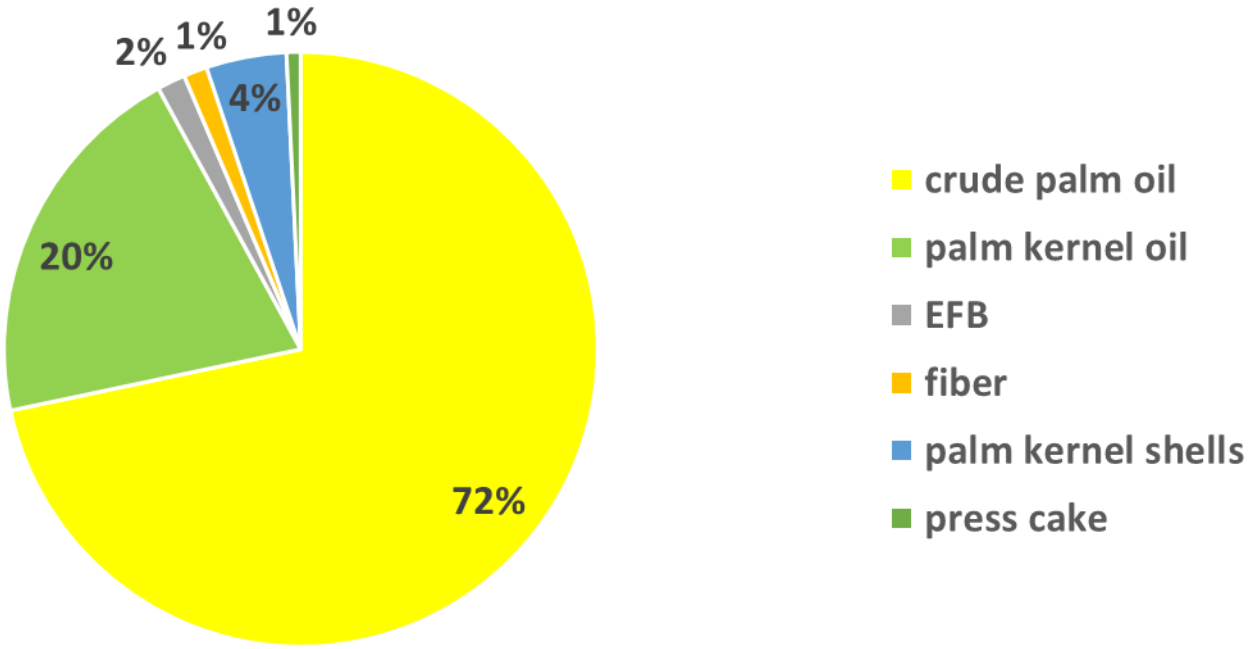
Rapeseed meal
Rapeseed oil



Sunflower meal
Sunflower oil

* Based on 2012 to 2017 data, quotes from ICG (2017)

Value Shares of Palm Oil Ingrediencies



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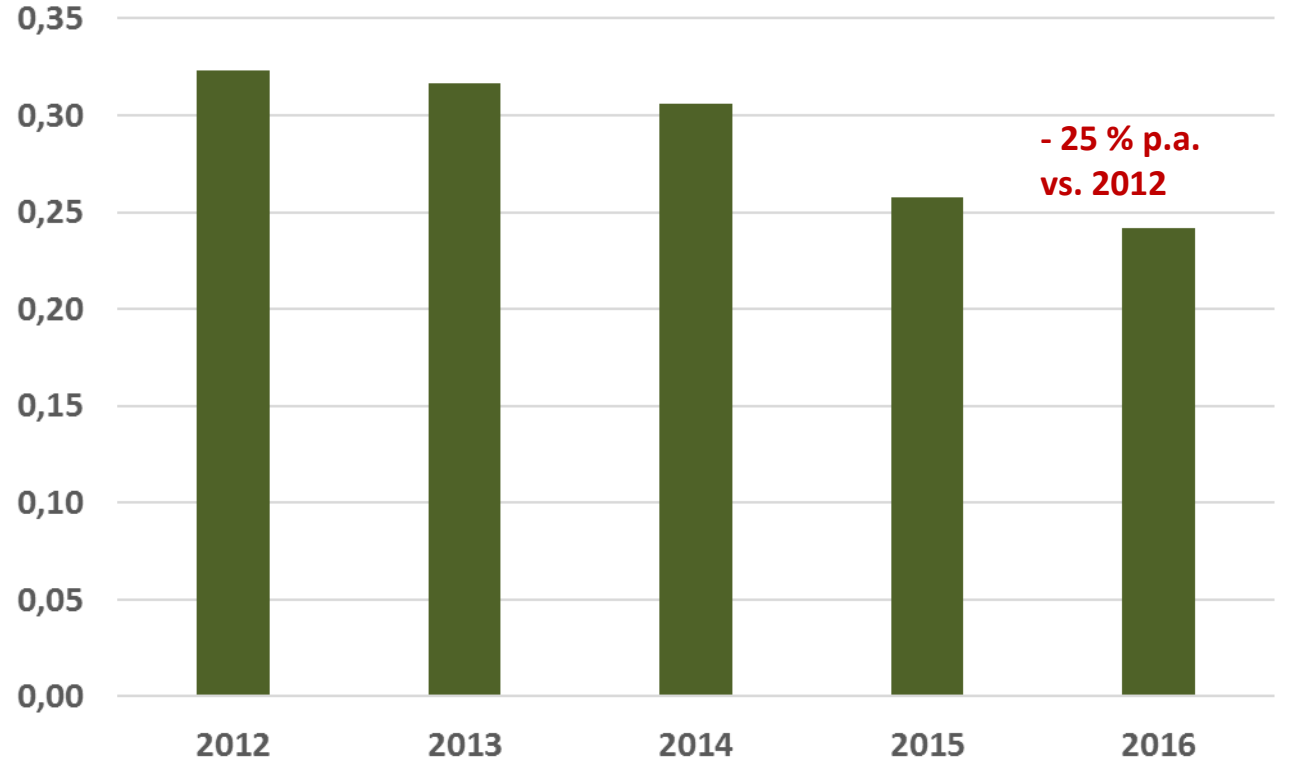
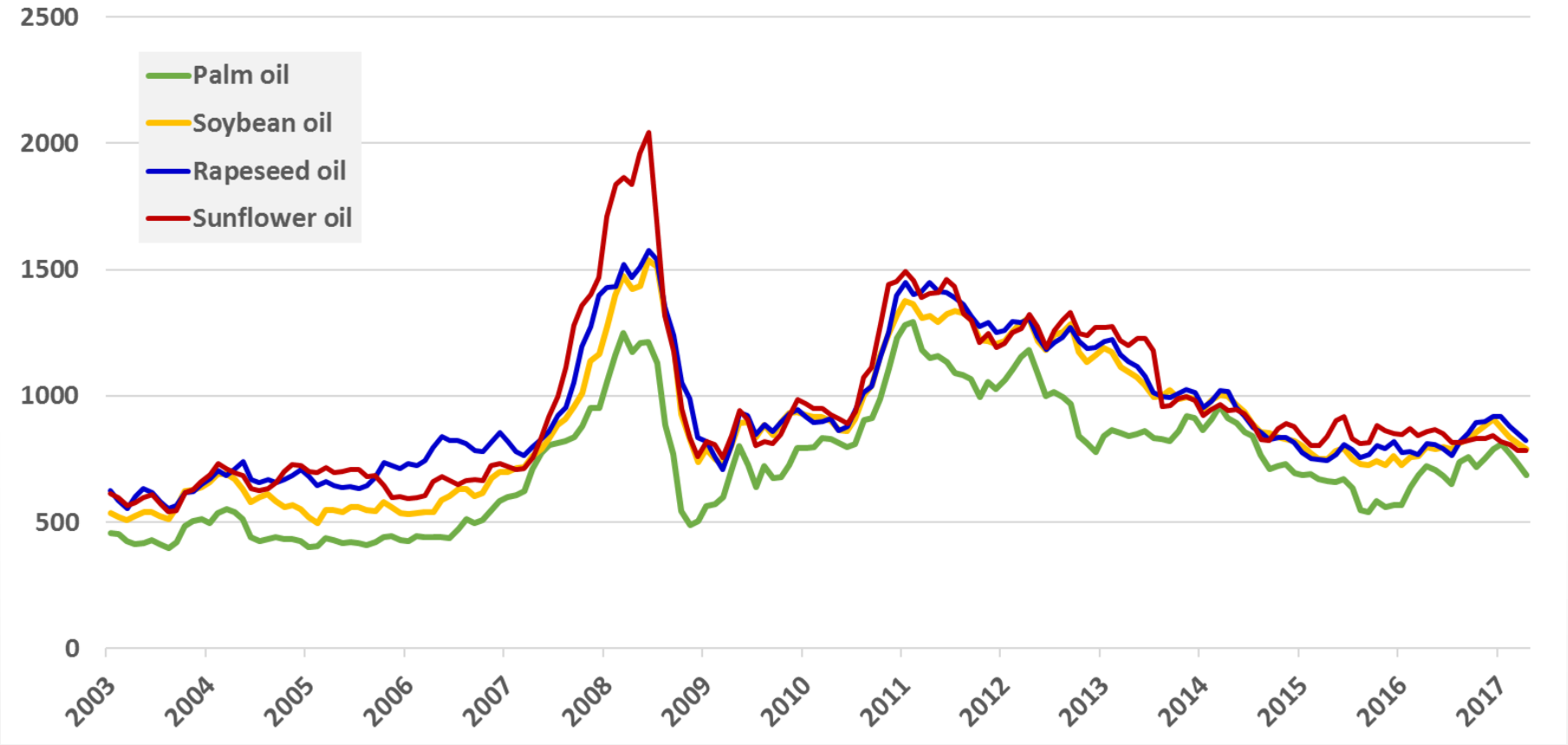
Evolution of Malaysian Ringgit vs. US Dollar



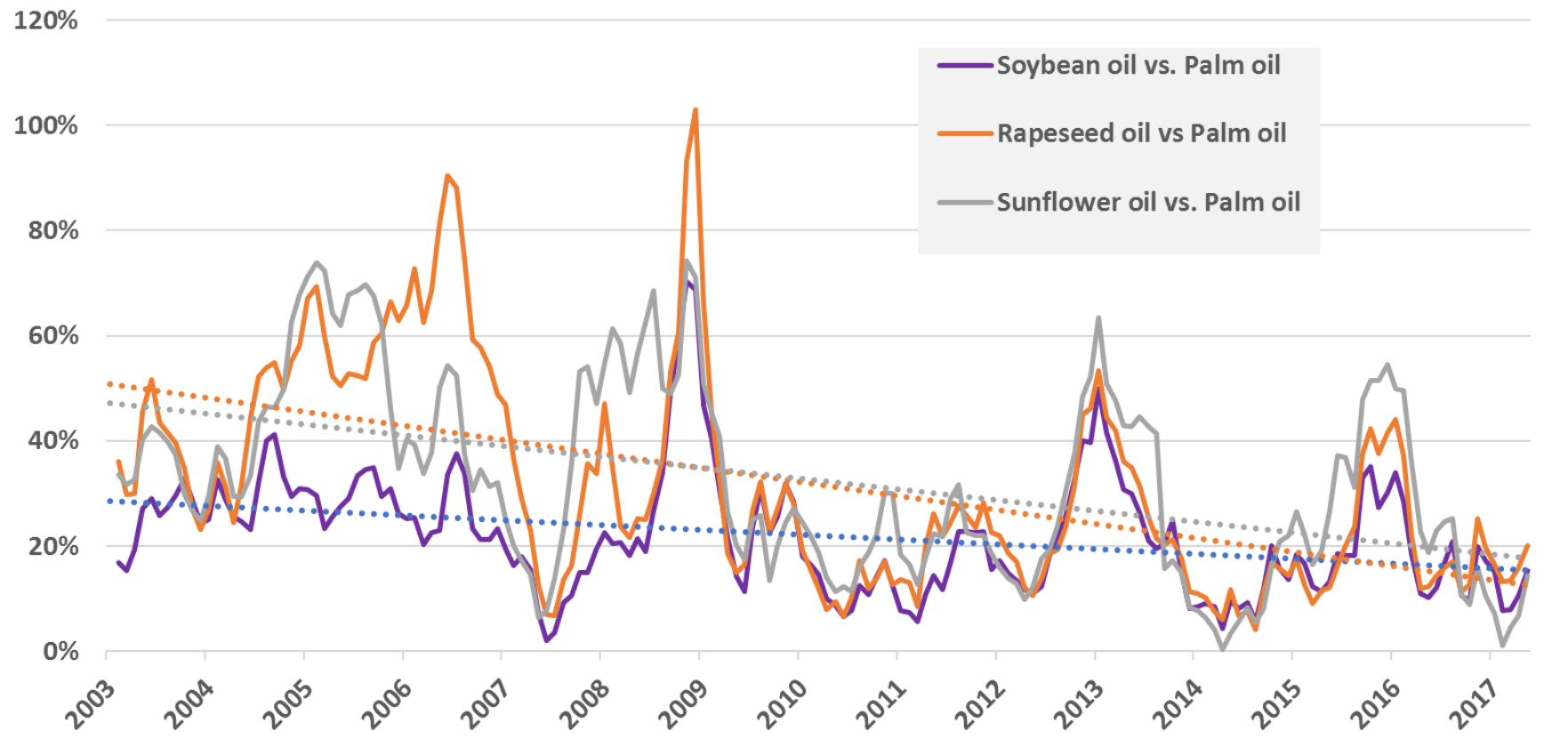
1. **Strong devaluation over the last 4 years.**
2. **Since the bulk of cost is domestic this implies a strong boost for competitiveness of Malaysian palm oil**

Global oil markets – mostly downward trend (in USD/t)



1. **Since 2011 vegetable oil prices went south (- 50%) – but compared to pre-boom level prices are still high.**
2. **Palm oil was and is the most competitive oil on global markets.**

…but the gap is narrowing (in USD/t)



1. **Other oilseed price went down stronger than palm oil.**
2. **Global demand less picky?**

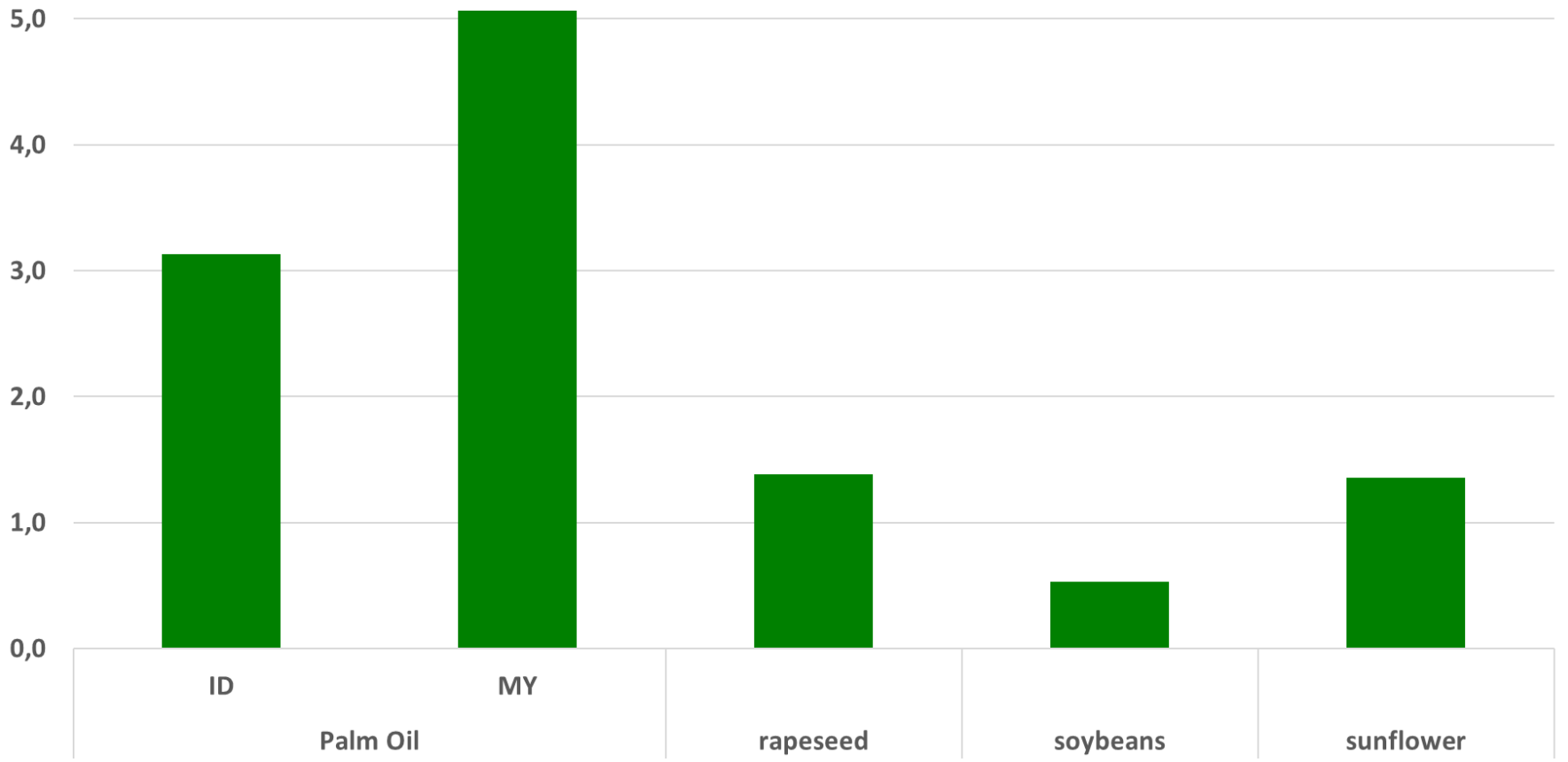
Farms used to create national averages per crop (1)

Crop	Country	# of typical farms
Rapeseed	Canada	5
	Australia	5
	Germany	8
	Poland	4
	United Kingdom	4
	Ukraine	2
Soybeans	Argentina	3
	Brazil	3
	United States	4
	Canada	3
	Russia	3
	Ukraine	2

Farms used to create national averages per crop (2)

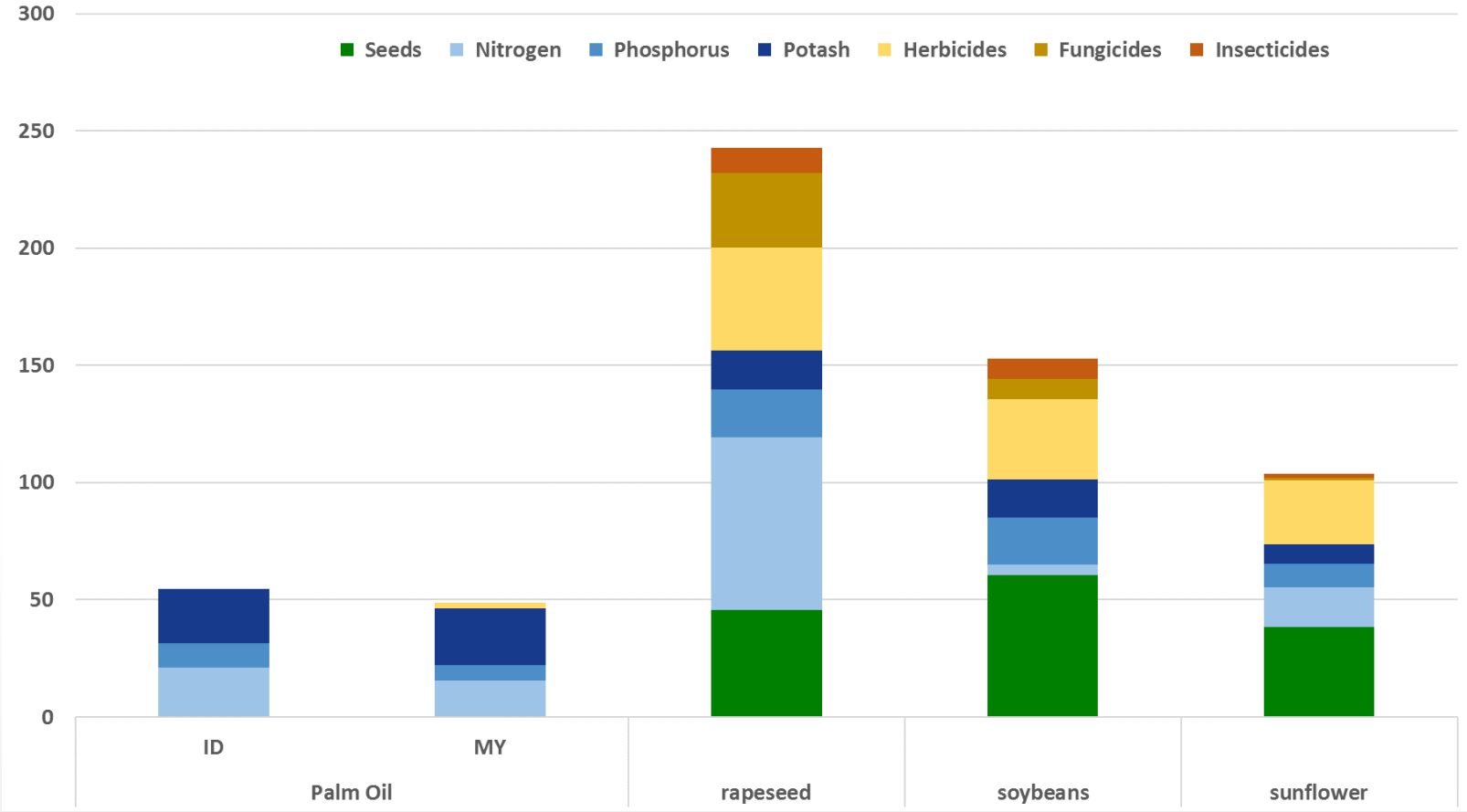
Crop	Country	# of typical farms
Sunflower	Argentina	2
	Ukraine	3
	Russia	2

Typical farms: Av. yield in oil content (t/ha ; Ø 2014-16)



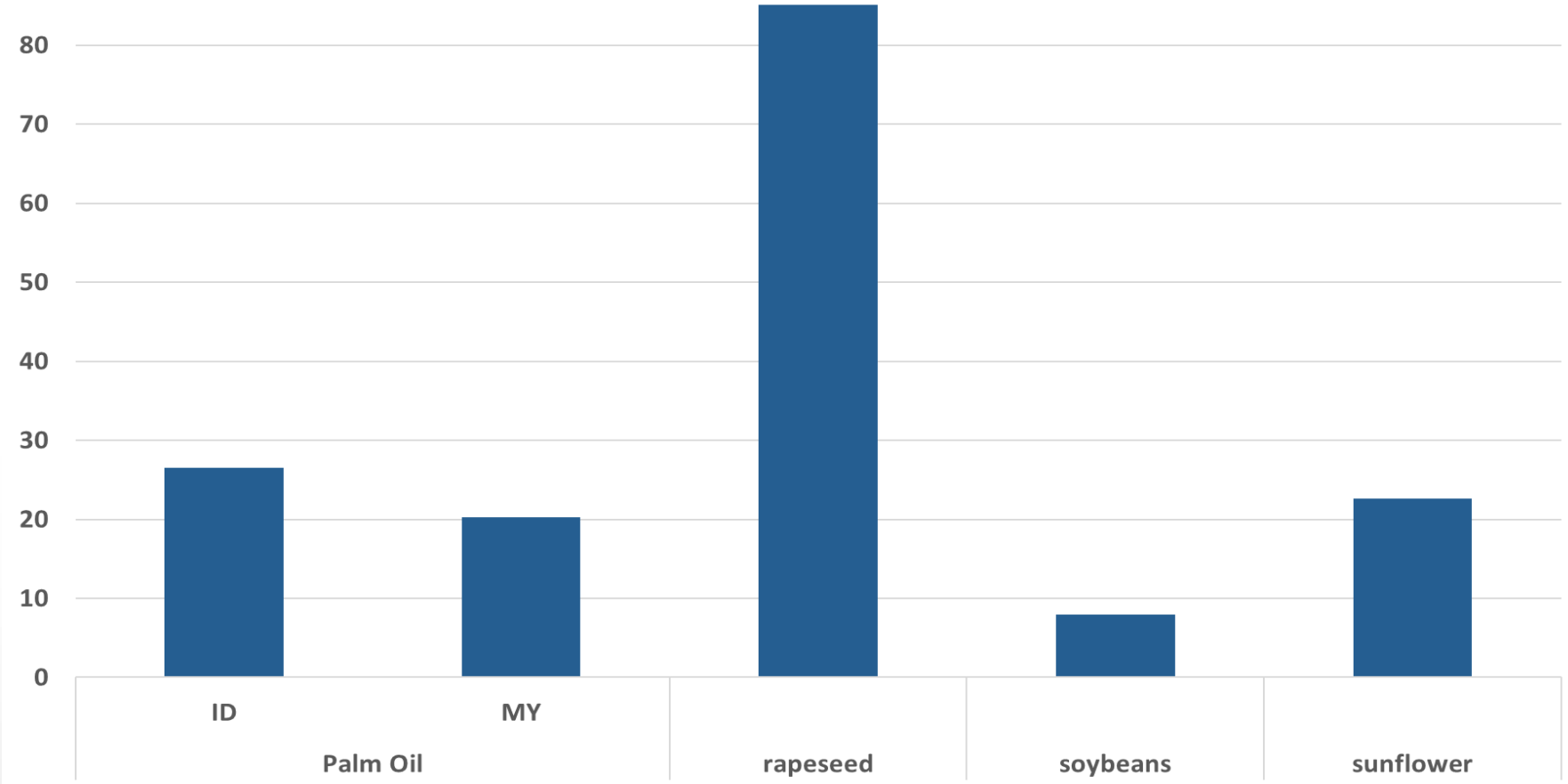
1. **Palm oil by far the most productive oil crop (<u>but:</u> mind the very high value by-products in the others).**
2. **Indonesian small holder farm with strong potential to boost yield.**

Direct cost – per tonne of raw material (USD/t; Ø 2014-16)



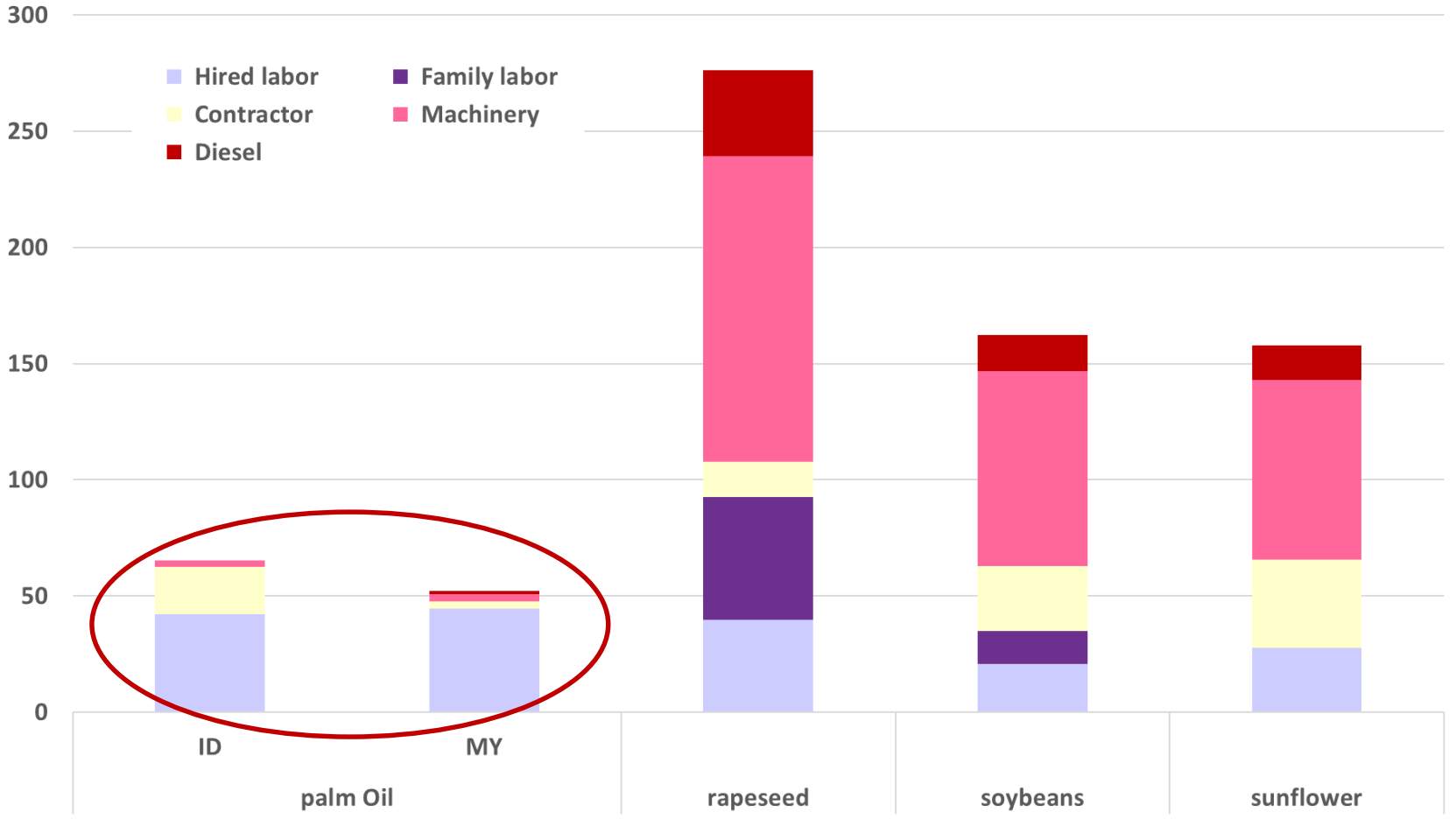
1. **4 tiers in direct cost: rapeseed, soybeans, sunflower, and palm oil**
2. **Palm oil looks too low (app. 30 $/t) because crop establishment is under overhead (as a land cost)**

Nitrogen use (kg/t raw product ; Ø 2014-16)



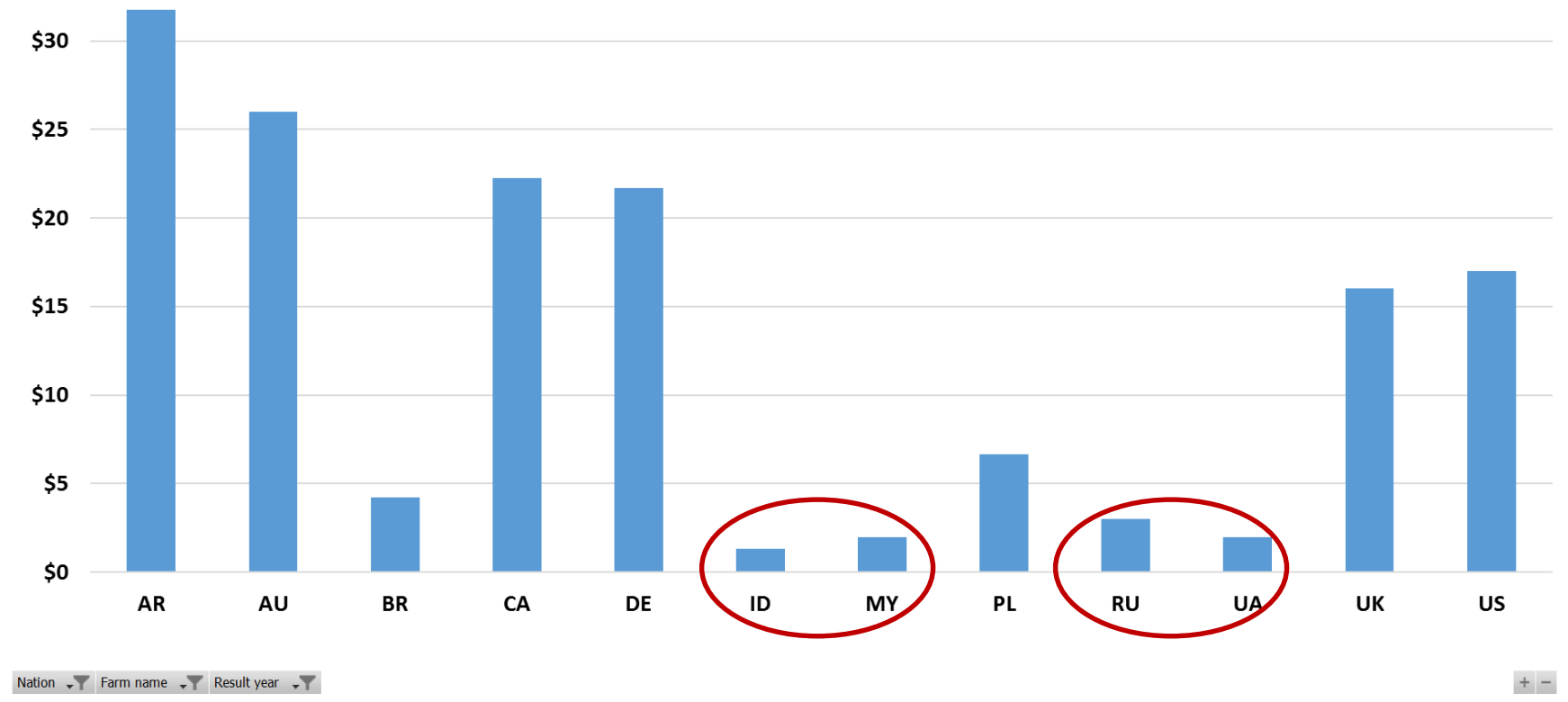
1. **Soybeans: rather top performing in N-productivity (poor value for RU/UA due to new crop issues).**
2. **<u>But:</u> palm oil is as good as sunflower and light years better than rapeseed.**

Operating cost – per tonne raw material (USD/t ; Ø 2014-16)



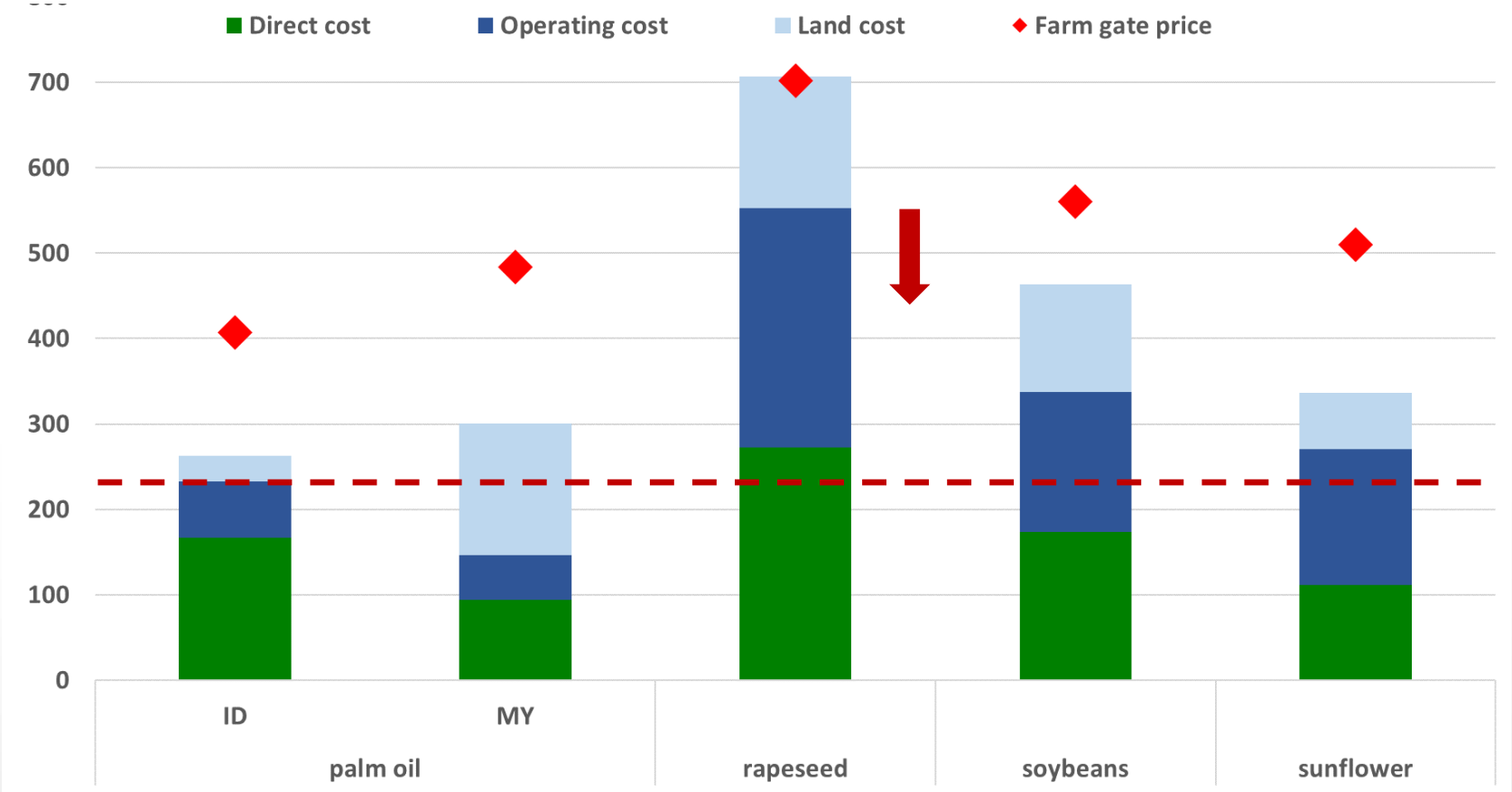
There is an elephant in the room…

Wages rates hired labor (USD/h ; Ø 2014-16)



1. **Wage in MY comparable to BR, RU and UA.**
2. **But all Western countries (except for PL) app. 10 times higher and more.**
3. **Despite much lower wages for MY plantation, labor cost per tone about the same as in the US or CA.**

Total cost and gross revenue – per tonne of raw material (USD/t ; Ø 2014-16)



1. **Palm oil extremely competitive: half of total cost is opportunity cost for land cost, which serves as a buffer.**
2. **Rapeseed by far the most expansive raw material, sunflower and soybean similar (exl. Land cost)**

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Conclusions: Competitiveness of oilseeds (1)

1. Caveat: Malaysia and Indonesia currently only one typical plantation.

2. Cost of production of raw material very low for palm oil – clear advantage over soybeans, rapeseed and sunflower.

3. Despite very low wages (app. 2 MYR/h) labor cost per tonne of raw material for palm oil is as high as in the US in Soybeans (app. 50 $/t).
   - ➡ Mid term challenge for palm oil producers (overall increase in wages due to booming industry)
   - ➡ Need to increase economic labor productivity

4. In relative terms (vs. other veg. oils) price for palm oil increased – global competitiveness of palm oil improved.

5. Considering N-usage (and related GHG emissions), palm oil is very competitive relative to rapeseed and sunflower.

Conclusions: Competitiveness of oilseeds (2)

6. **Big BUT: app. 50 % of total cost in MY palm oil raw material production is land cost**
   ➡ **strategic buffer in case overall profitability goes down (land value is a residual in crop economics).**

7. **Strategic questions for the palm oil industry:**
   a) **What can be done in breeding and/or crop treatment to increase oil content? (improve economic labor productivity)**
   b) **Is it feasible to establish sample taking at the mill and establish quality based payment for FFB?**
   c) **Ambition to challenge negative image re. GHG emissions in the EU? Low N-usage creates a very strong argument.**

Let's grow together.

Thank you for your interest in agri benchmark

jointly managed by: THÜNEN **&** global networks

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