

PALM OIL: Uses, problems and possible alternatives

Sergio Gámez Casado

Food science and technology - June 2018



FACULTAT DE VETERINÀRIA

OBJECTIVES

To give a global view about palm oil:

- Uses and applications
- Properties given to foods
- Problems
- Alternatives

PROBLEMS

Health:

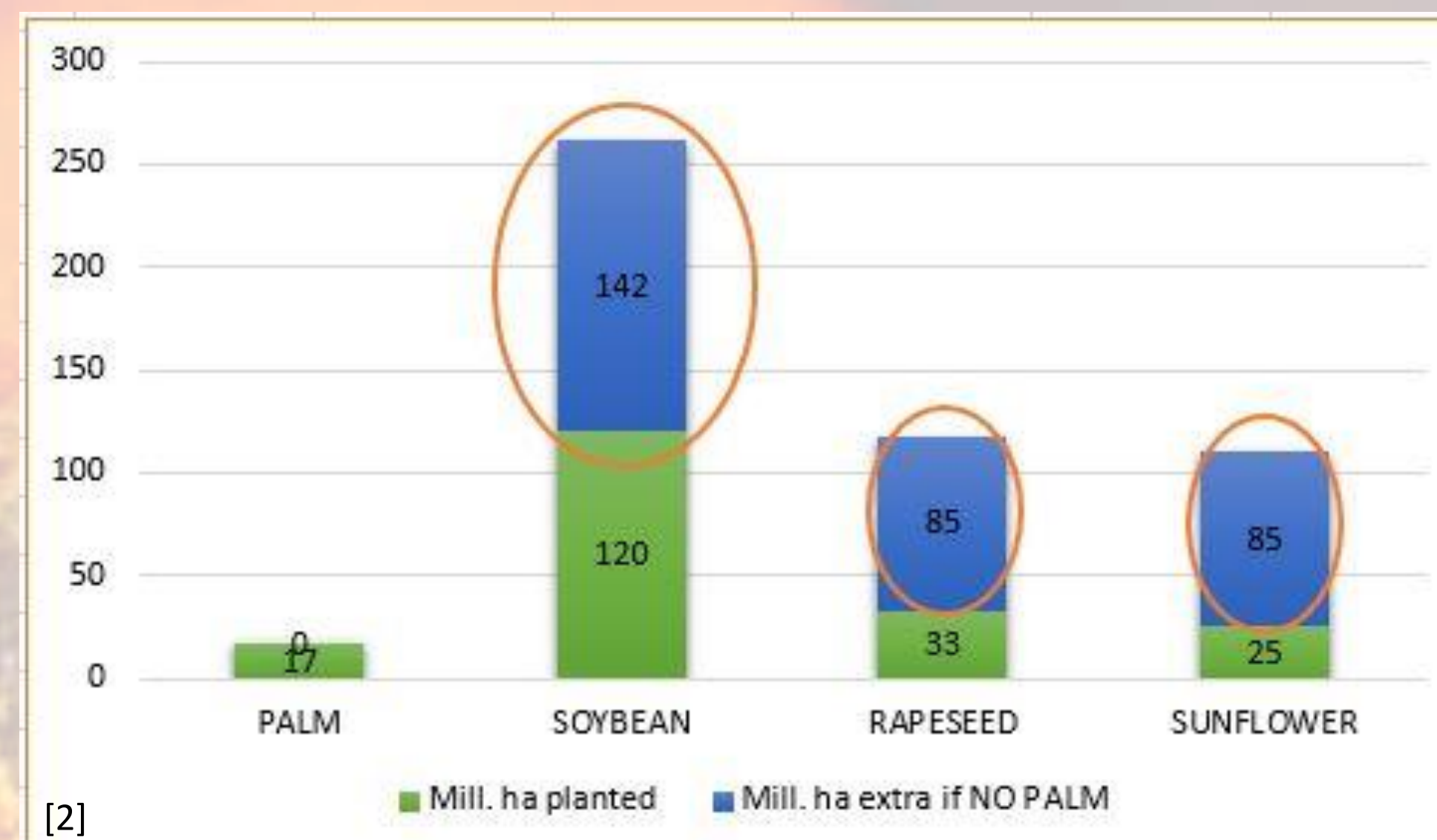
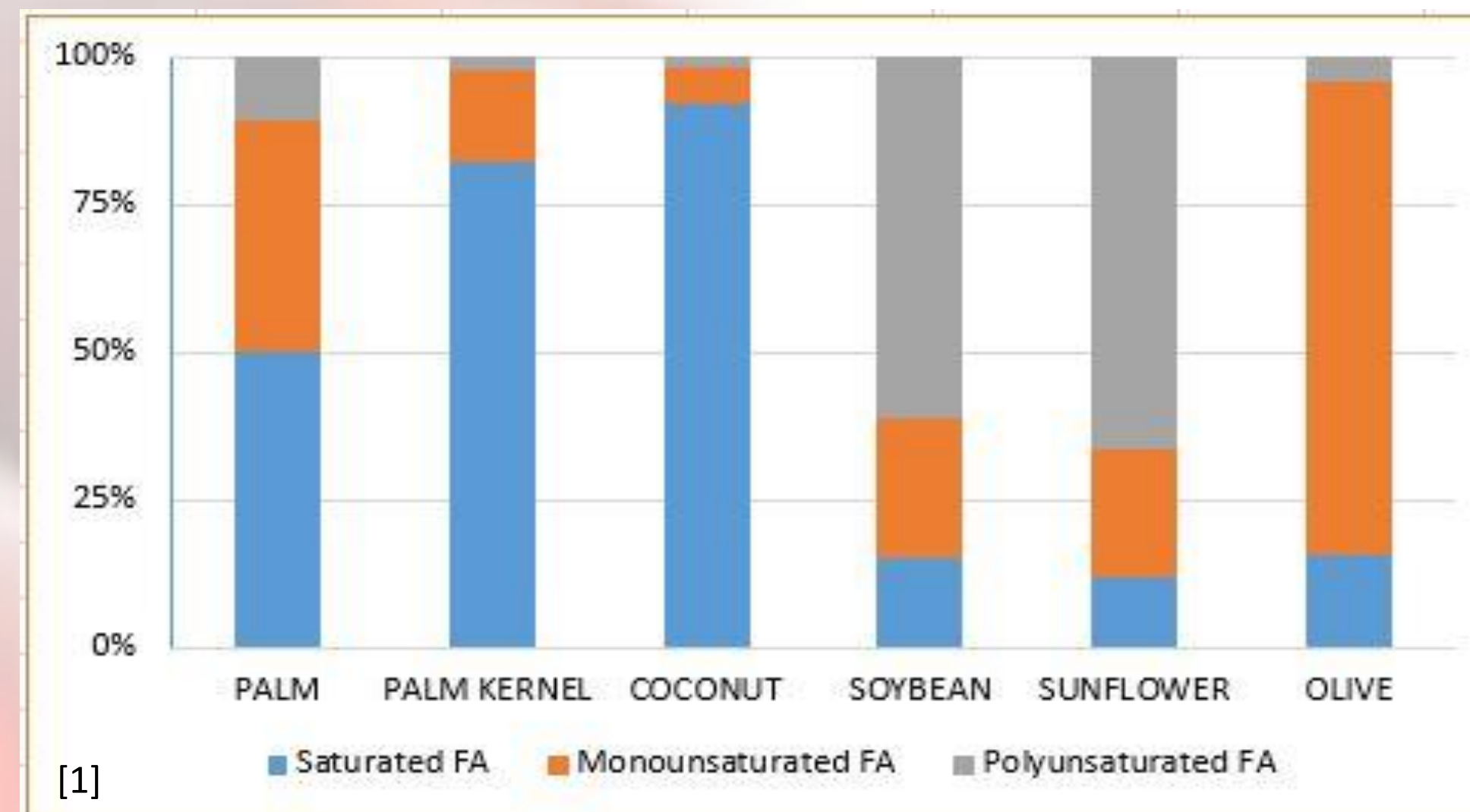
- Compounds formed during refining
- % saturated fatty acids (palmitic)

Enviromental:

- RSPO certification

CONCLUSIONS

- Increasing use of ecological palm oil
- Difficulties in replacing palm oil with other oils
- Decreasing harmful compounds as 3-MCPD and GE
- Balanced diet and moderate palm oil consumption



[3]



[4]



[5]

USES

Human nutrition:

- Margarines
- Cookies
- Industrial bakery (frying oil)
- Others

Other applications:

- Animal nutrition
- Technical uses:
 - Biodiesel
 - Others

POSSIBLE ALTERNATIVES

- Fully hydrogenated oils (FHO)
- Mix of FHO and lauric acid-rich oils (coconut, palm kernel)
- "Exotic" oils (shea, illipe, kokum, mango pit)
- Liquid oils (soybean, rapeseed, sunflower)

SOURCES

[1] Edited figure: % of fatty acids (FA). Edem, 2002. *Plant Foods for Human Nutrition*, 57: 319-341.

[2] Edited figure: hectares to replace palm. Soler, 2018. Seminario *Aceite de palma*. AIQS, Barcelona.

[3] EL PAÍS:
<https://elpais.com/sociedad/2013/07/24/actualidad/1374673768403623.html>

[4] EPOA (European Palm Oil Alliance):
<https://www.palmoilandfood.eu>

[5] CSPO (Certified Sustainable Palm oil):
<http://www.aceitedepalma.org/cspo>