

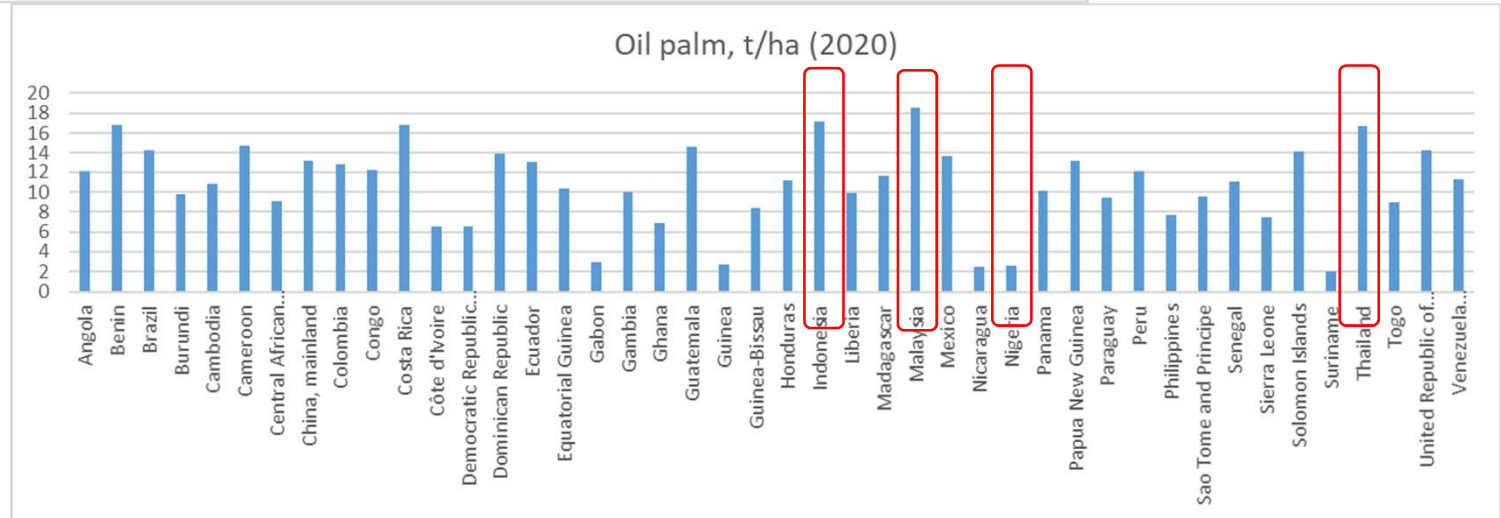
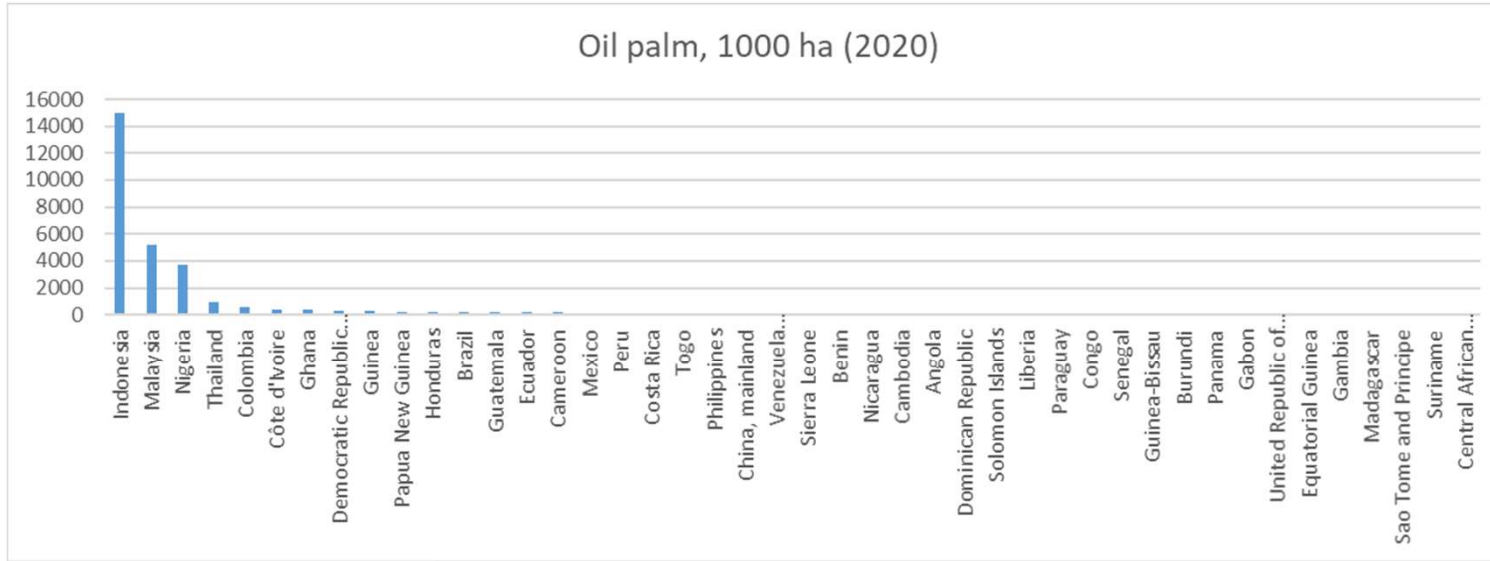


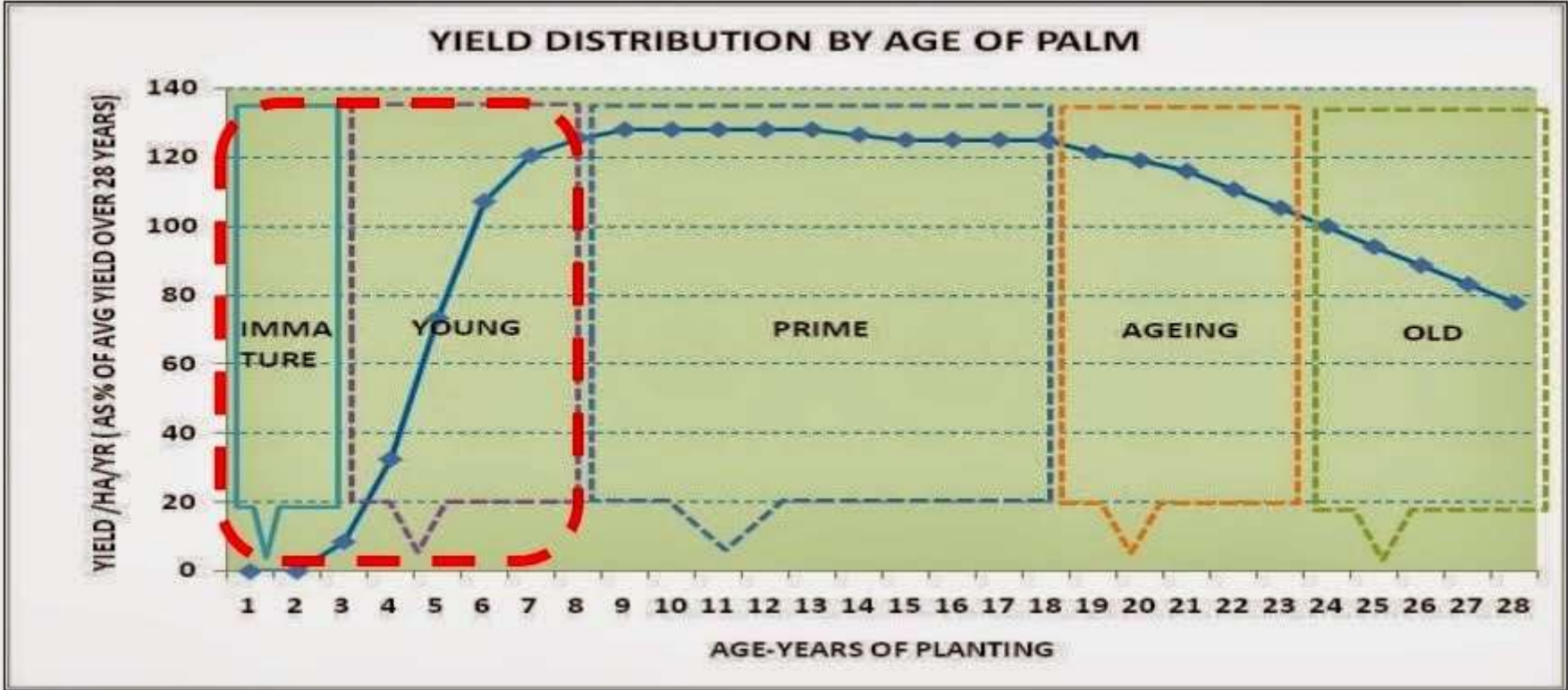
## Some thoughts on replacing palm oil with rapeseed oil

Input to the TABLE webinar: How to squeeze fat into a sustainable food future

Adrian Muller

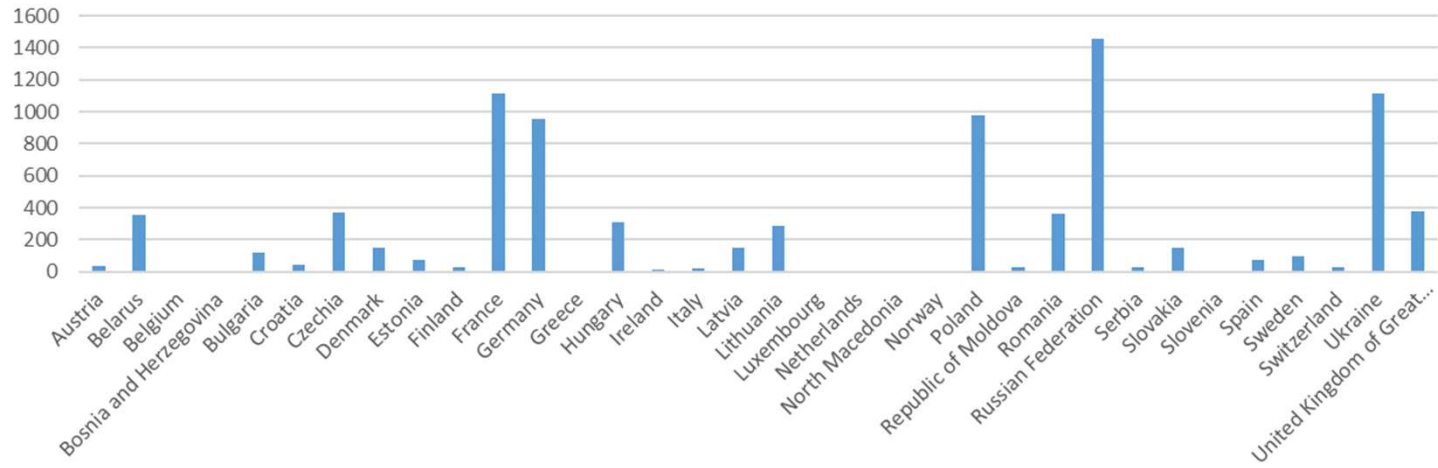
Online, 13.4.2022



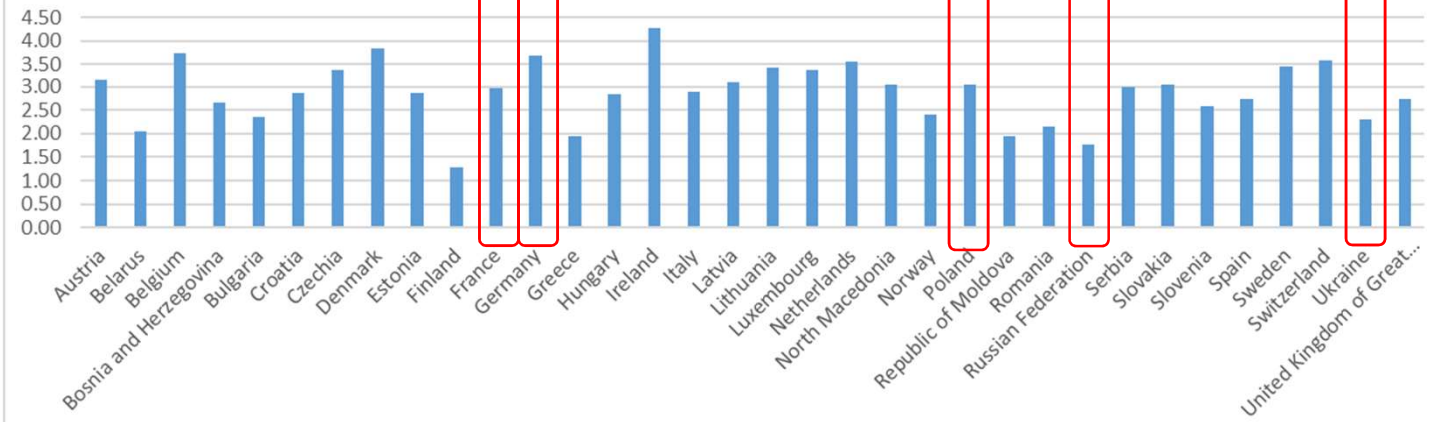


<https://klseimoney.blogspot.com/search?q=palm>

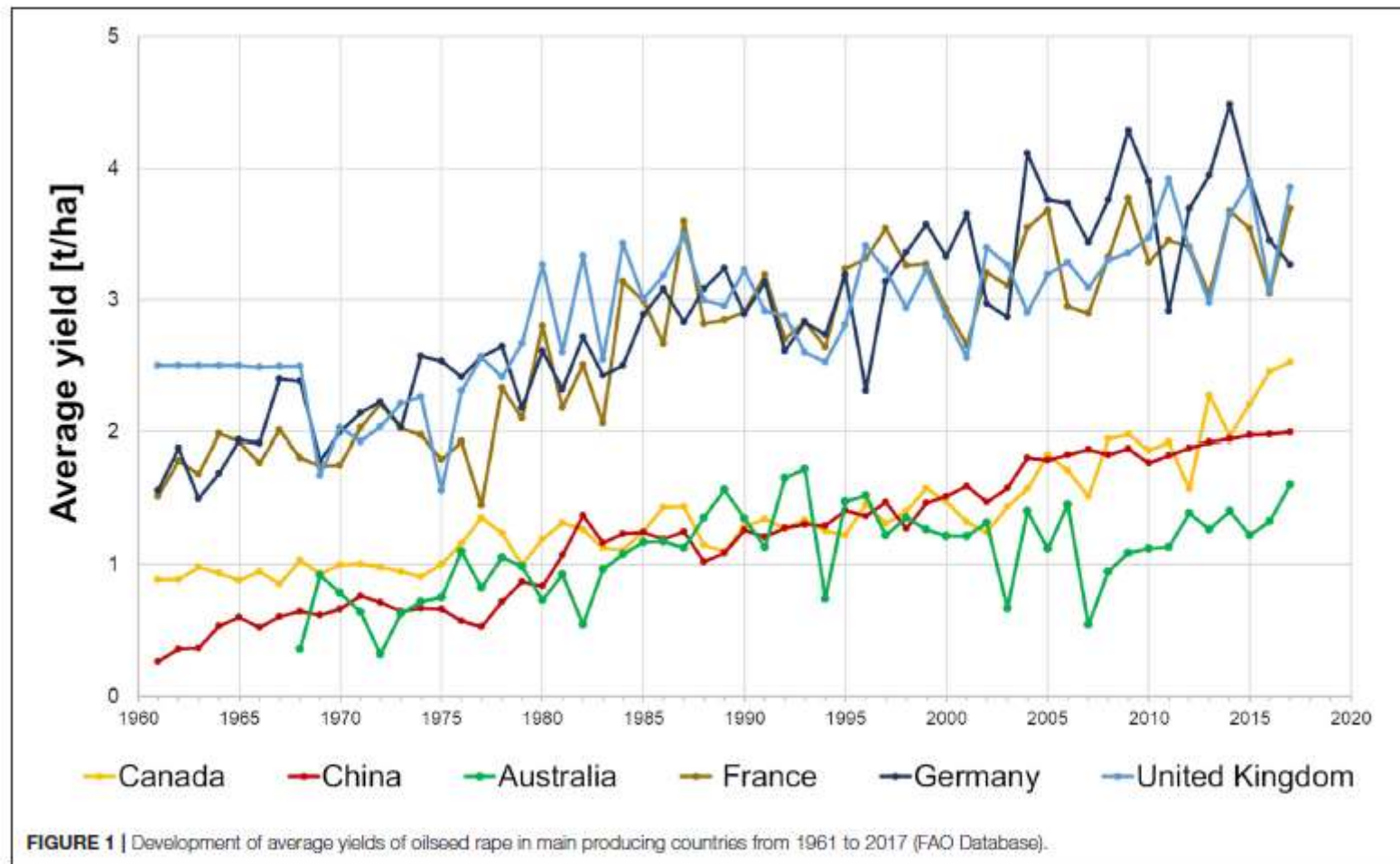
Rapeseed, 1000 ha (2020)



Rapeseed, t/ha (2020)



## Rapeseed yields



*Tabelle 1 5-Jahresdurchschnitt Ölflächenertrag (CPO) für Raps und Palmöl\**

Palmöl, weltweit	<b>3.54 t/ha/Jahr (2014-18)*</b>
Palmöl, Indonesien	<b>3.80 t/ha/Jahr (2014-18)*</b>
Palmöl, Malaysia	<b>3.97 t/ha/Jahr (2014-18)*</b>
Schweizer Raps, gesamt	<b>1.35 t/ha/Jahr (2013-17)<sup>a</sup></b>
Schweizer Raps, Bio Suisse	<b>0.77 t/ha/Jahr (2013-17)<sup>b</sup></b>

\* Produktive Palmölbestände, ab dem 3-4 Jahr nach Neuanpflanzung.

Quelle: *eigene Berechnung mit Daten von swiss granum<sup>a</sup>, Bio Suisse<sup>b</sup> und Oil World (2018)<sup>c</sup> unter der Annahme eines Pressertrages bei Rapsöl von 37% (gemäss swiss granum).*

**Factor 3 more oil from oil palm areas than from rapeseed areas**

EU palm oil consumption (7.5 Mt)  
corresponds to:

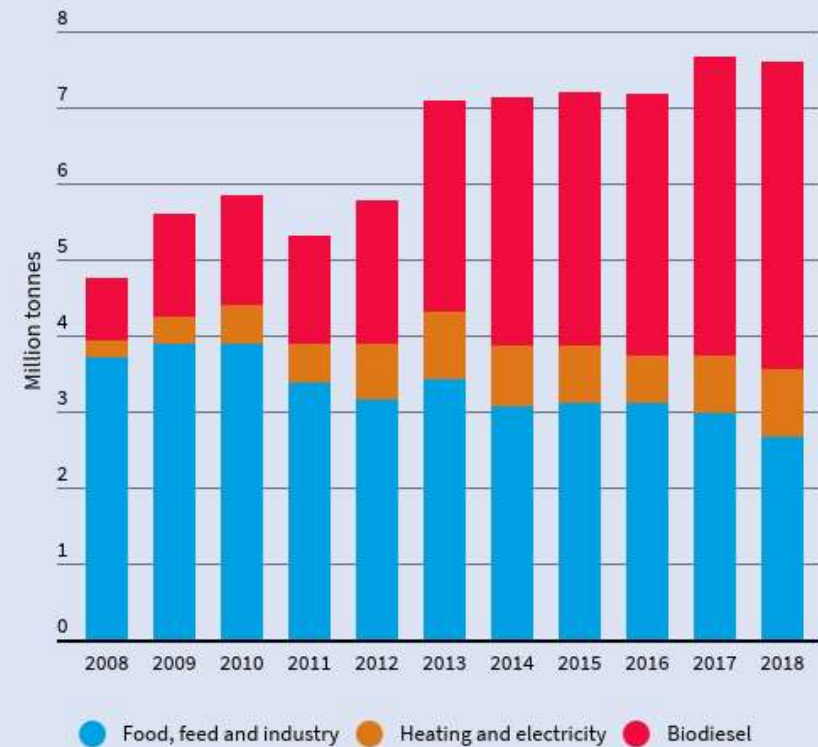
about 2 million ha oil palms  
about 6 million ha rapeseed

Fat gap globally: 40, 45, 97 Mt  
11, 12, 26 Mha oil palms  
32, 36, 78 Mha rapeseed

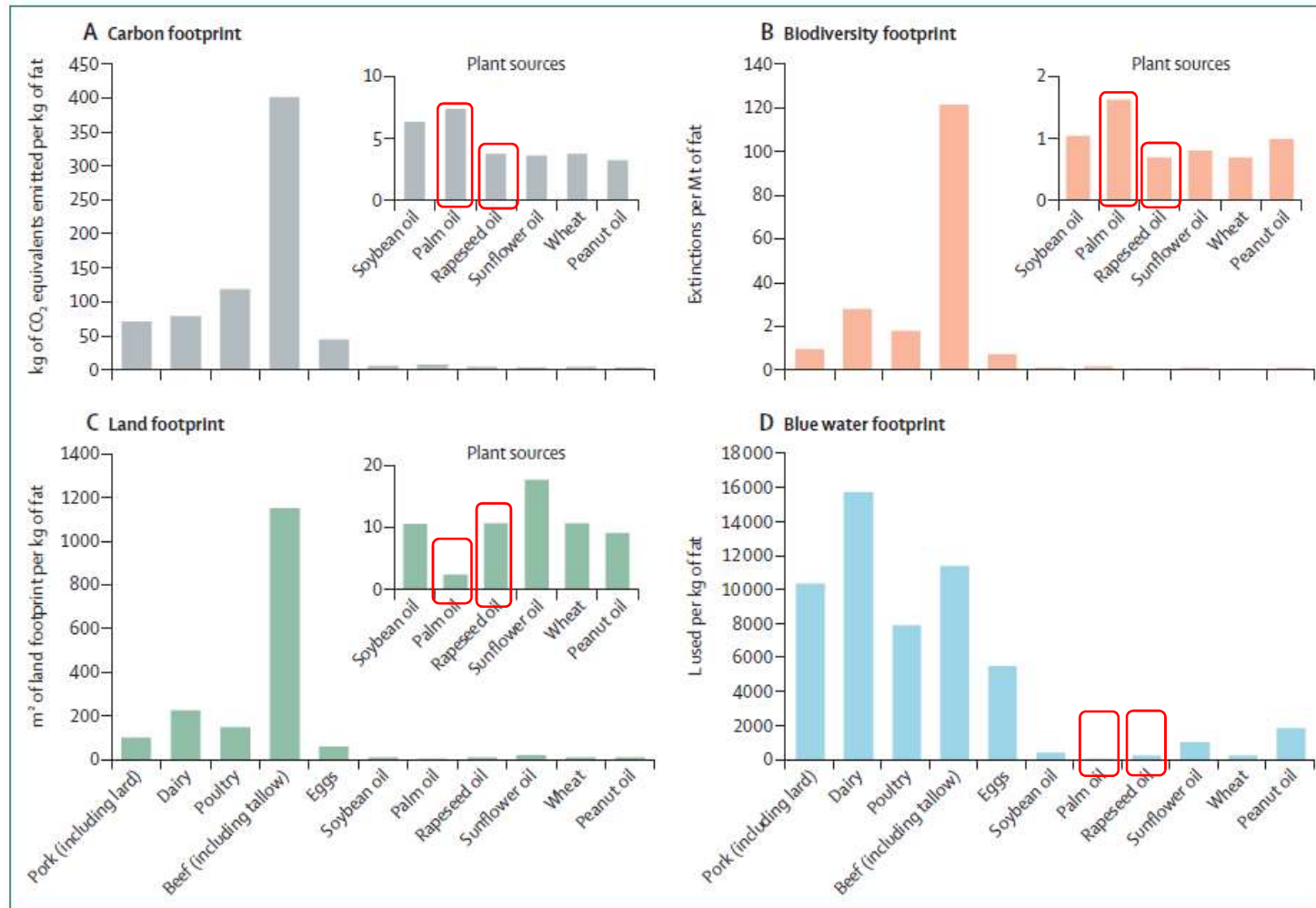
Currently in Europe:  
9 Mha rapeseed  
100 Mha arable land

Globally  
35 Mha rapeseed  
1500 Mha arable land

## EU palm oil consumption by end use



Source: OILWORLD



**Figure 3: Largest sources of fat and their carbon, land, water, and biodiversity footprints**  
 Estimates based on data from Poore and Nemecek,<sup>15</sup> Chaudhary and Brooks,<sup>18</sup> and Public Health England.<sup>40</sup>



## Challenges of rapeseed production

Oil processing: ok, also in organic

Position in the (organic) rotation

Sowing date

Fertilization

Plant protection

landscape approaches  
cropping-system re-design

**TABLE 7** | Survival and range of dispersal of the top 5 important pests and diseases of oilseed rape in Europe.

Pest, disease	Survival without host (years)	Range of dissemination	
		Field-bound	Landscape
<b>Insect pests</b>			
Aphids	<1		+
Flea beetles	<1		+
Pollen beetle	<1		+
Rape stem weevil	<1	(+)*	+
Brassica pod midge	3–4	(+)	+
<b>Fungal diseases</b>			
Sclerotinia stem rot	>4 <sup>a</sup>	+	
Phoma stem canker	<2 <sup>b</sup>	+ crop debris	(+)
Verticillium stem striping	<3 <sup>a</sup>	+	
Light leaf spot	<2 <sup>c</sup>	+ crop debris	(+)
Clubroot	>4 <sup>d</sup>	+	

<sup>a</sup>Data from own field experiments (not published); <sup>b</sup>West et al. (1999); <sup>c</sup>Personal communication with Bruce Fitt; <sup>d</sup>Wallenhammar (1996).

\*Rape stem weevil and pod midge overwinter in the soil of the previous year oilseed rape crop, and migrate to new oilseed rape crops in the following year.

## **Potential trade-offs**

What happens when palm oil demand is reduced

- on the plantations
- use of by-products
- livelihoods

## **Some concluding remarks**

**For deciding what is a sustainable solution, ask**

- **What is the oil to be replaced used for?**
- **What will happen on the areas not used anymore and to the related communities?**
- **What is currently cropped on the areas to be used for future oil production?**
- **Be aware of agronomic complexities!**