



Europe's seed sector in a changing socio-economic environment

International Seed Seminar 10.09.2019

Finnish Seed Testing: 100 years back, 100 years forward

Garlich von Essen, Euroseeds

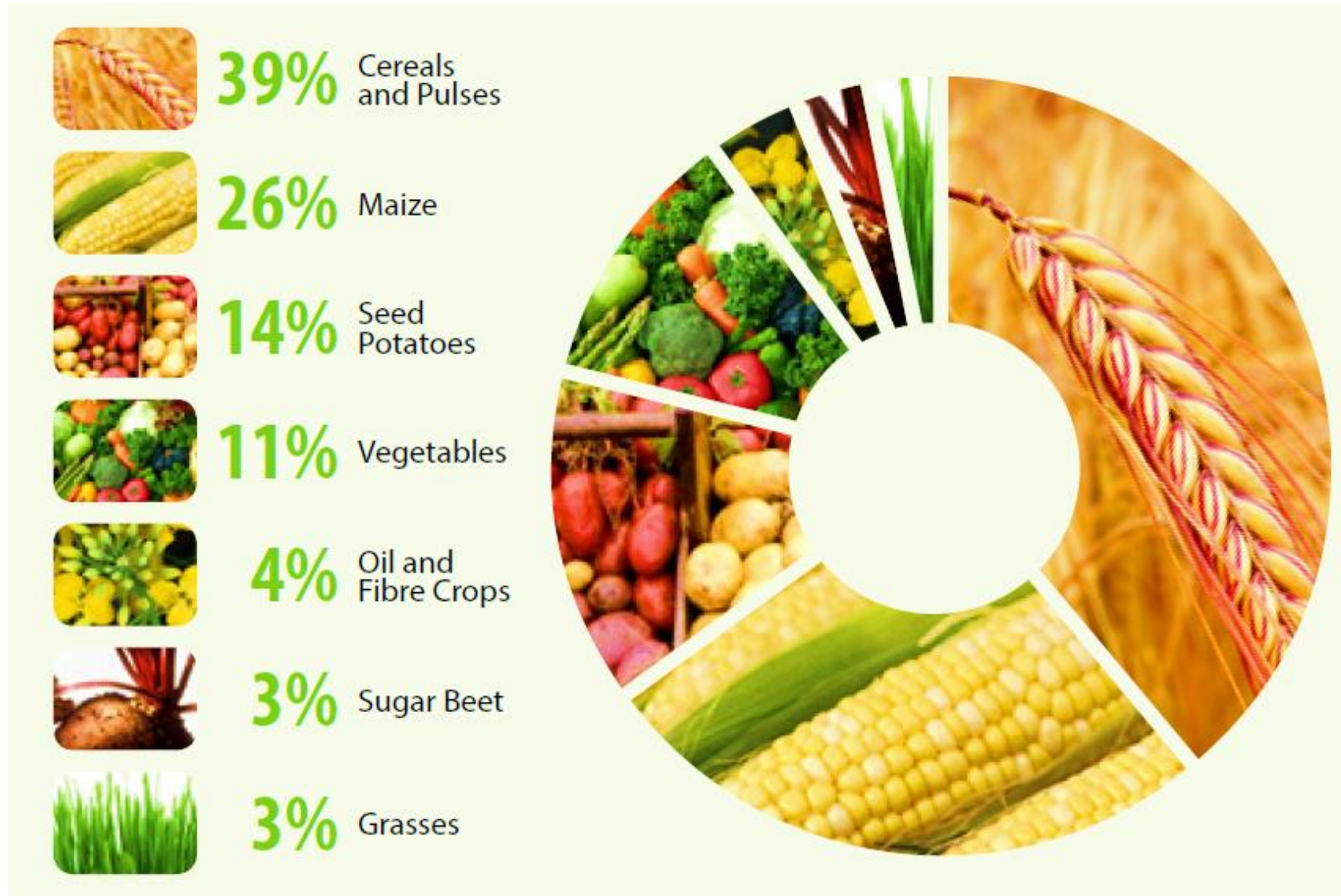


EU SEED MARKET – KEY FACTS AND FIGURE

Item	Figure
Value EU seed market	€ 10 bn
Number of seed companies	7.200
Employment	52.000
Annual R&D Spending	≤ 20% (of turnover)
R&D Stations	750
R&D Employees	12.500
Seed production	1.6 bn ha

Source: Euroseeds

EU SEED MARKET – KEY FACTS AND FIGURES



INNOVATION AND IMPACT

Value seed market EU	€ 10 bn
Farm gate value agric. Products EU	> € 100 bn
Value processed agric. Products EU	> € 1000 bn

Source: Euroseeds

EU SEED MARKET – KEY FACTS AND FIGURES

3.500 New varieties

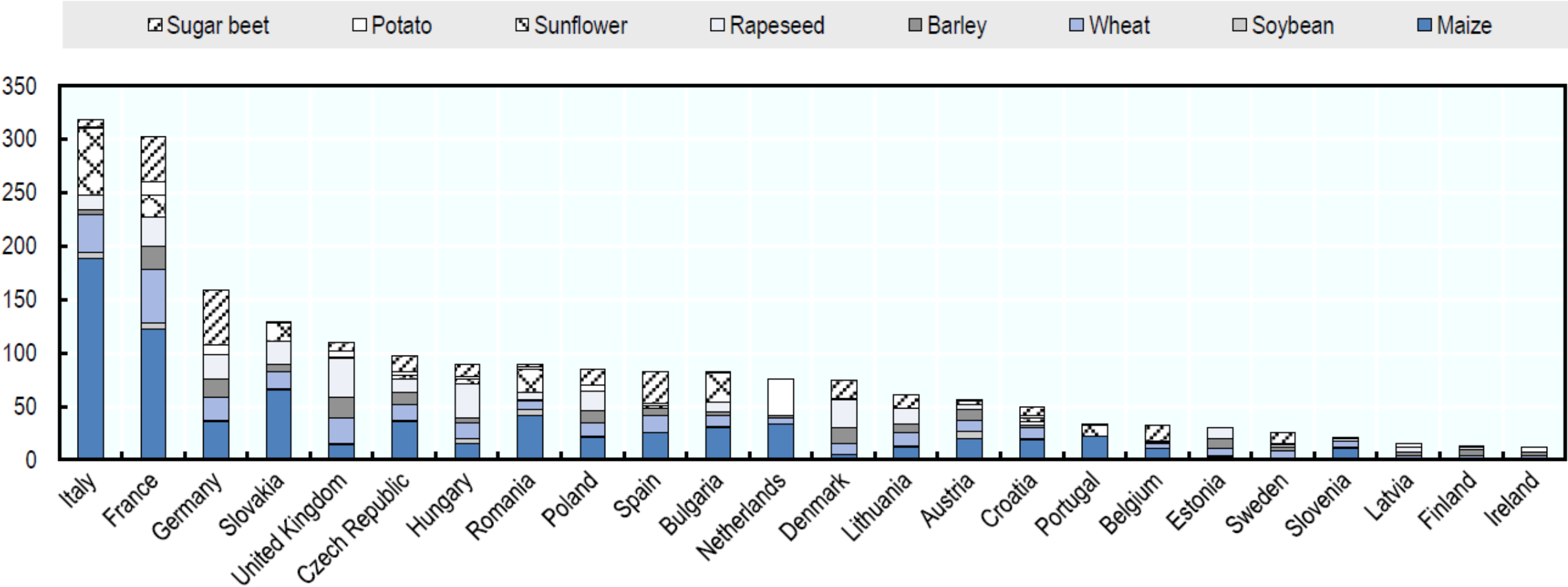
are authorized for marketing within the European Union **each year**.

42.000 Different varieties

of agricultural and vegetable species are available to **farmers** in the European Union.

Source: Euroseeds

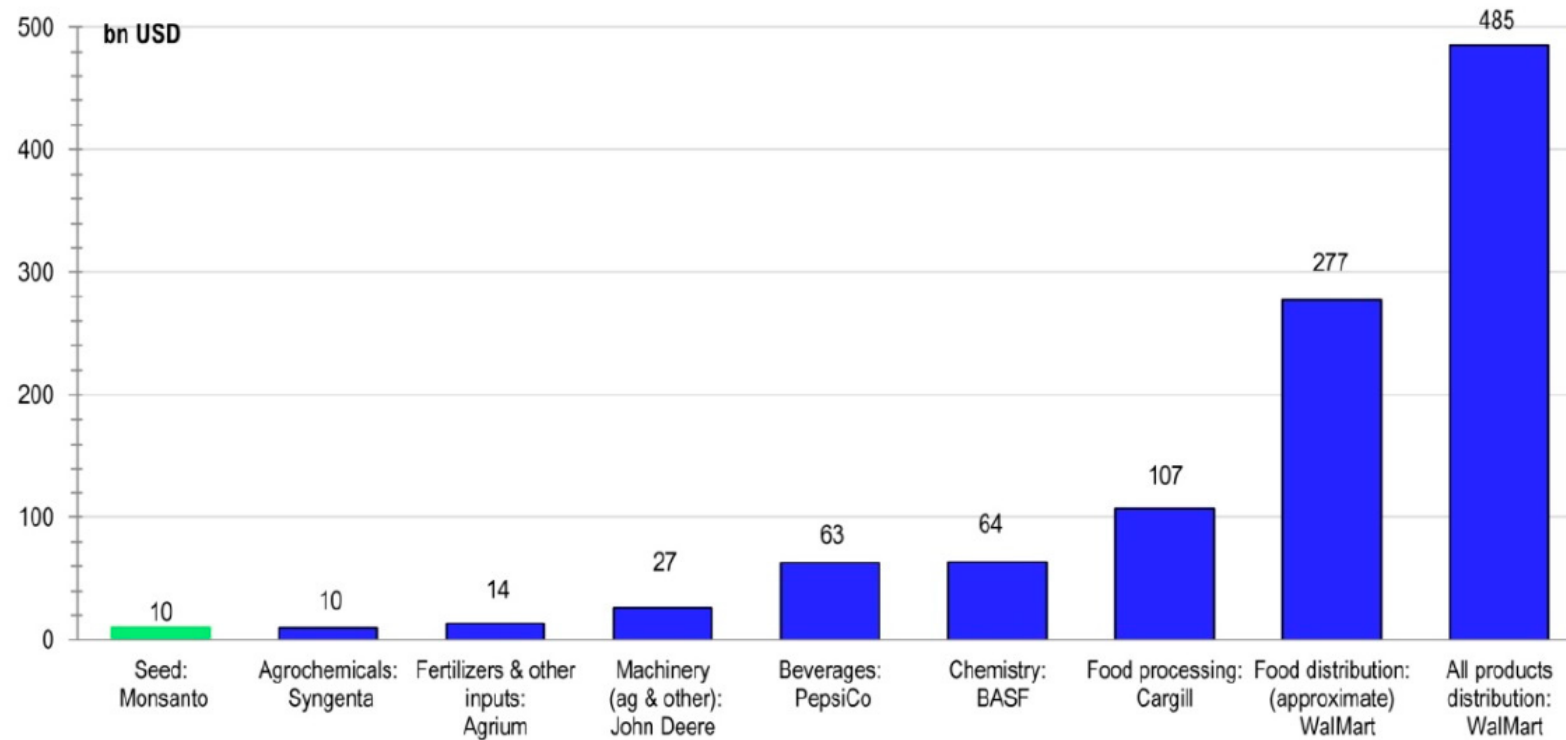
Figure 6.4. Median number of new varieties in the European Union, by country, 2013-2017



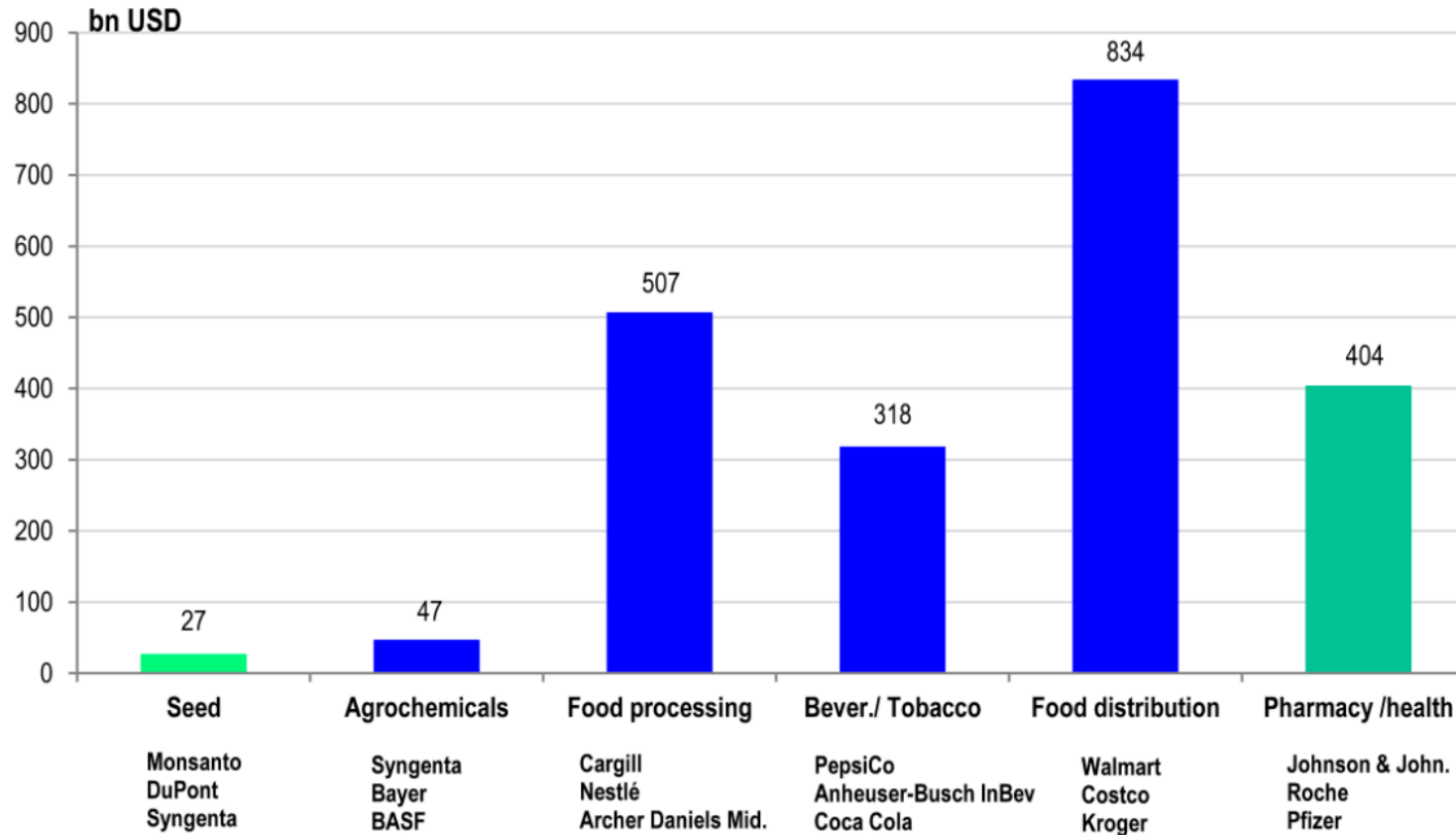
Note: Median number of annual approved applications to the National List, 2013-2017 (based on grant start date).

Source: OECD analysis using the UPOV PLUTO database (version 16 Feb 2018).

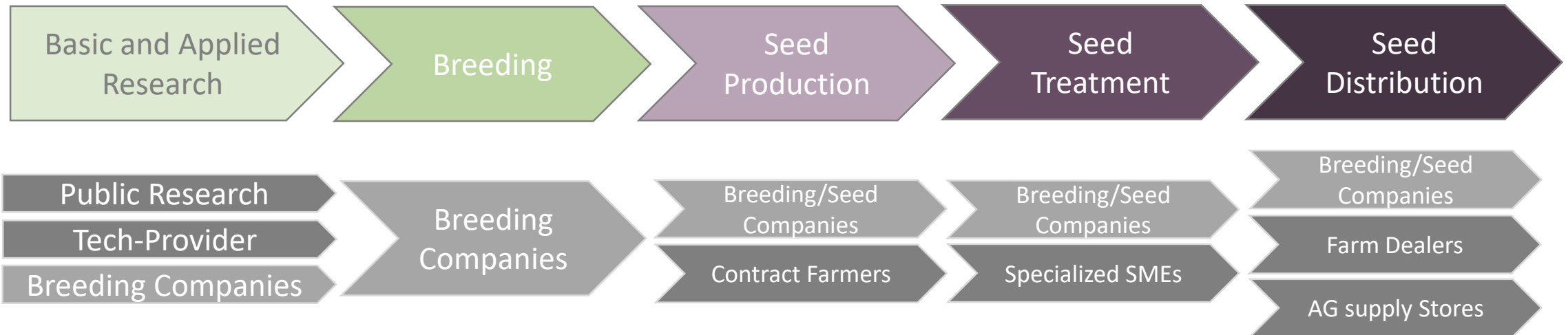
Size of largest company in each sector of the agri-food chain and chemicals globally



Size of top 10 players in the global agri-food chain & pharmacy



The Commercial Breeding and Seed Production Chain



Typical Seed Movement - Vegetables



1. Breeding parental lines
2. Production of parental seed
3. Seed processing
4. Production of hybrid seed
5. Seed processing
6. Commercial packaging
7. Final market

Growth of Seed Trade

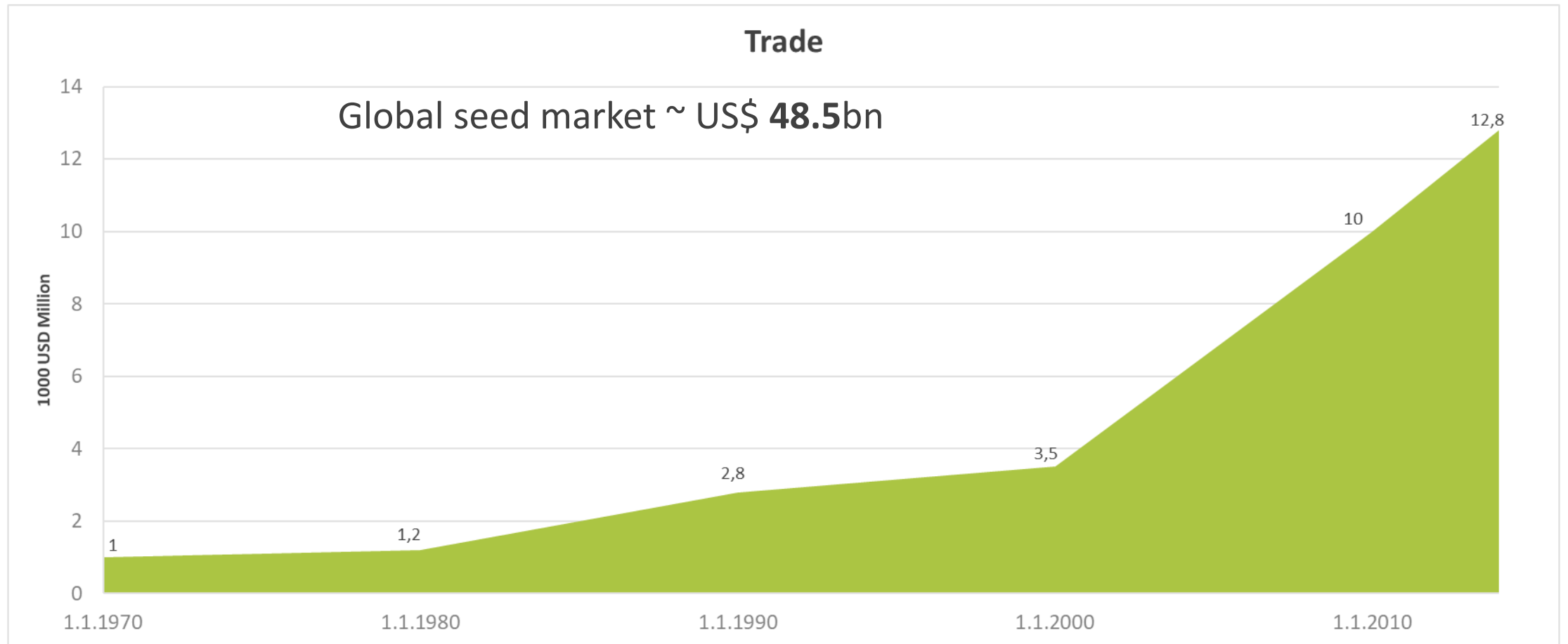
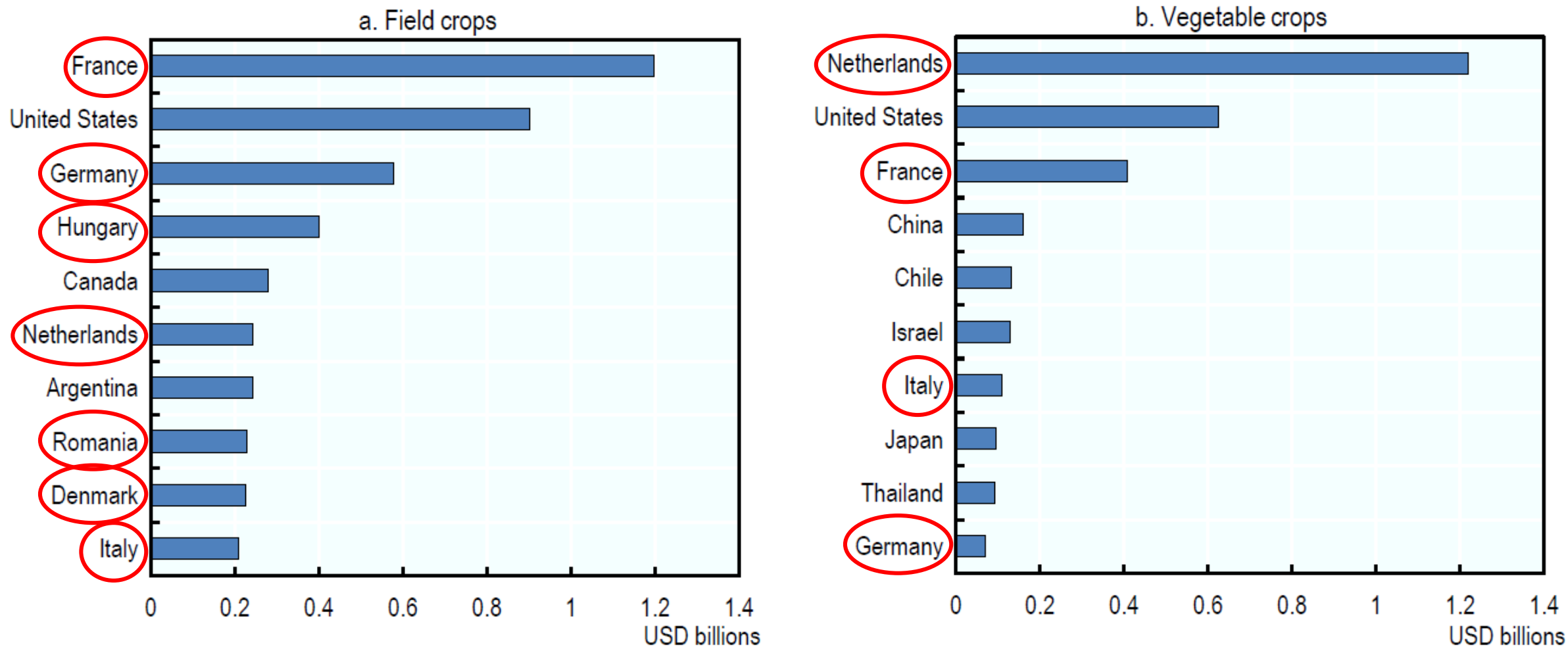


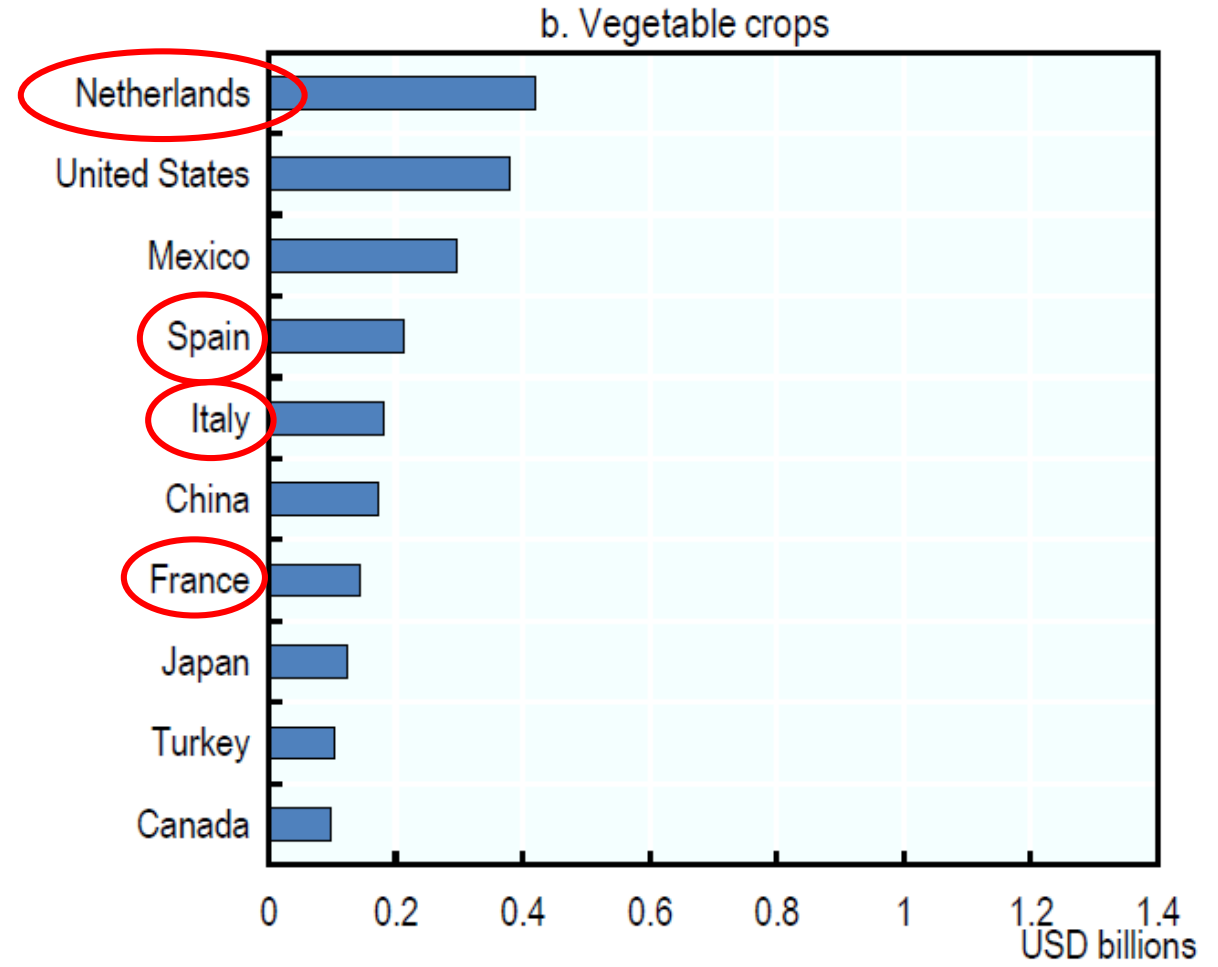
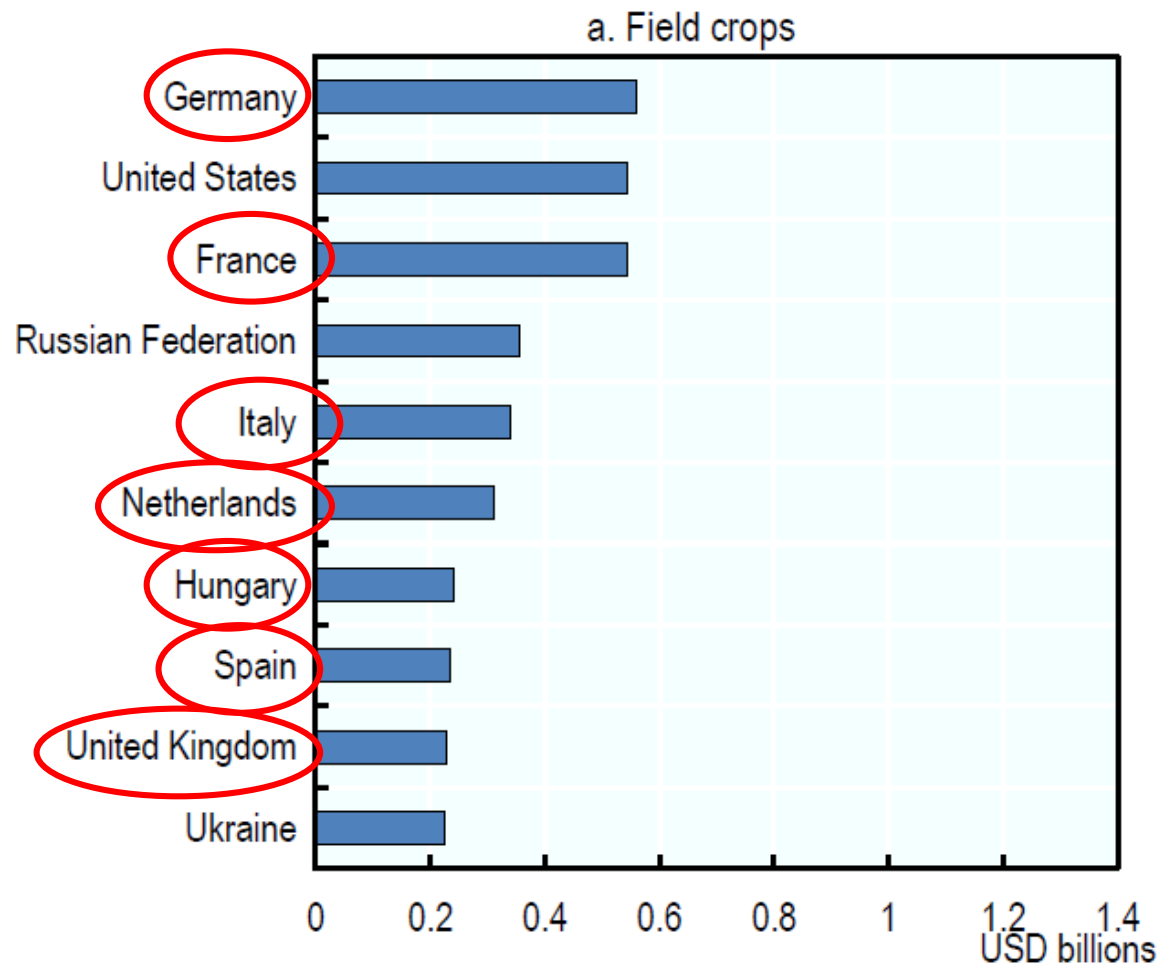
Figure 2.12. Main exporters, 2015



Note: The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Source: International Seed Federation.

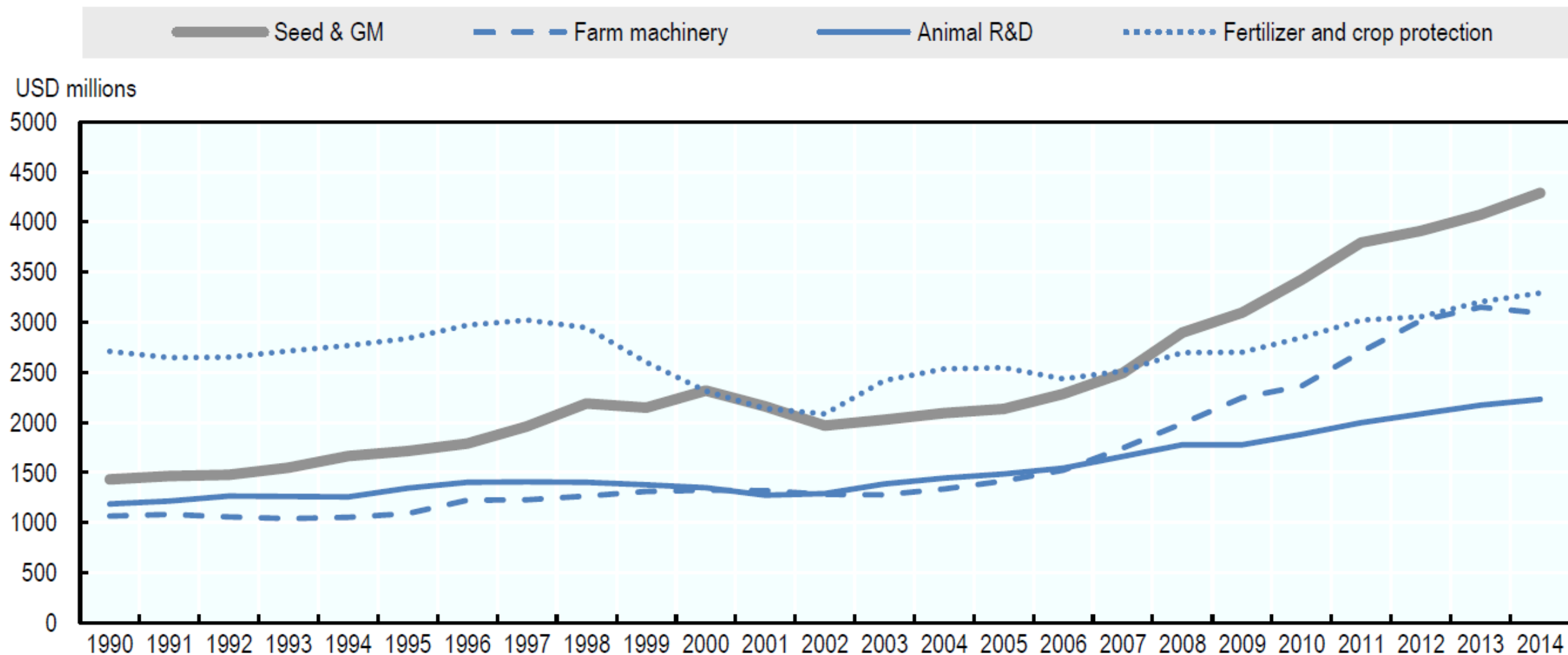
Figure 2.13. Main importers, 2015



Source: International Seed Federation.

<https://www.oecd.org/publications/concentration-in-seed-markets-9789264308367-en.htm>

Figure 2.19. Private R&D by input sector worldwide, 1990-2014



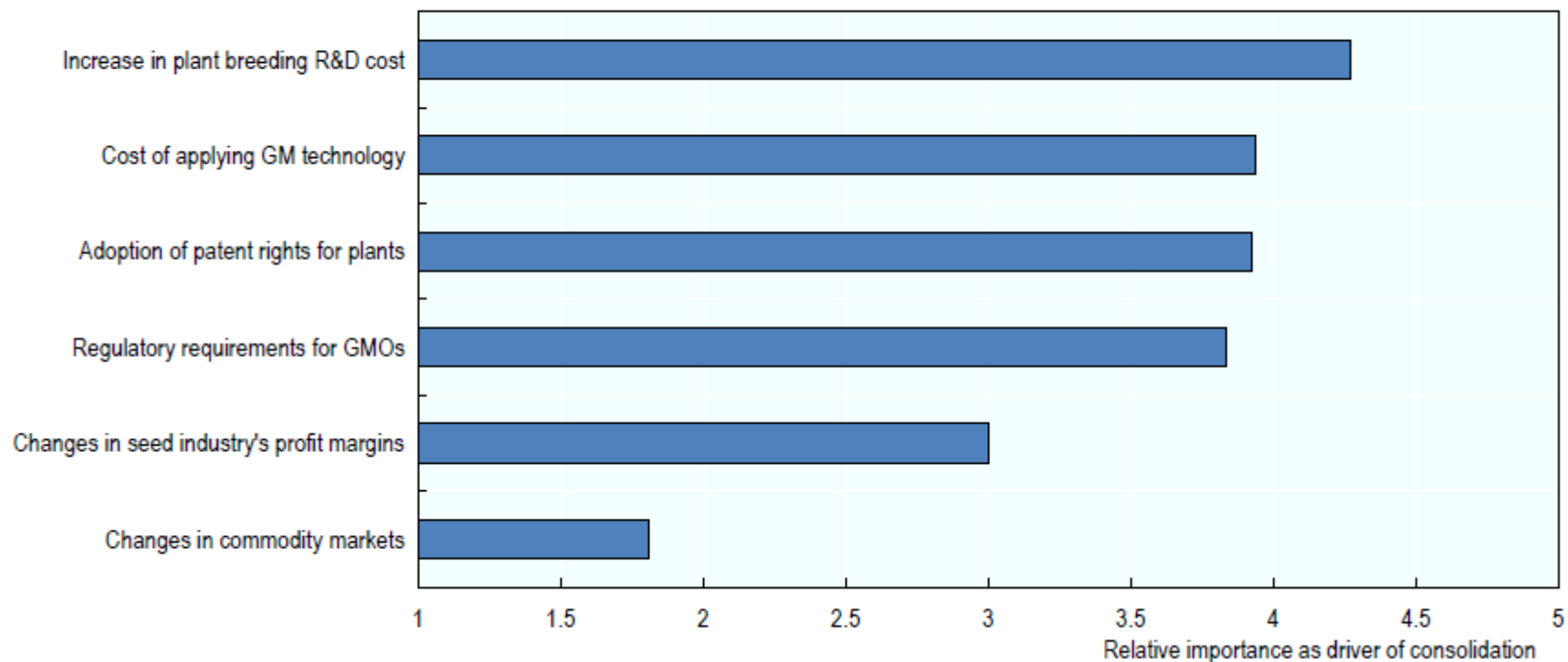
Note: In millions of constant 2005 PPP dollars.

Source: Based on Fuglie (2016_[28]), Tables 3 and 4.

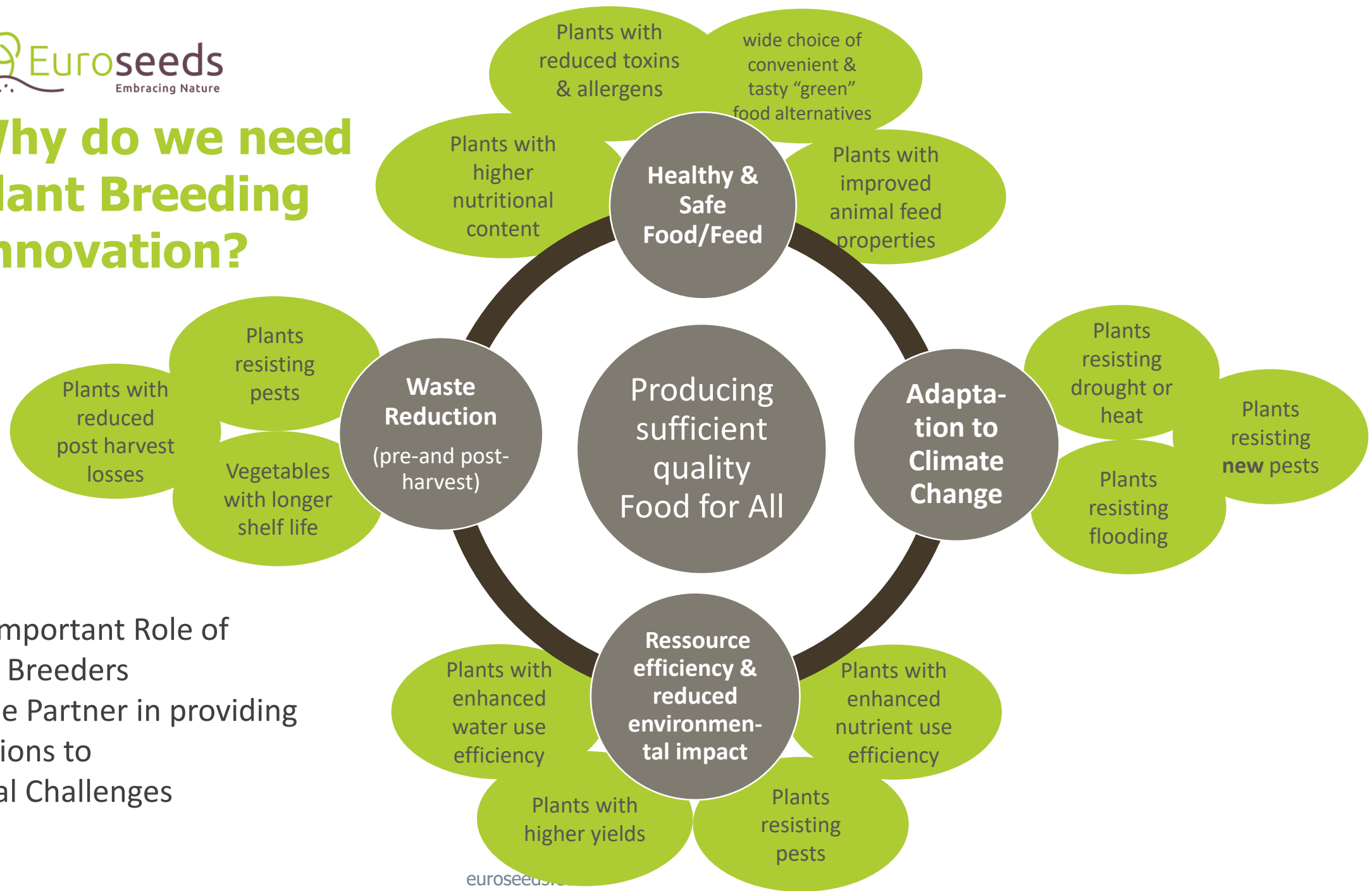
<https://www.oecd.org/publications/concentration-in-seed-markets-9789264308367-en.htm>

Drivers for Seed Industry Consolidation

Figure 3.11. Causes of industry consolidation

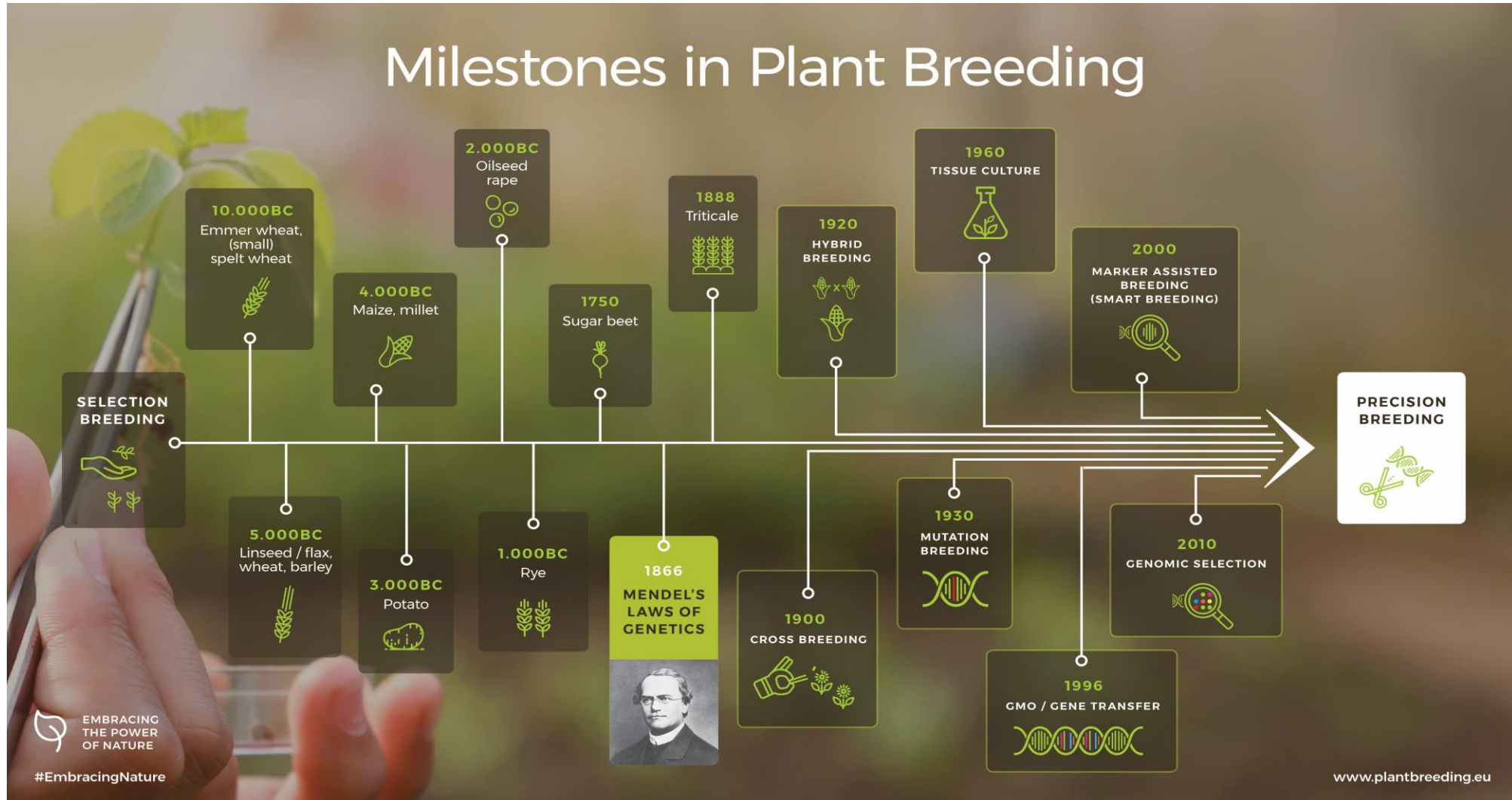


Why do we need Plant Breeding Innovation?

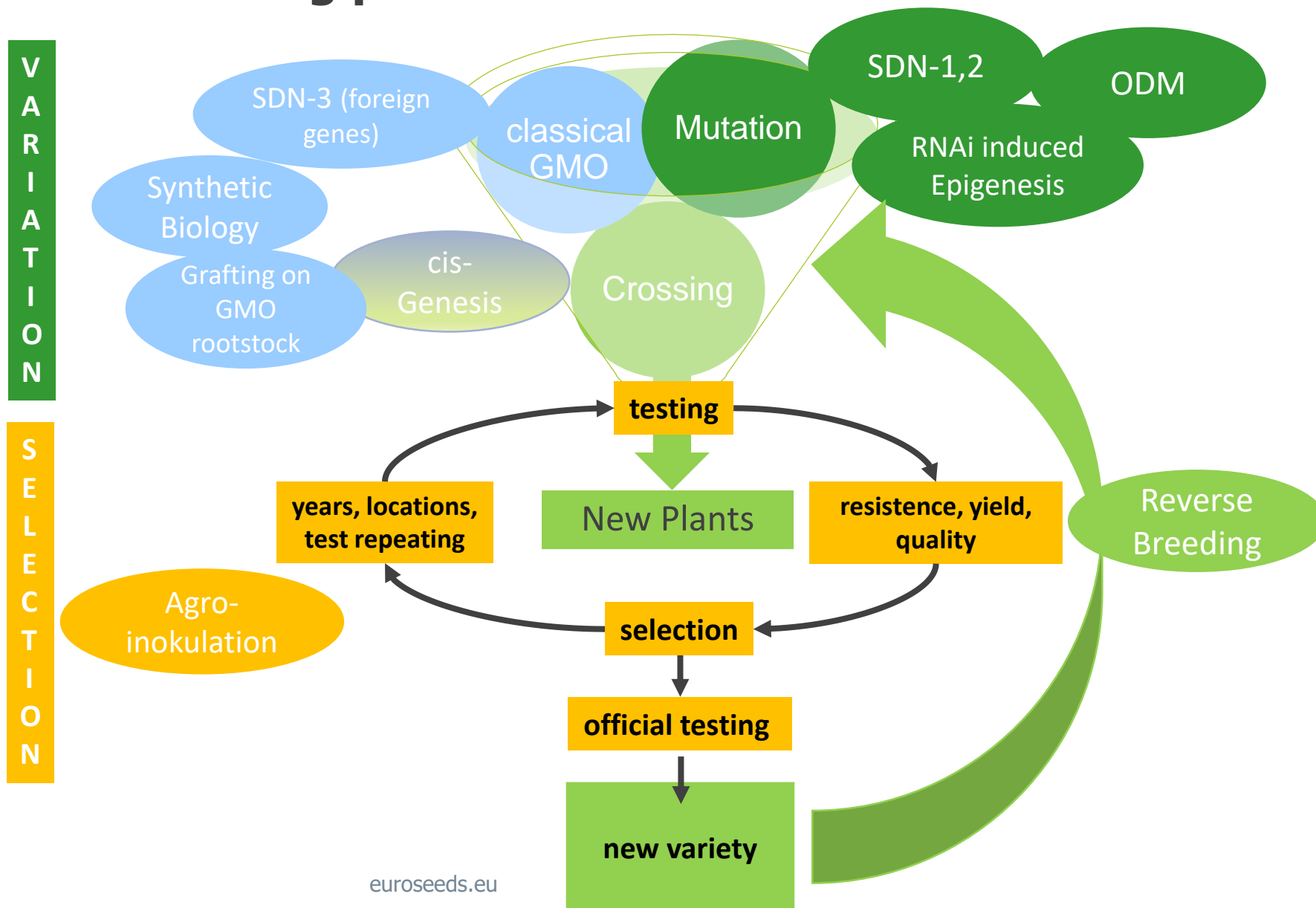


The important Role of Plant Breeders as one Partner in providing Solutions to Global Challenges

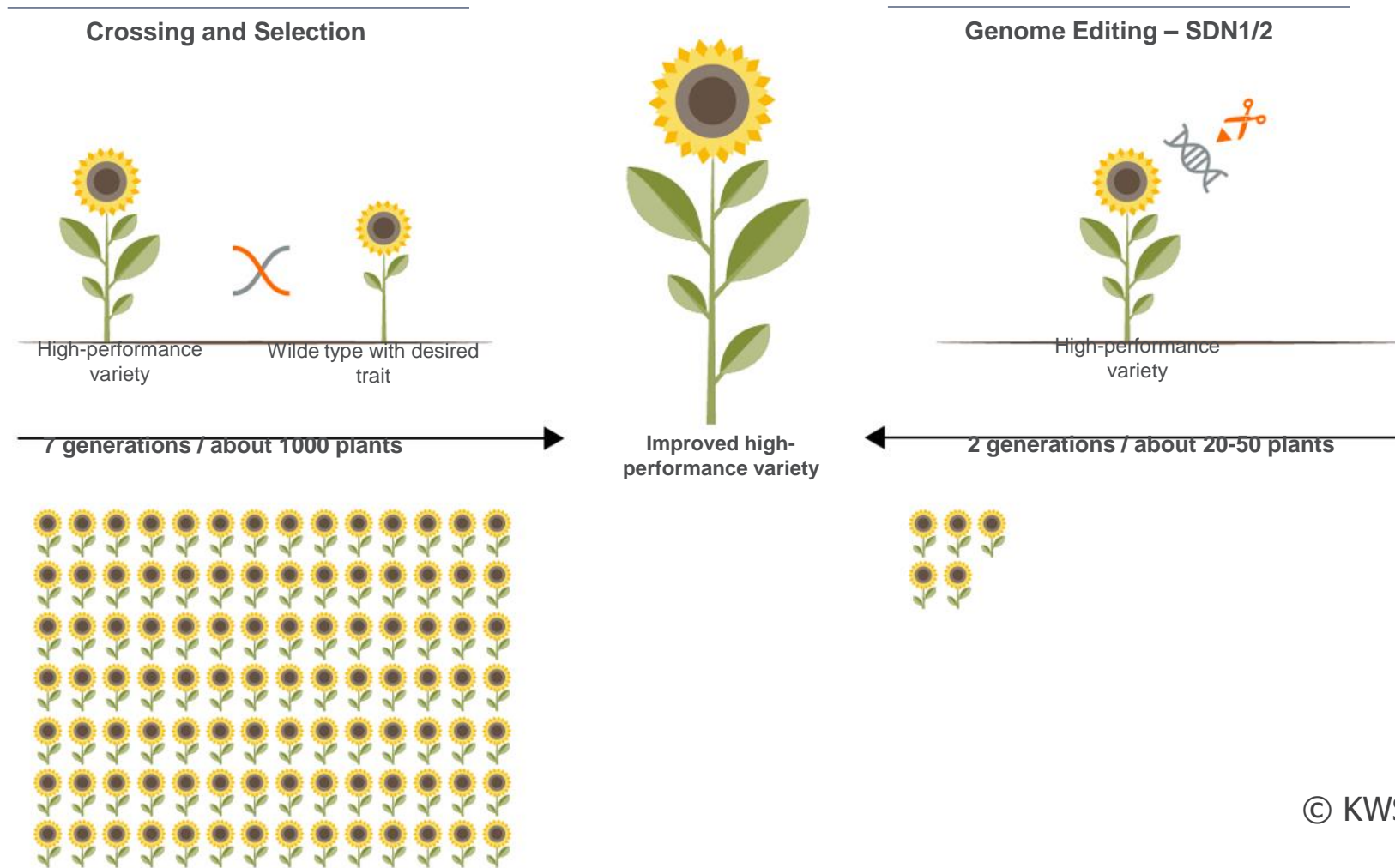
A HISTORY OF CONSTANTLY IMPROVED BREEDING METHODS



How do the latest plant breeding methods fit into the breeding process?



Genome Editing 1/2 is faster and more efficient: the result identical



Examples and benefits of (targeted) mutagenesis breeding products



Waxy corn or potato



- Less chemical and energy use during starch processing
- Clean Food Label



Non-browning mushroom



- Less food waste



Powdery mildew-resistant wheat

Gluten-free wheat



- Less pre-harvest losses and less pesticides
- Avoid food intolerance



High Oleic Acid Soybean Oil*



- No Trans Fatty Acids – healthier Food

*first product on US-market (<http://www.calyxt.com/first-commercial-sale-of-calyxt-high-oleic-soybean-oil-on-the-u-s-market/>)

GENETIC RESOURCES AND IMPROVED SEEDS CONTRIBUTE TO THE UNITED NATIONS' SUSTAINABLE



More than 150 world leaders adopted the 17 Sustainable Development Goals (SDGs) to help address global challenges such as poverty and environmental degradation, at an historic United Nations Summit in September 2015.



SDG2
More productive, reliable harvests mean fewer people going hungry.



The SDGs all have targets and indicators. Under SDG2, for example,

Target 2.5 includes:

- genetic diversity of seeds and cultivated plants,
- soundly managed seed and plant banks,
- access to and fair sharing of benefits.



SDG1
More productive, reliable harvests help farmers escape from poverty.



SDG8
Improved seeds increase productivity and revenue for farmers.



SDG13
Improved seeds help farmers adapt to climate change.



SDG15
Access and Benefit Sharing schemes help protect vital ecosystems.



SDG17
Public and private sectors collaborate to protect genetic resources.

Source:
<https://www.worldseed.org/wp-content/uploads/2019/07/ISF-Guide-on-Genetic-Resources-2019.pdf>



Avenue des Arts 52
1000 Brussels

www.euroseeds.eu

#EmbracingNature

