

A close-up photograph of a cluster of bright yellow rapeseed flowers with green buds and stems, set against a blurred background of more flowers.

Trends & Challenges in the OSR Market

Version | September 2021

SEEDING
THE FUTURE
SINCE 1856



Our success story began over 160 years ago with a sugar refinery near Magdeburg



1856
Sugarbeet



1955
Corn

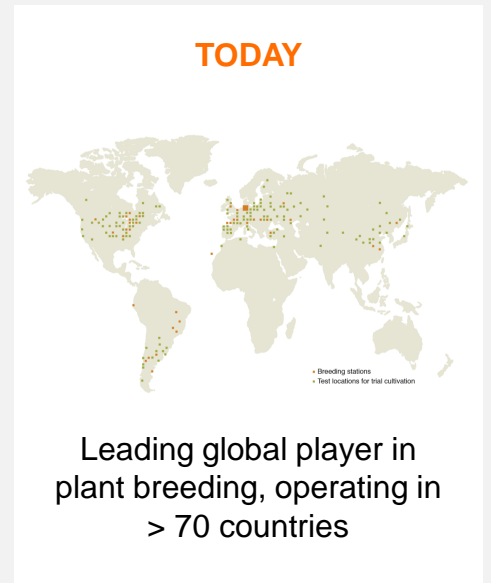


1920
Cereals

1945
**New Start
in Einbeck**



2019
Vegetables



Today we rank among the top 5 companies for plant breeding (KWS fiscal year 2019/2020)



NET SALES
in Million €

1,283

COUNTRIES
Globally

>70

EMPLOYEES
Globally

5,709

INNOVATION
in % of Net Sales

18.4

**YIELD PROGRESS IN
EARNINGS** Crops Ø p.a. in %

1-2

Ranking

by sales with agricultural crops

Global

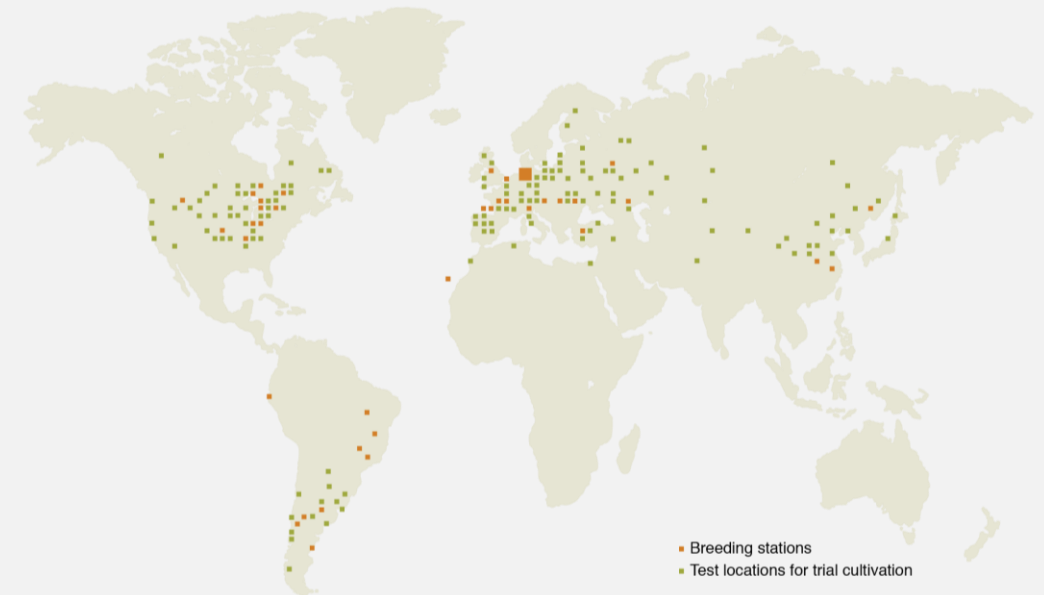
1. Bayer
2. Corteva
3. Syngenta Group
- 4** KWS
5. BASF

Europe

1. Corteva
- 2** KWS
3. Bayer
4. Vilmorin
5. Syngenta Group

Sources: AgbiolInvestor 2020 and KWS estimates. Ranking considering Field Crops seed sales

Breeding stations and field trials



KWS in the OSR Market



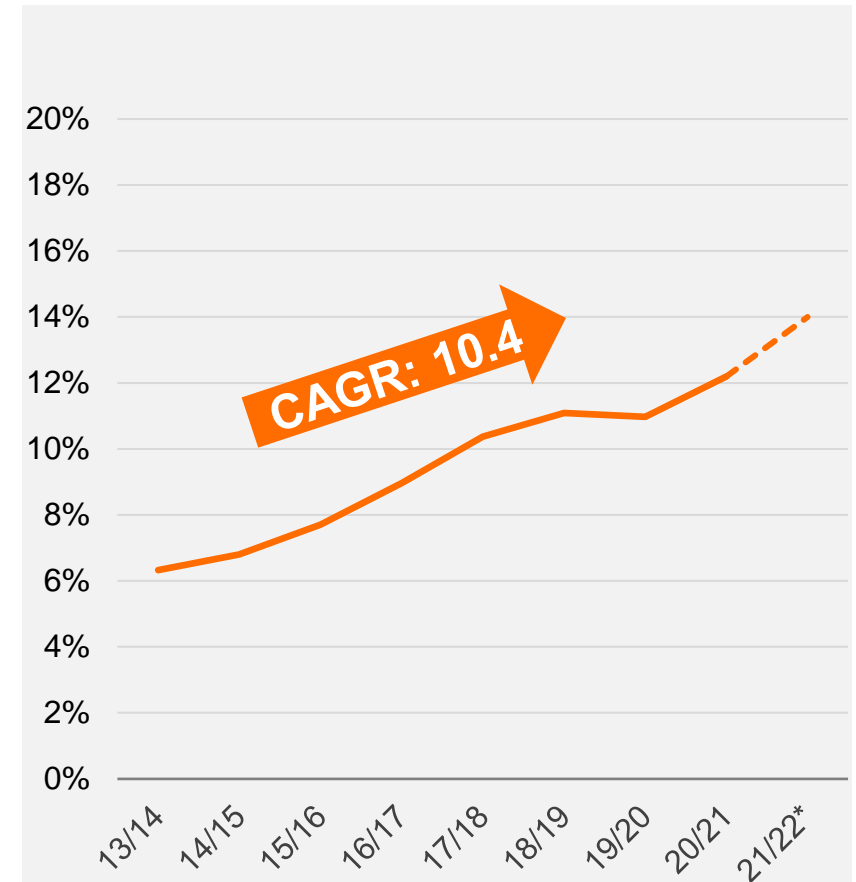
Currently Biggest variety: **Umberto KWS**

Variety with longest sales: **Triangle (19 years)**

Number of Breeding Programs: **2 (Maritime ; Continental)**

Number of OSR plots tested/year: **77.740**

KWS Market Share



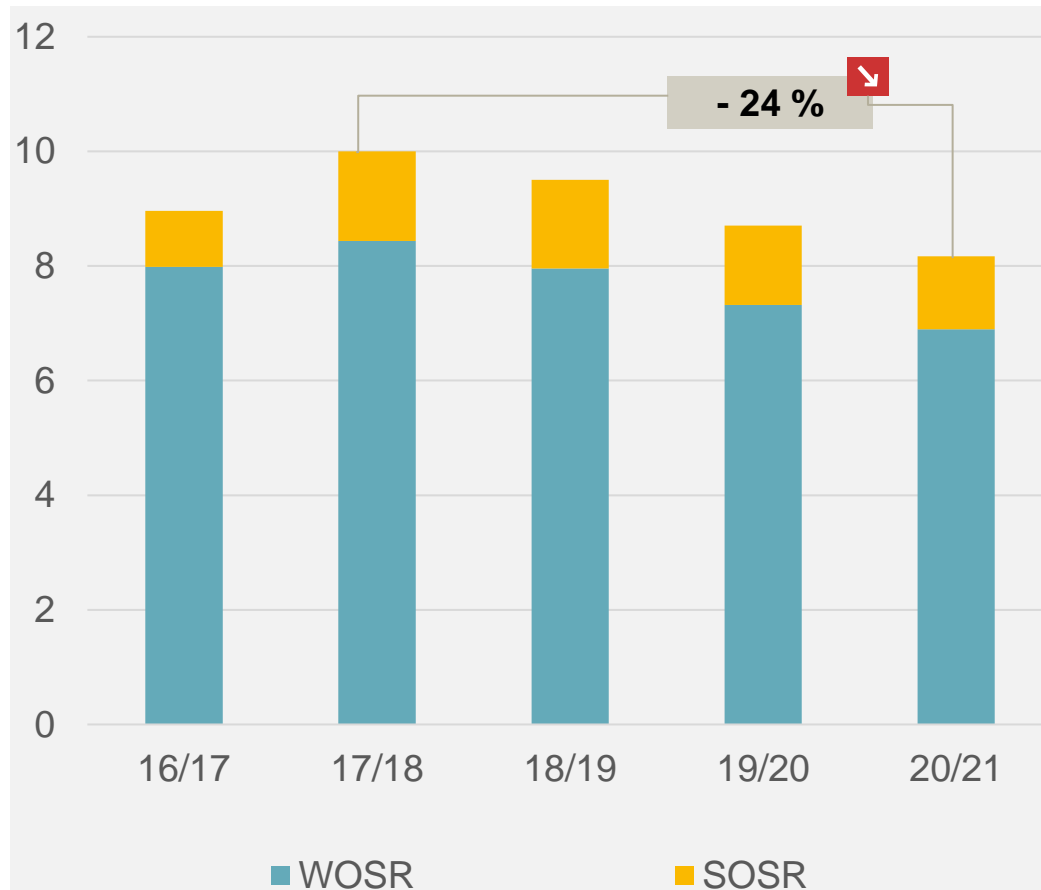
*Internal Estimation

**HOW will OSR Production
develope in coming years?**

Challenges in OSR Production



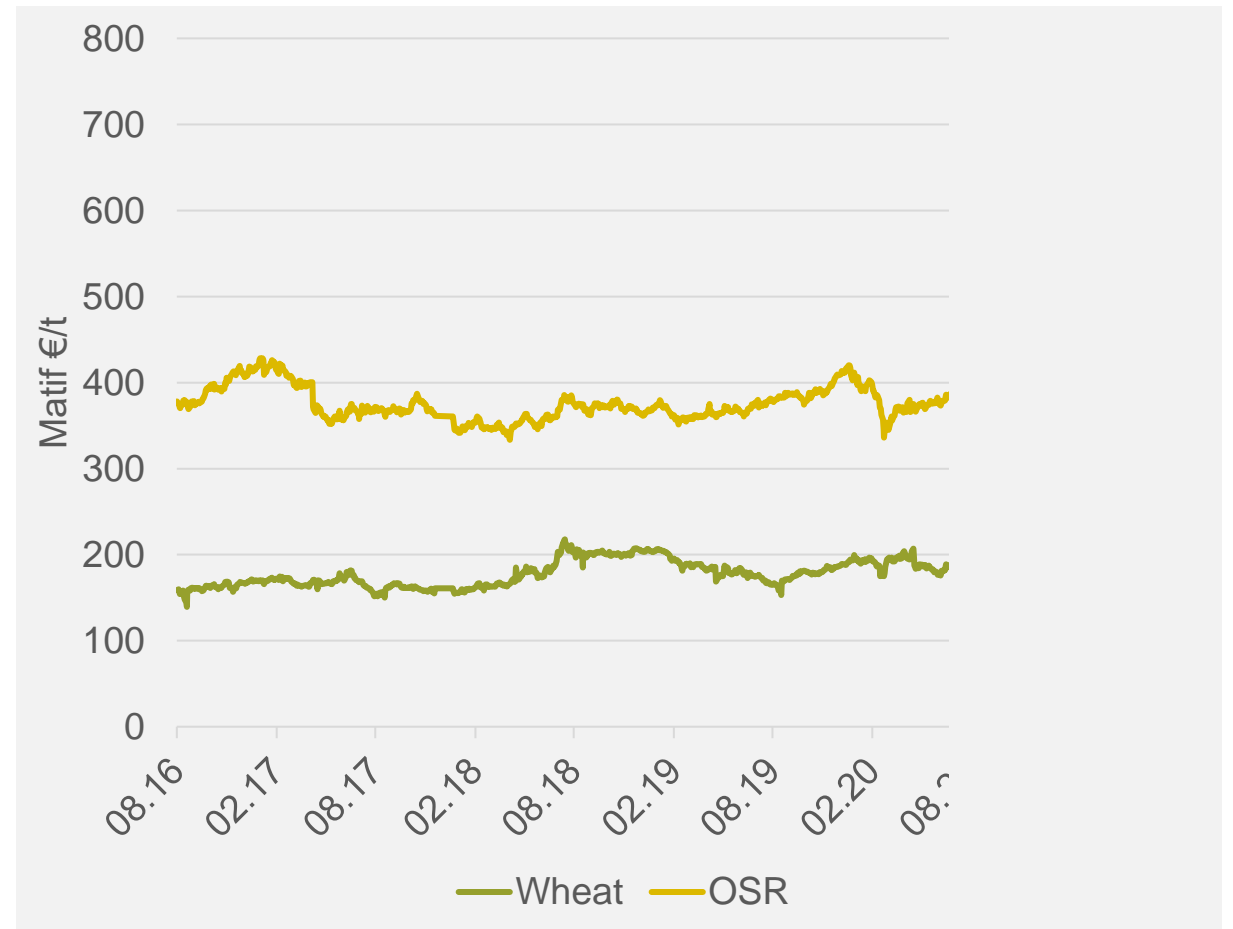
OSR acreage in Europe Mio ha



Source: Kleffmann



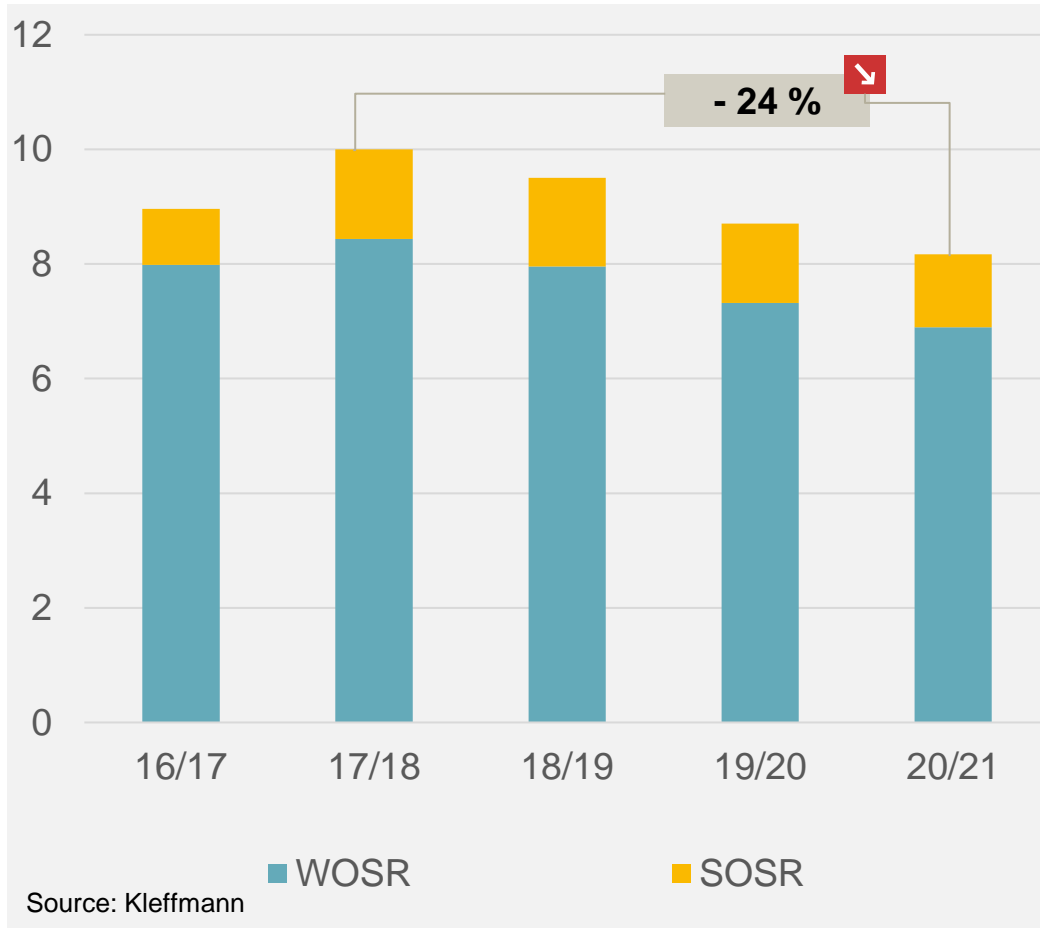
Matif OSR and wheat price



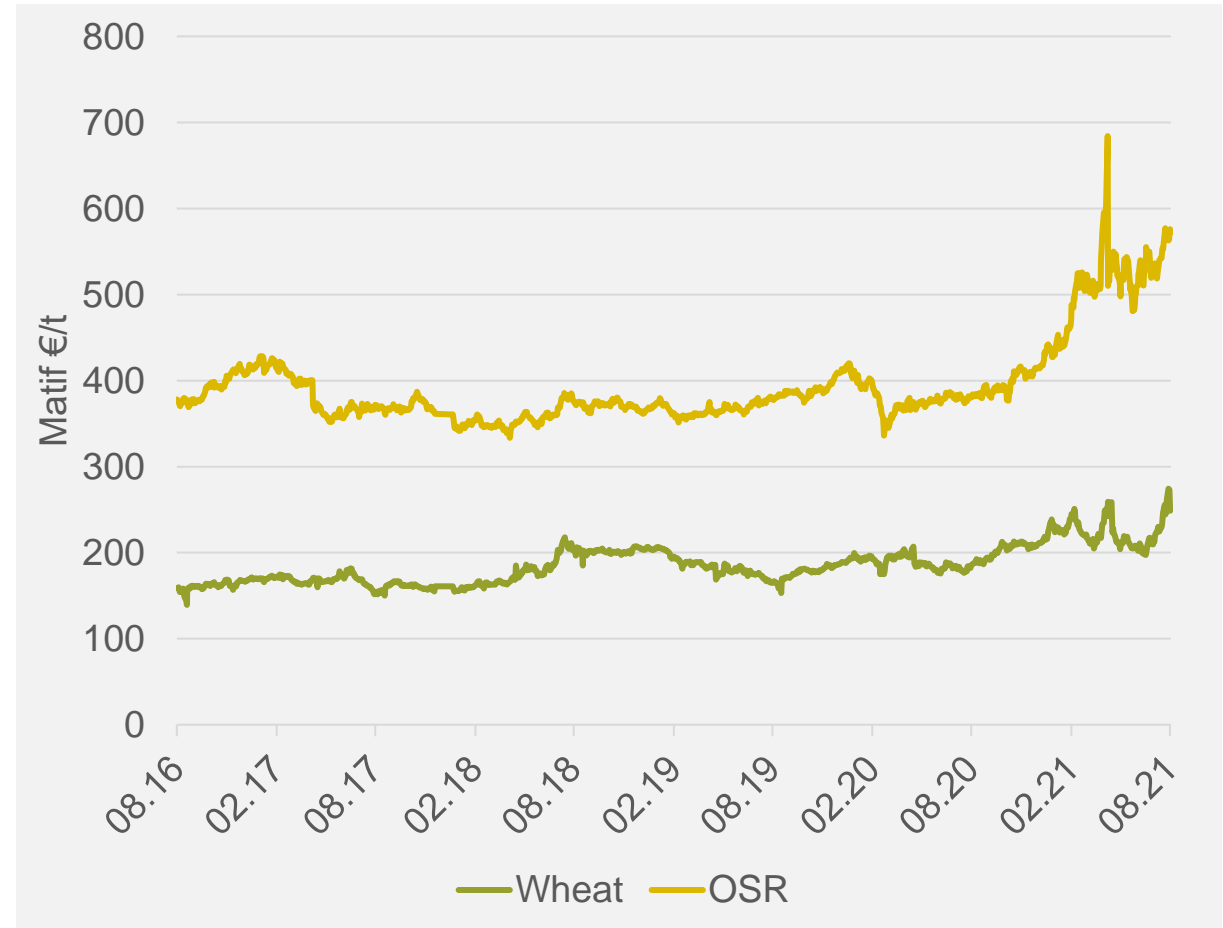
Challenges in OSR Production



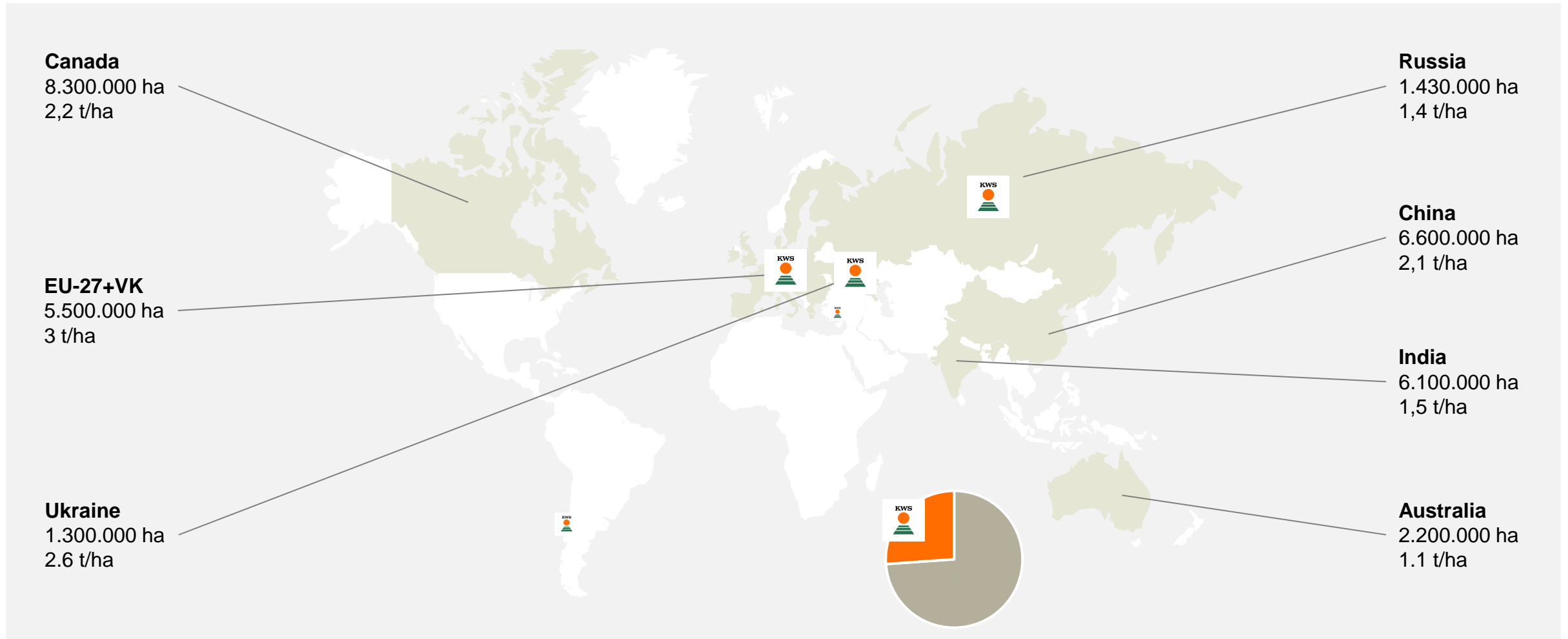
OSR acreage in Europe Mio ha



Matif OSR and wheat price

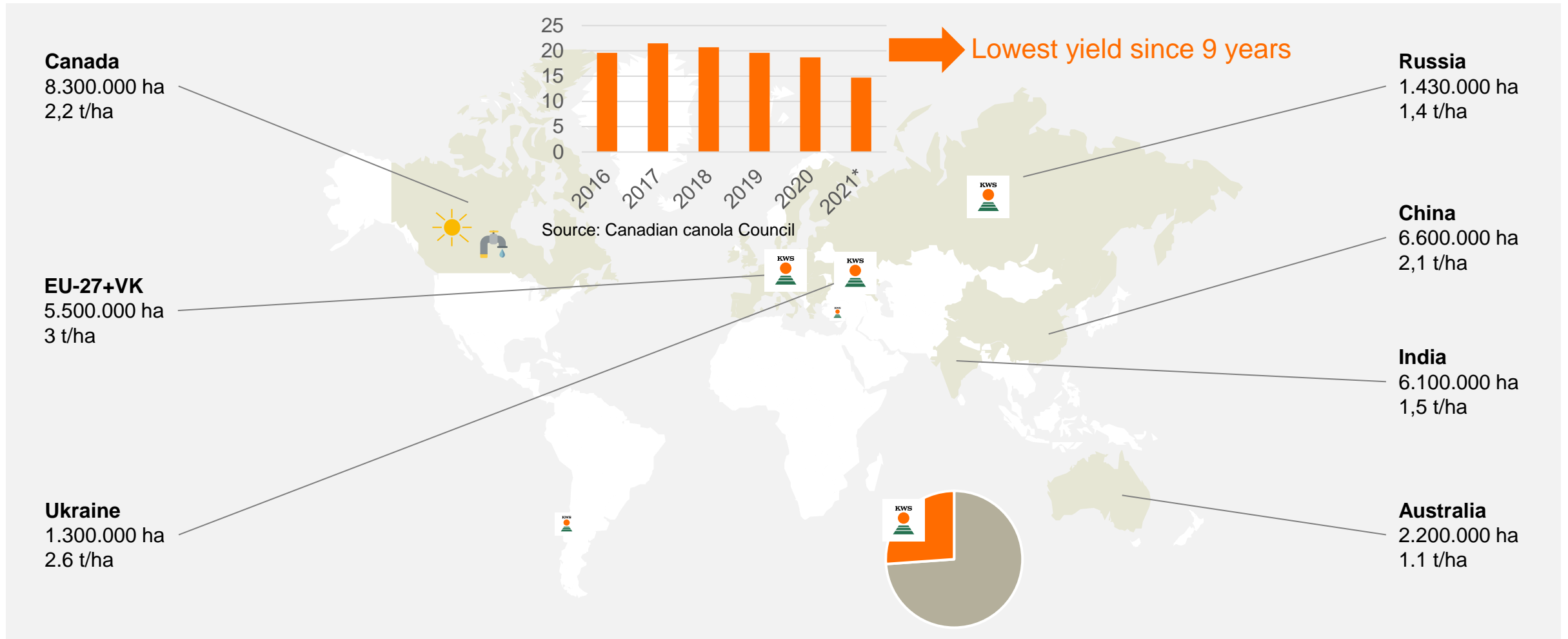


OSR Main Markets and KWS activities



Marked are the 7 biggest OSR producer by acreage (FAOSTAT, 2019)

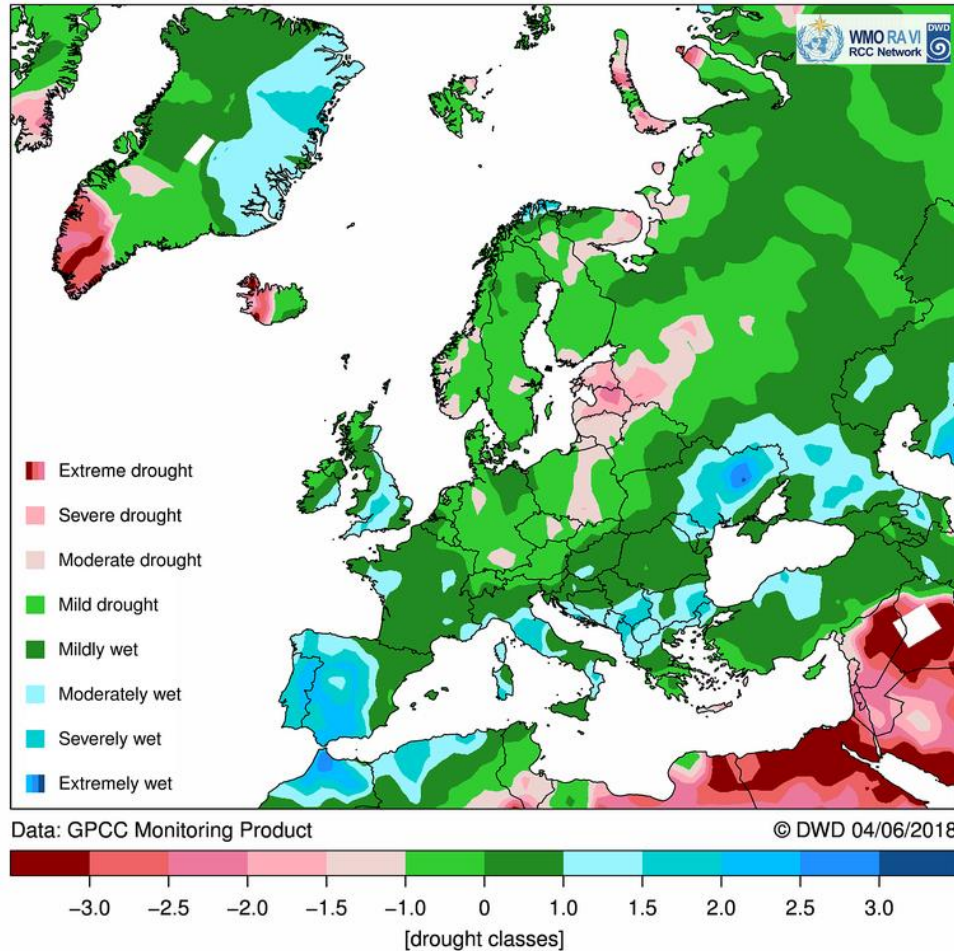
OSR Main Markets and KWS activities



Marked are the 7 biggest OSR producer by acreage (FAOSTAT, 2019)

Weather becoming more and more extreme...

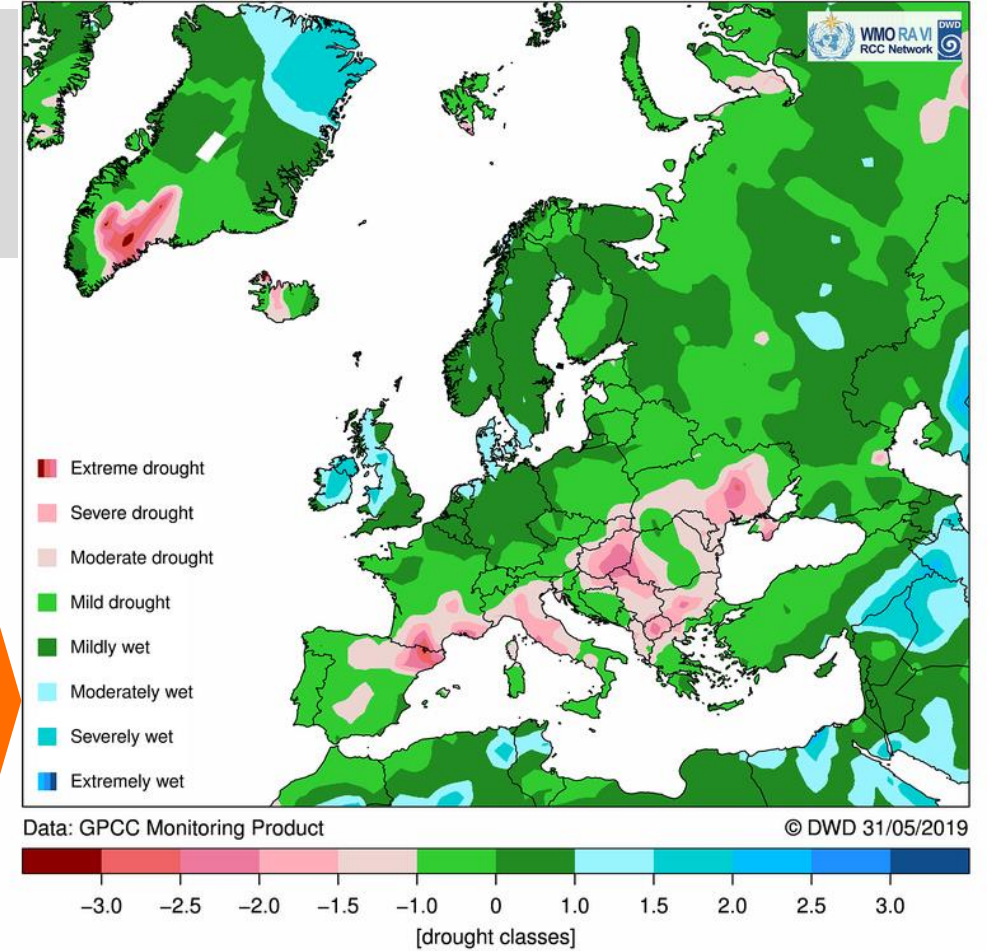
March 2018



- Wet
- Many diseases
- Little sunshine

- Drought
- Heat
- Lots of sunshine

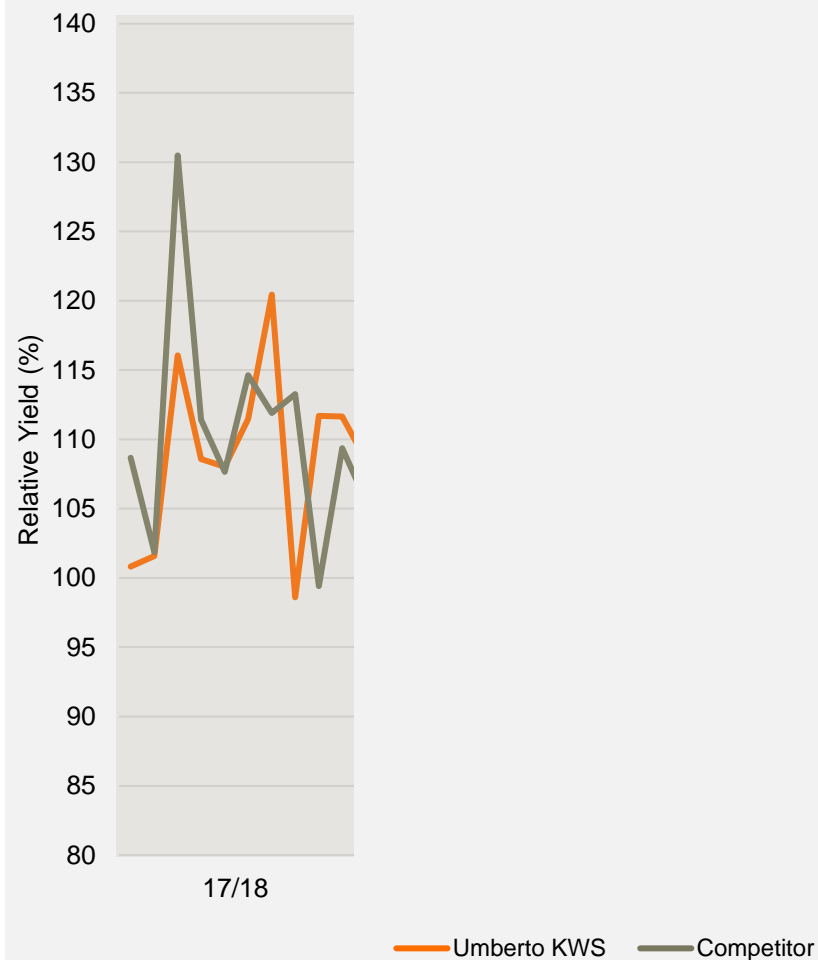
March 2019



Yield Stability is key in unpredictable environments



Umberto KWS vs. Main competitor

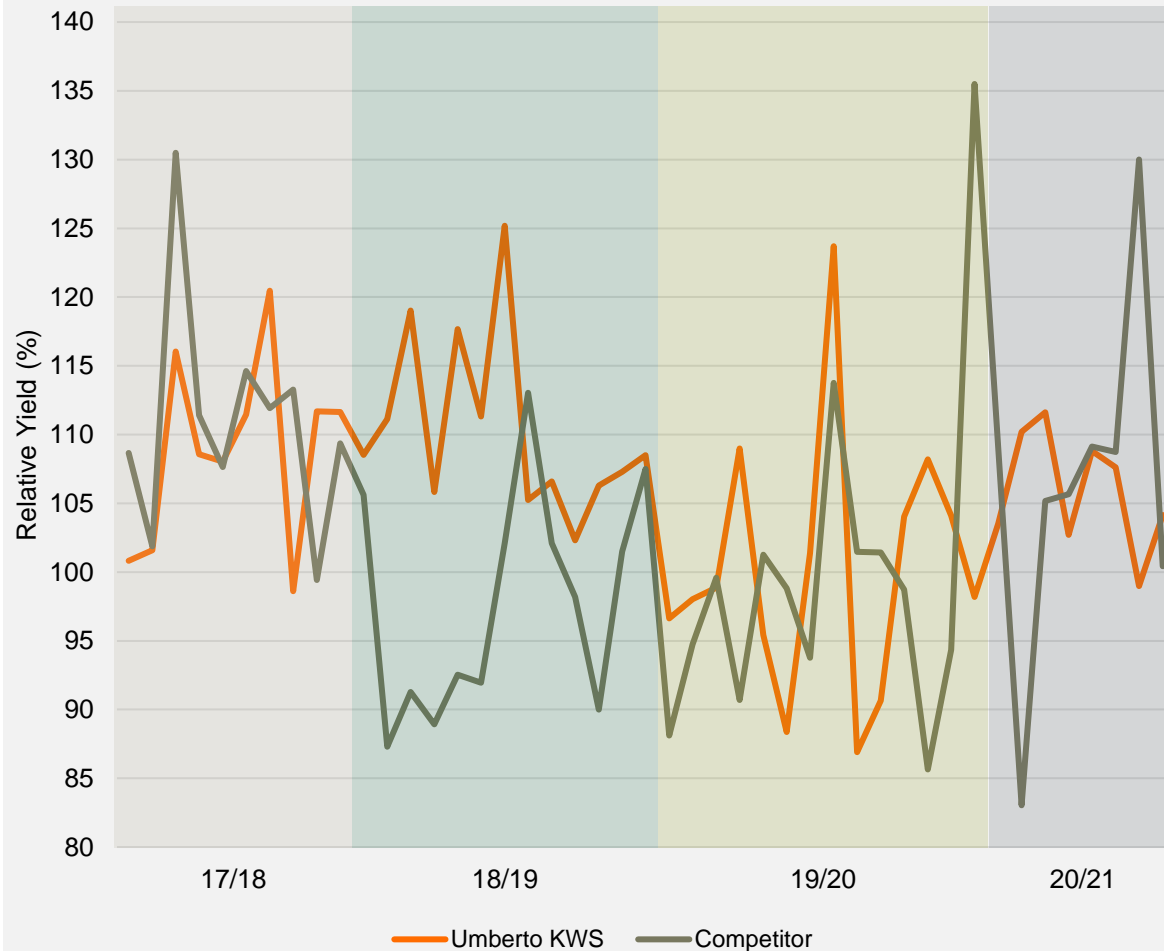


Which variety to
Chose?

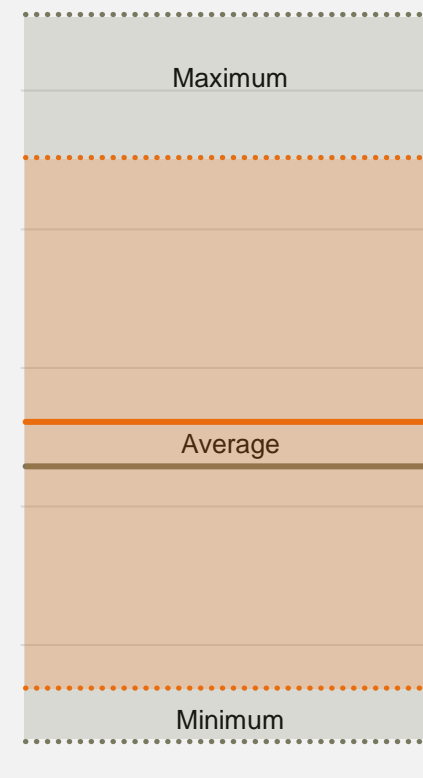
Yield Stability is key in unpredictable environments



Umberto KWS vs. Main competitor



Range of Results

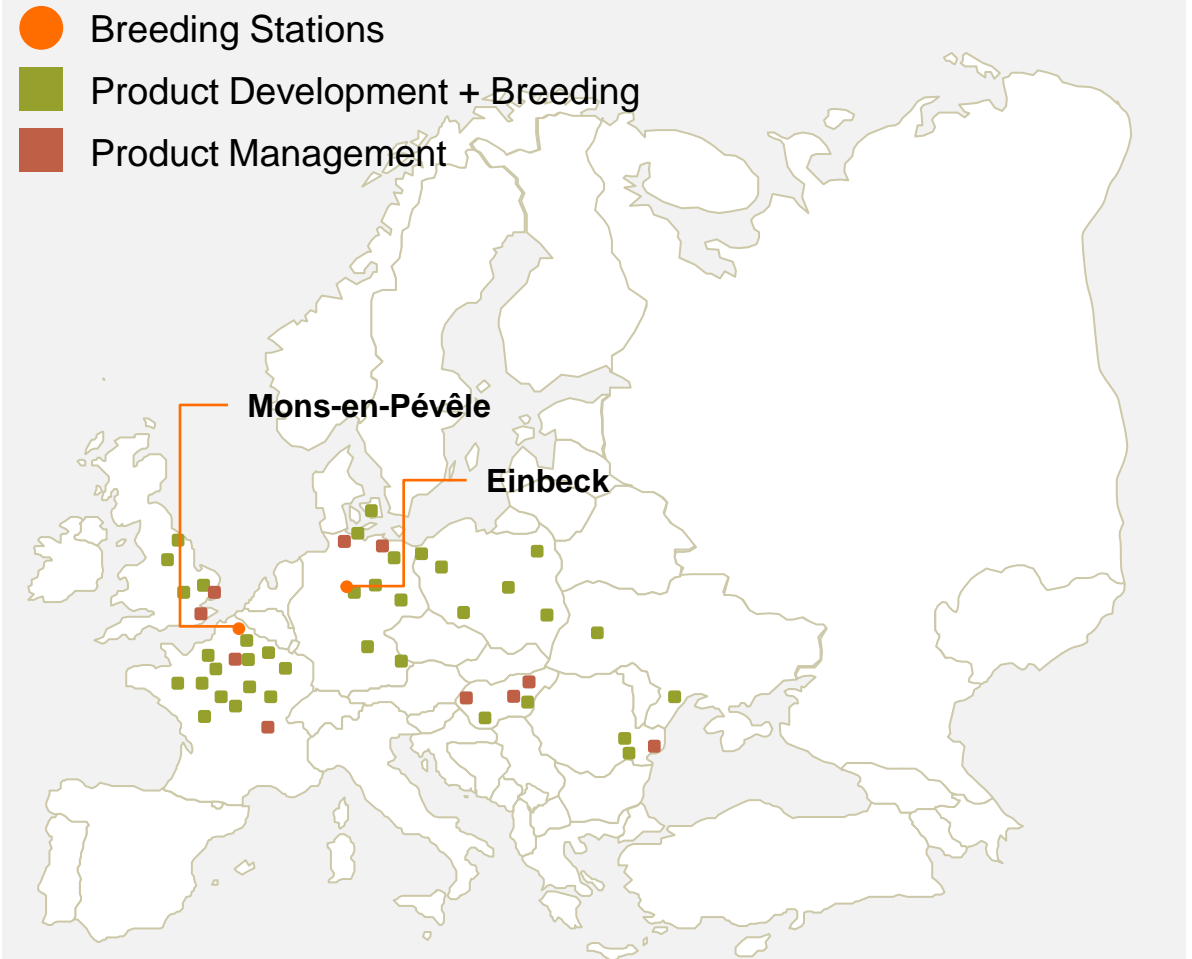


Data Sources

- Internal Product Development Trials (Agroservice Trials)
- Total:
 - 45 location over 4 years
- Countries:
 - France, Hungary, Romania

Trial network

- 47 locations in 8 different countries
- Competitor checks included (overall standard + market specific ones)
- Covering many differences:
 - Weather conditions
 - Soil types
 - Growing conditions (i.e. insect/disease pressure)
 - Vegetation period



Regulatory challenges on European OSR market



- Further restrictions on Plant Protection
- Increasing restrictions on Fertiliser usage
- Overall extensivisation

KWS Breeding – Innovator in OSR

New Phoma
resistance RLMs



First variety with low
attractivity for larva of
Cabbage stem Fleabeetle*

Variety	Number of Flea-beetle Larves
Feliciano KWS	3.2/plant
Competitor 1	3.8 / plant
Competitor 2	
Competitor 3	
Competitor 1	4.3 / plant
Competitor 1	
Competitor 4	
Competitor 5	
Competitor 6	

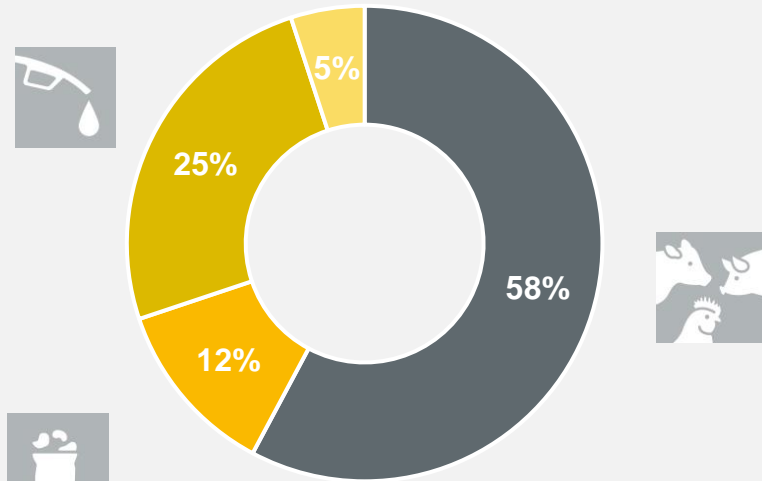
Nutrient efficient
varieties
→ Breeding trials under
reduced input



World vegetable oil-demand increasing



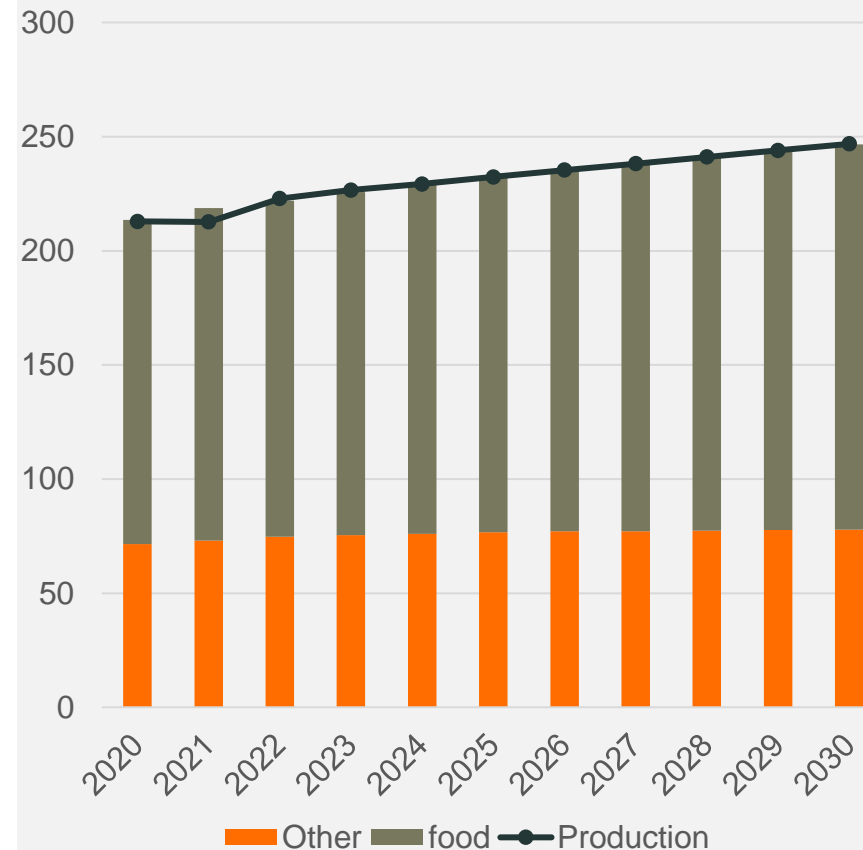
Fate of OSR (Oil and Protein)



■ Animal Feed (Residues from oil production) ■ Human Nutrition
■ Biofuels ■ Technical oils

USDA (FC 2018/19)

World vegetable oil demand & Production in Million tons



Source: OECD-FAO
Agricultural Outlook 2021-2030

In a Nutshell

- Growth of vegetable oil demand coming from food demand in developing countries
- No further increase in bio-fuel production
- Production can cope with demand

- Acreage
 - Volatility will increase due to climatic conditions
- Prices
 - High volatility but increasing trend
 - Reduced stocks
 - Increasing demand
 - Increasing production risks world wide
- Regulatory
 - Pressure from regulatory will continue
 - Less chemical solution
 - Fertilization



Breeding is
preparing you for
the unexpected

Rise a champion.



Thank you