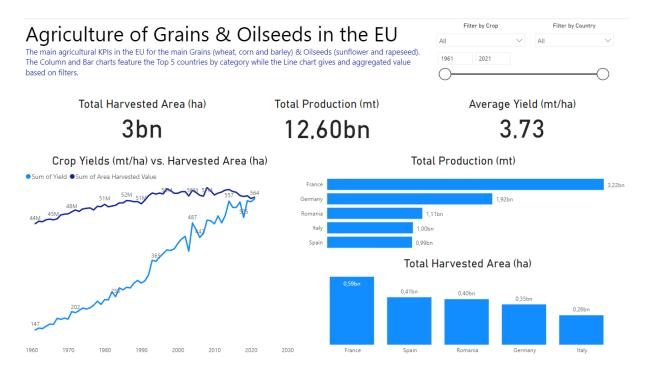
Agriculture of Grains and Oilseeds in the EU dashboard

Overview

This dashboard tracks the main agricultural KPIs in the EU for the main Grains (wheat, corn and barley) & Oilseeds (sunflower and rapeseed) from 1961 to 2021.



Business Questions

The dashboard can be used to answer the following questions:

- How have the yield, harvested area, and production of different crops changed over time in the EU?
- Using historical data can we make predictions or forecasts about future yield, harvested areas, or production quantities?
- Which countries are the leading five producers on an annual basis or during distinct time periods?
- How the EU's/member states productivity in terms of efficient land cultivation has changed over the past 6 decades?

Dataset Description

The dashboard uses the FAOSTAT database, which is the official database of Food and Agriculture Organization of the United Nations. Link: https://www.fao.org/faostat/en/#data/QCL

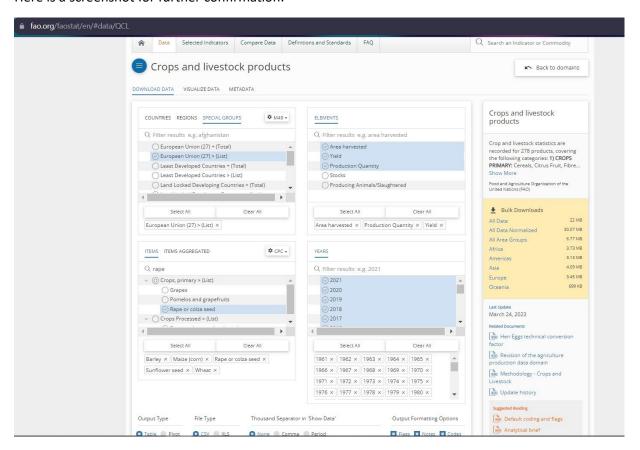
In case the first link does not work: https://www.fao.org/faostat/en/#data

- 1. Select Production
- 2. Crops and livestock products

The website was filtered in the following way:

- Countries:
 - o EU countries (by selecting special groups)
- Items:
 - o only primary crops: Corn, Wheat, Barley, Sunflowerseed, Rapeseed.
- For elements:
 - o Area harvested, Yield and Production Quantity
- For years I did not use any filtering.

Here is a screenshot for further confirmation:



Data Source

The dataset is about the Agriculture of the EU. Each row describes one country's values for a given year for a given element for a given item:

- Area fields identify the country (Austria, Belgium, Bulgaria, etc.)
 - o 28 distinct values
- The element field identifies the category. (Yield, Area Harvested, Production)
- Item field specifies the crop (Barley, Wheat, Corn, Sunflowerseed, and Rapeseed)
- Year (from 1961 to 2021)
- Unit: defines the unit of measurement (ha, mt, 100g/ha)
- Value: shows the values for the given element.

Calculated fields

Using MS Excel I had to modify the Value column as this was the only way to make the charts interact with each other. New columns include:

- Area Harvested Value:
 - o uses the value field's value only if the element is Area Harvested
 - = =IF('Element' = "Area Harvested", 'Value',"")
- Yield
 - o uses the value field's value only if the element is Yield
 - o divides it by 10 000 and rounds up to 2 decimals so the original 100g/ha is converted into mt/ha
 - =IF('Element' = "Yield", 'Value/10000',"")
- Production
 - o uses the value field's value only if the element is Production
 - = =IF('Element' = "Production", 'Value',"")

Dashboard Layout

The dashboard consists of 3 main areas, in the following vertical order:

- Header area (Title & subtitle)
- KPI and filter area
- Main charts area

The main charts

- Crop Yields (mt/ha) vs. Harvested Area (ha): A line chart showing the aggregated values of yield and harvested areas using two y axes over time (x axes)
- **Total Production (mt):** A bar chart displaying the Top 5 countries in the category of total produced quantity.
- Total Harvested Area (ha): A column chart displaying the Top 5 countries in the category of total harvested area.

KPI Cards

There are 3 KPI cards on this dashboard:

- Total Harvested Area (ha): the total area harvested for the selected filtering
- Total Production (mt): the total production for the selected filtering
- Average Yield (mt/ha): the average yield for the selected filtering

Slicers

There are 3 Slicers on this dashboard:

- Crop: is a dropdown slicer with multi-select for the Item field
- Country: is a dropdown slicer with multi-select for the Area field
- Year: is a "between" slicer for the Year column

Non-visible filters

• The **Total Production** and **Total Harvested Area** charts feature a Top N filtering for the Top 5 by value of sum of Production and sum of Harvested Area respectively.