

# Starch Europe Presentation– EU Crops Market Observatory

11 July 2018



**STARCH**  
EUROPE

# Starch Europe members



ALTIA



TATE & LYLE



# Economic contribution

26  
Companies  
2017

74  
Plants  
2017

€7,6  
billion

Total annual turnover  
2016

€421  
million

Averaged Capitalised  
Investments  
2014-2016

€81  
million

Average Investments in Research  
& Development  
2014-2016

15.195  
direct jobs  
2016

100.000  
indirect jobs  
Estimate

# Member's location

74 production facilities in  
20 out of 28 European  
Union Member States



# Starch plants in Europe/Country

## Austria

- Agrana – Gmünd
- Agrana – Aschach
- Agrana – Pischelsdorf

## Belgium

- Beneo-Remy - Leuven
- Novidon - Veurne
- Tereos – Aalst

## Bulgaria

- ADM – Razgrad

## Czech Republic

- Lyckeby – Horazdovice
- Novidon – Hodiskov
- Skrobarny – Chynov
- Skrobarny – Pelhrimov
- Skorbarny – Batelov

## Denmark

- AKV – Vodskov
- KMC – Brande
- KMC – Karup
- KMC -Toflund

## Finland

- Altia – Koskenkorva
- Finnamyl – Kokemäki
- Finnamyl - Lappua

## France

- ADM /Chamtor - Bazancourt
- Cargill – Haubourdin
- Roquette – Vecquemont
- Roquette – Lestrem
- Roquette – Benheim
- Tereos – Lillebonne
- Tereos – Marcholsheim
- Tereos – Haussimont
- Tereos - Nesle

## Germany

- Avebe – Lüchow
- Avebe – Dalmin
- Cargill – Barby
- Cargill – Krefeld
- Crespel & Deiters – Ibbenbüren
- Emsland Staerke – Emlichheim
- Emsland Staerke – Wietzenndorf
- Emsland Staerke – Golssen
- Emsland Staerke – Kyritz
- Ingredion – Hamburg
- Interstarch – Elsteraue
- Jackering - Hamm
- Kröner – Ibbenbüren
- Südstärke – Schrobenhausen
- Südstärke - Sünching

## Hungary

- Hungrana - Ipartelep

## Italy

- Cargill – Castelmassa
- Roquette – Cassano Spinola
- Tereos – Saluzzo

## Latvia

- Lyckeby

## Lithuania

- Roquette – Panevezys

## Netherlands

- Avebe – Ter Apelkanaal
- Avebe – Gasselternijveen
- Avebe – Foxhol
- Cargill – Sas van Gent
- Cargill – Bergen op Zoom
- Novidon – Nijmegen
- Tate&Lyle – Koog aan de Zaan

## Poland

- AWW – Zbiersk
- Cargill – Wroclaw

## Portugal

- Copam – S. Joao da Talha

## Romania

- Agrana – Tanderei
- Roquette – Calafat

## Slovakia

- Tate&Lyle – Boleraz

## Spain

- Cargill - Martorell
- Roquette - Benifaio
- Tereos - Saragoza

## Sweden

- Avebe – Malmö
- Lyckeby – Lister
- Lyckeby – Jämjö
- Lyckeby - Kristianstad

## United Kingdom

- Cargill – Manchester
- Ingredion – Goole
- Novidon – Wrexham
- Roquette – Corby
- Tereos - Selby

# Starch Europe Members by product

## Cereal based starch products companies

ADM  
Altia  
Beneo-Remy  
Cargill  
Chamtor  
Copam  
Crepel & Deiters  
Grupa AWW  
Hungrana  
Interstarch  
Kröner-Stärke  
Ingredion  
Jäckering  
Tate & Lyle

## Potato starch companies

AKV Langholt  
Avebe Group  
Emsland-Stärke  
Finnamyl  
Kartoffelmelcentralen  
Lyckeby  
Novidon  
Skrobarny Pelhrimov  
Südstärke

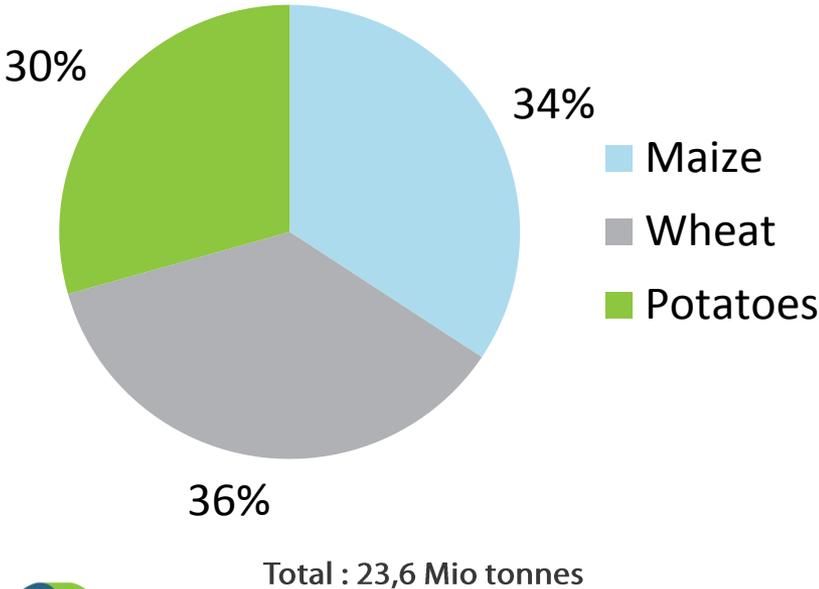
## Cereals and potato starch companies

Agrana Stärke  
Roquette  
Tereos

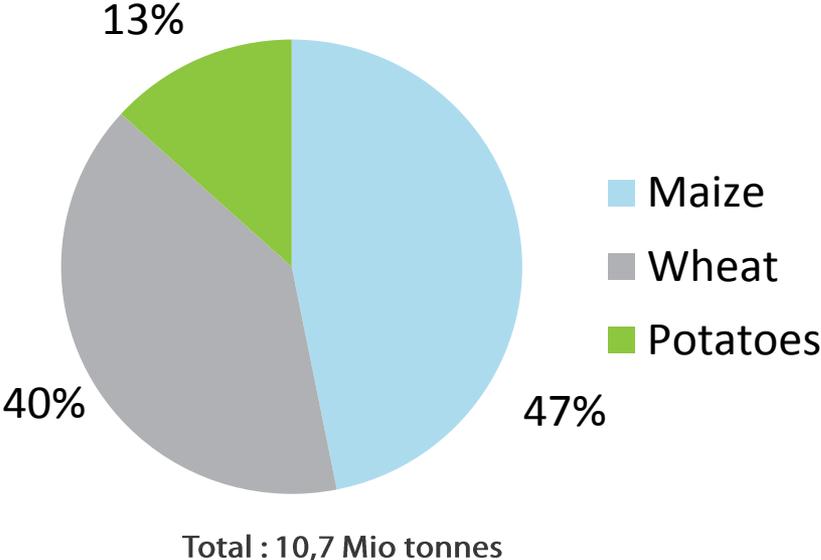


# Raw materials and starch production in the EU

## Processed raw materials



## Starch products in starch equivalent



# Starch production in the EU

Mio tonnes



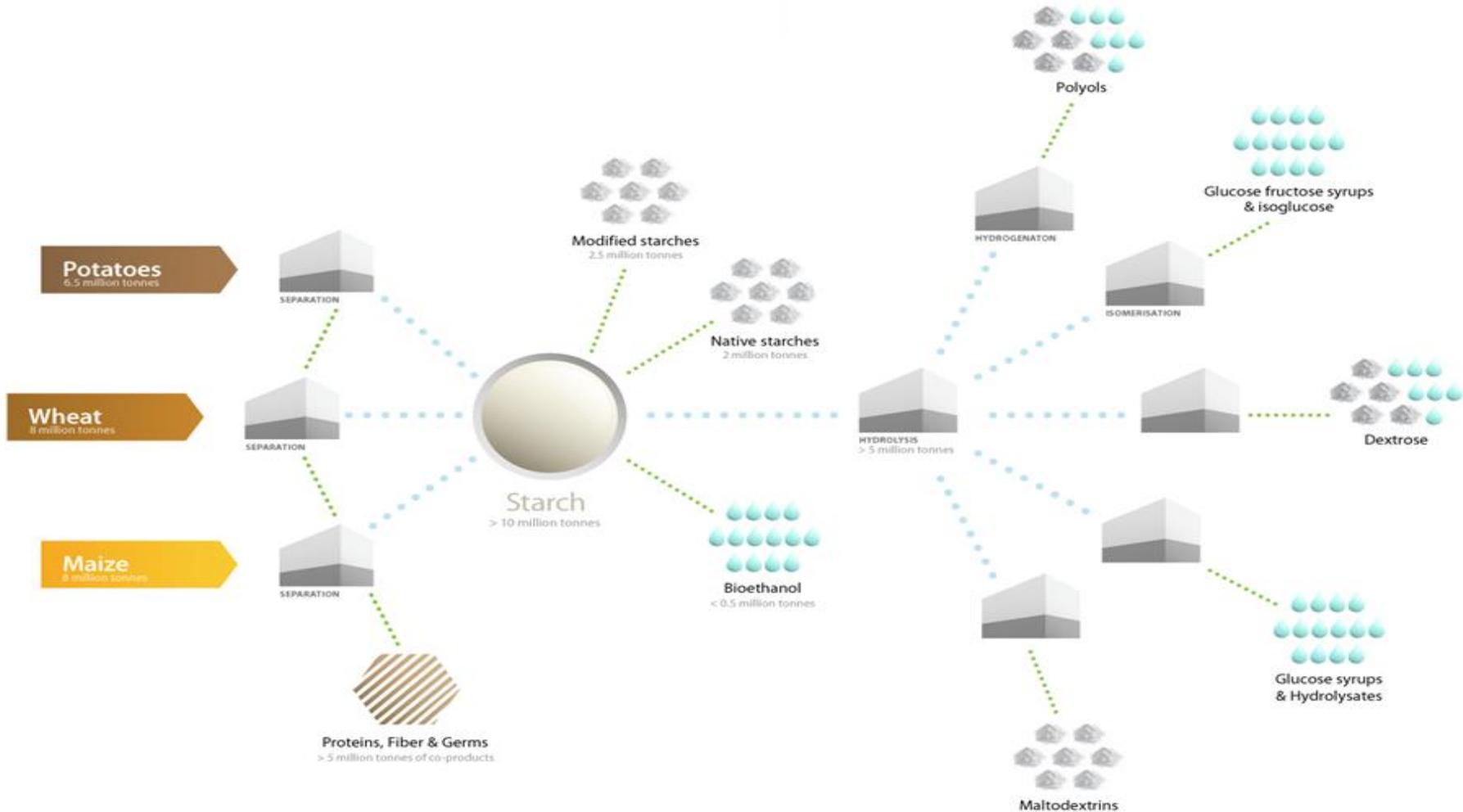
# Uses of cereals by the EU starch industry

Starch Europe uses\*:

- 6,5% of the total EU Wheat production
- 13% of EU Maize production
- 100% of EU starch potatoes production

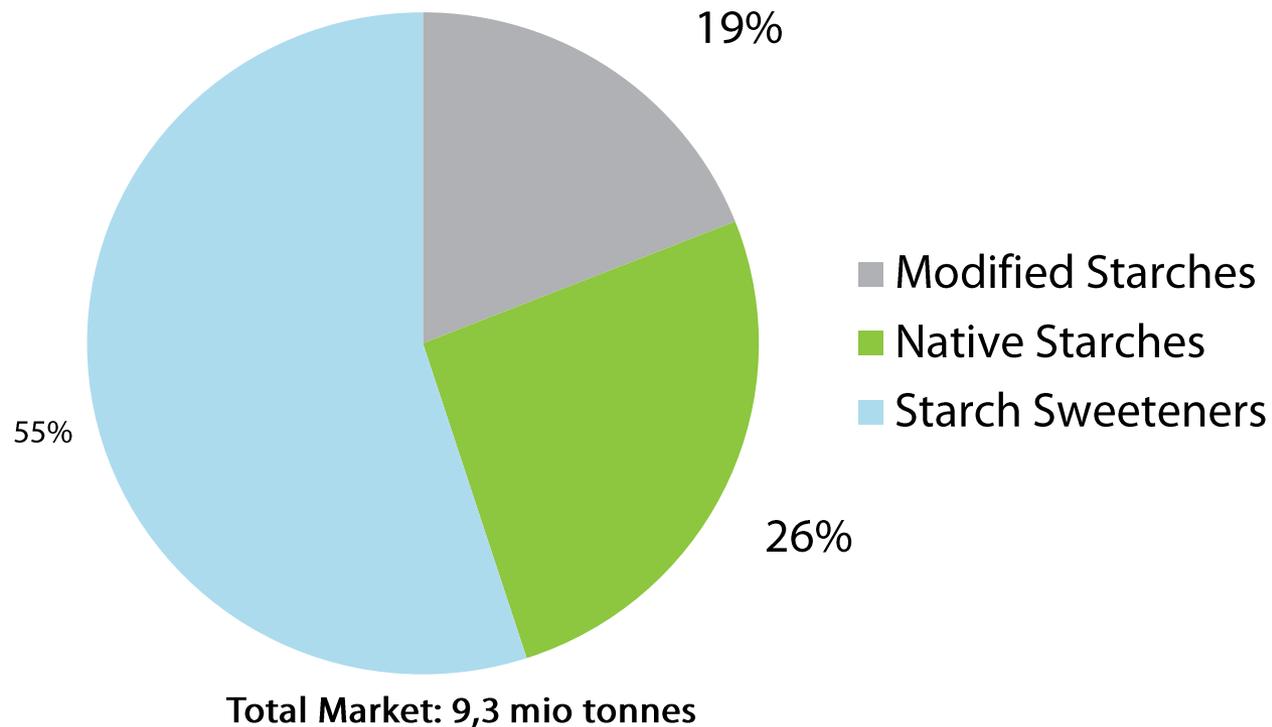
\* Cereal production: Commission data 2015/2016 campaign  
Starch production: 2016 data

# The starch production process in Europe and total output

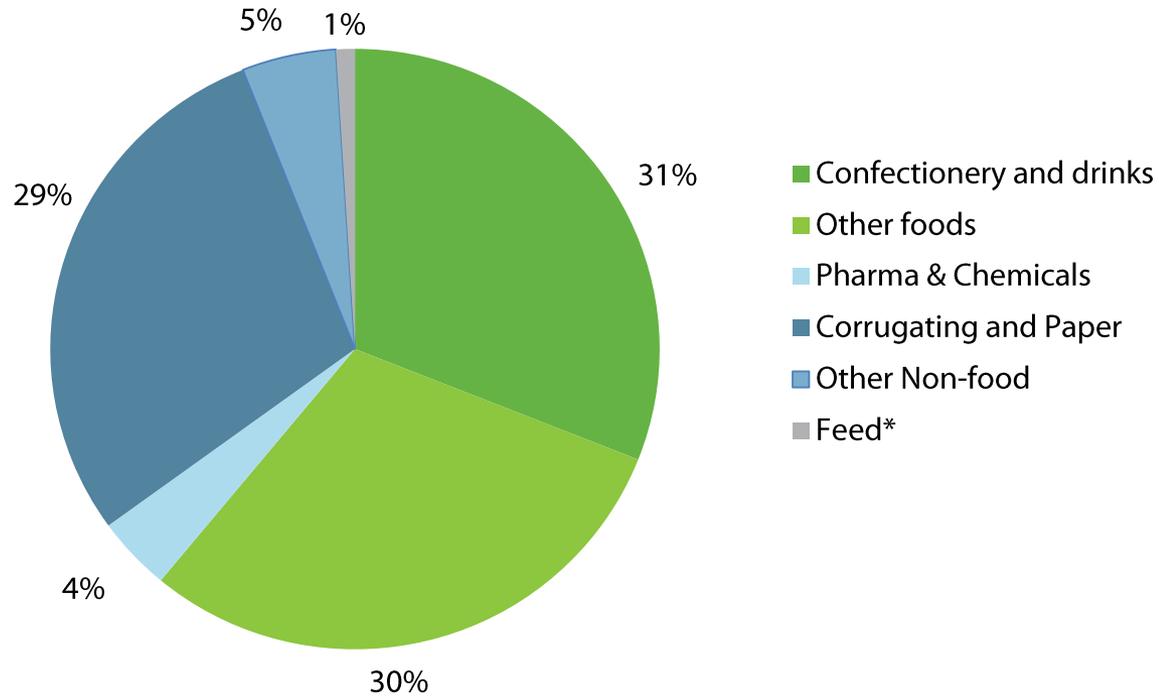




# EU sales of starches & starch sweeteners



# Main starch applications



Total Market: 9,3 mio tonnes

\* Excluding co-products amounting to about 5 million tonnes  
Source: industry data - 2016

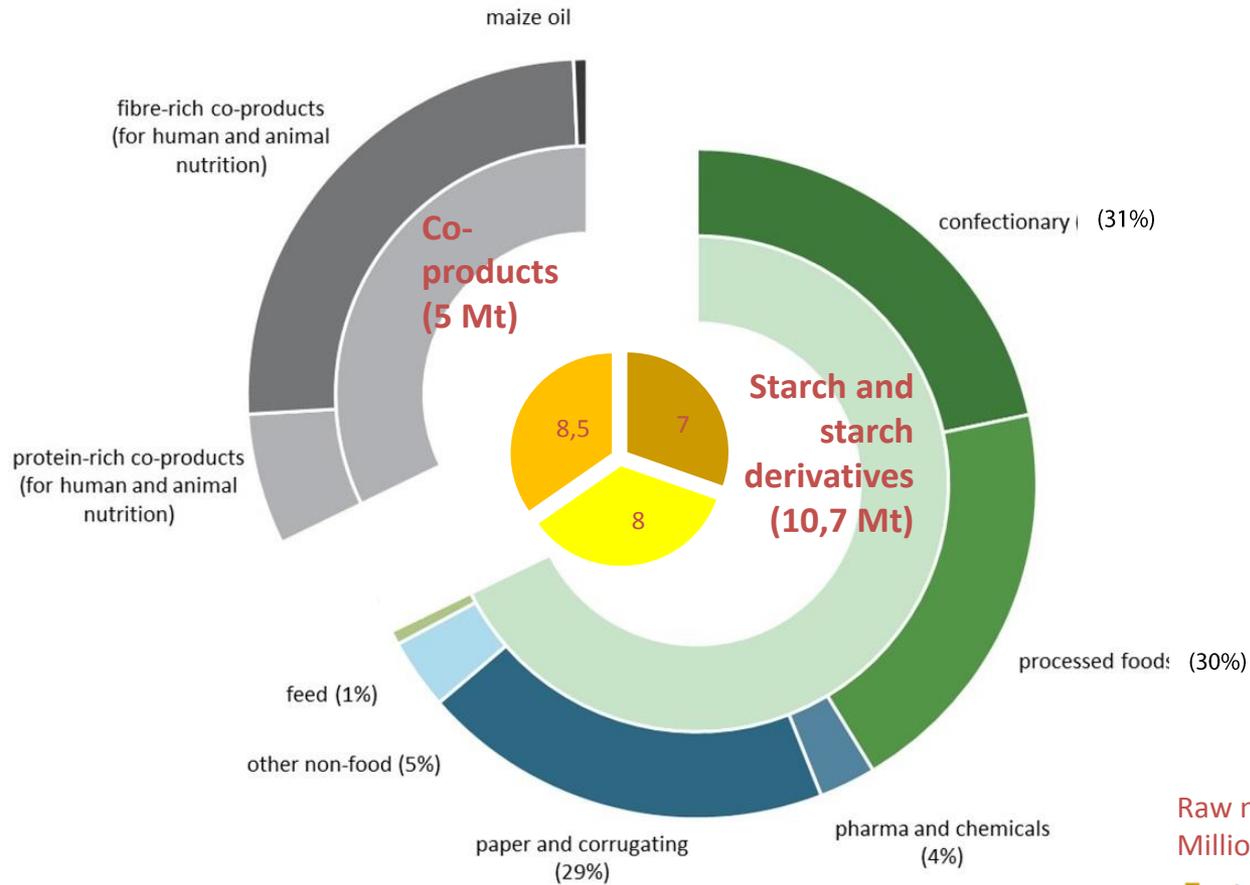
# Drivers of cereal choice of a starch plant

- A starch plant processes either corn, wheat or starch potatoes: the raw material is **not interchangeable**.
- The raw material use is **historically** driven: when starch production developed in the EU, corn and starch potatoes were the only two raw materials used.
- Originally, location of plants depended from the supply of corn (either corn growing areas e.g. France, Hungary, or near harbours).
- In the 1980's the **wheat starch** process developed.
- The production of wheat starch increased:
  - with the development of products with similar functionalities to maize- and potato starch-based products, and
  - as a result of the valorisation of co-products from the production process, like wheat gluten.

# The EU starch industry sources qualitative raw materials

- EU starch industries need high quality raw materials.
- 73% of EU starch production (starch and co-products) is used in food and feed applications
- The example of **mycotoxins**: controls occur over the supply chain as well as along the starch production process to secure food and feed safety (from farmers to end users):
  - The EU starch industry selects raw materials with level often significantly lower than required to ensure levels in products below regulatory limits;
  - Management in place to ensure compliance with strict EU food and feed legislation, adapted to the outlet.
  - Starch Europe compiles data on mycotoxins on a yearly basis and assesses measures to be taken (e.g. increased controls, ...).
- The **composition** of cereals processed matters, the aim being to separate and valorise as efficiently as possible both starch, proteins and all components in general.

# The European Starch Industry's Production and Outlets - 2016



# Uses of proteins

- Proteins represent a significant share of co-products resulting from the extraction of starch from raw materials;
- According to the raw materials, proteins have specific qualities and uses, both in food and animal feed

Qualities and functionalities of the proteins resulting from the starch production in EU:

- **Maize proteins**
  - are highly interesting in certain food products and are increasingly used in dry food for dogs and cats;
  - developed in animal nutrition in 2 forms: maize gluten meal and maize gluten feed

# Uses of proteins

- **Potato proteins**
  - are part of the composition of high added value food (calves or piglets)
  - also developed in animal nutrition in 2 forms: purified proteins and pulps enriched in proteins
- **Vital wheat gluten** (wheat protein purified)
  - is used in animal nutrition (20%) and in human nutrition (80%);
  - is the only protein with the property of visco-elasticity. It offers high nutritional value (higher digestibility). Wheat gluten can also be used as a binder, particularly in aquatic feed or in meat analogues for pets food

# EU starch industry in the world

- 10 million tonnes starch produced in EU
- 21-22 million tonnes in the US
- 29-30 million tonnes in China
- 10 million tonnes in ASEAN countries
- 3,5 million tonnes in Mercosur

# EU starch industry in the world

## Opportunities

- Japan
- China



## Threats

- the US
- Mercosur
- Thailand
- Vietnam

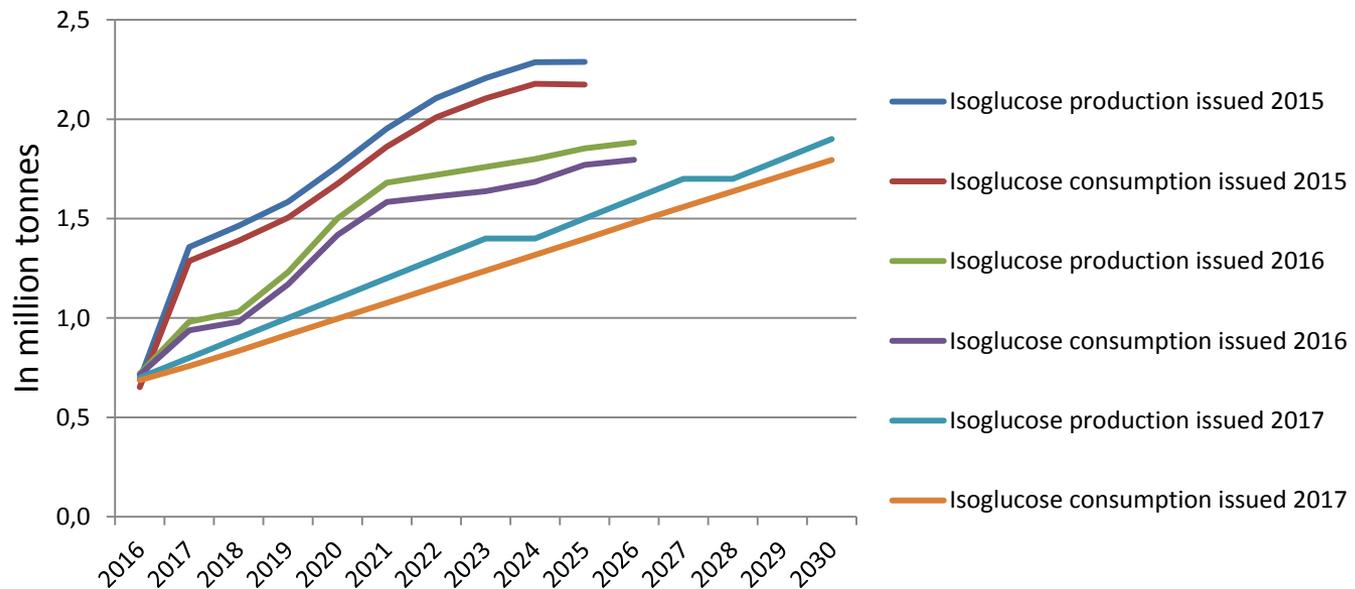
# Opportunities for EU farmers

## The end of the sugar quotas

- The possibilities
  - Freedom to produce and optimise production
- How much additional isoglucose will be produced?
  - Starch Europe position: “2-3 million tonnes over time”:
    - Share of 13% - 19% of EU sugar market based on 2016/2017 EU balance sheet
    - Range confirmed by other sources such as the Commission (pre-2017 outlook), Rabobank and LMC
  - How much customers demand, will depend on:
    - Functionality
    - Price
    - Consumer acceptance

# Opportunities for EU farmers

- Shows a decreasing trend in isoglucose forecasts over the years:



# Opportunities for EU farmers

On the long term, the end of the EU sugar quotas will increase output, which will be beneficial to EU farmers as this will broaden their outlet for cereals.

- e.g. 3 extra million tonnes of wheat (about 2% of EU wheat crop)



Source: estimate based on the Commission's forecast for EU cereal crops in 2015/2016

# Opportunities for EU farmers

## Specialty grains (e.g. waxy maize)

Starch processors also have contracts with farmers to secure supply of specialty grains. This provides an alternative to global markets to farmers.

It provides more income security to farmers, ensures outlets and protects from market volatility.



# Opportunities for EU farmers

## The development of the bioeconomy

### – Today's bioeconomy

- “the sustainable production of renewable resources and their conversion into food, feed, fibres, materials, chemicals and bioenergy through efficient and/or innovative technologies”\*
- Worth 2 trillion euros and 22 million jobs\*

### – Starch is renewable and biodegradable.

As such a well-suited ingredient for industrial uses: starch producers manufacture bio-based products and ingredients that replace fossil-fuel-based ingredients in :

- paper and textiles: traditional industrial outlets
- fermentation, construction, chemical, cosmetics, plastics and detergents
- feasible through considerable investments in R&D

### – Next steps – Update of the EU Bioeconomy Strategy in 2018

- Need Commission to support beyond DG Research & Innovation, including from DG Grow:
- update to include concrete measures to boost the bio-based product demand in the EU



\* Source: EU Commission “Innovating for Sustainable Growth: A Bioeconomy for Europe” COM(2012)60 final

# Long-term opportunities for the bioeconomy

- Starch biorefineries deliver to the four outlets of the bioeconomy (food, feed, industrial and energy)
- Starch industry asset optimization will benefit the bioeconomy, a priority for the post-2020 CAP

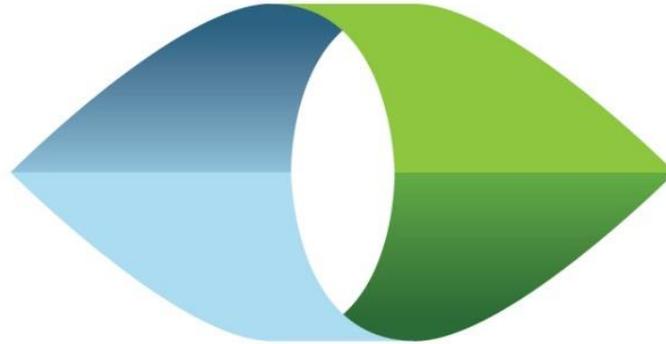


# EU starch industries view on the future of the Common Agriculture Policy post-2020

- Secure raw materials of good quality, in sufficient quantities at a competitive price and readily available
- A strong CAP coherent with other EU policies
- Promotion of the production and valorisation of sustainable raw materials on global markets
- The CAP, as an enabler of the bioeconomy, addressing upcoming challenges both at the local and global level

# Increased production announcements to date

- Two new starch plants announced so far
  - Kall ingredients in Hungary: 530,000 tonnes of maize per year, HUF 9.2 billion (€ 29.6m) government grant
  - Sudzucker in Germany: 140,000 tonnes of glucose syrup per year. Investment of 125 million euros
- Other starch companies have announced plans to increase capacity
  - ADM: Investment in Bulgaria
  - Cargill : Investment of 35 million € to allow for increased sweetener production in the United Kingdom, the Netherlands and Poland



# STARCH

## EUROPE

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