

Market Intelligence on Corn Supply & Price Drivers

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OBJECTIVE

Renew the sourcing plan for 2020 - 2021

ACTIONABLES

- Supply & Demand for corn regionally [country with highest supply & Lowest supply]
- Price Drivers
- Impact of Ethanol Production on corn Price
- Impact of Animal Feed consumption on corn price
- Analyse the Trend to Find suppliers

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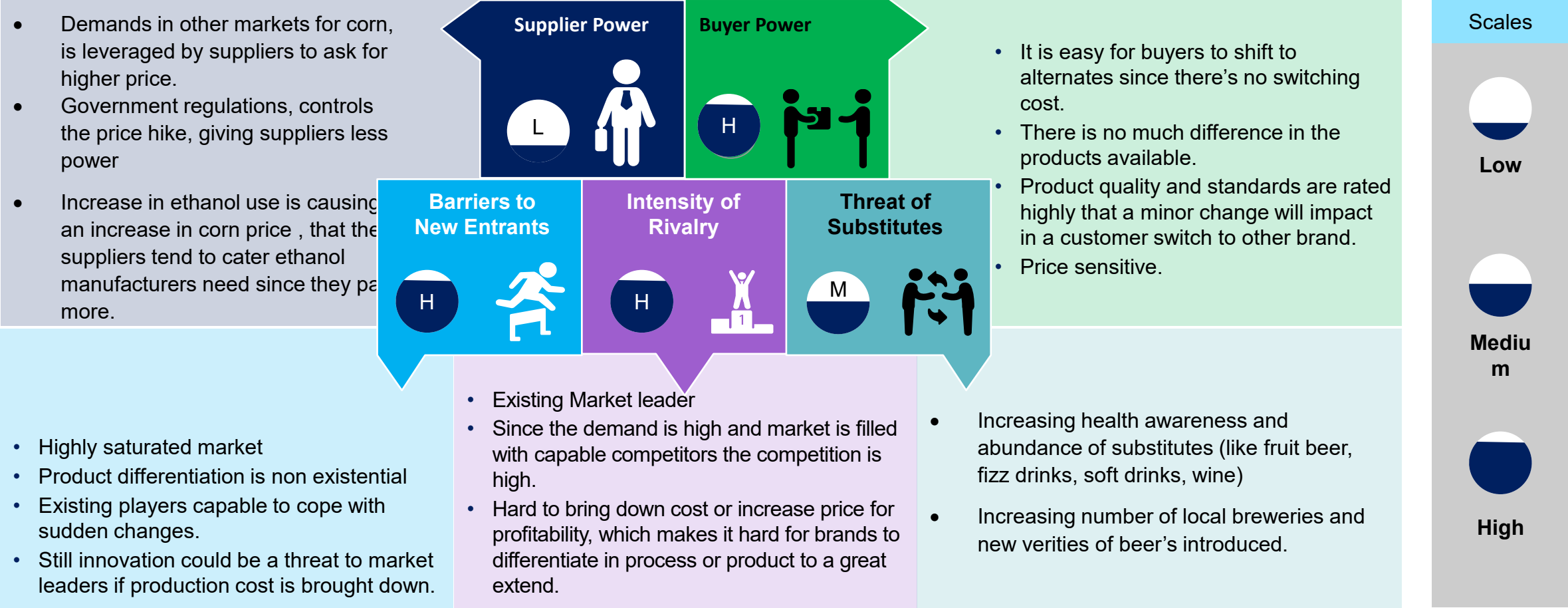
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Porter's 5 Force Analysis

Analysis primarily based on the current Brewing Industry and Corn Market Conditions, **Intensity of competition within the industry** is the major concern especially with little room for innovation and **no options to reduce production cost**. Industry is also **susceptible to buyer power** due to **lack of options to differentiate** and pressure to maintain supply and quality standards.



Executive Summary

Feasible & Non-feasible **regions/countries** in terms of Production & Supply

FEASIBLE



United States of America



Brazil

NON-FEASIBLE



European Union



China

Impact of Ethanol & Animal Feed on corn price

ETHANOL

The Impact of ethanol production on corn price has been **low** for the past decade especially with the univariable production and corn use

Impact scale



ANIMAL FEED

Increase in the demand for animal feed have effected the supply & Price of corn **moderately**.

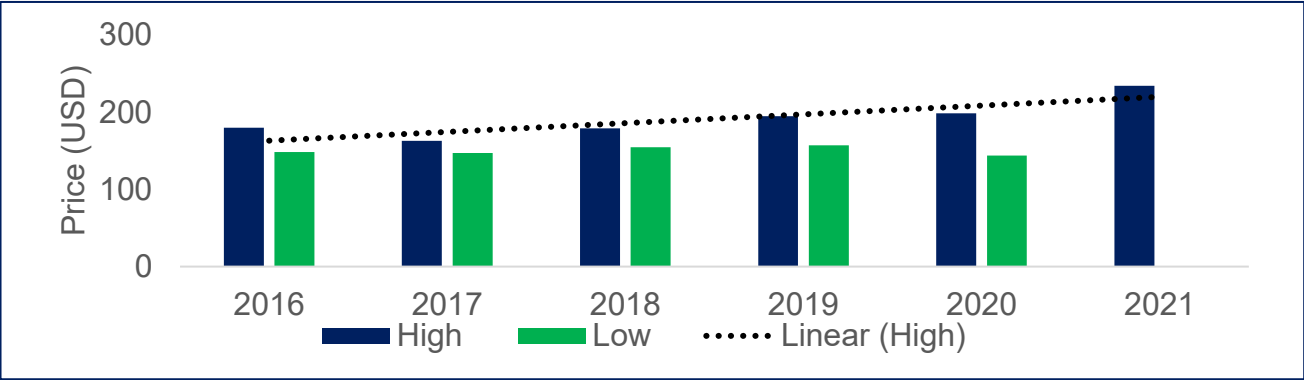
Impact scale



Global Corn Market & Trends

The corn prices have been mostly demand driven in 2020 hitting a 6 year high of \$198.77 per MT and continuing the trend in 2021 Q1 with an all time high of \$234.47. Import by china have dramatically increased and its effect on price is expected to continue especially since they have already preordered 11.6 million MT compared to 60,000 MT last year.

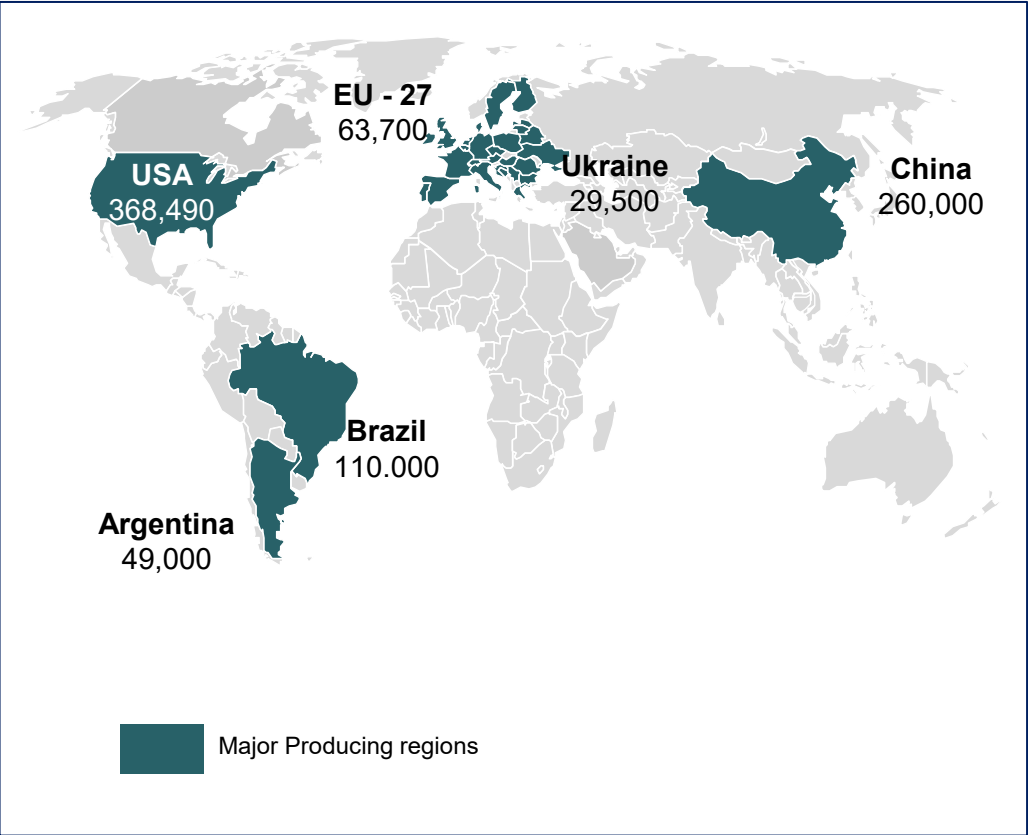
Corn Price/MT (2016-2021)



Impact of Production & Demand on price

- High demand/import by china
- 2020-21 YoY Export sales for US Corn rose up to **162%**, major reason being demand from china. Even though the Chinese demand reduced by end of 2020 it is predicted to resume in 2021 especially with the pre orders in place.
- The demand is also tied to the recovering hog farming after the ASF and tight inventories in china.
- US corn production by 2020-21 had fallen by **9.3%**, regions like EU and Ukraine have also been facing shrinking production.
- **Argentina** have suspended its production of corn till **March 2021**.
- **Dryness** in parts of EU, Ukraine & US has also been a major reason for shrink in production.

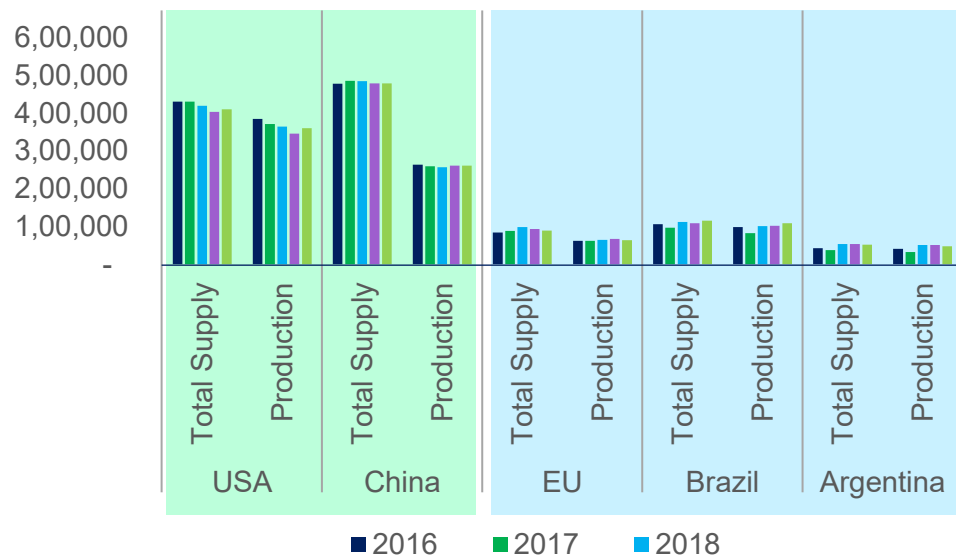
Global Corn Production (Market Leaders)



Global Corn Market – Supply & Production

Balance in supply and production to an extent defines the stability of the market. Low production and high supply raise major concerns such as high production cost, inability to meet domestic demands, unexpected increase in domestic consumption.

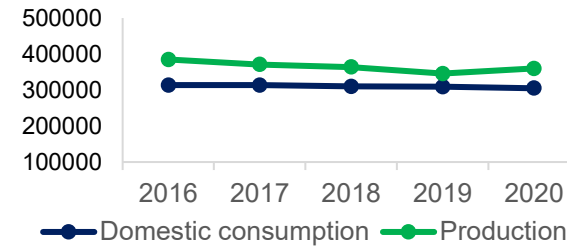
Supply VS Production



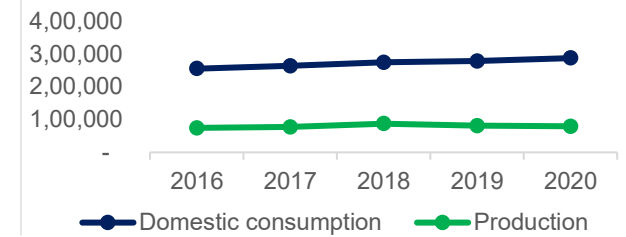
The disproportion between the Total supply and production in china can be explained by the increasing import and stocking behavior of china and they by resulting in the huge beginning stock every next year.

- **China** is the country with highest supply **478,696 1000 MT** in 2020
- China accounts for over **45.34%** of the global Corn supply in the world.
- In 2020 total corn supply is estimated to be **1.06 million 1000MT**
- USA is the second with around **409,644 1000MT** total supply in 2020

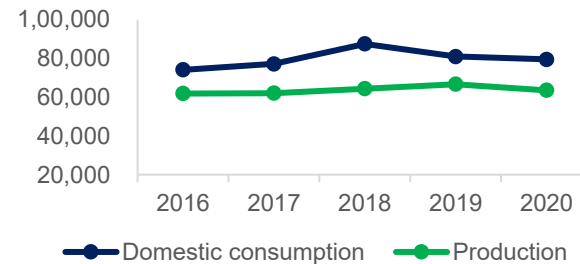
USA



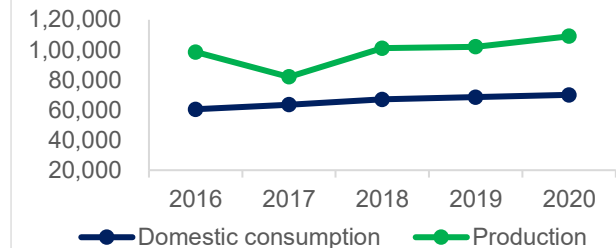
China



European Union



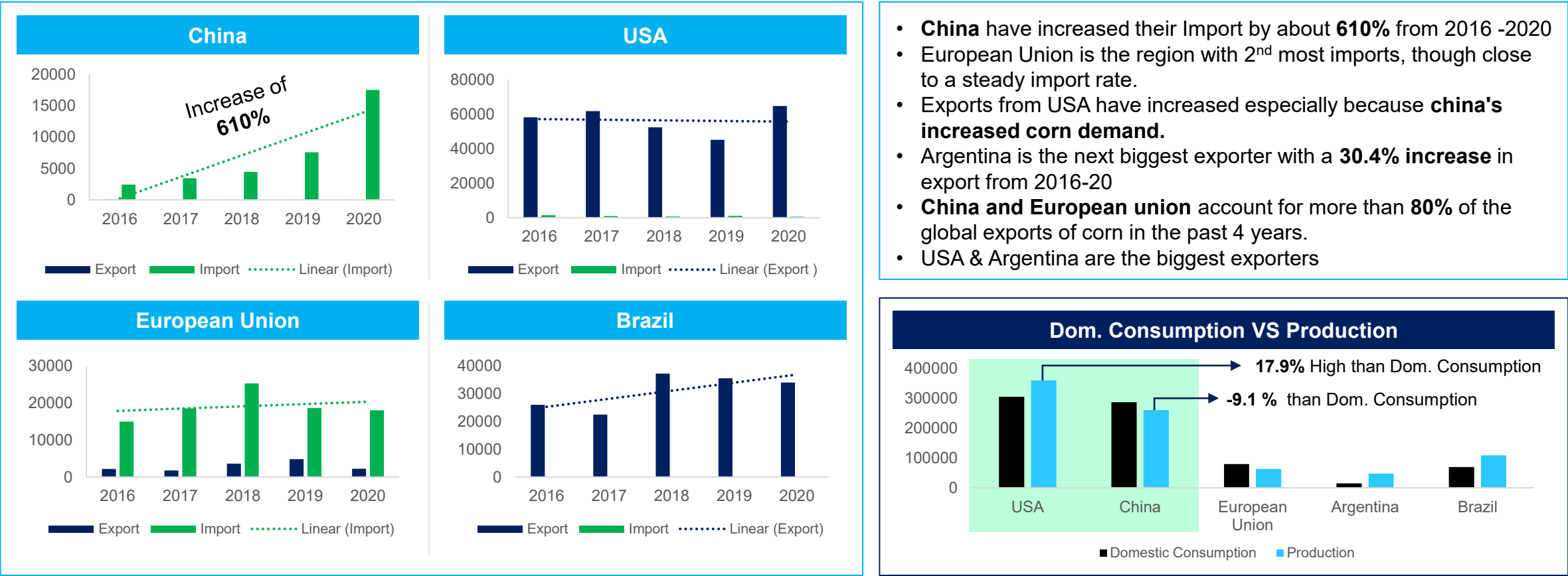
Brazil



- **Brazil** is the only region which has an increase in the 2019-2020 period, a **6.8%** increase.
- In **China & EU** the domestic consumption is higher than the production, and china has the biggest dom. Consumption to production deficit.
- In brazil even though there is a **3% increase** in Dom.Consumption there is a proportionate increase in production.

Global Corn Market – Export & Import

China & European Union are the two regions that imports most of the corn. China imported ~17,500 1000MT which accounted for around 87.76% of total corn import in 2020. The global corn import in 2020 was estimated to be ~19,940 1000MT.



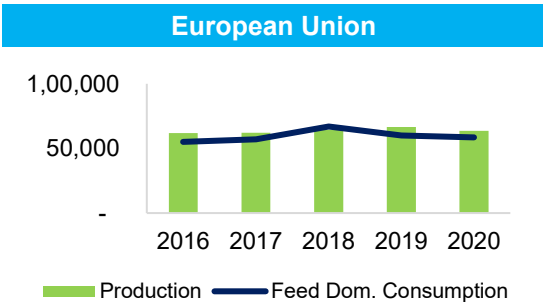
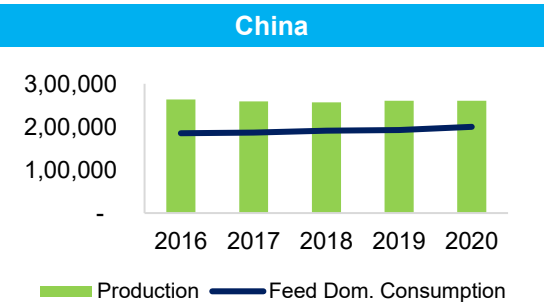
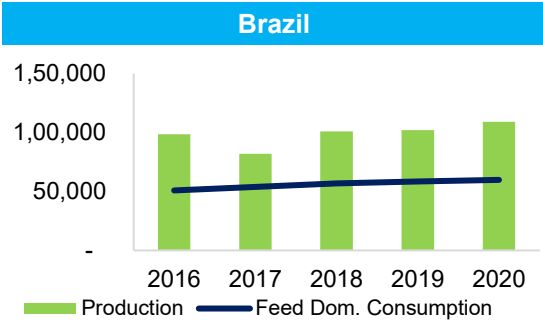
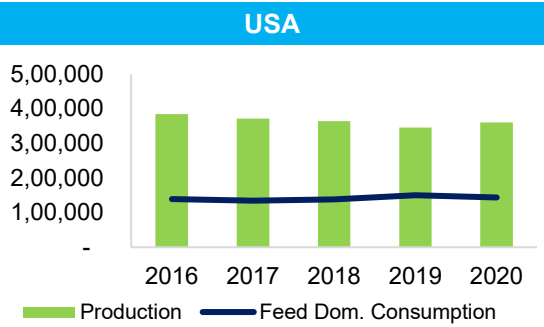
To an extend the high import can be explained by the imbalance in production & domestic consumption in a country, which is vivid in case of China & USA| European union & Argentina

Global Corn Market – Animal Feed | Yield & Harvest

China accounts for over **46.35%** of the global corn-feed consumption, in 2020 it was ~ **200,000 1000MT**. Global corn-feed domestic consumption was around **431,517 1000MT** in 2020.

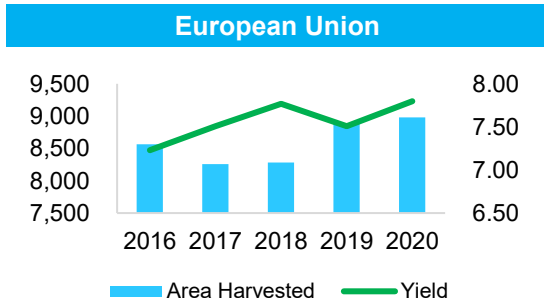
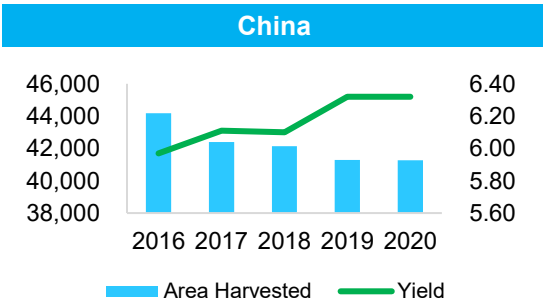
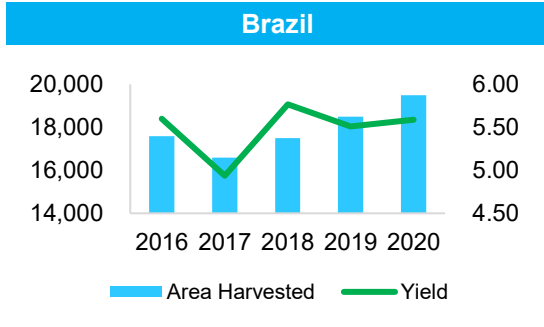
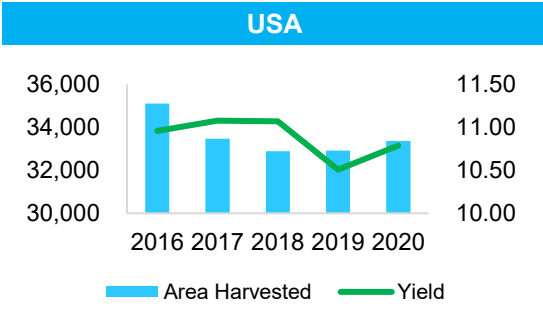
Production VS Feed Dom. Consumption

- China showed an increase of **~4.7%** in corn-feed consumption from 2018-20.
- Most countries esp. China is seeing an **increase in hog farming** after the ASF(2018) which is resulting in the increase of animal feed consumption.
- Apart from **USA**, the domestic corn-feed consumption in most countries are more than **50%** of its production.



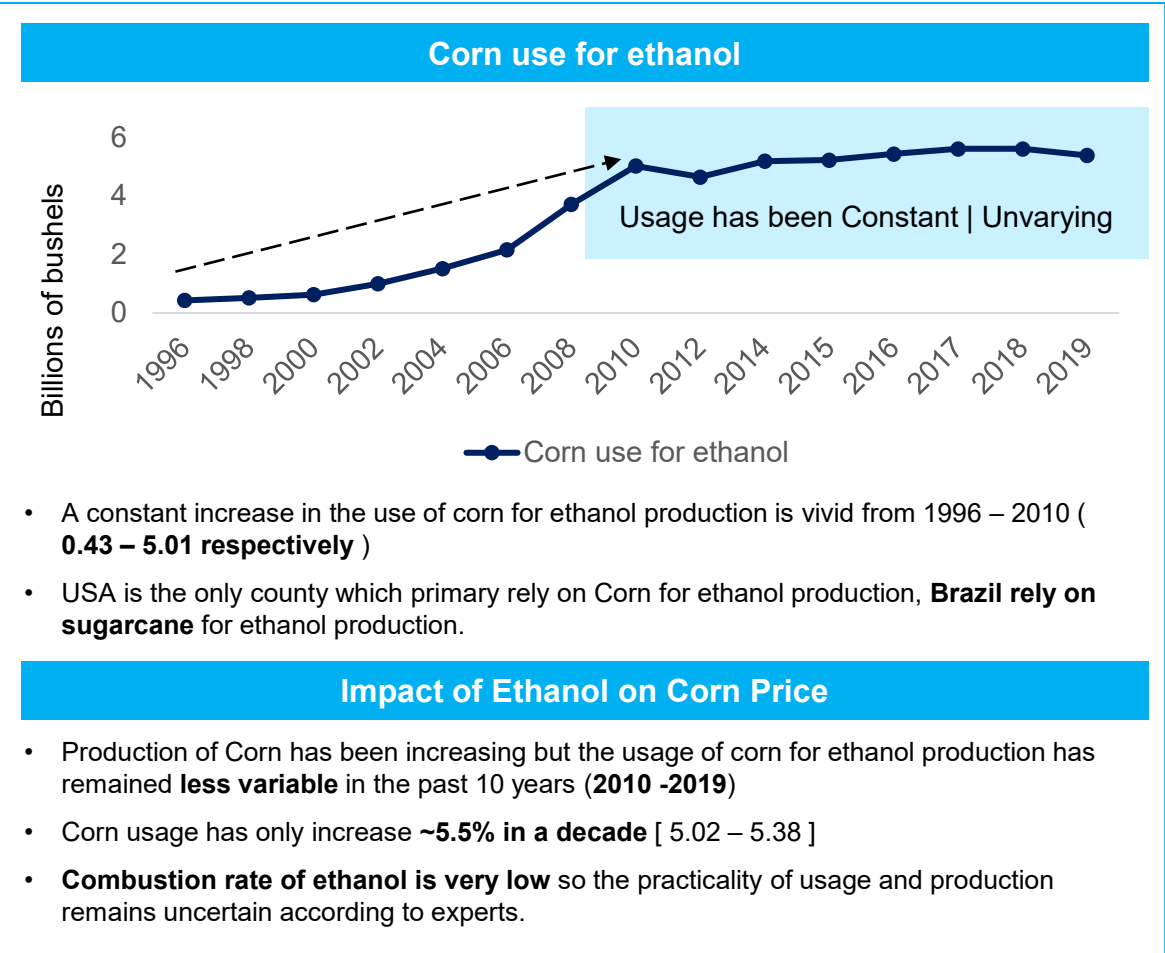
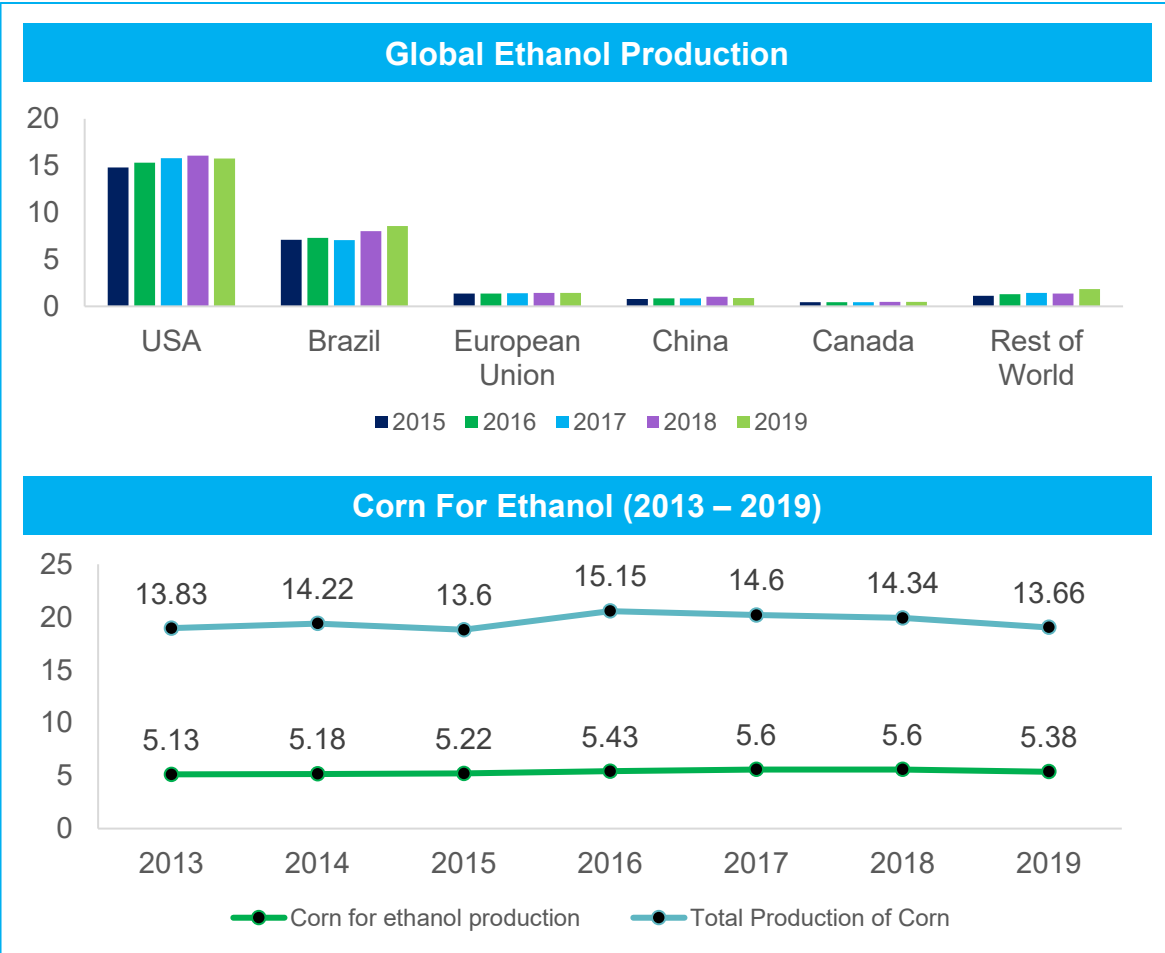
Production VS Feed Dom. Consumption

- Total **Global Harvested area** in 2020 was estimated to be **~109.637 1000MT**, **Global yield** was **~33.52 MT/HA** in 2020.
- USA has the highest yield of **~10.79 MT/HA**, which accounts for **32.19%** of global yield in 2020.
- Though there was decrease in the Harvesting area **china** had been increasing their yield, **5.97 MT/HA – 6.37MT/HA** from 2018-20 respectively.



Global Ethanol Market

With 15.7 billion gallons of ethanol produced in 2019 United states is the world's largest ethanol producer, United states & Brazil accounts for ~84% of worlds ethanol production. 90% of the ethanol plants use Dry milling process using corn since its cheaper.





Current Market Drivers & Insight

Current market holds a positive sign in terms of recovering even though the price/MT is at an all time high of **\$234.47** compared to the 2020 high of **\$198.77**. According to experts this trend will remain for some time.

Price Drivers	Trend	Reasons	Impact
Supply/ Demand	Increasing	<ul style="list-style-type: none">After COVID-19, supply have been increasing.China's increase in corn import rate and pre order from USA	High
Animal Feed Stock	Increasing	<ul style="list-style-type: none">Countries stocking due to low productionChina's hog farming reviving after 2018 ASF.	Medium
Ethanol Production	Steady	<ul style="list-style-type: none">Corn is still the main source in USA but countries like brazil using sugarcane for production.Ethanol production has not been rising due to its practicality beyond a point.	Low
Yield	Increasing	Yield has been increasing globally, which is diminishing the impact of low production after COVID-19	Medium
Production	Increasing	The production have started to increase in a gradual pace globally.	High
Domestic Consumption	Increasing	In regions like china and Europe imports have increased dramatically after COVID-19, triggered by high Dom. Demand and low supply	Medium

Objectives Addressed
Ethanol Production <ul style="list-style-type: none">Corn usage for ethanol production has remained same for the past decade after a ~1000% increase in usage of corn.
Animal Feed Production <ul style="list-style-type: none">Corn-feed domestic consumption has been on increasing trend, what impacted most was the chine's hog farming recovery and inability to meet the domestic needs
Supply & Demand <ul style="list-style-type: none">Supply & demand has been high but what's driving the market is the import and stocking of china [2020 beginning stock was ~ 200,000 1000MT.

Recommendation		
	Based On: <ul style="list-style-type: none">ProductionImport SupplyDom. ConsumptionRecovery rate	
USA		BRAZIL
From all the aspects especially focusing on supplies, production & price drivers these are the most feasible & stable regions to look for suppliers.		