

Mexican Palm Oil Industry & Market Context

Contents

Executive Summary 3

Mexican Edible Oils & Fats Economy..... 4

Soybean Oil 5

Rapeseed Oil..... 6

Sunflower Seed Oil 6

Palm Oil 6

Palm Kernel Meal 7

Palm Oil Production In Mexico 8

Planted Area 9

FFB Production 10

Mexican Food Processing Economy..... 12

Mexican Oilseeds Crushing Sector/Palm Oil Refinery 13

Mexican Food Processing Sector 13

Conclusions 15

Executive Summary

Estimated to have an economic value of some US\$7BN pa, Mexico's demand for edible oils and fats is significantly driven by its vibrant domestic food processing sector, the third largest in the Americas. With a population of 130M to feed, the \$40BN pa Mexican food processing sector is forecast to grow by more than 6% pa 2020-2025. However, there is a significant dependency on imported raw materials. Mexico does not produce enough grains and oilseeds to meet internal demand, so the country's food and livestock feed producers import sizable volumes of these commodities to produce value-added products including, vegetable oils, salad dressings, and baking goods, primarily for the domestic market.

While Mexico generated a positive agricultural trade balance of some US\$9.5BN in 2021, more than 77% of U.S. agricultural exports to Mexico in that year were grains, oilseeds, meat, or related products. In this context it is surprising that the Obrador Administration has cancelled supports for the oilseed and palm oil producer sectors. The still developing Mexican palm oil sector has been successful in at least reducing to some degree, the dependency on imported palm oil from within LAC region and Asia. Domestically produced palm oil now represents around 10% of all oils and fats consumed annually within Mexico and it is by a significant margin, the leading domestically grown edible oil.

However, the reported reluctance of the Obrador Government to support the sector, coupled with the climate related challenges of producing palm oil in the Southeast of Mexico, implies that private capital will be required to expand production in the immediate future. Security over the supply of edible oils would be strengthened by expanding the hectarage devoted to oil palm, and it would also be enhanced by expansion of palm oil yields. To raise yields across the Mexican sector, further investment is required in irrigation, mechanisation, and training of agricultural labour. The availability of suitable land for palm oil production is a structural issue for the sector, placing even greater emphasis on the imperative of optimising yield performances on existing plantations.

While palm oil products make up circa 30% of the oils and fats consumed in Mexico, soybean oil, is the leading oil with market share of 58%. It is produced almost entirely from imported soybeans and is the by-product of soya crushed for high protein meal for Mexico's livestock sector. Rapeseed oil, also produced from imported oilseed (mostly from Canada), commands lower market share than palm oil and soybean oil but has been marketed as the healthy choice for consumers. In the same context, palm oil has been winning market share from soybean oil for its use in Mexico's food processing sector due to it being semi-solid at room temperature, unlike soybean oil which must be hydrogenated, a process which creates 'trans fats'. Medical science indicates that dietary intake of trans fats increases the risk of heart and blood vessel disease, leading the U.S. Food and Drug Administration (FDA) to prohibit food manufacturers from including trans fats in foods and beverages.

Although palm oil has demonstrated its ability to compete with soybean oil on health (and price) terms in the Mexican market, the value chain has not been benefited by reports (USDA) that senior officials within the Obrador Administration have publicly stated their concerns regarding the sustainability and environmental impact of palm oil production. The USDA further reports the Obrador Administration "appears to be encouraging planting other types of trees (fruit trees and hardwood species) in the key palm oil production zones". In this context it is important that the Mexican sector (led by FEMEXPALMA) has proactively embraced the principles of the RSPO, with a goal to achieve RSPO certification for 40% of domestic production. This strategy chimes with the reported instincts and preferences of younger Mexican consumers and is thus strongly endorsed by Mexican food processors and brand owners.

Supported by a buoyant domestic market, a vibrant food processing sector, positive demographics (28% of pops are 14 years or younger and 66% are aged 15-64 years), and its strong bias towards sus-

tainable production, the Mexican palm oil production sector has an opportunity to grow its share of demand for oils and fats which are overwhelmingly produced from imported oilseeds. But to optimize realisation of this opportunity, the sector must invest for capacity growth and for growth in productivity.

Mexican Edible Oils & Fats Economy

Euromonitor describes Mexico as the second largest market in Latin America for edible oils and fats, with an economic value of some US\$7BN in 2020. Per capita consumption of oils and fats in Mexico was running at 29.1kg in 2021, at circa 91% of the world average (32 kg per capita), but well behind per capita consumption of more than 70 kg in Europe, USA, and Indonesia. Mexico has the 3rd largest food processing economy in the Americas, behind only USA and Brazil, with the sector contributing circa 4% of GDP. The B2B sector is the largest consumer of fats and oils at 66% of total Mexican demand, with the bakery, tortilla, meat processing and dairy sectors representing around 25% of food production. Research conducted by USDA indicates that young consumers in Mexico are concerned about the impact of their purchasing decisions on the environment and wider society and this has driven brand owners in the country to demonstrate a commitment to the use of sustainably sourced ingredients in their products.

Because circa 83% of oilseed production in Mexico occurs on non-irrigated farmland, supply of oilseed from domestic producers is vulnerable to unpredictable weather conditions. This is a factor in making Mexico heavily dependent on imported oilseeds, fats, and oils to meet national demand. However, the palm oil production sector has been growing domestically produced oil's share of national consumption. The USDA data in the table below indicate that in MY2020/21 domestically produced palm oil made up some 36% of national consumption of crude palm oil (0.873M MT). The data for MY2020/21 indicate 1.03M MT as total consumption of all palm oil products.

Soybean oil is the most consumed vegetable oil in Mexico, accounting for circa 58% of all edible oils consumed, driven significantly by the demands of the poultry and pork sectors for high protein soybean meal, with soybean oil a by-product of the crushing process. After palm oil, the third most consumed vegetable oil, rapeseed oil, is largely produced from imported seed from Canada. Rapeseed oil is promoted as a healthy oil / product in Mexico, and reportedly has strong consumer demand for that reason. However, domestic production of rapeseed is small, and hampered by deficient infrastructure and limited availability of suitable seed. USDA notes that rapeseed imports from Canada are sensitive to exchange rate movements, and it also notes that US Federal policies in support of biodiesel have the potential to limit the availability of US soybean exports to Mexico. In this context, domestic palm oil production is well-placed to increase its share of national demand for oils and fats.

Table 1

Mexican Vegetable Oil Supply & Demand (USDA data May 2022)	2021/2022	Comment
	MT Millions	
Soybean Oil (September to August)		
<i>Domestic Production</i>	1.21	
<i>Imported</i>	0.17	
Total New Supply Soybean Oil	1.38	USDA reports that Soya hectares (0.195M) unlikely to be expanded in near future as the Obrador Government has cancelled all supports for sector and reportedly has no agricultural policy for national production of oilseeds. Situation exacerbated by steeply rising input costs including ferts & diesel
Rapeseed Oil (October to September)		
<i>Domestic Production</i>	0.54	
<i>Imported</i>	0.15	
Total New Supply Rapeseed Oil	0.69	
Sunflowerseed Oil (October to September)		
<i>Domestic Production</i>	0.011	
<i>Imported</i>	0.051	
Total New Supply Sunflowerseed Oil	0.062	
Total New Supply of Vegetable Oils		
<i>Domestic Production</i>	1.761	
<i>Imported</i>	0.371	
Total New Supply Vegetable Oils	2.132	
Palm Oil (MY2020/21)		
<i>Domestic Production</i>	0.313	USDA reports that private sector sources estimate total palm oil consumption in MY 2020/21 at approx 873,533 MT + 86,000 MT of PKO and 70,068 MT of refined palm oil products
<i>Imported</i>	0.56	
Total New Supply Palm Oil	0.873	

Source: USDA (RN: MX2022-0024)/ACAL

Soybean Oil

Soybean oil remains the major vegetable oil produced and consumed in Mexico, accounting for 69% of total oil from oil seed, or 58% (of all vegetable oils) if palm oil is included in the mix. Typically, some 85% of domestically produced soybean oil is extracted from imported U.S. soybeans.

Soybean imports are forecast to increase to 6.37 M MT in MY 2022/23 led by demand for animal feed (pork & chicken), processor demand, and population growth. Poultry meat continues to be one of the cheapest animal protein sources for Mexican consumers. USDA notes that a point of concern for the Mexican oilseeds value chain, is the U.S. biodiesel subsidy policy, which has the potential to influence the volume of soybeans available for export from the United States, Mexico's main supplier. Additionally, it would make U.S. soybean oil exports more expensive. Such a situation could also lead

to an oversupply of soybean meal – which would become a problem for Mexican crushers. High-protein soybean meal continues to account for approximately 87% of total Mexican oil meal production, while the production of meal from imported rapeseed accounts for circa 13% of total meal. USDA notes that the total soybean meal production forecast for MY 2022/23 is 5.2 M MT, due to the expected growth in the livestock sector. The poultry sector continues to be the primary consumer of oilseed meals, and especially soybean meal due to its high protein content.

Rapeseed Oil

Rapeseed (canola) consumption is expected to increase to 1.3 MMT in MY 2021/22, to give some 0.54M MT of oil. USDA reports that Mexican crushers import canola (largely from Canada) when the price is competitive. Rapeseed meal production is forecast to increase 2.7% in MY 2022/23 to 755,000 MT, reflecting the expected increase in domestic pork production during 2022. The pork industry continues to be one of the main consumers of rapeseed meal in Mexico along with the dairy sector.

Sunflower Seed Oil

The relatively high cost of sunflower seed oil limits consumption in Mexico, as it continues to be a price sensitive market.

Palm Oil

USDA reports that in MY 2020/21 palm oil consumption was approximately 873,533 MT. An additional 86,000 MT of palm kernel oil and 70,068 MT of refined palm oil were also reported to have been consumed for a total of 1.09M MT. In the previous marketing year (2019/20) total national consumption of all palm oil products was estimated by USDA at 873,403 MT, suggesting growth in consumption of 17.9% between the two marketing years. Despite growing domestic production of palm oil, Mexico remains significantly dependent on imports to meet demand, although this dependence is proportionally reducing as national production increases.

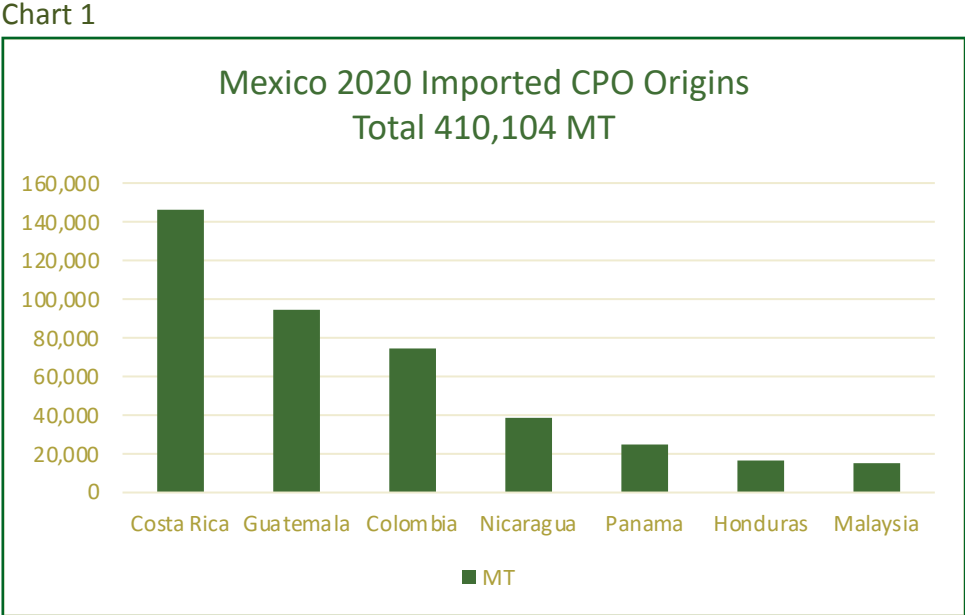
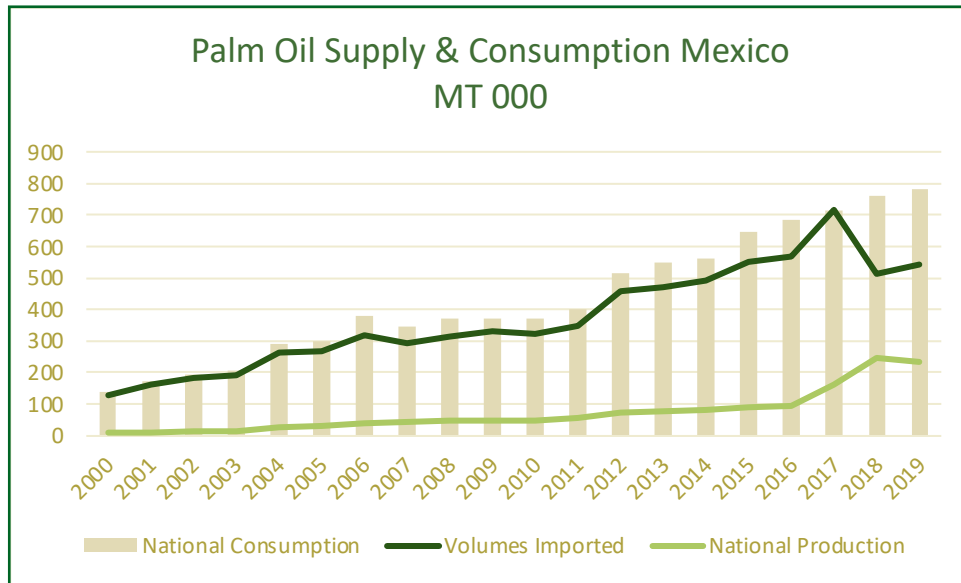


Chart 2



Source: COMEXPALMA-ANIAMEX

Table 2

Calendar Year	2015	2016	2017	2018	2019	2020
National Annual Production (MT)	139,910	158,597	183,439	206,572	271,325	299,189
National Consumption of CPO (MT)	621,710	678,897	709,939	687,472	750,225	709,293.0
National CPO Trade Balance / Deficit (MT)	-481,800	-520,300	-526,500	-480,900	-478,900	-410,104
Domestic Production as % of National Consumption	22.5%	23.4%	25.8%	30.0%	36.2%	42.2%
Femexpalma Statistical Year Book 2021						

Source: FEMEXPALMA/ACAL

Palm oil has become increasingly important for the food processing industry in recent years since food processing companies began to remove trans-fats from their recipes. Several snack food companies have also switched to palm oil. To avoid the potential for adverse impact on consumer demand for palm oil due to sustainability concerns, the palm oil value chain in Mexico, has promoted the standards of the Mexican RSPO, which requires certification for sustainably produced domestic palm oil.

Palm Kernel Meal

Noting the dependency of the Mexican livestock sector on imported oilseeds for high protein meal in the production of animal protein, there is an opportunity for the palm oil production sector to meet a small portion of this demand. Palm kernel meal or cake (PKC) is the main by-product of the palm kernel oil extraction process. It is a highly fibrous and medium grade protein feed, hence most suited to ruminant feeding (Pickard, 2005). Palm kernel resulting from mechanical extraction contains 5-12% oil and solvent-extracted palm kernel meal contains 0.5-3% oil (Chin, 2001). PKC is also used in poultry broiler systems, hog production, and in freshwater aquaculture (Zahari and Alimon, 2005).

In the two leading palm oil producer nations (Indonesia and Malaysia), a significant amount of PKC is used domestically as cattle feed, where it is fed to feedlot cattle at very high levels. In Colombia, the organic palm oil producer Daabon, advertises PKC as a cost competitive stock feed, suitable for most ruminant livestock including dairy cattle, beef cattle, and weaned calves. PKC is described as:

- a rich source of digestible fibre
- a good source of non-starch digestible fibre energy
- a very rumen-friendly raw material
- allowing energy intake to be maximised without increasing the risk of acidosis associated with cereal feeding.

Protein content of PKM ranges 14.4%–20%. This compares with 40%-49% for soybean meal. It also contains a high amount of carbohydrates (50.3%) and crude fiber (16.7%). Nutritive values of PKM can be enhanced by biological processes such as solid-state fermentation with cellulolytic and hemi-cellulolytic bacterial cultures to increase the protein value and the availability of nutrients (Marini et al., 2005; Alshelmani et al., 2014).

The NZ dairy sector is a noted market for PKC produced in Indonesia and Malaysia. PKC is currently retailing for NZ\$620 MT/US\$382 MT.

The recovery rate of palm kernels from FFB is typically 4.5%-5.5% by weight and the extraction rate for meal is in the range of 51%-52% - so in the region of 2.58% of the weight of FFB. If Mexico is producing FFB in the range of 1.45M MT pa, then PKC production is potentially 37,000 MT pa with a wholesale value of circa US\$6.7M pa.

Palm Oil Production In Mexico

The production of palm oil in Mexico has developed strongly in the current century, to become the leading domestically produced vegetable oil by volume, and domestic production now constitutes approximately 40% of palm oil consumed. Further growth in production may be constrained by supply of suitable land within the regions best suited for oil palm, noting that Mexico’s oil palm belt (at 16-18 degrees north) is well outside the preferred latitude of oil palm: 5% north or south of the Equator. Uneven distribution of rainfall, severe dryness, and extended dryness across some of the palm growing regions, makes irrigation an important tool in optimising commercial yields, but this is too expensive for smallholders and smaller producers, thus a limiting factor for national productivity.

Table 3

Productivity per Ha/Climate Profile	Veracruz	Tabasco	Campeche	Chiapas
Annual Rainfall (mm)	1,500	2,550	1200-2,000	1,400-4,000
Average Annual Temperature (Celsius)	23	27	27	18-28
Average Age of Plantations (Years)	17	10	8	12
FFB Per Harvested Hectare (MT)	9.11	12.09	11.73	13.79
FEMEXPALMA 2021 Year Book				

Source: FEMEXPALMA/ACAL

The data in the Table 4 above confirm the limitations on productivity when oil palm is cultivated in regions outside the optimal environment for palm oil production. The data for Veracruz, where the average age of plantations is 17 years, confirm that annual precipitation below 1,800 mm pa and a relatively low average annual temperature, are severely limiting factors for per hectare productivity.

Optimal precipitation is in the range of 2,000-2,500 mm pa. However, annual rainfall does not tell the whole story, distribution is also key. A water deficit of 100 mm has been shown to reduce FFB yield by 10%-20% depending on soil conditions (Hartley 1988). Rainfall should be evenly distributed over the year, without consecutive months of sub-optimal precipitation or dry periods, typically with at least 100 mm per month. Similarly, temperature and minimum / maximum range throughout the day is important for growth and productivity. It has been shown that optimal growth occurs between 32-22 degrees Celsius, with an average of 27C.

Planted Area

In the five years 2015-2020 the planted area reported by FEMEXPALMA grew on average by more than 8% pa to reach 117,534 Ha planted to oil palm by end 2020.

Table 4

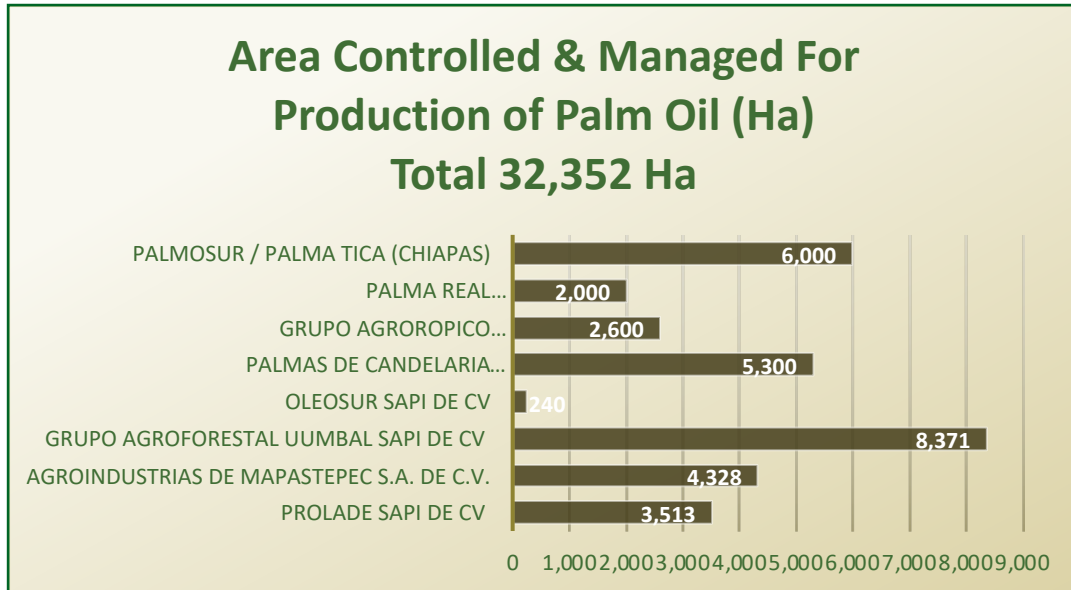
Mexico: Area Planted In Oil Palm By State	Hectares Planted 2015	Hectares Planted 2016	Hectares Planted 2017	Hectares Planted 2018	Hectares Planted 2019	Hectares Planted 2020
Chiapas	43,468	43,444	44,465	45,426	49,197	51,165
Campeche	18,056	23,328	25,028	28,061	29,334	30,783
Tabasco	13,447	16,195	20,002	21,047	26,719	27,520
Veracruz	7,179	7,151	7,165	7,220	7,202	8,066
National Total	82,151	90,118	96,660	101,753	112,452	117,534
Annual Increase in Area	na	7,967	6,542	5,093	10,699	5,082
Annual % Increase In Area		9.7%	7.3%	5.3%	10.5%	4.5%
Femexpalma Statistical Year Books						

Source: FEMEXPALMA/ACAL

ACAL estimates that the total area planted to oil palm in Mexico, may now be in excess of 120,000 Ha. While domestic production of palm oil has been growing steadily, the Obrador government's decision to cancel the various programmes incentivizing the development of the vegetable oil sector, including palm oil production, from any of its current support programmes, will increase the requirement for the private sector to fund development.

FEMEXPALMA advises that the area planted by its thirteen affiliated industrial plantations is circa 32,000 Ha. These 13 members include: Prolade, Industrias Oleopalma, Uumbal, Pالموسور/Pالماتیکا, Agrotropico, Sembradios de Palma Africana, Palma Real Del Sureste. The list also includes medium sized plantations. FEMEXPALMA advises ACAL that this list of industrial plantations is not exhaustive, as there are other large plantation businesses in Mexico which are not affiliated to FEMEXPALMA.

Chart 3



Source: FEMEXPALMA/ACAL

FFB Production

USDA reports indicate that more than 313,000 MT of CPO were produced in MY2021/22, suggesting FFB production of some 1.42 million MT (assuming a national OER of 22%) or circa 11.8 MT of FFB per planted Ha (all planted hectares versus harvested hectares only).

Table 5

Production of Fresh Fruit Bunches (MT)	2015	2016	2017	2018	2019	2020
Chiapas	438,977	463,120	500,783	548,447	642,163	696,693
Campeche	34,793	64,236	120,103	158,867	326,105	345,591
Tabasco	128,939	163,005	185,869	208,438	254,262	308,973
Veracruz	63,529	64,861	66,764	67,925	69,494	73,454
National Total	666,238	755,222	873,519	983,677	1,292,024	1,424,711
Annual Increase In Production (MT)	na	88,984	118,297	110,158	308,347	132,687
Annual % Increase In FFB Production	na	13.4%	15.7%	12.6%	31.3%	10.3%
Femexpalma Statistical Year Books						

Source: FEMEXPALMA/ACAL

Noting that the Obrador Administration has cancelled previous supports for the palm oil sector, it is interesting to observe the effect of positive interventions. The administration of President Peña Nieto (2012-2018) promoted a support programme (starting in 2016) for the palm oil producer sector, with a focus on certain states in the southeast of the country. The support programme included delivering planting material free of charge to smallholders. During the same period, the state government of Campeche (headed by Alejandro Moreno Cardenas), introduced an ambitious planting programme for an additional 100,000 hectares of oil palm over the period 2016- 2022. FEMEXPALMA advises that the programme was halted due to federal government budget cuts, with fewer than 30,000 Ha being planted. However, the results can be seen in the production data in the table above for 2019, when national production surged by 31% and in Campeche, production doubled.

There was a surge of planting in Campeche during the period 2015-2019 (the planted area expanded

from some 18,000 Ha to more than 29,000 Ha). A component in this growth was the 5,000 Ha estate developed by Palmas de Candelaria, which is noted for its use of irrigation and best agronomic practice. ACAL has failed to find productivity data for Palmas de Candelaria, but we have been advised by FEMEXPALMA that oil palm yields in the south of Campeche are between 21MT FFB/Ha and 25 MT FFB/ Ha due to the use of irrigation systems. Much of Campeche receives less rainfall than required for palm oil production – so irrigation has become a feature of the sector in the state.

Table 6

Fresh Fruit Bunches MT/Harvested Ha	2015	2016	2017	2018	2019	2020
Chiapas	12.8	13.3	14.0	14.3	13.2	13.8
Campeche	9.0	11	12.4	11.9	13.6	11.7
Tabasco	13.5	17.8	14.0	15	13	12.1
Veracruz	9.1	9.3	9.5	9.5	9.7	9.1
National Average	12.2	12.9	13.3	13.5	13.7	12.5
FFB/Ha (all planted Ha)	8.1	8.4	9.0	9.7	11.5	12.1
Femexpalma Statistical Year Books						

Source: FEMEXPALMA/ACAL

The average productivity data for Mexico (above) as provided by FEMEXPALMA, contrast with the national data for Guatemala, provided by GREPALMA (Oil Palm Growers’ Guild in Guatemala). GREPALMA states that the national average yield is 5.86 MT CPO /Ha. The world average in palm oil productivity is circa 3.8MT CPO/ Ha. GREPALMA data show that national average FFB/Ha is 25.6MT compared to a world average of circa 18 MT and Mexican productivity of 13.7MT-12.2 MT/Ha (2015-2020). Guatemalan OER is also high at 24.1% according to GREPALMA data. However, data from USDA’s International Product Assessment Division (IPAD) provide a more nuanced picture. If we apply the GREPALMA stated national average OER of 24% to the average annual yield of 5MT CPO per hectare, it would imply FFB per hectare of some 20.7MT, for some 8 MT /Ha better than the Mexican data.

Table 7

Guatemala Palm Oil Area, Yield and Production (USDA/IPAD)	Area	Production	Yield
Marketing Year	(1000 Ha)	(1000 Tons)	(T/Ha)
2011/2012	75	291	3.88
2012/2013	90	365	4.06
2013/2014	100	434	4.34
2014/2015	120	510	4.25
2015/2016	140	625	4.46
2016/2017	165	740	4.48
2017/2018	166	852	5.13
2018/2019	172	862	5.01
2019/2020	172	862	5.01
2020/2021	175	865	4.94
2021/2022	180	880	4.89
2022/2023	185	910	4.92
5-year Average 2017/18 - 2021/22	173	864	5

Source: USDA/IPAD/ACAL

Looking at production data for another near Central American neighbour, Honduran palm oil production for 2019/20 (before the ravages of Hurricane Eta) was estimated at 580,000 MT CPO, on a harvested area of 200,000 Ha for yields of 2.9 MT CPO. Assuming an extraction rate of 22% would imply 13.2MT FFB/Ha. This is more in line with Mexican production levels, noting that the Honduran sector is significantly dependent on smallholder production.

Included amongst the reasons given for the lower yield profile of the Mexican sector are the 5 deficiencies or omissions listed below.

1. **Plantation design** does not consistently prioritise sufficient internal roading due to limited availability of scaled parcels of suitable land. FEMEXPALMA notes that smallholders and medium-size producers do not invest in professional plantation design, including adequacy of provision for roads and internal storage areas.
2. **Low levels of mechanisation** – especially in respect of harvesting and field management. FEMEXPALMA confirms that smallholder producers are the weakest in this area, due to a lack of capital for investment.
3. **Agricultural labour** needs more training to develop a mindset and culture conducive to efficient oil palm management. FEMEXPALMA notes that there are moves within the sector to give more focus to training agricultural labour in more efficient practices:
 - a. *“...in recent years various programs have been developed focused on training in good agricultural practices for smallholders and smaller producers including:*
 - i. *Holistic Program (with PepsiCo, Nestle, Cargill, Oleofinos, RSPO, FEMEXPALMA).*
 - ii. *Agrovita program - a PepsiCo program that includes around 600 smallholders”.*
4. **Irrigation** is required in various palm oil producing regions of Mexico if the genetic potential of planted oil palms is to be more fully realized.
 - a. FEMEXPALMA notes that *“investing in irrigation would be the ideal, but it is very expensive, ...support programs by development banks are too complicated...for small and medium producers, the cost of capital can be too onerous a commitment”.*
5. **Best agricultural practices** – a failure to adoption best agricultural practices, including soil and foliar analysis, and designing fertilizer programmes based on effective palm monitoring and calibration of palm nutrient export, and fertiliser treatments designed for need across the plantations, rather than on ‘a whole plantation’ basis.

Mexican Food Processing Economy

Mexico is the third largest food processing economy in the Americas, behind the United States and Brazil, and it is in the top 15 worldwide. Moreover, the food industry in Mexico is considered one of the most dynamic in the region, with an historic average annual growth rate of 4.3%, and contributing \$39.4 billion (some sources indicate more than \$41bn) to 2020 gross domestic product (GDP), for circa 4% of the total (USDA). Euromonitor has forecast a post COVID CAGR for the segment of 6.1% 2020-2025. The B2B sector accounts for more than 66% of the domestic demand for edible oils and fats (Euromonitor), but while Mexico traditionally sources around 90% of its food processing ingredients locally, in respect of oilseed products, these are overwhelming sourced from imported seeds.

Table 8

Edible Oils & Fats Industry Segment	2020	Comment
National Demand for Edible Oils & Fats	US\$7.0bn	
B2B Demand as % of Total Demand	66.30%	Food processing represents 4% of GDP. B2B demand is stronger in Mexico than across region
Domestic Production Value	US\$4.8bn	69% of Domestic Demand
Domestic Supply	74.20%	Imports 25.8% of total supply
Domestic Value Growth YoY	-14.30%	COVID Effect
Exports % of Total Production	13.00%	
Export Value	US\$772m	circa 10% of the value of Argentina or Brazil exports
Forecast CAGR 2020-2025	6.10%	The economy is projected to expand by 1.9% in 2022 and 2.1% in 2023. Consumption driven by gradual improvement in the labour market, remittances, and increasing % of population vaccinated
Number of Producers	7,229	Fragmented Market
Production Value of Top 5 Producers	23.80%	Fragmented Market

Source: Euromonitor Data/ACAL

Mexican Oilseeds Crushing Sector/Palm Oil Refinery

The crushing sector in Mexico is highly concentrated and dominated by large regional and international corporations including Ragasa (a focus on soya), Agydsa (canola and soya), Cargill (soya and palm oil), Proteinas y Oleicos (palm oil), Arthur Daniel Midland (grains), La Corona, and Grupo Aceites El Mayo (safflower). These names account for more than 90% of crushing capacity in Mexico, and competition between them is described as intense. The upward trend in meal production in Mexico has resulted also in increased domestic crush capacity. USDA estimates that the current crushing capacity is circa 9.3 M MT with average utilisation estimated at 75% of total capacity.

As with oilseed crushing segment, the palm oil refinery segment is also highly concentrated. One of the leading refiners and actors in the Mexican palm oil value chain, and founded in 1978, is Grupo OLEOMEX. The group, which operates as a conglomerate of 15 significant businesses, includes oil palm plantations, industrial processing and refining of palm oil, and the marketing and distribution of refined products to the food and pharmaceutical industries.

The concentration of refining capacity with a small number of actors, coupled with the commitment of those names to source traceable and sustainable palm oil, makes RSPO certification a strategic imperative for Mexican producers, and a sound business decision given the dominance of smallholders in the supply of CPO.

Mexican Food Processing Sector

With a population of more than 130m, Mexico has a broad base of food and beverage companies, which also benefit from the country's proximity to the USA economy, and the proximity of other foreign markets in both North America and LAC region.

Bakery, tortilla, meat processing, and dairy production are the primary processing segments, with bakery and tortilla accounting for 25% of the total production. These are segments for which palm oil is an important food ingredient. Mexico may be consuming more than 1M MT of palm oil products annually. Palm oil is predominantly used for cooking oil, or as a component for confectionery, bakery, tortilla, and margarine. The oil has become increasingly important for the Mexican food processing

industry in recent years since companies began to remove trans-fats from their recipes, and several snack food companies have also switched to palm oil for their products.

According to research undertaken by USDA: young Mexican consumers are concerned about their ecologic impact and favour socially responsible companies; most Mexican consumers rely less on brand names, preferring to purchase products that suit their lifestyle and values. These consumer characteristics are a likely component in the growing industrial demand for certified sustainable palm oil amongst Mexico's food processing companies. The USDA reports that increased consumer awareness of deforestation and other environmental issues has led the Mexican palm oil value chain actors to promote RSPO certification, hoping thereby to avoid adverse consumer sentiment impacting on demand.

In 2020 the domestic food and beverages processing sector in Mexico, was led by Bimbo (as measured by net revenues), according to a Statista analysis, followed, in descending order by: Coca-Cola FEMSA, Arca Continental, Sigma Alimentos, Gruma, Grupo Modelo AB-InBev, PepsiCo Alimentos, Grupo Lala, Heineken Mexico and Nestlé Mexico. This significant consumer group is demanding sustainably produced palm oil products, with RSPO certification.

Sustainable Production of Oil Palm Products in Mexico

The Mexican palm oil value chain has promoted the creation of a Mexican official standard that guarantees the sustainability of domestic palm oil production through the issuance of a Roundtable on Sustainable Palm Oil (RSPO) certificate. This Mexican official norm (NOM) was published in Mexico Federal Register went into force on January 1, 2021. RSPO Certified Sustainable Palm Oil (or RSPO CSPO) describes palm oil produced by a mill (including independent mill) if the FFB/palm fruit are sourced from plantations/estates that have been certified under the RSPO Principles and Criteria (P&C).

Production of sustainable oil palm products is comprised of legal, economically viable, environmentally appropriate, and socially beneficial management and operations. This is delivered through the application of the RSPO Principles and Criteria for Sustainable Palm Oil Production and the accompanying indicators and guidance, as set out in the document RSPO Principles and Criteria for Sustainable Palm Oil Production. All the RSPO Principles and Criteria apply to:

- the management of oil palm plantations and associated mills.
- Independent mills are certified against the requirements of the RSPO Supply Chain Certification Standard.

In June 2021, the RSPO Latin America signed two Memoranda of Understanding with the Mexican Federation of Oil Palm Producers (FEMEXPALMA) and the Guild of Palm Growers of Guatemala (GREPALMA), aiming to jointly align strategic efforts by defining common objectives, identifying high impact projects, and fulfilling commitments in an effective manner. The two agreements will be effective until 2025. The RSPO is hoping to certify 40% of palm oil production in Mexico, and 75% of palm oil production in Guatemala.

On the announcement, FEMEXPALMA Executive President José Luis Pérez Vázquez stated, "Since the foundation of FEMEXPALMA, sustainability has been a fundamental axis in our work agenda, and we are convinced that this effort will be reinforced through the signing of the collaboration agreement with RSPO...Together, we jointly promote the sustainable production of palm oil in Mexico to be the norm." The RSPO's Latin American membership includes 31 certified growers across LAC region covering more than 420,500 hectares of certified land, about 30% of all land planted to oil palm within the region.

Conclusions

Palm oil production in Mexico feeds into a vibrant food processing economy with 130 million pops and a significant youth cohort. Domestically produced palm oil has an opportunity to increase market share by substituting for 400,000-600,000 MT pa of imported palm oil products, and for a portion of the other 2.2M MT pa of edible oils consumed annually, largely produced from imported oilseeds. The dominance of soybean oil at 58% of national consumption of oils and fats is being somewhat eroded by palm oil due to palm oil's healthier profile as a frying oil and ingredient in processed foods, but soya's importance as a source of high protein meal for the Mexican livestock sector, means that it will continue to command an important position in the Mexican edible oils and fats complex.

This still leaves a considerable opportunity for domestically produced palm oil, but to realise this opportunity, the Mexican palm oil producer sector needs to 'raise its game'. National average yields at 12-13MT FFB/Ha are less than 50% of the national average reported by GREPALMA for the Guatemalan sector (25.6MT/Ha). Even allowing for a degree of immaturity across the planted area in Mexico, national yields look to be low side. While the Mexican palm oil belt is located at latitudes outside the preferred range for oil palm, national productivity is also impacted by a lack of investment and inefficient practices. Greater investment by the private sector in plantation design, planting materials, irrigation, mechanisation, and training looks to be required.

Under the leadership of FEMEXPALMA, the Mexican value chain has proactively embraced adoption of the principles of the RSPO, with a goal to achieve certification for 40% of domestic production. This strategy should chime with the reported preference amongst Mexico's 'youth cohort' for ethical products, leaving domestically produced palm oil well-placed to grow market share if only it can grow production volumes to access that opportunity.