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Oilseeds development in Morocco in the current international context★

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Abstract – Oilseeds are grown mainly for the extraction of vegetable oils and for its by-products needed in livestock feed and in other industrial uses. The oils obtained from them are becoming a staple food used in daily cooking in several countries, and as a result the world demand is constantly increasing. This situation, combined with the exponential increase in the world population and other cyclical factors, is leading to a surge pricing, especially in importing countries. This increase in prices is fueled by soaring oil prices and disruption in supplies following Covid-19 pandemic and geopolitical tensions in the Black Sea. Morocco is directly impacted by these fluctuations given that the country imports almost its total needs in vegetable oils, oilseeds and meals. The high dependence on imported vegetable oils and oilseed products has a detrimental effect on the economy of Morocco and weighs heavily on the country's trade balance. Considering their increasingly important role in society, the development of a local oilseed sector to reduce Morocco's dependence on imports and cope with the vagaries of global markets has never been more topical in the current context of sustainable agriculture and food sovereignty.

Keywords: global market / Morocco / oilseeds / vegetable oil / oilseed sector

Résumé – Développement des oléagineux au Maroc dans le contexte international actuel. Les graines oléagineuses sont cultivées principalement pour l'extraction d'huiles végétales et pour leurs sous-produits nécessaires à l'alimentation du bétail et à d'autres usages industriels. Les huiles qui en sont extraites deviennent un aliment de base utilisé dans la cuisine quotidienne de plusieurs pays et, par conséquent, la demande mondiale ne cesse d'augmenter. Cette situation, combinée à l'augmentation exponentielle de la population mondiale et à d'autres facteurs conjoncturels, entraîne une flambée des prix, notamment dans les pays importateurs. Cette hausse des prix est alimentée par la flambée des prix du pétrole et les perturbations des approvisionnements suite à la pandémie de Covid-19 et aux tensions géopolitiques en mer Noire. Le Maroc est directement impacté par ces fluctuations étant donné que le pays importe la quasi-totalité de ses besoins en huiles végétales, graines et tourteaux. La forte dépendance vis-à-vis des importations d'huiles végétales et de produits oléagineux a un effet néfaste sur l'économie du Maroc et pèse lourdement sur la balance commerciale du pays. Compte tenu de leur rôle de plus en plus important dans la société, le développement d'une filière oléagineuse locale pour réduire la dépendance du Maroc aux importations et faire face aux aléas des marchés mondiaux n'a jamais été autant d'actualité dans le contexte actuel de l'agriculture durable et de la souveraineté alimentaire.

Mots clés : marché global / Maroc / oléagineux / huile végétale / filière oléagineuse

1 Introduction

According to data from United States Department of Agriculture (USDA, 2022), world consumption of vegetable oils has grown from 131 million tons in 2008/2009 to 205 million tons in 2020/2021. It is forecast by the Organisation for Economic Co-operation Development (OECD) and the Food and Agricultural Organization (FAO) to exceed 246 million tons (Mt) in 2030 (OECD-FAO, 2021). The majority of the utilized vegetable oils are obtained from a huge variety of oilseeds well known worldwide such as soybean, rapeseed, sunflower, groundnut, safflower, flax, cotton, sesame, etc. Their cultivation area and their production

★ Contribution to the Topical Issue "Construire de nouvelles filières oléoprotéagineuses / Creating new oil & protein crop value chains"

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are constantly increasing. In 2020/2021, the total area was estimated at 286 million hectares with a total production of 605 million tons, being by 24% and 51.6% respectively higher in comparison with the records in 2008/2009. This increase in world production is partly due to the expansion in cultivated area but also to the improvement in yields per hectare, which increased from 1,7 t/ha to 2,1 t/ha (about 22%) between 2008/2009 and 2020/2021. The production growth trends are facing a big challenge to meet the growing demand for vegetable oils, livestock feeds, and other industrial uses.

In Morocco, the oilseed sector has experienced a significant decline since the 1990s, leading to almost total dependence on the international market. Several factors have contributed to this decline over the last three decades, including the reduction in public support and the liberalization of trade with other countries. The main oilseed crop grown in Morocco are sunflower, rapeseed, and groundnut intended more for direct consumption than for the production of oil. Their cultivation area represents currently less than 1% of the country's total useful agricultural surface and their production covers less than 2% of the country's vegetable oil needs.

In this context, Morocco continues to make many efforts to increase its national production and limit the impact of its exposure to the international market. The new strategy "Green generation 2020–2030" aims to reach 70,000 ha of oilseeds including 20,000 ha of rapeseed and 50,000 Ha of sunflower by 2030, which will cover 10% of the local market needs.

This article examines the oilseeds sector situation in the world, with particular reference to the importance of major oilseed crops and their production in Morocco, and concludes by reviewing the challenges and opportunities for the development of local oilseed sector in this country.

2 Global market of oilseeds, edible oils, and meals

2.1 Oilseeds global market

Oilseeds are the second most important crop in the world in terms of cultivated area, after cereals. Their production is dominated by soybeans, which accounted for more than 61% of total worldwide oilseed production in 2020/2021, followed by rapeseed, peanut, sunflower and cottonseed (Fig. 1). Among the top five producing countries, more than half of total production is located on the American continent, represented in order of importance by Brazil, United States and Argentina (Fig. 1). United States, Brazil, China and Argentina provided 87% of the total soybean production in 2020/2021. Meanwhile, 85% of the total rapeseed is produced in China, Canada, EU, India and Japan. During the same period, Ukraine, Russia and Argentina together with EU account for about 80% of the total sunflower production.

In 2020/2021, about 191 million tons of oilseeds are exported in the international market. Brazil and United States were the largest exporters with approximately 82 and 63 Mt exported respectively. The top importers were China, EU, Mexico and Japan (Fig. 2).

2.2 World trends in oilseeds production

Figure 3 shows the global trends in oilseed crop production, yield and area over the past 12 years. Production

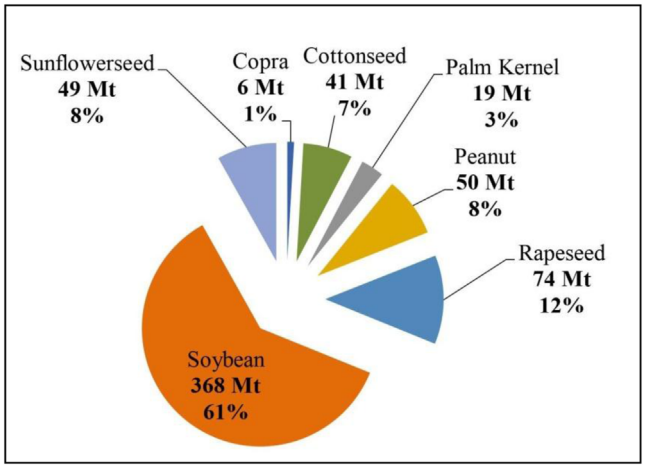

Fig. 1. Major oilseed production in 2020/2021 (data from USDA, 2022).

increased by 52%, while the increase in area and yield was 24% and 22%, respectively. The global production of major oilseed crops between 2008/2009 and 2020/2021 is compared in Figure 4 (USDA, 2022). Soybean has the highest production increase (+73%) followed by sunflower (+49%), and rapeseed (+26%). The main driving-force behind the growth in production was to meet the supply requirements of a steady rising demand in view of the global population growth and increased use of vegetable oils for industrial purposes. Production performance has been achieved both by increasing cultivated areas and by improving yields through the use of high-yielding varieties and the adoption of the latest technologies.

2.3 Edible oils global market

In addition to annual oilseeds, other perennial plants are known as sources of edible oils in the world such as coconut, oil palm and olive (Zhou *et al.*, 2020). As can been seen from Figure 4, world production of these oils has reached 207 million tons in 2020/2021 with an increase of 53% compared to 2008/2009. Palm oil has a maximum share of 35%, followed by soybean oil, rapeseed oil and sunflower oil (Fig. 5). More than 47% of the world vegetable oils production is found in Asia with Indonesia in the lead, followed by China and Malaysia (Fig. 6).

The consumption of vegetable oils in the world has reached 205 million tons in 2020/2021, with an average annual increase of 3.8% since 2008/2009, following in a linear way the increase of the world population (Fig. 6). Furthermore, the increasing use of these oils in other technical and industrial applications contributed to supporting this growing demand. The dominant consumers of the vegetable oils are China, EU, India, Indonesia and the United States. Together they represent more than 60% of world consumption. With more than 85 million tons of vegetable oils exported in 2020/2021 on the international market, Indonesia and Malaysia represented more than 50% of exports, followed by Argentina and Ukraine. As for the importers, India, China, EU and United States are the largest with a total import volume of over 42 million tons, or 51% of the world import volume estimated at 82 million tons (Fig. 7).

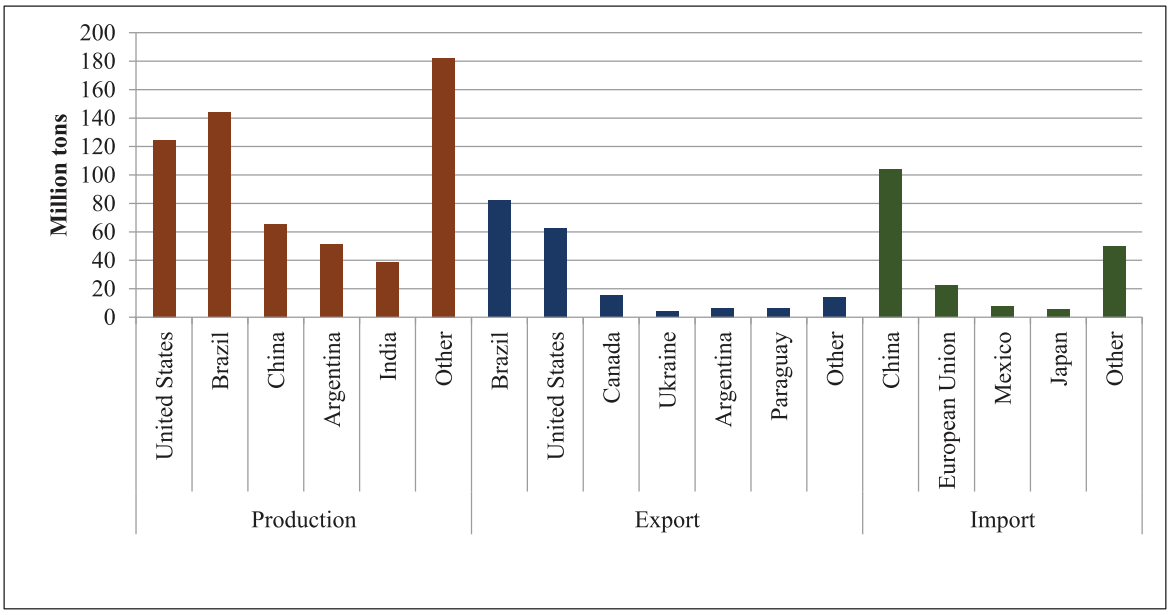

Fig. 2. Oilseeds production and trade by country in 2020/2021 (data from USDA, 2022).

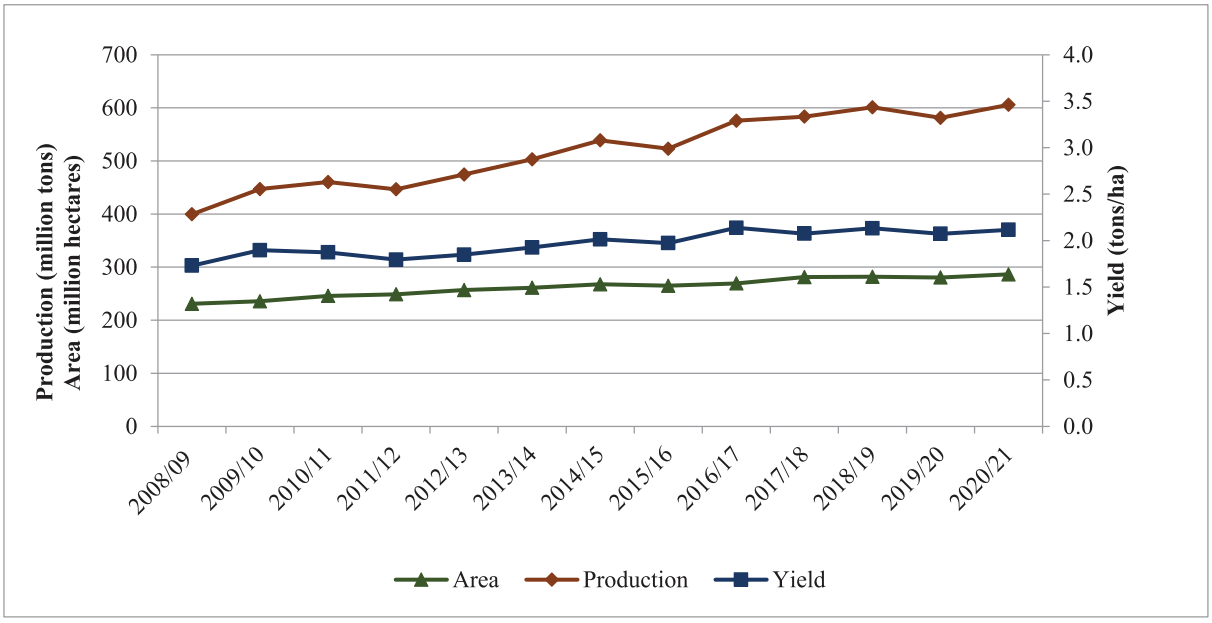

Fig. 3. Global oilseed area, production and yield from 2008/2009 to 2020/2021 (data from USDA, 2022 and own calculations).

Among the different types of vegetable oils exported in the international market in 2020/2021, palm oil ranks first (48 Mt), followed by soybean oil (13 Mt), sunflower oil (11 Mt) and rapeseed oil (6 Mt). The main exporters of soybean oil are Argentina and Brazil, while the most important importers are India and China. Regarding sunflower oil, the leading exporters are Ukraine and Russia and the largest importers are EU and Turkey. Canada and EU are major exporters of rapeseed oil, and China and EU are the world's largest importers (Fig. 8).

The world production of olive oil in 2020/2021 is around 3 million tons, mainly located in the Mediterranean basin. The largest producing countries are Spain (1.38 Mt), Greece (0.27 Mt), Italy (0.27 Mt), Turkey (0.21 Mt) and Morocco (0.16 Mt). World consumption of this oil is estimated at 3.125 million tons and the main consumers are EU, United States, Turkey, Morocco and Brazil (IOC, 2022).

2.4 Oilseed meals global market

Oilseeds provide high-quality meals, which are protein-rich by-products, needed for livestock feed (Ramachandran *et al.*, 2007). About 348 million tons of meals were produced in 2020/2021, with an increase of 51% compared to 2008/2009. Soybean meal has the largest share, followed by rapeseed meal

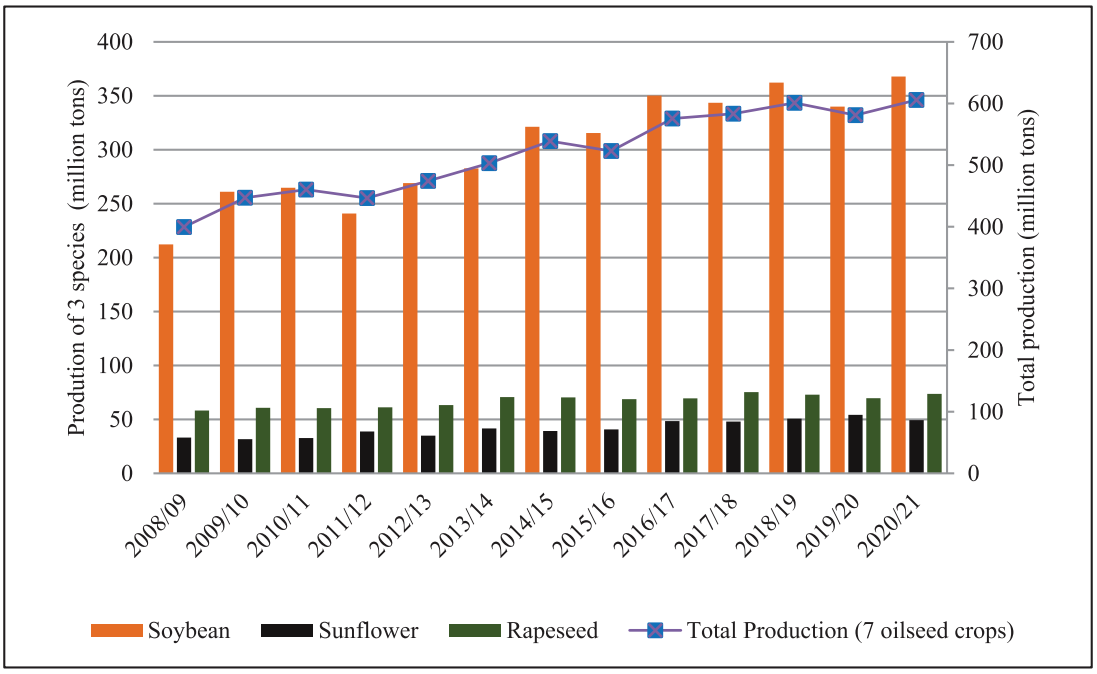

Fig. 4. Trends in global oilseed production and in production of soybean, sunflower seed, rapeseed between 2008/2009 and 2020/2021 (data from USDA, 2022).

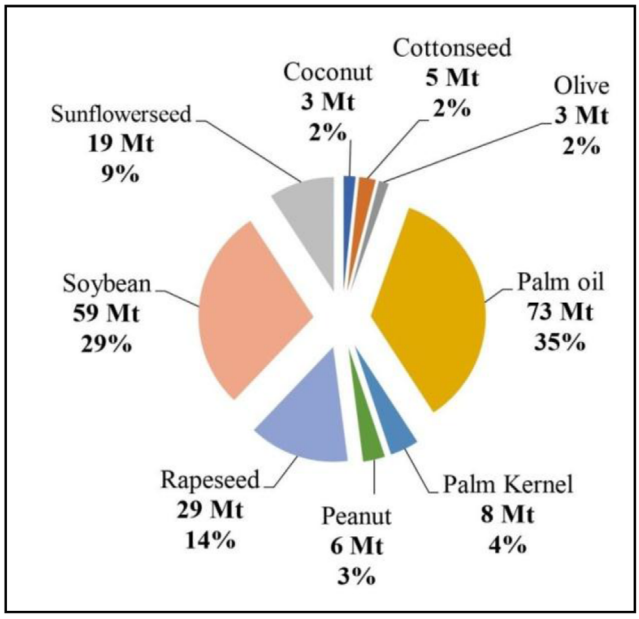

Fig. 5. World major sources of edible oils in 2020/2021 (data from USDA, 2022).

and sunflower meal (Fig. 9). China, United States, Brazil, Argentina and EU were the most important producers. They account for about 69% of the total meals production (Fig. 10).

Consumption of meals in the world was rising substantially from 230 million tons to 344 million tons between 2008/2009 and 2020/2021, an increase of 50%. China, EU, United States and Brazil accounted for around 61% of total global consumption (Fig. 10).

In 2020/2021, 97 million tons of meals were exported in the international market. The main important exporters were Argentina, Brazil and United States. Meanwhile, EU and China were the largest importers (Fig. 10).

2.5 Price dynamics of oilseeds and oilseed products in the global market

Figure 11 shows average annual prices between the marketing years 2010/2011 and 2019/2020 compared to the monthly average of 2020/2021 (October 2020–September 2021) and 2021/2022 (October 2021–May 2022). Although increases in prices were apparent for all categories, the vegetable oils recorded the largest increase. Mediocre climatic conditions affecting certain areas of production and strong demand are the main reasons for this price surge. The situation has recently been aggravated by geopolitical tensions disrupting supply to some markets and a rapid rise in fuel prices driven by the gradual economic recovery from the Covid-19 pandemic. On the other hand, the costs of agricultural inputs (seeds, fertilizers, fuel, etc.) have also risen steadily and the producers transfer their increasing costs to industry and consumers.

2.6 Impacts of oilseed global market volatility on Moroccan economy and domestic prices

The high dependence on imported vegetable oils and oilseed products has a detrimental effect on the economy of Morocco and weighs heavily on the country's trade balance.

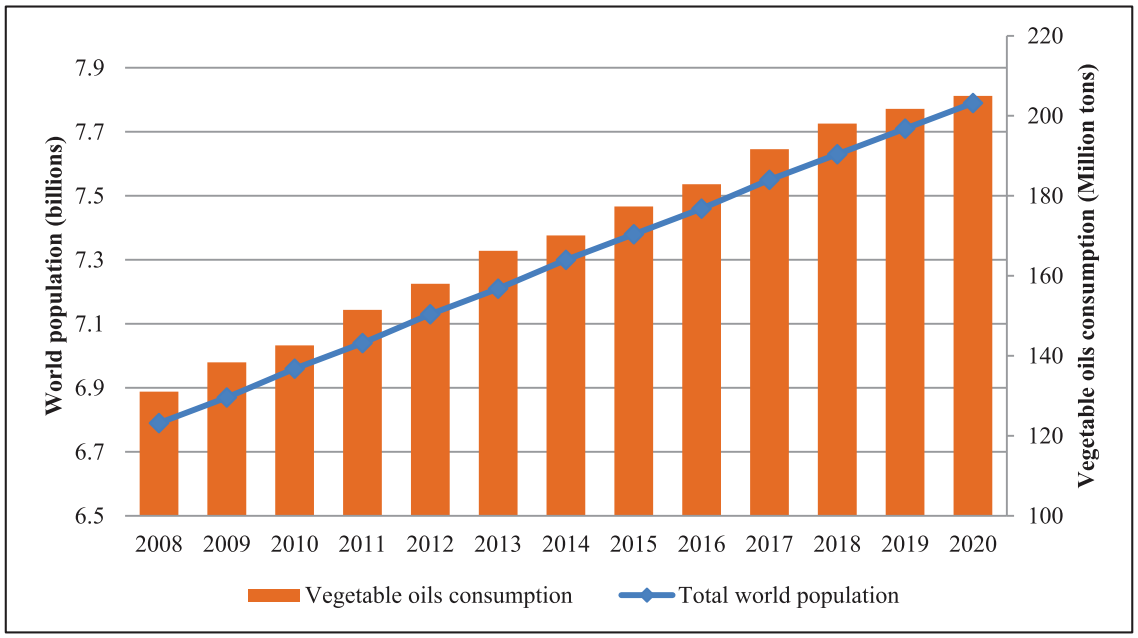

Fig. 6. Global consumption of vegetable oils and world's population growth from 2008 to 2020 (data from FAOSTAT, 2019, 2020 and USDA, 2022).

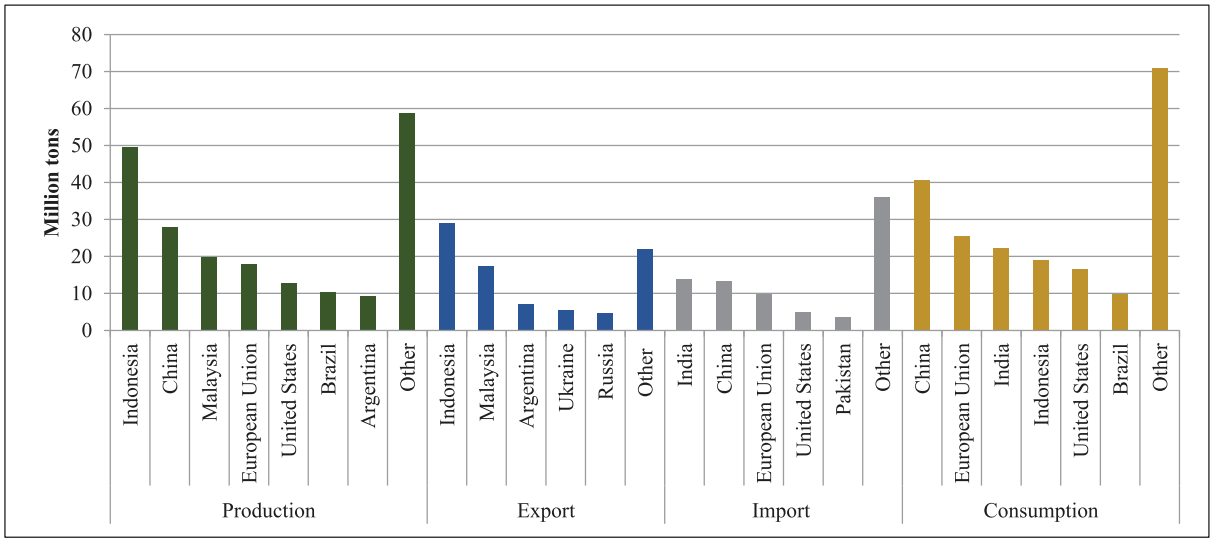

Fig. 7. Production, trade and consumption of vegetable oils by country in 2020/2021 (data from USDA, 2022).

According to data from Morocco's Exchange Office (MEO), the import bill is estimated at 900 million US dollars in 2020. In addition, the import of considerable quantities leads to a significant drain on the country's foreign exchange reserves. Furthermore, this dependence contributes to increasing the vulnerability of the local economy to external supplies, hinders the development of local production and calls into question the country's food security. On the other hand, imports have a significant impact on domestic prices as it exposes the domestic market to the effects of global market price fluctuations. The international prices of oilseeds and oilseed products have been showing a strong and consistent upward trend during the recent period 2020/2021 to 2021/2022 for the reasons mentioned above. In this way, vegetable oil being a global commodity product with a considerable volatility in prices, imports have severe implications for the domestic prices of importing countries such as Morocco. Consequently, the rise in prices has an intense impact on consumer prices and put a greater pressure on the household purchasing power insofar as vegetable oil is the unavoidable element of Moroccan cooking. This situation reflects the importance of developing a local oilseed sector to reduce Morocco's dependence on imports and cope with the vagaries of world markets.

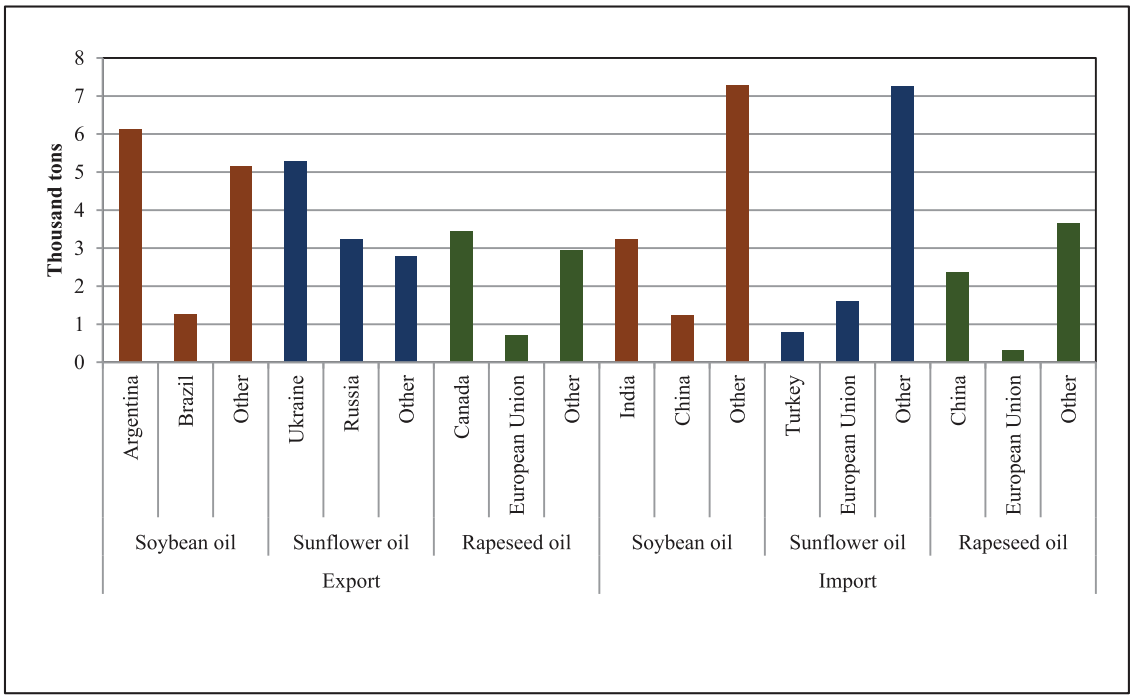

Fig. 8. World main exporters and importers of soybean, sunflower and rapeseed oil in 2020/2021 (data from USDA, 2022).

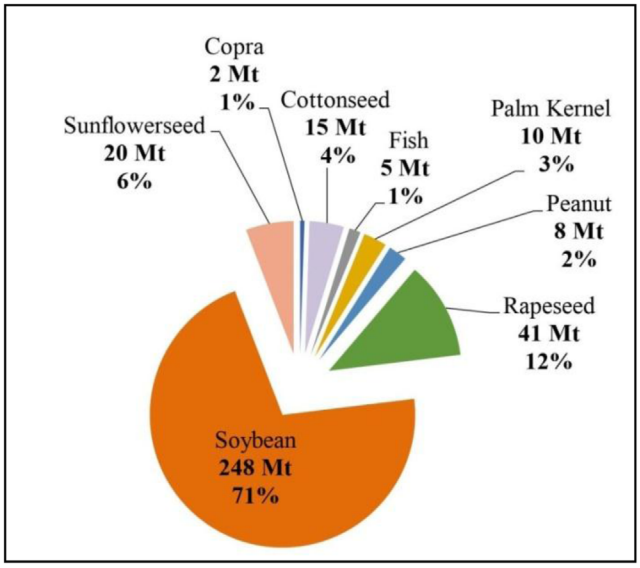

Fig. 9. World's major protein meals sources in 2020/2021 (data from USDA, 2022).

3 Oilseeds in Morocco

3.1 Area, production and yield

Several annual oilseed species have been grown in Morocco: sunflower, rapeseed, groundnut, soybean, sesame and safflower. Their cultivation area has continued to decline since the 1990s following several factors, in particular the abolition of guaranteed minimum price and liberalization of the sector. Sunflower has always been the main oil crop, despite the fact that its growing area has decreased from more than 200,000 ha in 1993 to only 22,207 ha in 2019 (FAOSTAT, 2019). Groundnuts are still grown in some areas but their production is intended for direct consumption as edible nuts. Rapeseed is being re-introduced taking advantage of several efforts for its development and extension. Since 2013, the oilseed sector has benefited from several support measures within Green Morocco Plan strategy. Thus, based on data published by Morocco's Ministry of Agriculture (MAPMDREF, 2019), the area of sunflower increased from 15,406 ha in 2013 to 22,207 ha in 2019, an increase of 44% (Fig. 12). As for rapeseed, its area increased from 528 ha in 2013 to 10,304 ha in 2019 (Fig. 13). Sunflower production increased from 17,638 tons in 2013 to 29,456 tons during 2019 harvest year; meanwhile, rapeseed production has increased from 590 tons to 9,093 tons (Figs. 12 and 13). During the same period, average yields gradually increased to reach 13.3 quintals/ha (+16%) for sunflower and decreased by 21% for rapeseed (MAPMDREF, 2019). The results recorded remain far below the objectives initially set out in the program due to several reasons, in particular climatic conditions (spring drought), competition from other more profitable crops, sparrow (*Passer* spp.) damages and sometimes use of non-certified local seeds. The new strategy "Green generation 2020–2030" intends to give a new impetus to this sector aiming to improve coverage of needs through the use of local oilseeds by 2030.

According to data from the High Commissioner for Planning (HCP, 2021), sunflower and rapeseed areas are mainly located in Rabat-Salé-Kenitra (16,000 ha), Fes-Meknes (8000 ha) and Casablanca-Settat (2000 ha) during the 2019/2020 crop year (Fig. 14). There are 2 crushing units and 5 vegetable oil refining plants in Morocco. These plants

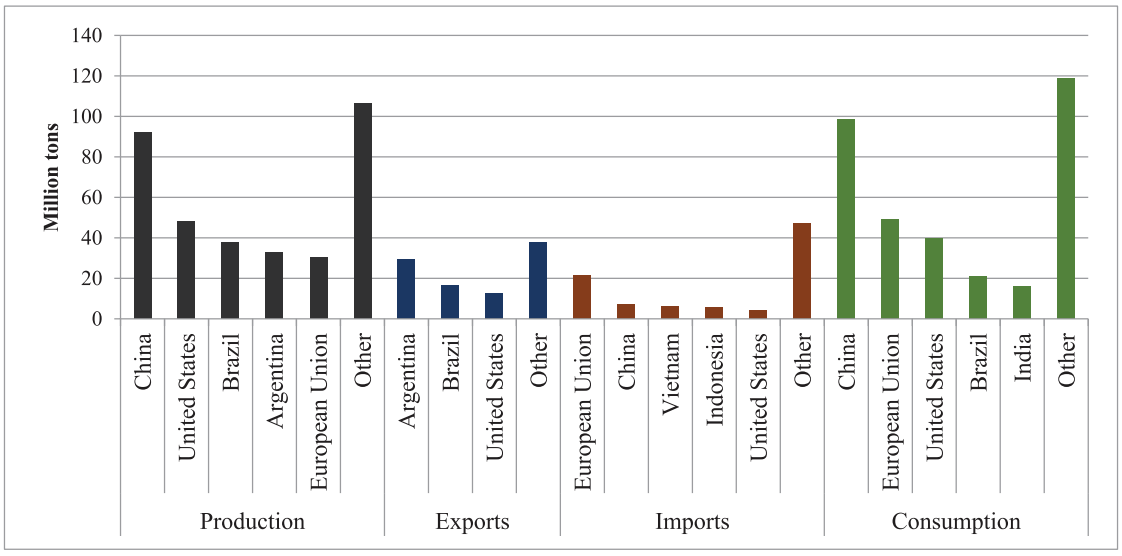

Fig. 10. Oil crops meal production, trade and consumption by country in 2020/2021 (data from USDA, 2022).

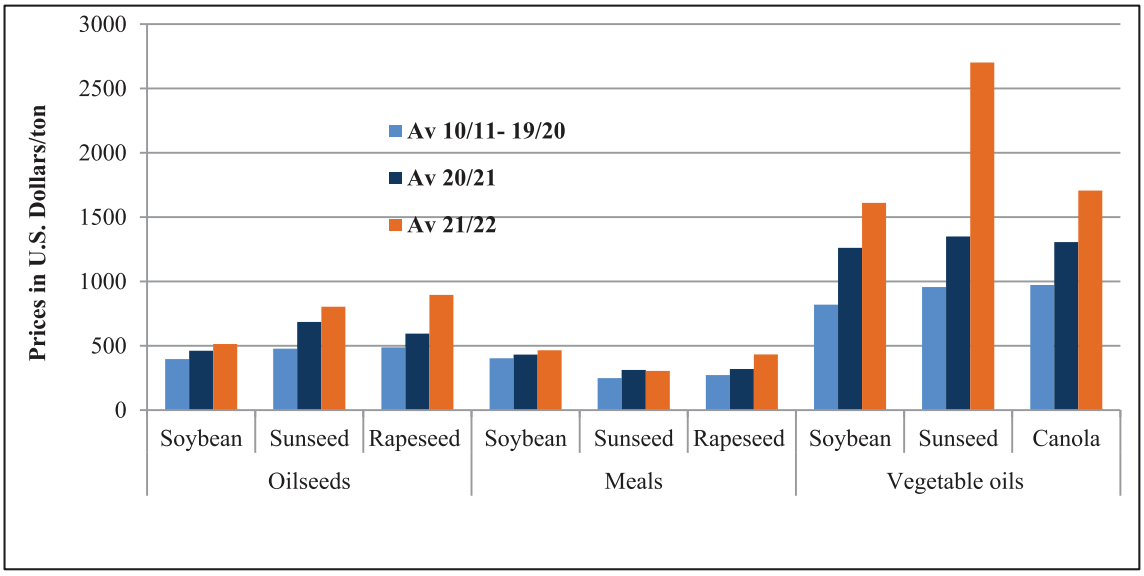

Fig. 11. October–September average annual prices (US$/ton) of oilseeds, meals and vegetable oils between 2010/2011 and 2019/2020 compared to the monthly average of 2020/2021 (October 2020–September 2021) and 2021/2022 (October 2021–May 2022) marketing years (data from USDA, 2022).

accounts for crushing capacity of 620,000 tons/year and a refining capacity of 770,000 tons/year. Crushing quantities fluctuates from year to year, depending on market conditions and the national production, but typically, the average quantity of crushed seeds does not exceed 60,000 tons per year. The country relies heavily on imports to bridge the widening gap between supply and demand (Tab. 1).

3.2 Edible oils consumption in Morocco

In 2020, the per capita consumption is estimated as 15 kg/capita per year, with total local consumption of vegetable oils evaluated at 550,000 tons for about 36 million inhabitants. It is in line with the average for developing countries and reflects urban changing lifestyles and increase in per capita income. According to IOC data for 2020/2021, the consumption of olive oil in Morocco reached 140,000 tons in 2020/2021 for a production of 160,000 tons (Fig. 15). Although Morocco is the world's fifth largest producer of olive oil, its consumption per capita and per year (about 4 liters) remains quite low compared to other Mediterranean countries, such as Spain, with 12 l/capita per year. Encouraging household consumption of olive oil in Morocco would help to reduce the country's high dependence on vegetable oils extracted from oilseeds. This measure will necessitate increasing the production of olive oil and offering local consumers quality oils at affordable prices.

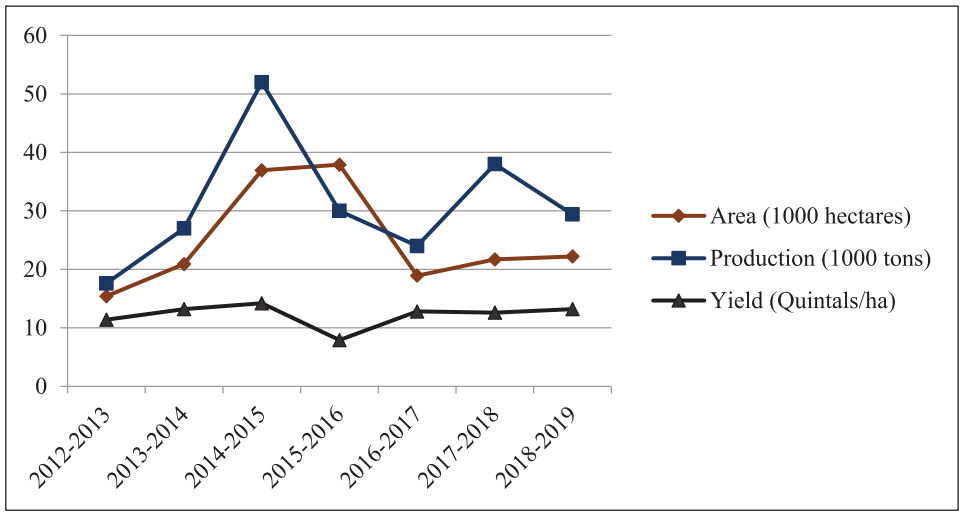

Fig. 12. Trends in area, production and yield of sunflower in Morocco between 2012/2013 and 2018/2019 (data from MAPMDREF, 2019).

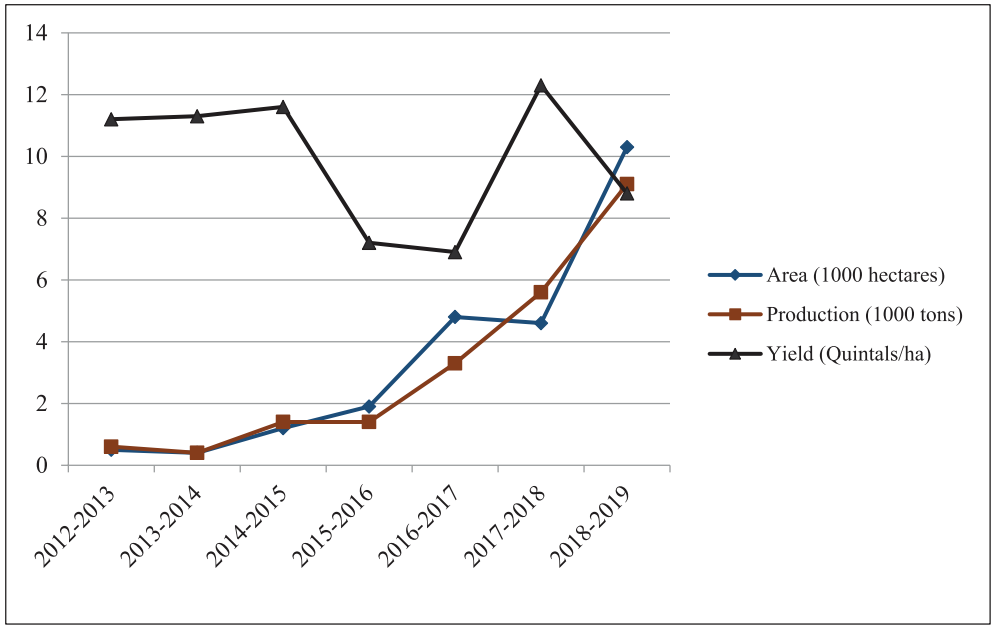

Fig. 13. Trends in area, production and yield of rapeseed in Morocco between 2012/2013 and 2018/2019 (data from MAPMDREF, 2019).

3.3 Vegetable oils imports in Morocco

Locally produced oilseeds barely cover 2% of national vegetable oil needs. The rest comes from an imported raw material (95% from crude oils and less than 3% from oilseeds, mainly sunflower). In 2019/2020, Morocco is among the top 10 importers of soybean oil, which represented more than 88.5% of its vegetable oil imports, followed by sunflower oil (11%) and rapeseed oil (0.5%). With an average annual growth rate of 3% per year, the total imports in vegetable oils have increased from 405,000 tons in 2007 to 616,000 tons in 2020, an increase of 52% (FAOSTAT, 2020) (Fig. 16). Between 2016 and 2020, the main suppliers of Morocco are EU, followed by Argentina, United States and the rest comes from Turkey, Ukraine and Russia (MEO, 2020). These imports are encouraged by the fact that customs duties are abolished with countries that have signed free trade agreements (EU and United States) with Morocco and have been reduced to 2.5% for the rest of the countries. The profitability of the crushing industry has suffered from the combined effect of the reduction in local oilseed production and the entry into force of the free trade agreements. This situation has led to a drastic reduction in oilseed imports *versus* a significant increase in direct imports of crude vegetable oils and meals (Fig. 16). Moreover, the gap between supply and demand is large and growing, leading to high price volatility with a negative effect on the trade balance (Tab. 2).

3.4 Oilseed meals consumption and imports in Morocco

The growth in demand for animal products has led to a considerably rising demand for oil meals for animal and

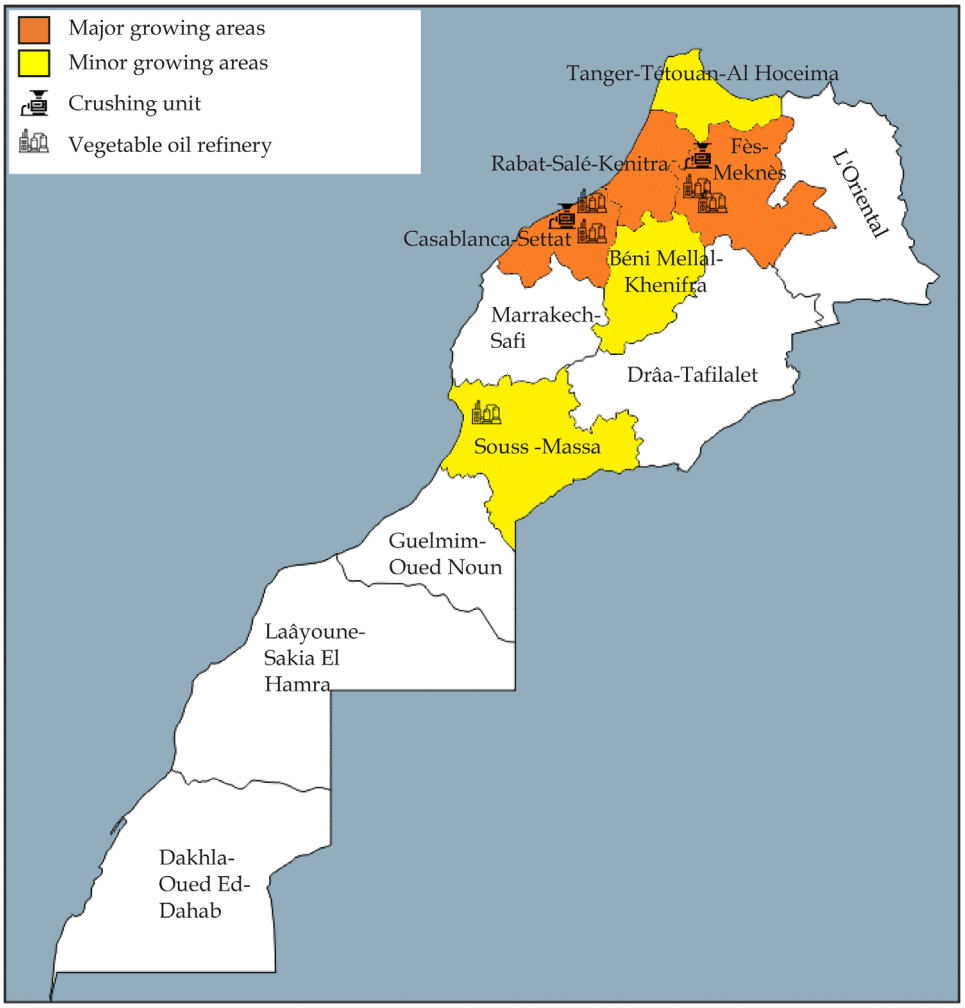

Fig. 14. Oilseed growing areas in Morocco and distribution of major operators in 2019/2020.

Table 1. Oilseeds supply and distribution in Morocco between 2007/2008 and 2020/2021 (unit: 1000 tons – data from USDA/FAS/PS&D, FAOSTAT, 2019, 2020 and MAPMDREF, 2019).

Oilseeds	Soybean				Sunflower seed				Rapeseed			
Years	Production	Imports	Exports	Consumption	Production	Imports	Exports	Consumption	Production	Imports	Exports	Consumption
2007/2008	0	409	0	410	33	1	0	66	1	7	0	8
2008/2009	0	386	0	395	32	80	0	112	1	0	0	1
2009/2010	0	187	0	200	43	72	0	115	1	5	0	6
2010/2011	0	95	0	100	59	89	0	129	1	12	0	13
2011/2012	0	76	0	76	48	18	0	85	1	0	0	1
2012/2013	0	73	0	74	18	37	0	55	1	0	0	1
2013/2014	0	134	0	134	19	1	0	20	1	0	0	1
2014/2015	0	128	0	128	27	38	0	65	1	0	0	1
2015/2016	0	100	0	100	52	15	0	67	1	0	0	1
2016/2017	0	67	0	67	30	8	0	38	3	0	0	3
2017/2018	0	27	0	27	24	19	0	43	5	0	0	5
2018/2019	0	28	0	28	38	2	0	40	9	0	0	9
2019/2020	0	101	0	101	29	11	0	40	9	0	0	9
2020/2021	0	27	0	27	22	40	0	62	9	0	0	9

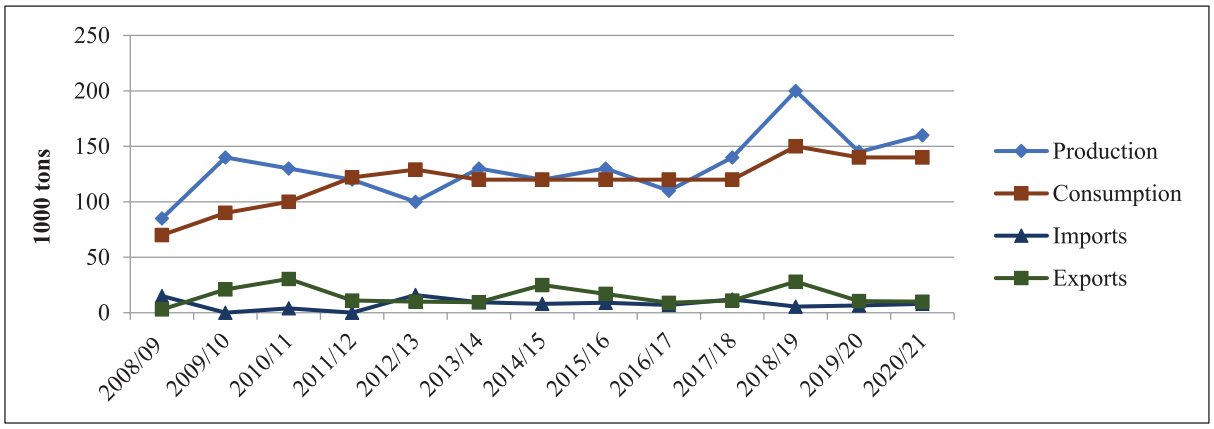

Fig. 15. Olive oil production, consumption, exports and imports in Morocco between 2008/2009 and 2020/2021 (data from IOC, 2022).

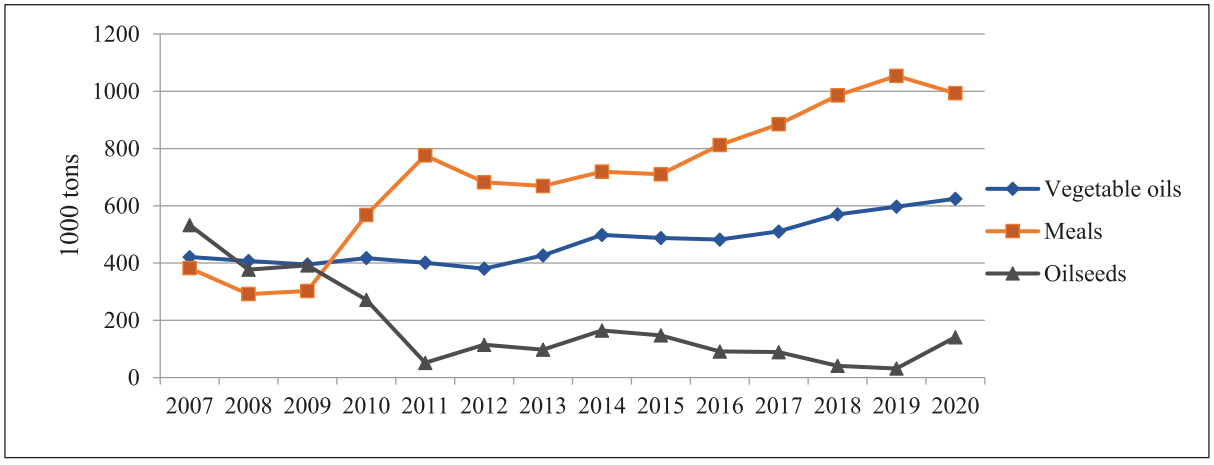

Fig. 16. Trends in Morocco's imports of vegetable oils, meals and oilseeds between 2007 and 2020 (data from FAOSTAT, 2020).

poultry feed. For example, poultry meat consumption in Morocco has increased significantly over the past decade, from 15.4 kg/capita per year in 2008 to 22.1 kg/capita per year in 2019 (MAPMDREF, 2019). To cope with this increased domestic demand, the livestock industry looks towards foreign markets as providers of high protein contents for animal nutrition. The importation of meal in Morocco has increased 10 times over the last 20 years, reaching 993,000 tons in 2020 (FAOSTAT, 2020) (Fig. 16). Soybeans dominate the local oilseed meal sector by volume, due to their low oil content compared to other oilseeds (Zhou *et al.*, 2020). They represent 58% of total imports, followed by sunflower meal and rapeseed meal. In 2020, Morocco's main oil meals suppliers are United States (417,000 tons), followed by Ukraine (285,000 tons) and Argentina (181,000 tons) (Fig. 17) (MEO, 2020). The analysis of trends and deficiencies in the local meals market illustrate the significant gap between supply and demand (Tab. 3).

3.5 Strategies for enhancing oilseed production in Morocco

The development of oilseed agriculture requires joint efforts from all stakeholders along with political and financial support from the public authorities to address effectively current and future challenges. Continuing to ensure a minimum support price with guaranteed sales will increase the attractiveness of oilseed crops for growers. Furthermore, it will allow the extension of cultivation areas, with regard competing crops, such as common wheat or pulses. In addition to increasing the growing area, improving yields is another key source of growth of oilseed production in Morocco. The productivity enhancement is possible through the transfer of technologies and technical assistance to growers. Research and development can play a crucial role in the improvement of crop management techniques and selection of varieties adapted to local conditions and resistant to biotic and abiotic stress,

Table 2. Edible oils supply and distribution in Morocco between 2007/2008 and 2020/2021 (unit: 1000 tons – data from USDA/FAS/PS&D and IOC, 2022).

Edible oils	Soybean oil				Sunflower oil				Rapeseed oil				Olive oil			
Years	Production	Imports	Exports	Consumption	Production	Imports	Exports	Consumption	Production	Imports	Exports	Consumption	Production	Imports	Exports	Consumption
2007/2008	73	421	9	450	27	28	5	50	0	3	0	1	85	5	2	65
2008/2009	70	350	7	426	46	13	1	58	0	0	0	0	85	15	3	70
2009/2010	36	379	9	420	48	31	2	77	2	0	3	1	140	0	21	90
2010/2011	18	397	17	403	54	18	3	69	0	0	0	0	130	4	30.5	100
2011/2012	14	367	10	372	34	33	1	65	0	0	0	0	120	0	11	122
2012/2013	13	364	10	375	21	43	4	60	0	8	0	4	100	16	10	129
2013/2014	24	444	15	420	6	43	2	48	0	0	0	4	130	9.5	9.5	120
2014/2015	23	432	21	450	26	26	2	50	0	7	0	5	120	8	25	120
2015/2016	18	465	14	480	27	33	1	56	0	3	0	6	130	9	17	120
2016/2017	12	497	23	480	14	76	2	85	0	7	0	7	110	7	9	120
2017/2018	5	502	11	510	17	50	9	60	0	2	0	2	140	12	11	120
2018/2019	5	536	7	515	15	67	22	60	0	4	0	4	200	5.5	28	150
2019/2020	18	573	23	520	15	86	28	65	0	3	0	3	145	6.5	10.5	140
2020/2021	5	507	25	520	25	53	14	65	0	2	0	2	160	8	10	140

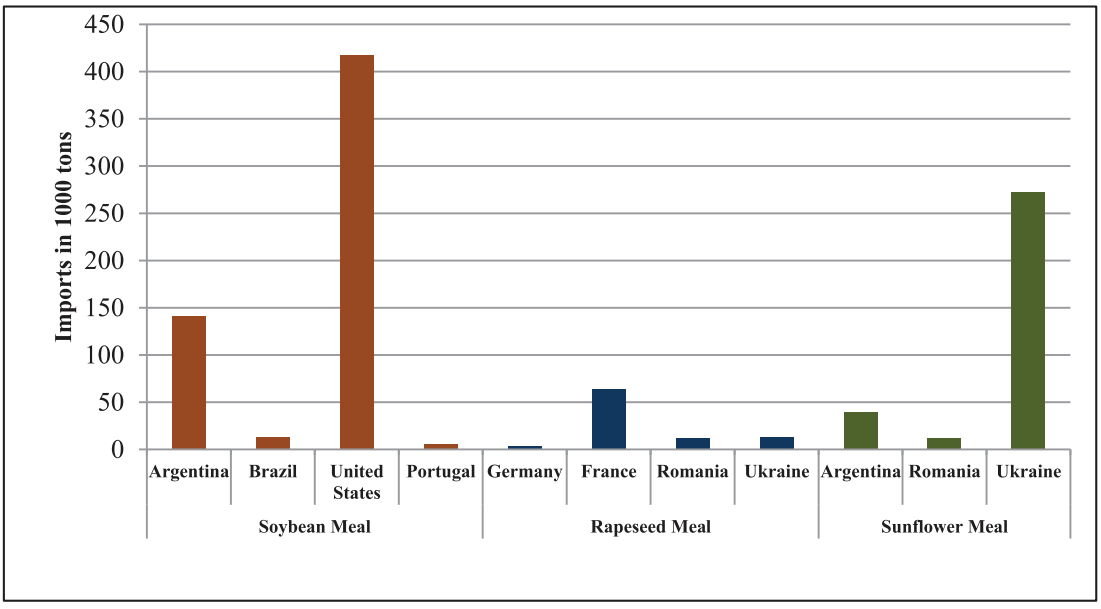

Fig. 17. Moroccan imports of oilseed meals by country of origin in 2020 (data from MEO, 2020).

Table 3. Oilseed meals supply and distribution in Morocco between 2007/2008 and 2020/2021 (unit: 1000 tons – data from USDA/FAS/PS&D).

Meals	Soybean meals				Sunflower meals				Rapeseed meals			
Years	Production	Imports	Exports	Consumption	Production	Imports	Exports	Consumption	Production	Imports	Exports	Consumption
2007/2008	323	168	4	487	27	146	0	173	5	36	0	41
2008/2009	311	141	5	445	47	150	0	197	1	7	0	8
2009/2010	157	356	1	500	50	106	0	156	4	31	0	35
2010/2011	79	531	0	600	57	66	0	123	7	86	0	93
2011/2012	60	485	0	560	37	88	0	125	1	90	0	91
2012/2013	58	490	0	555	23	106	0	129	1	70	0	71
2013/2014	105	417	0	510	7	249	0	250	1	77	0	78
2014/2015	100	447	0	530	28	215	0	245	1	60	0	60
2015/2016	78	443	0	540	29	221	0	252	1	73	0	70
2016/2017	52	497	0	540	15	296	0	305	1	69	0	73
2017/2018	21	602	0	575	18	300	0	300	1	98	0	99
2018/2019	22	540	0	600	16	361	0	350	1	78	0	80
2019/2020	79	640	0	625	16	365	0	365	1	101	0	90
2020/2021	21	550	0	640	27	296	0	350	1	69	0	80

targeting to obtain cultivars with higher yields in seed and oils. The impact of production fluctuations experienced by sunflower and rapeseed in certain regions can be countered by extending irrigation facilities or supplemental irrigation provided at critical growth periods where possible. It is also of critical importance to guarantee the availability of quality and certified seeds, while encouraging their use through incentives and subsidies. The sustainability of the sector requires as well introducing a new dynamic in different associations of growers and industrials along with the inter-branch organization in order to improve technology transfer and access to funding (Fig. 18).

3.6 Development opportunities for oilseeds in Morocco within "Green Generation 2020–2030" strategy

Morocco has launched a new strategy for the development of the agricultural sector called "Green Generation 2020–2030". It aims to consolidate the Green Morocco Plan

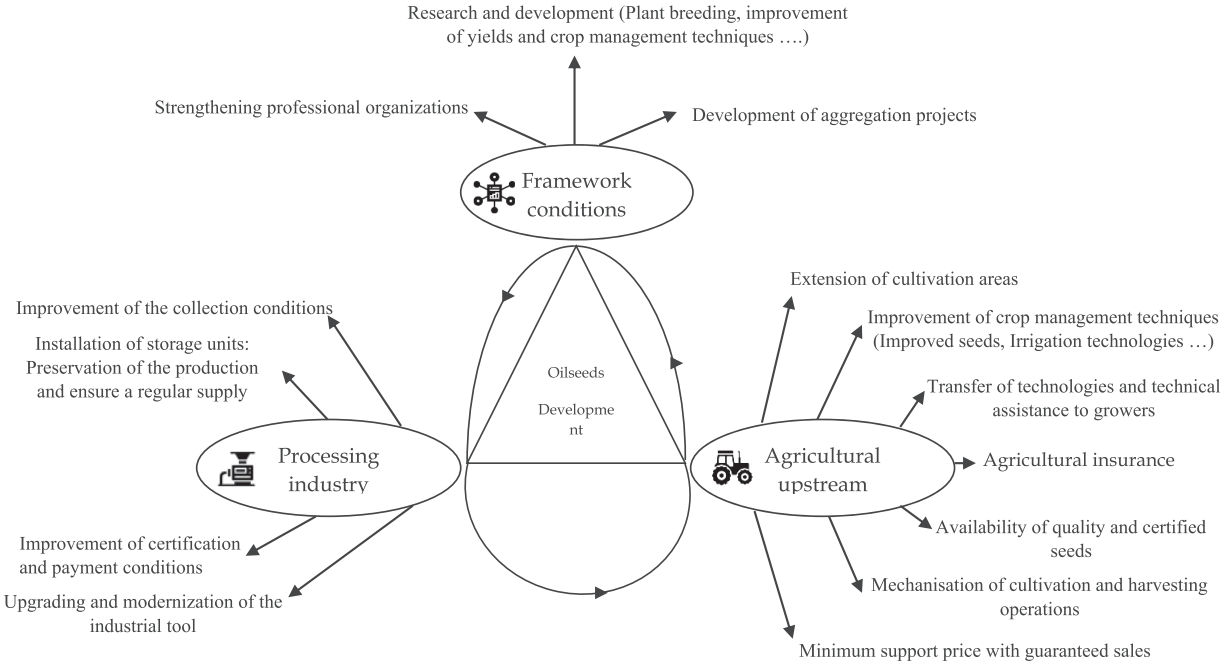

Fig. 18. Conceptual framework to designing the levers for the oilseeds development in Morocco

achievements, while giving priority to the human element and developing a significant agricultural middle class. Therefore, it has been designed for seeking out the best rate of coverage for food needs, increasing gross agricultural production, supporting agricultural exports, and increasing the volume of investments, through strengthening agricultural sustainability and improving the socio-economic status of the farmers. As regards oilseeds sector, this strategy relies on a significant increase of area from 32,500 ha in 2019 to 70,000 ha, by 2030. It also envisages increasing the yield from 12 to 18 quintals per hectare and oil production from 38,000 to 126,000 tons. As a result, Morocco aims to meet 10% of its vegetable oil needs by 2030 instead of the current 2%. The implementation of this strategy focus on expansion of oilseed areas; improvement of crop management; multiplication of certified seeds, developing research programs, maintaining the guaranteed producer price, and strengthening professional organizations. Revival of the oilseed sector in Morocco has great potential to reduce reliance on imports, achieve a better trade balance and improve food security. Furthermore, it may help improve the level of employment upstream and downstream of the sector, promote local sustainable development and raise the incomes of farmers and rural communities. On the other hand, the supply of locally produced raw materials could stimulate the use of existing industrial capacity and help make crushing more profitable through less costly processing. Apart from the potential economic and social benefits, this stimulus will also bring many agronomic benefits, particularly as valuable rotational crops, due to their ability to help improve soil properties and break the cycles of weeds, diseases and insect pests.

4 Conclusion

Based on a review of global market data, there is a steadily increasing demand for oilseeds, vegetable oils and meals for nutritional and industrial purposes. With production struggling to meet these growing needs, any disruption or change in the world supply chain impacts directly price levels. As an import dependent country, Morocco is subject to these sudden shifts in economic conditions. To reduce its reliance on the global market and mitigate the impact of soaring prices, the country aims at stimulating local oilseeds sector as part of an ambitious new agricultural strategy.

Conflicts of interest

The author declares that he has no conflicts of interest in relation to this article.

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