



Turkey

Herbs & Spice Crop Report

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The Land of Mediterranean Herbs and Spice

Turkey has around 1000 aromatic and medicinal plant species used locally, nearly 40-50% are widely traded.

National Research Project of Medicinal and Aromatic Plants was established in 1990 by Republic of Turkey Ministry of Agriculture and Forestry to cater to the growing demand for aromatic and medicinal herbs.

Turkey produces more than 300,000 tons of medicinal and aromatic plants in around 100,000 hectares of land area.

Exports of value-added, processed goods is gaining importance over raw material trading.

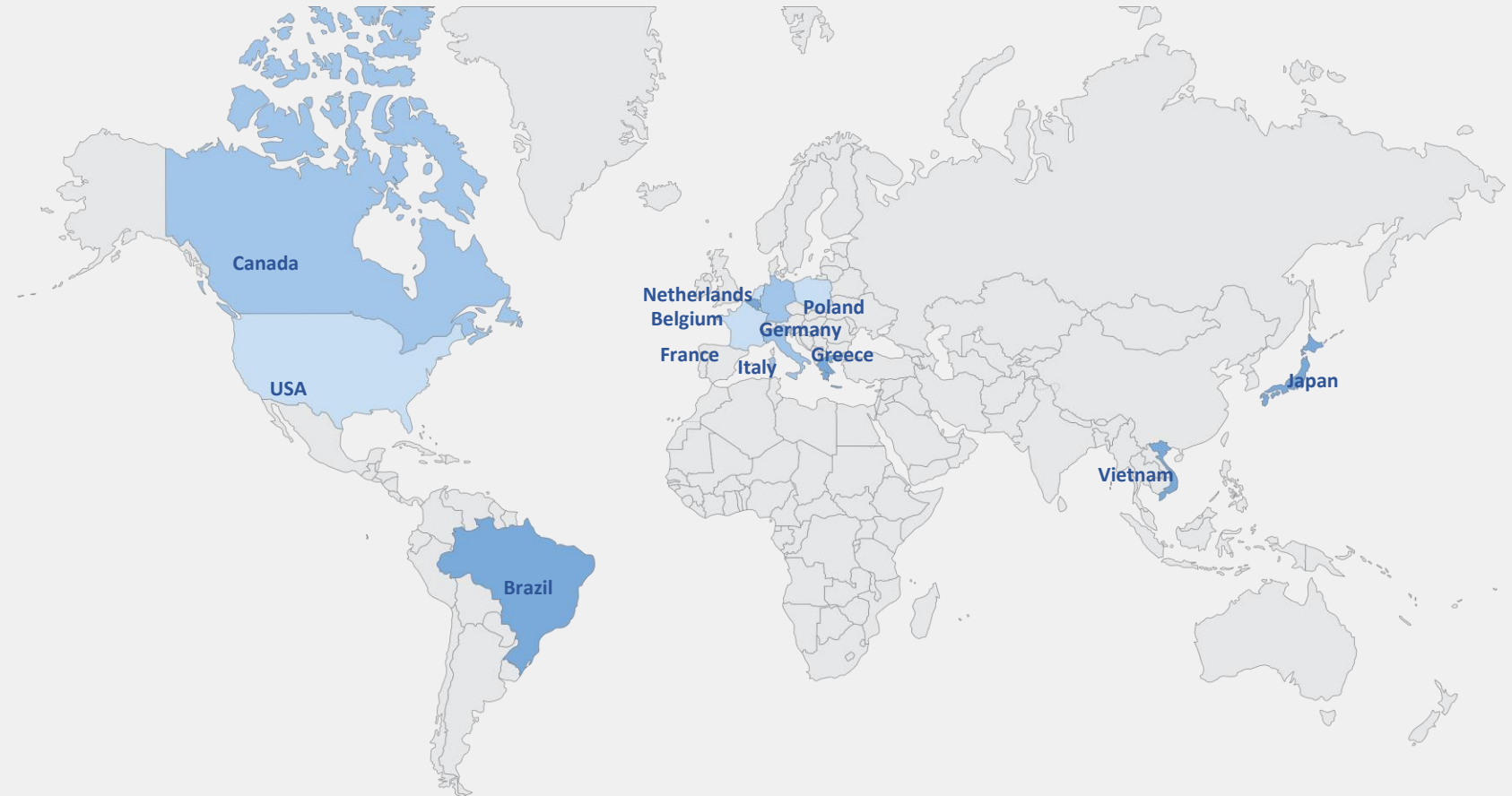
Approximately 11% of the traded species are endemic to Turkey.



Key Markets

Aromatic and medicinal plants are exported to nearly 100 countries around the world.

USA, Germany, Vietnam, Netherlands, Poland, Brazil, Canada, Italy, Belgium, Greece, France and Japan are the major importers.



Key Commodity Exports

Exports	2012		2013		2014		2015		2016		2017		2018		2019		2020	
	Qty (MT)	Value M(\$)	Qty (MT)	Value M(\$)	Qty (MT)	Value M(\$)	Qty (MT)	Value M(\$)	Qty (MT)	Value M(\$)	Qty (MT)	Value M(\$)	Qty (MT)	Value M(\$)	Qty (MT)	Value M(\$)	Qty (MT)	Value M(\$)
Oregano	13,900	39.7	14,718	55.9	15,490	59.7	15,153	55.7	12,188	44.2	17,708	56.93	17,401	56.22	16,781	53.33	19,768	59.87
Bay Leaf	10,482	29.9	10,676	32.2	12,255	35.7	12,723	35.8	10,033	28.9	12,708	36.05	14,660	39.09	13,522	38.28	16,410	44.66
Sage	1,489	5.8	1,345	5.8	1,644	6.3	2,070	8.06	2,071	7.65	1,907	7.05	1,961	7.18	2,317	8.68	2,176	8.15
Anise	1,837	6.3	1,944	7.9	3,808	14.1	3,250	11.5	2,462	8.70	2,634	8.81	2,818	9.16	3,016	9.52	3,227	9.90
Cumin	3,731	10.1	7,941	20.5	6,011	15.3	3,764	11.1	8,300	22.9	8,200	15.52	8,733	21.37	9,480	20.94	10,400	30.55

Oregano, Laurel Leaves, Cumin, Aniseed and Sage are the top forex earners for Turkey.

Turkey - Cumin Growing Regions



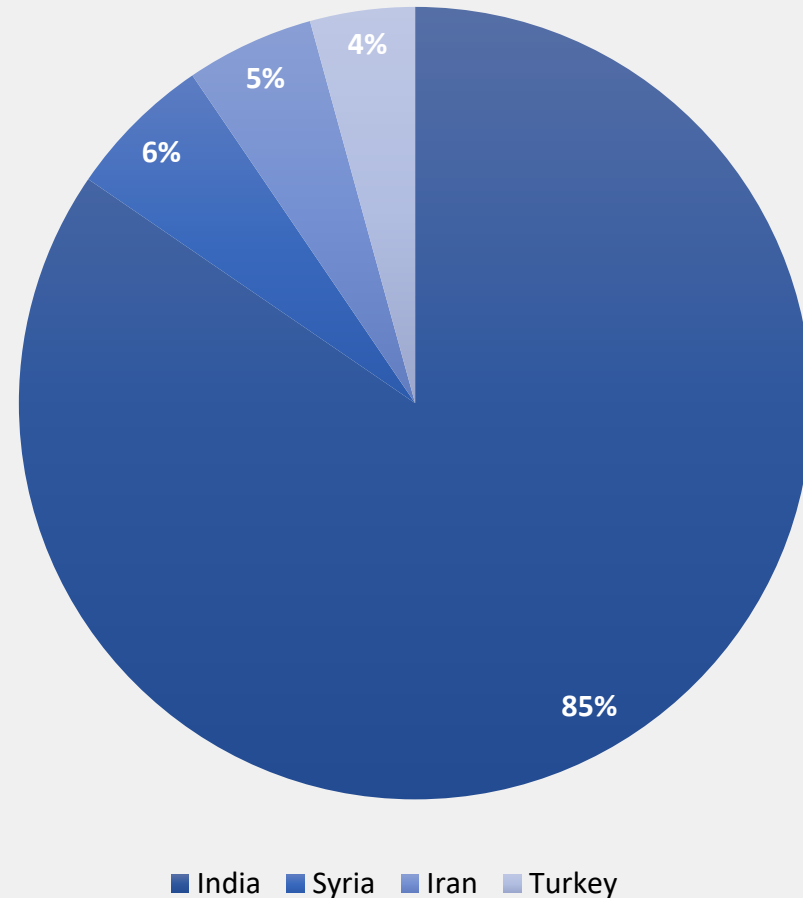
Major Producers

India is the main producer, exporter and consumer, contributing to nearly 85% of world cumin supplies.

Syria (6%), Iran (5%), and Turkey (4%) are other smaller producers.

Major consumers are India, Mexico, Portugal, Spain, Turkey, China, Japan, Netherlands, France and Morocco.

**World CUMIN Production
% Share**



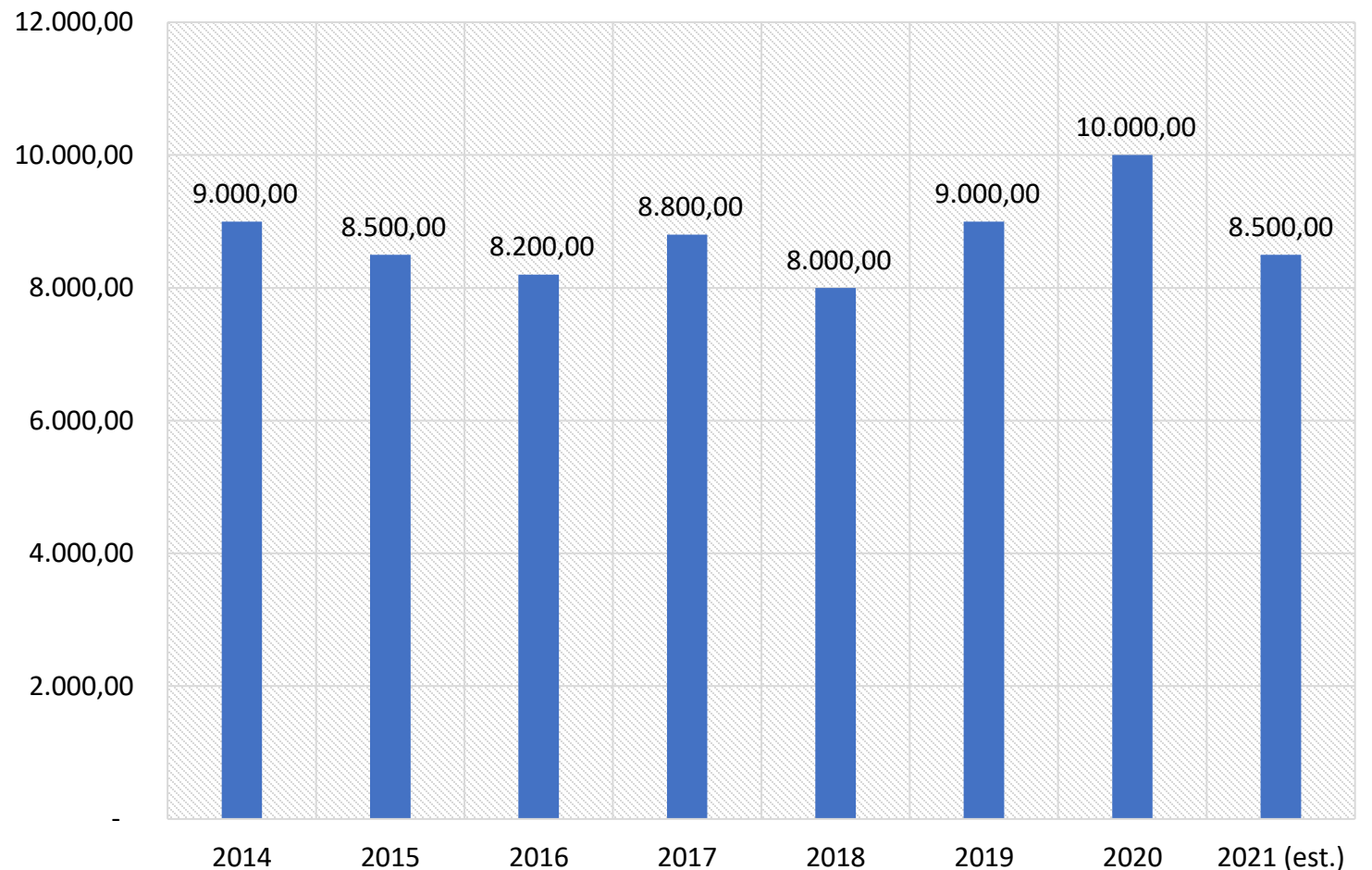
Cumin Crop 2021

Changing weather patterns, low precipitation and unusually warm winter has taken its toll on cumin production in 2021.

Turkish Cumin crop was expected to be around 10-12,000 MT at the beginning of harvest season while the actual output could be 20- 30% lower than the initial estimate.

Usual harvest months are July/August. This year cumin arrivals were seen in June as hot and dry weather has induced early ripening.

Turkey - Cumin Production (Qty. in MT)



Key Trade Statistics

Turkey's average annual production is around 8,000-10,000 MT.

Turkey exports 8,500-10,500 MT cumin annually taking into consideration imports for re-exports.

Last season due to COVID 19 pandemic imports into China , the largest importer of Cumin was adversely impacted.

Prices have continued to rise due to supply chain disruptions, increasing raw material, labour and freight costs amidst the global logistics crisis in COVID 19 times.



Farming Challenges

Area under cultivation has been gradually increasing as cumin is a drought-resistant commercial crop.

Besides the weather vagaries that determine the crop quality and losses, production of EU-MRL compliant cumin remains a challenge as chemical residue limits are being lowered regularly.

Production costs are rising. Farmers tend to spray linuron instead of employing labour and adopting mechanical weed management methods to save costs. Farmers prefer selling in the local market even at lower prices as they find it difficult to meet export quality standards.

Major problems in cumin cultivation are occurrence of *Fusarium* and *Alternaria* fungi that can be pathogenic and can produce harmful mycotoxins.

Price fluctuations in overseas markets and policy changes are also impacting production



Social Challenges

Political unrest in the neighbouring countries is spilling over into Turkey with the steady influx of Syrian war refugees in border towns.

Large farms are employing families of migratory workers for weeding and harvesting at comparatively lower wages.

In general, camps and places where migratory workers reside have poor sanitary conditions with limited access to potable water and electricity.

Suppliers and exporters have joined hands with NGOs to improve the general conditions on farms and taken many initiatives to rehabilitate and educate Syrian refugee children.



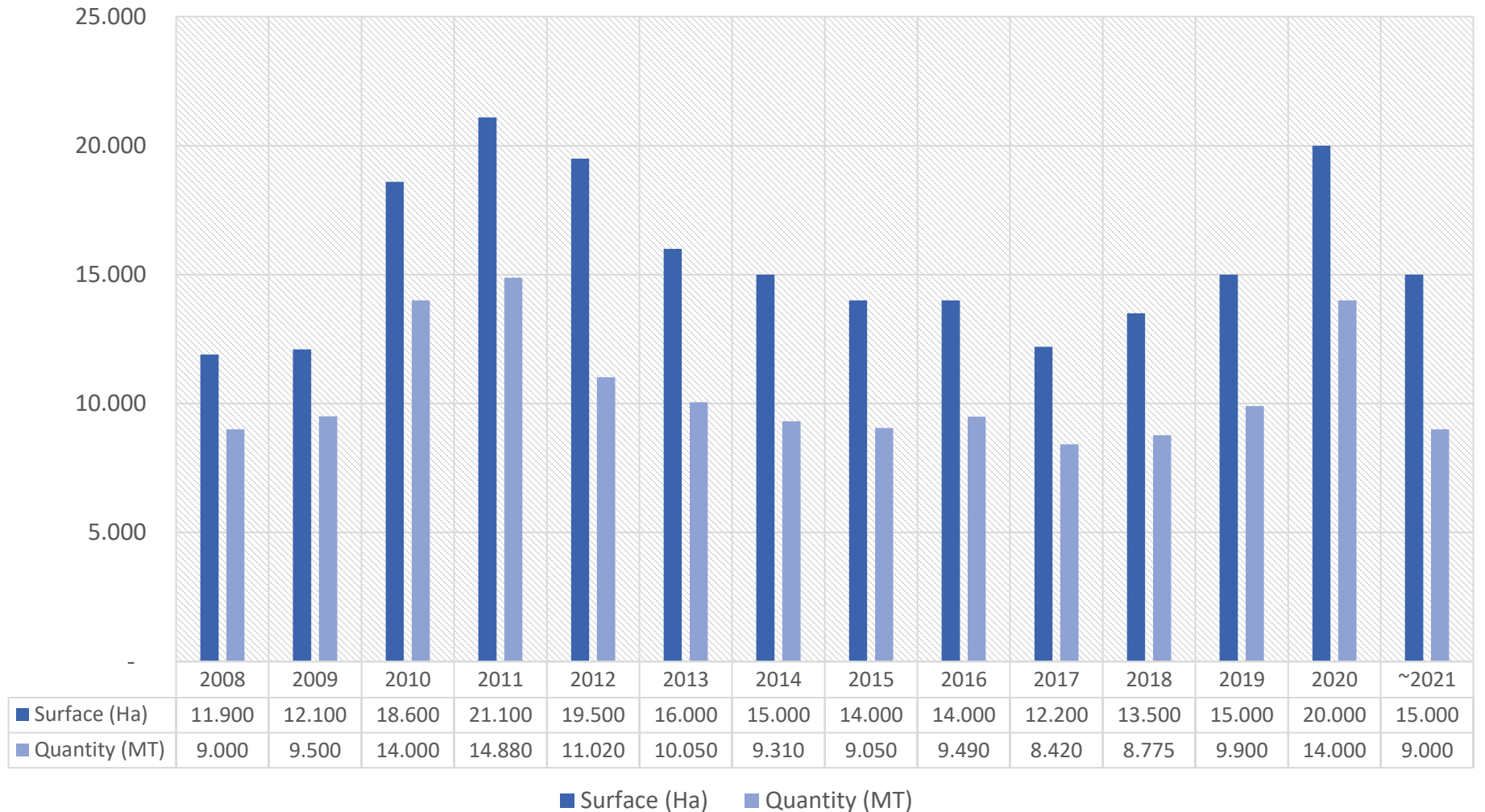


Aniseed - Production

Native of East Mediterranean Region, Bulgaria, Cyprus, Turkey, Russia and Egypt are the major producers.

France, Germany, Italy, Mexico and South America are other key growing regions.

Turkey - Aniseed Cultivation Area and Production



Aniseed Crop 2021

Aniseed is a widely produced crop in Turkey covering around 20,000 Ha of land producing 14,000 MT.

Sowing in 2021 has been lower due to substantial price drop seen in recent times. Also, yield has been impacted due to drought conditions.

As much of the produce is consumed internally mainly by **Raki** (Turkish liquor) manufacturers, available US/EU export quality product is estimated to be only around 750 MT.

Harvests will begin in end July.



Farming Challenges

The reasons for the lack of development and low production of anise are that the production is still in limited areas as farmers cannot find high-quality certified seeds.

Production is limited to small family businesses, so, there is not enough information about production techniques used or fertilization processes.

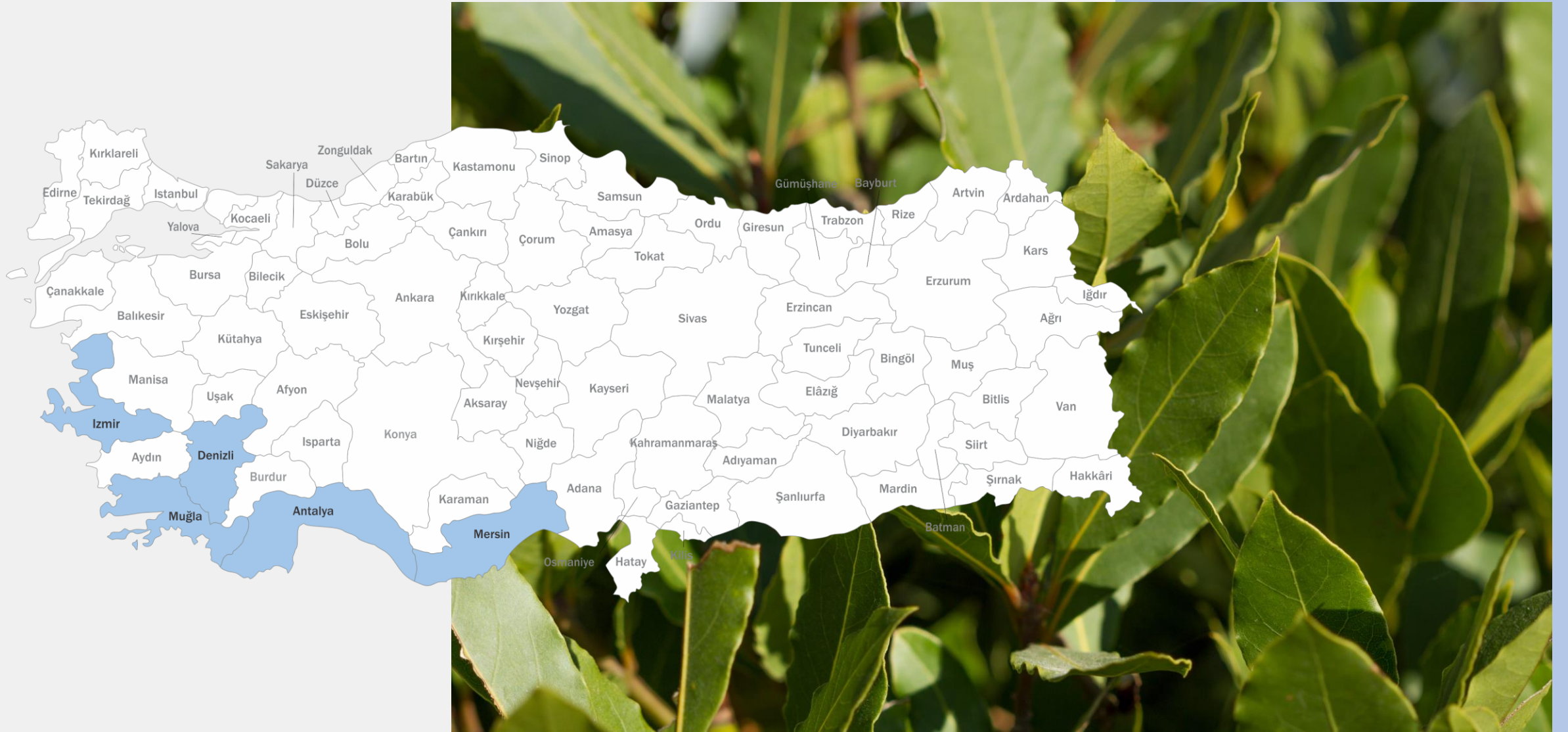
Average yield is around 700 Kgs/Ha.

New farmers are not venturing into anise production as prices have remained low and profitability variations high, over the last many years.





Laurel Leaves



Major Producers

It is a native of the Mediterranean and grows widely in scrubland of Europe and California.

It is widely cultivated in Europe, America and Arabian Countries.

Turkish Bay Leaves are considered the best in the world. They have a mild and sweet flavour and are preferred over California bay leaves.

Laurel leaves grow wild on the hilly mountains as well on the roadsides.

Cutting permissions are given to Collectors twice in a year.



Laurel Leaves - Crop 2021

- Cutting permissions for fresh laurel leaves have ended.
- New crop of sun-dried product is usually available starting second half of August.
- Carry-over stocks are minimal and are of inferior quality.
- Demand for selectively hand-picked laurel leaves has continued to rise.
- Good demand persists from European cosmetic and essential oil manufacturing industries.



Farming Challenges

Trees alongside highways accumulate higher levels of *Polycyclic Aromatic Hydrocarbons* (PAHs), considered carcinogenic

Laurel leaves collected from the wild should be washed, processed and dried appropriately to maintain optimal flavours

Sun drying is a laborious process but recommended over mechanical drying. Accidental over drying using mechanical processes may lead to degradation of essential flavours.

Laurel Leaves are offered in various formats: Broken, Semi Select and Handpick Select, the gourmet product.





Sage



Major Producers

Sage is a native of the Mediterranean region. It grows wild and is cultivated as well.

Sage species

Salvia officinalis L : This species is cultivated in Turkey as well as in Germany, Southern France, Hungary, Russia and America.

Salvia fruticosa Mill. : Known as Anatolian sage in Turkey, *Salvia fruticosa* is found in the Balkans, Italy, Cyrenaica, Sicily and in the west of Syria;

Salvia tomentosa Mill. : *Salvia tomentosa*, which can grow on limestone slopes at an altitude of 90-2000 m, spreads naturally in many regions of Turkey, is important for both domestic and foreign trade. It spreads naturally in the Crimea, Lebanon, Latakia, the Balkans and Armenia; It is cultivated in Germany, Southern France and Hungary.

Albanian Sage

Area under cultivation in Albania has continued to increase due to higher demand. Albanian Sage grown in natural , pesticide-free conditions is preferred variety in US. Crop size : ~ 3,500 MT.



Sage Crop 2021

Sage is a popular culinary and medicinal herb, and its demand is constantly rising. This perennial herb endemic to Mediterranean region is a low-maintenance, drought resistant crop.

But due to high precipitation levels seen during last two consecutive years productivity of wild sage has been impacted. Climate change is impacting its aroma and flavour profile.

Sage is also extensively cultivated in the southern and western regions of Turkey. Izmir in Aegean region has seen considerable increase in area under sage cultivation in the recent years. This significant shift towards cultivated sage is a good development as exporters can be assured of high-quality supplies all through the year.

Prices have increased by almost 30% due to lower productivity and lesser availability of sage during the last two consecutive years. This year we are expecting cultivated herb crop size of 1,300-1,500 MT and wild sage harvest of around 750-900 MT.



Farming Challenges

More farmers are preferring sage farming to oregano due to better returns. Many have started trial farming on new plots due to its rising demand. Even with rising production costs, sage farming remains lucrative.

Drought has taken its toll on both oregano and sage production. There are more dwarf plants with lower yield, this season. But hopefully, shortage will be limited as many new plots have come under sage production.

August is the peak harvest month, but some cash-strapped farmers have already started selling their pre-mature harvests.

Weed management is of specific significance to protect the harvests as well the quality of essential oil. Farmers often cover the soil between plant rows with special black mat to prevent the development of weeds.



Key Trade Statistics

Sage Export Data		
Year	Quantity (MT)	Value (\$)
2016	2,071	7,651,095
2017	1,907	7,057,417
2018	1,961	7,181,635
2019	2,317	8,680,563
2020	2,176	8,155,503

Between 2010 and 2020, sage was exported to 65 countries, including the USA, Germany, France, Italy and Spain.

Average annual exports between 2016-2020 from Turkey was around 2,100 tons.



Oregano



Major Producers

Oregano is endemic to the Mediterranean region. It is cultivated in Turkey, Mexico, Italy, Greece and Peru. It grows well in well-drained soil with adequate sunlight.

Turkey meets 80 percent of the world's production of oregano. (*Origanum* types).



Oregano Crop 2021

Production has been hit due to aphid and grasshopper attacks and severe drought seen in April this year.

Vegetative growth has been stunted and plants had turned to generative maturation. Basal leaves had started turning yellow by early June.

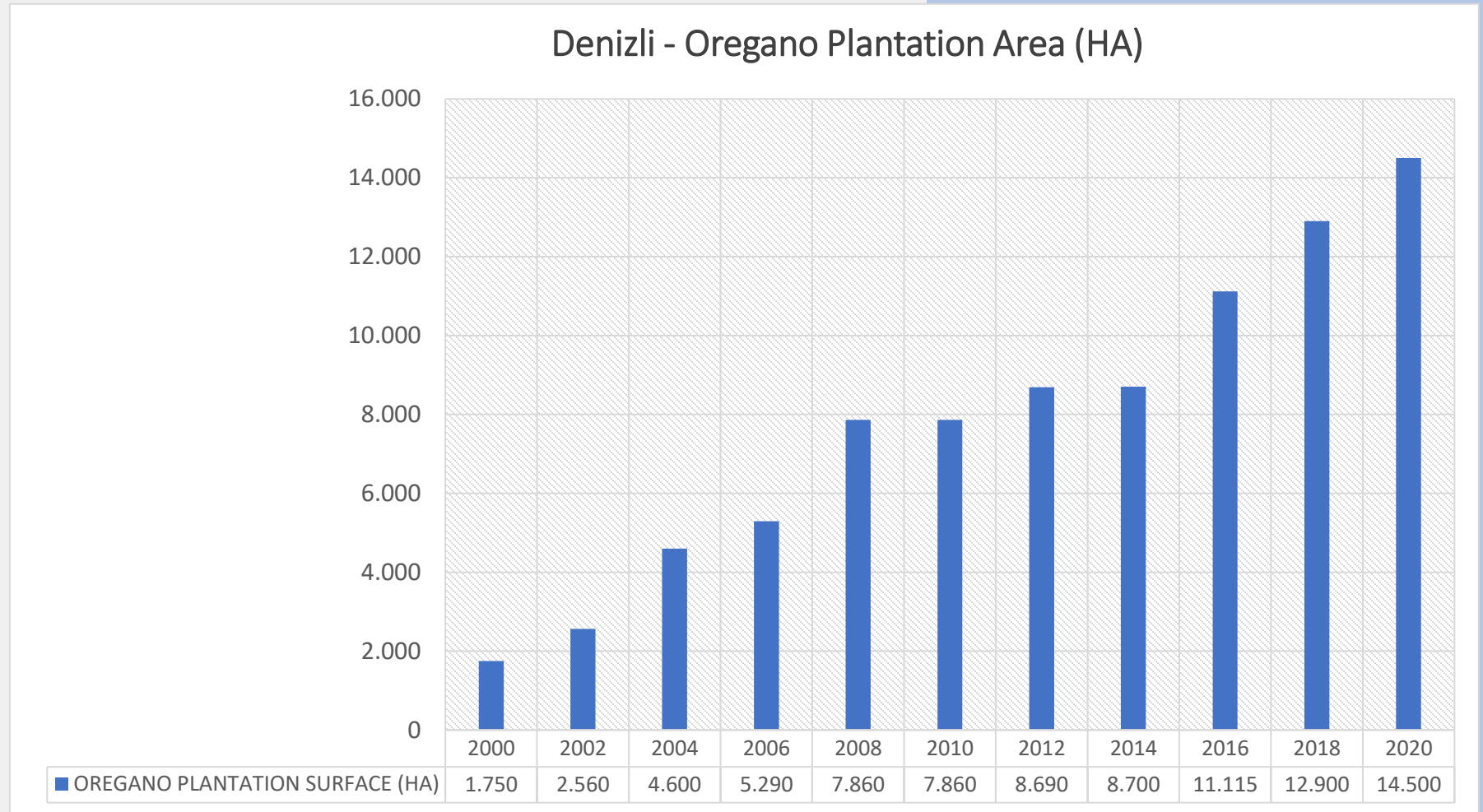
Cultivated Oregano is our primary source. Production area is 12,000 Ha providing 14,000 MT, mostly *Origanum onites*, cultivated, for its higher productivity. Adding the wild collected oregano species, total production is estimated to reach 18,000 MT.

Farmers are anticipating 20-25% damage to oregano crop due to prolonged drought conditions



Key Trade Statistics

Denizli is the key growing region contributing to more than 90% of Turkey's total production. Oregano exports increased 13 percent in 2020 compared to the previous year. Turkey has earned 60 million dollars income from oregano exports in 2020.



Roughly 12% increase in plantations per year.

Farming Challenges

Most farmers have stopped *Oregano vulgare* cultivation due to its lower yield and plant's sensitivity to extreme weather conditions. It is a critical variety for bulk density adjustments and its shortage will increase prices for high bulk density products.

Though it is early to comment, we do not expect a shortage in oregano supplies as cultivated area expands each year.

Continuous surveillance of farms for producing US/EU compliant material is necessary. It will not be wrong to expect higher prices and volatile oil content in 2021 produce.

Harvests have begun in early July in the lower altitudes.





Outlook 2021

We have started to see the worst effects of climate change in Turkey as 2/3rds of the country is reeling under drought.

Climate change is a serious issue and its impact on crop yield and quality is becoming unpredictable. Drought, floods, hailstorms and extreme weather conditions are taking its toll on production year after year. Fungal infection and lower yields are pushing production costs higher.

Increasing price volatility is also keeping a check on production.

Farmers prefer to sell locally than in international markets due to stricter import norms and MRL compliance levels.

Prices are likely to remain firm in the backdrop of a drought year of lower yield and quality losses.



The Road Ahead...

Turkey has an abundance of medicinal and aromatic plants, thanks to its location, which is at the intersection of three different floristic regions having distinct and favourable topographic and climatic conditions.

A significant part of these are exported around the world for use in pharmaceutical, food, cosmetics, fragrance and flavour industry.

Luckily, Anise, Cumin, Oregano and Sage are drought resistant, and can survive harsh conditions with just the spring rainfall. They are eco-friendly and can be considered as alternative crops by farmers who have no irrigation facility.

Overtime, with increasing awareness about the potential growth and huge opportunities that this sector offers, traders and farmers are establishing closer ties to invest in sustainable agricultural practices. This has enabled them to get better prices for higher quality produce. Market for Organic products also looks promising.

Overall, with significant technological breakthrough in sustainable farming, Turkey is poised to be the world leader in production and exports of value added medicinal and aromatic herbs and spice...



Presentation by : Cemal Saralp



Thank you!

