

**«Emerging Agronomic and commercial
Problems and needs in Cherry Cultivation
in Turkiye»**

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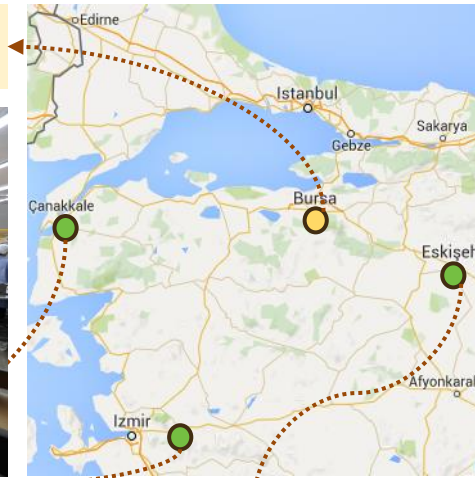
Alara Overview: Cherries



**Cherry
Packing facility**

**Location cherry
production**

Bursa Pack House
Cherries & Figs



Cherry farms

Canakkale Farm: Mid Production

- Total 85 ha
- Planted 71 ha



Manisa Farm: Early Production

- Total 61 ha
- Planted 50 ha

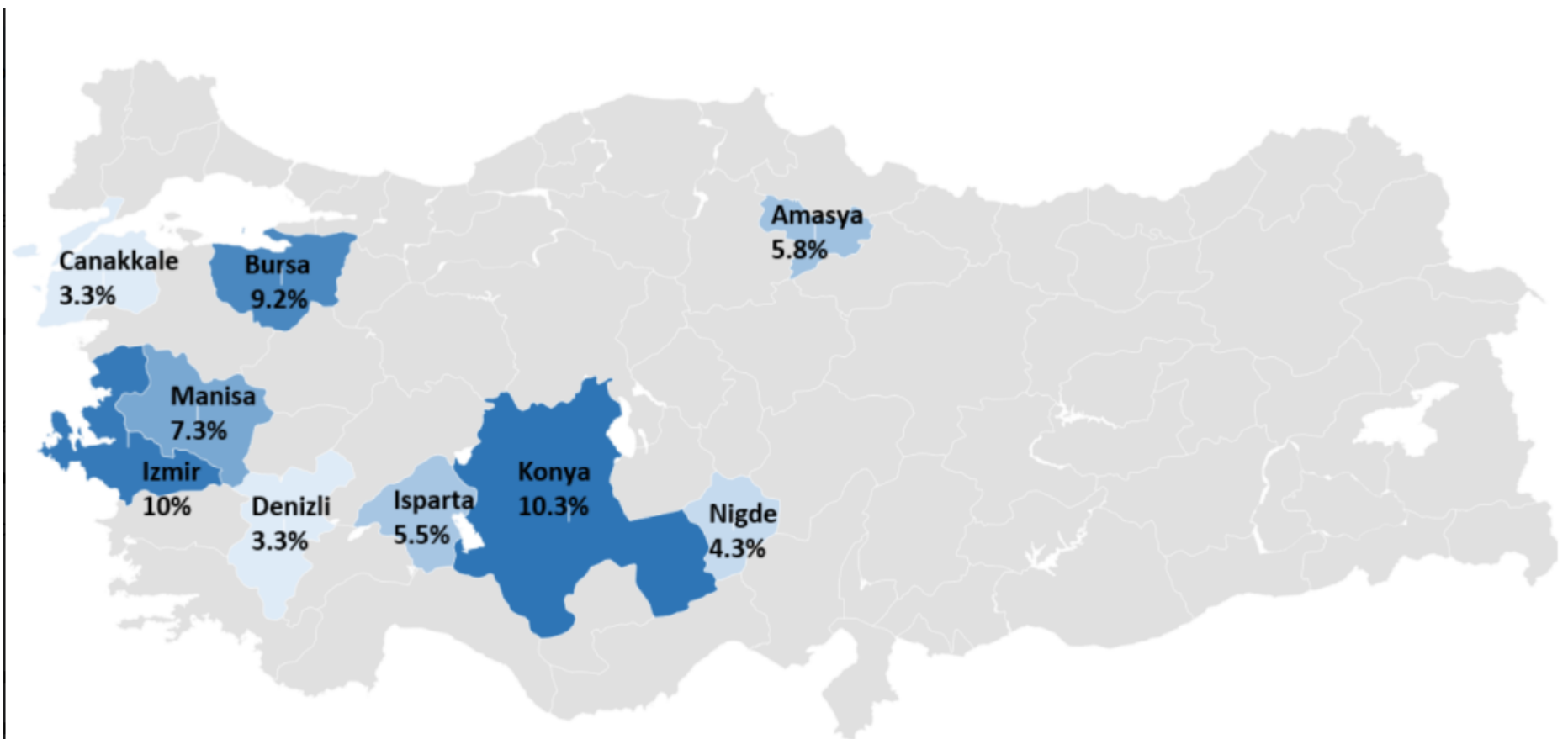


Eskisehir Farm: Late Production

- Total 111 ha
- Planted 71 ha



- Alara Central Packhouse
- Alara Orchards
- Alara 3rd party grower regions



Emerging Agronomic Problems and Needs in Cherry Cultivation in Turkiye

- Climate**
- Water**
- Soil Structure**
- Irradiation**
- Biopesticides (Leaf Roller, Red Mite, Monilia, Capnodis)**
- Energy**

Sustainability on Production - Climate

Advanced field systems to maximize crop yield



Wind machines

- Maximize crop yields by optimizing temperature to control frost damage
- Pull the warm air down into the crop zone to increase temperature with up to 6°C

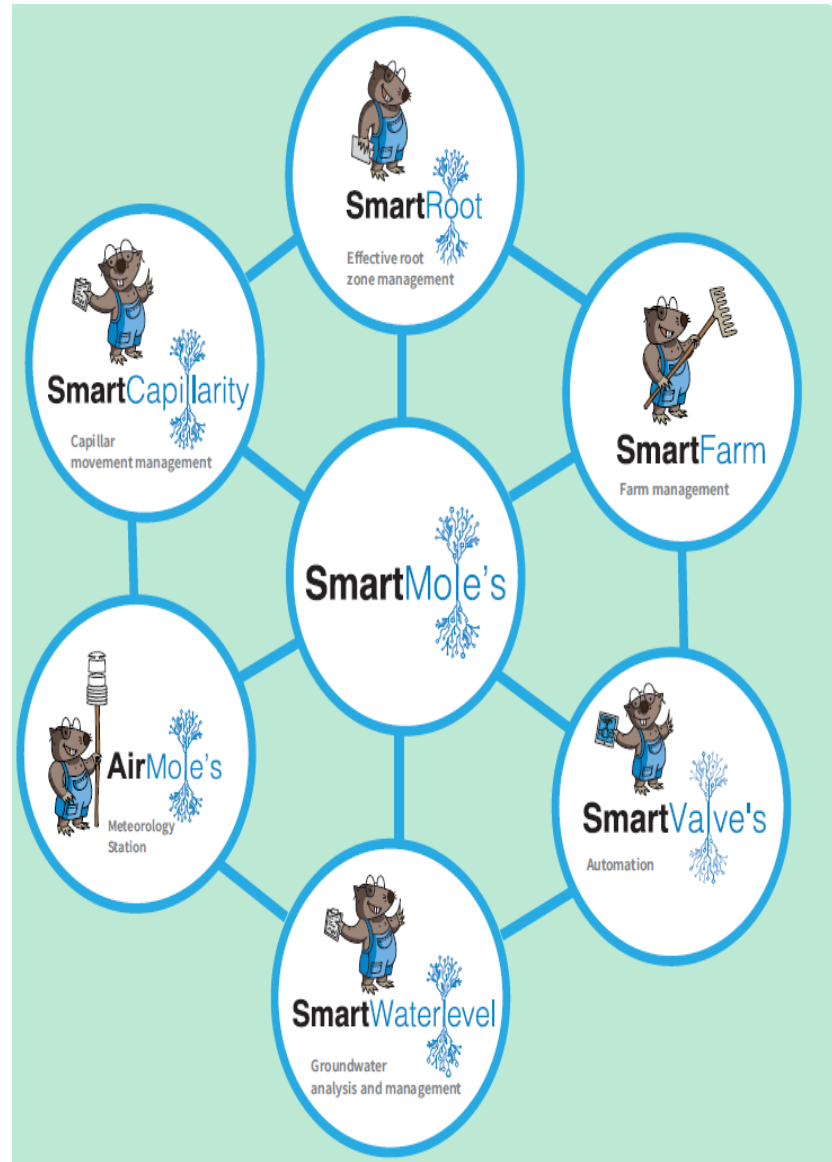
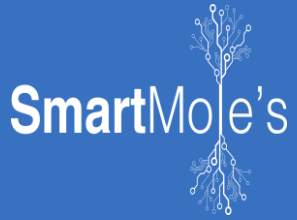


Hail cannons

- Used to minimize damage incurred by hail stones
- Repeatedly create shockwaves to disrupt the growth of hail stones during storms



Sustainability on Production Water





SmartMole's sensor technology detects effective root zone of the plant and monitors capillarity water movement in soil profile in real-time along with measuring the soil moisture.

SmartMole's is a technology operates with artificial intelligence and manages the irrigation system based on monitoring real-time capillarity water movement activity during and after irrigation.

SmartMole's sensor set, monitors capillarity water movement and moisture data in real time and transmits the collected real time data to SmartMole's artificial intelligence platform operating in the cloud platform.

According to these data, the system operates parallel with the development of the plant and valves are managed autonomously according to artificial intelligence paradigms to spread the unit amount of water to the maximum soil volume in the current effective root zone.





SmartCapillarity

Do you know where
you are irrigating?

It is the only patented technology in the world where **water movements are monitored in real-time along with the amount of moisture** in the soil profile during and after irrigation.



SmartRoot

Are you sure the effective root zone is where you think it is?

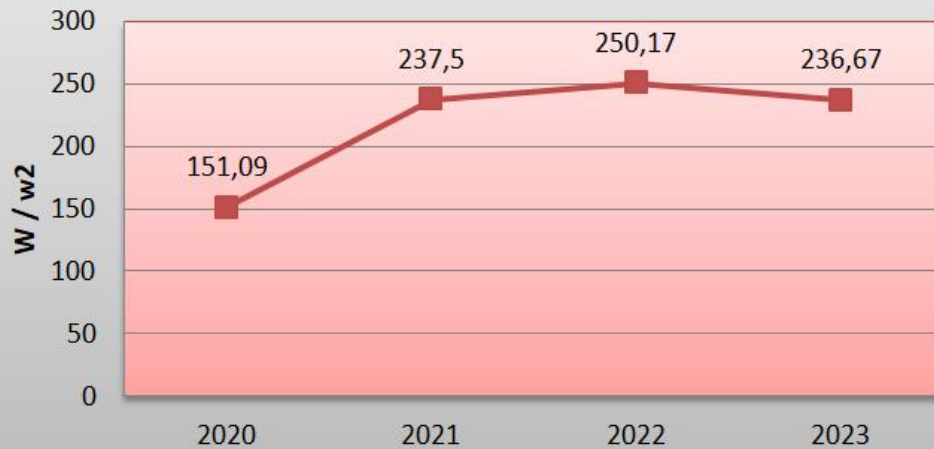
SmartRoot lets you know where the effective root zone is in your field.

Sustainability on Production – Improving Soil Structure and Microbial Activity

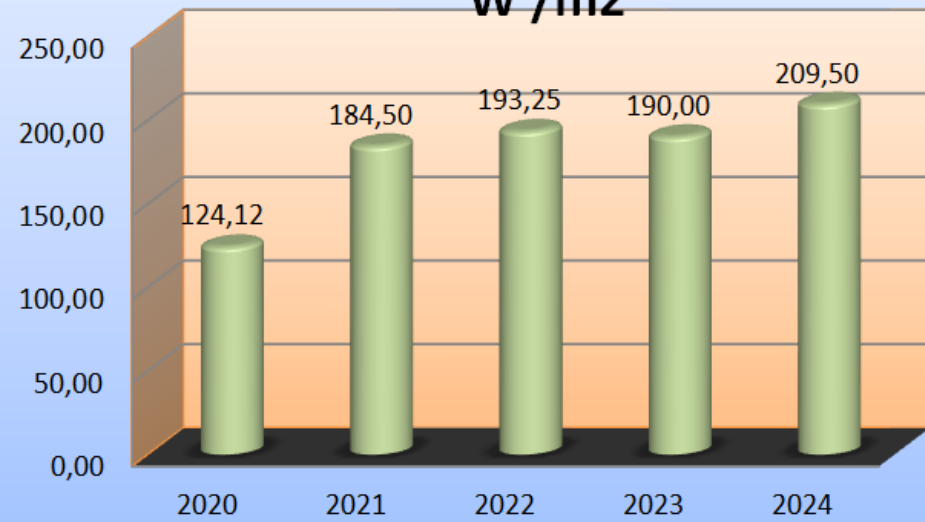


Sustainability on Production - Irradiation

solar Radiation. Annual Avrg.
W/m²



Yearly average between Jan-April
W /m²



Sustainability on Production - Irradiation



Sustainability on Production - Biopesticides

Active Ingredient	Ingredient	Pest/Disease
<i>bacillus thuringiensis</i> subs. <i>Kurstaki</i> ABTS-35 1 Irki	Bacteria	Leaf Roller
<i>paecilomyces fumosoroseus</i> strain PFs-1	Bacteria	Red Mite
<i>pseudomonas fluorescens</i>	Bacteria	Monilia
<i>steinernema carpocapsae</i>	Nematod	Capnodis

Sustainability on Production – Hybrid Plant Protection

Pheromone Traps- R&D for minimizing chemical use



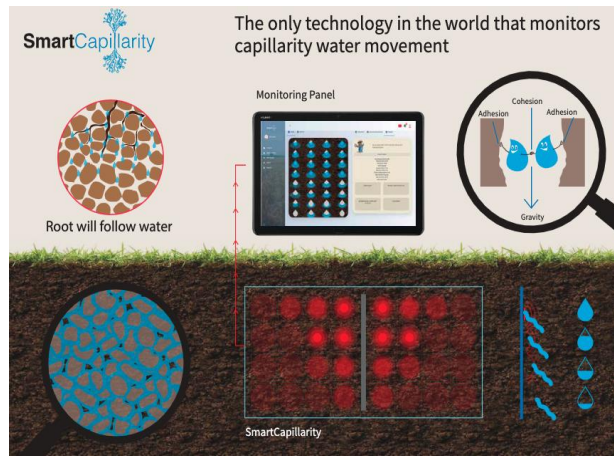
Manisa

Early cherry orchard

- Total 61 ha
- Planted 50 ha, of which 46 ha in full production
- Early Production

Innovation, Water & Market

- Smart moles: measuring water capillarity and humidity level
- Water pumping on solar energy
- Weather station
- Home-made compost
- Sourcing centre /cold store and hydro cooler on farm
- Growers (around 200 in this region) are happy, they see Alara as a guarantee for market access
- Good market time



Canakkale

Mid Cherry orchard

- Total 85 ha
- Planted 71 ha, of which 49 ha in full production
- Mid (late early) Production

Water, climate & market timing

- Water pumping on solar energy
- Home-made compost
- One of the most favourable climates
- Good export quality and high export ratio
- Perfect market time - between early and mid-season (late early season)
- Sustainable water - government dam located next to the farm



Eskisehir

Late Cherry orchard

- On a height of 1.220 m
- Total 111 ha
- Planted 71 ha of which 68 ha in full production
- Late Production

Innovation, Water & Expention

- Home-made compost
- Water pumping on solar energy
- Water availability (mountain catching, river, 2 on-farm dams, 3 boreholes)
- Good climatic conditions
- Potential to grow the farm



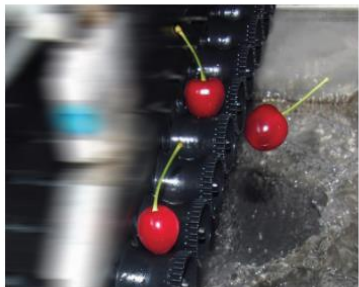
Alara Packing House: Post Harvest Cherry Process



1. Harvesting



2. Pre-cooling in the field by mobile hydro coolers, decreasing temperatures to 2°C in under 10 minutes



3. State of the art electronic sorting and sizing with in-line hydro cooler



4. Sorting and packing to customer specifications



5. Quality control with real time feedback to packing operation



6. Temperature controlled transport



Proprietary AI sorting software



Strategically located in the centre of the sourcing regions



Sorting on 5 sizes, colour, and internal & external defects



Latest automation technologies



All ranges of packaging sizes



Capacity of 10.000 tons processed per year

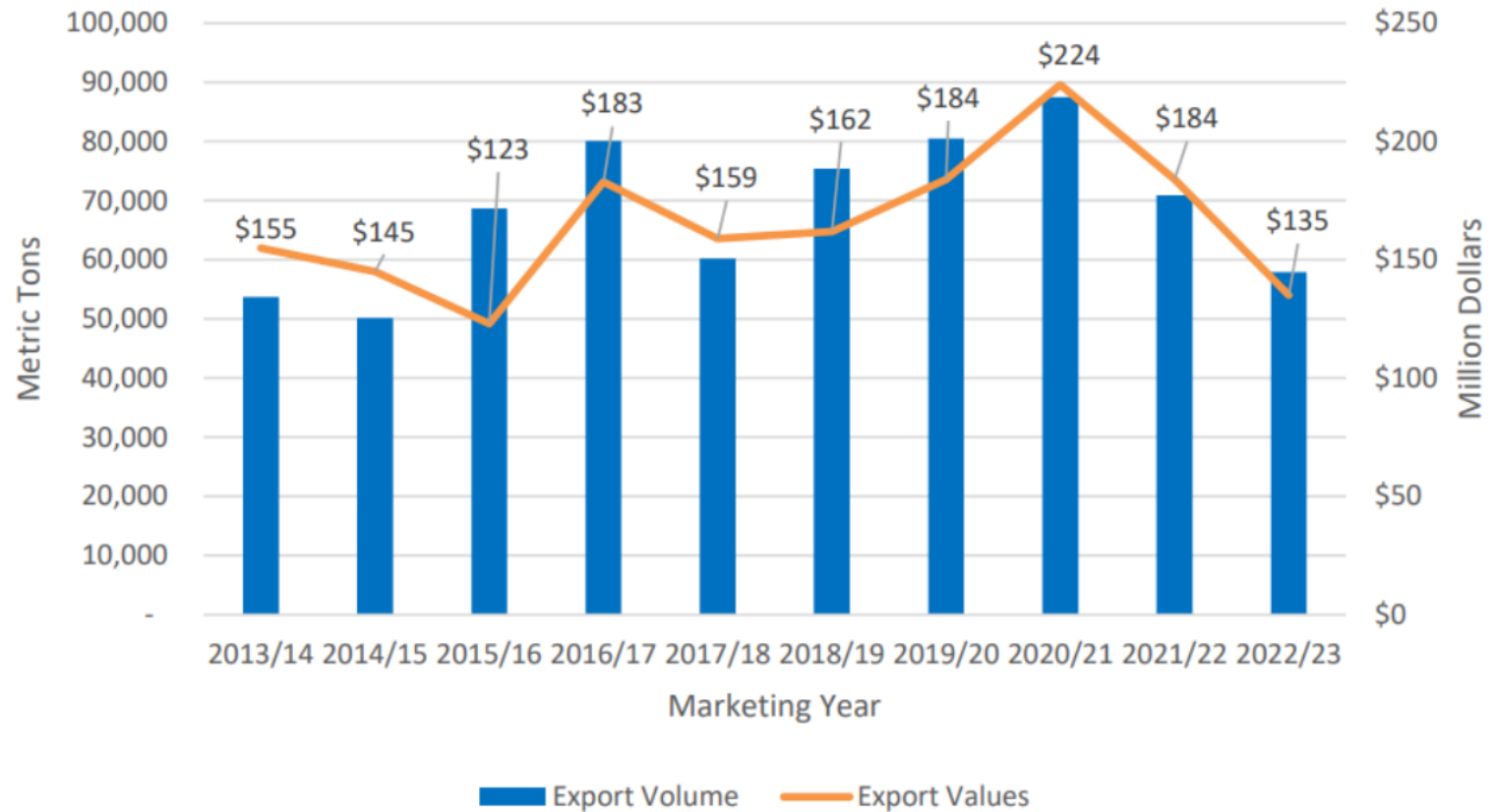
Emerging Commercial Problems and Needs in Cherry Cultivation in Turkiye

- Inflation and increasing costs**
- Supply & Demand Balance**

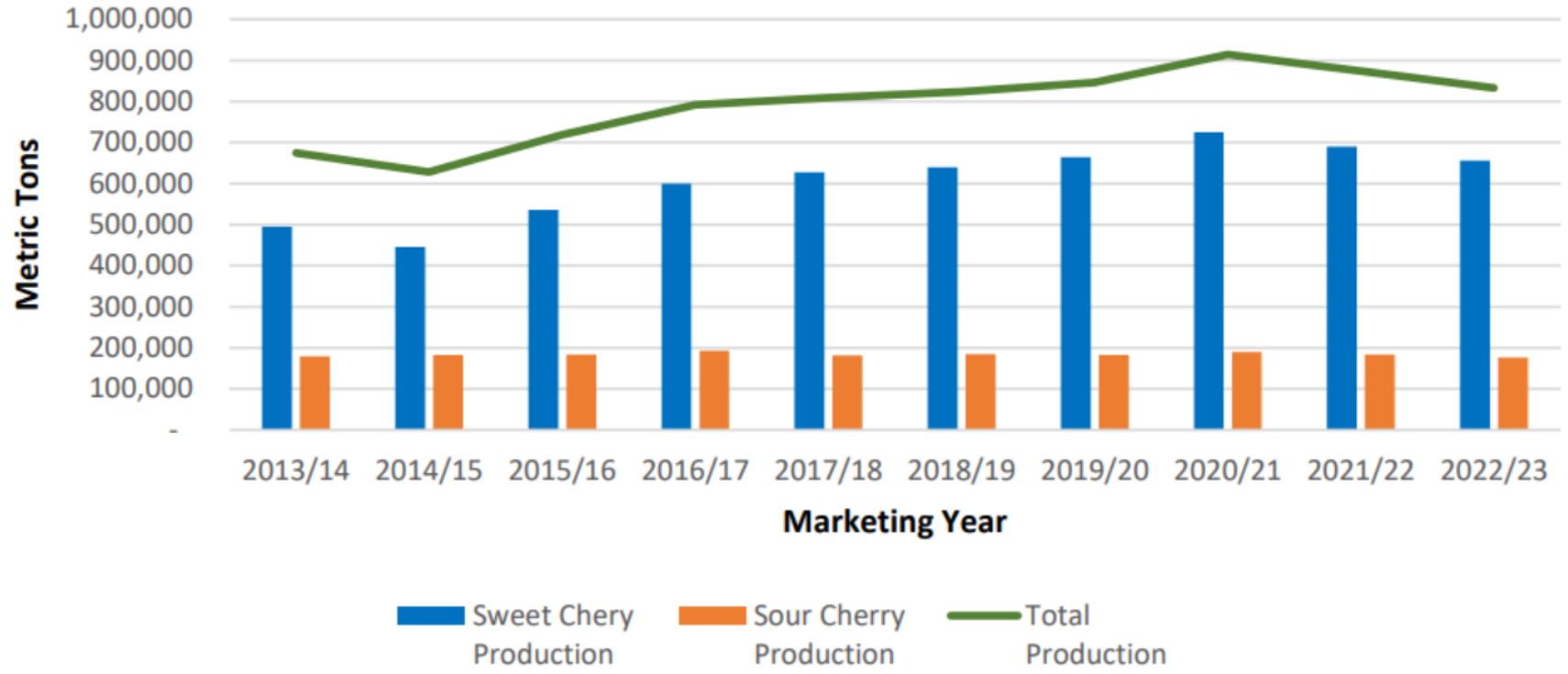
Türkiye's Cherry Exports to World 2018-2023 (MT)

Partner	2018/19	2019/20	2020/21	2021/22	2022/23
Germany	23,651	27,180	25,894	24,558	15,343
Russia	24,019	25,414	29,788	23,117	25,169
Iraq	13,171	10,281	7,243	7,128	7,813
Netherlands	1,298	2,546	2,141	2,241	1,116
Austria	785	1,961	3,877	2,195	407
Italy	1,583	1,166	2,754	1,153	20
Sweden	1,289	1,151	1,363	1,311	833
Norway	1,887	1,392	1,522	1,519	1,157
Denmark	1,380	1,243	1238	1,030	1,013
United Kingdom	1,087	686	1,373	832	122
World	75,377	80,542	87,511	70,948	57,915

Cherry Export for Türkiye 2013-2023



Cherry Production for Türkiye 2013-2023



Grazie...