
Mapping Agribusiness Support Measures in Turkey

Project Report – Public summary

Executive Summary

Agricultural Reform and Policies in WTO, EU and Turkey

Overview of Agriculture in Turkey

Overview of Subsidies and Measures

Executive Summary

- **Turkey's agricultural policies** have **significantly evolved** since the establishment of Turkish Republic in 1920's
- Current policies are **aligned with WTO's general trade obligations**
- As a next step, the government is focusing its **efforts on the alignment with the agricultural policies of the EU**
- Past policy developments have led to **moderate growth in Turkey's agricultural production and trade** over the last decade
- However, the country is faced with **a number of issues** such as decreasing sown area, small sized land plots, distorted product mosaic, high input costs and issues related to storage, productivity and traceability
- In order to improve the industry, **a number of subsidies and measures are provided** – major examples are premium payments, support for domestically certified seed production, export refunds, diesel/fertilizer/soil analysis subsidies, indemnity payments for animal diseases, support for R&D projects and consultancy services as well as custom duties, interventions and land use regulations
- As the **breadth and depth of policies differ by product type**, we **conducted a detailed assessment of subsidies and measures for 22 major products**

Executive Summary

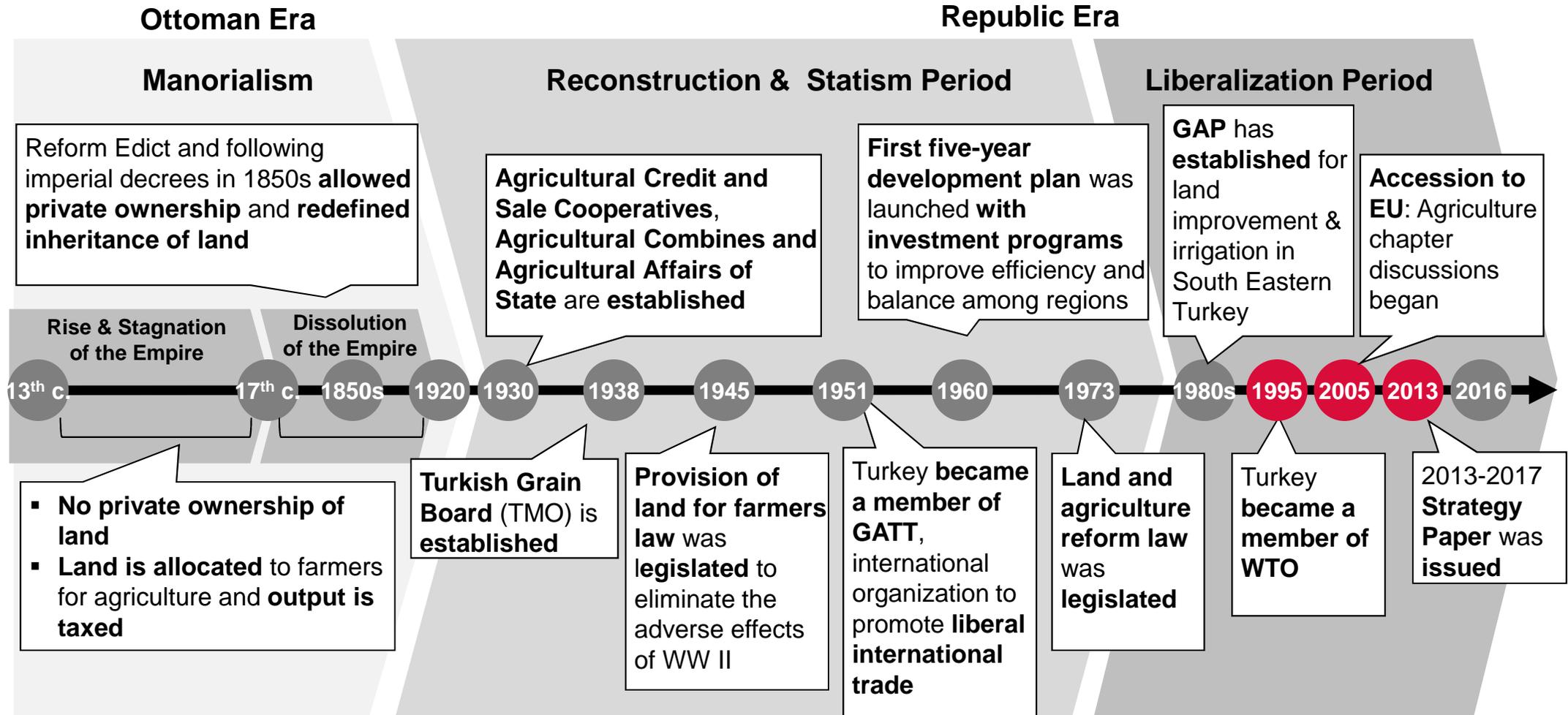
Agricultural Reform and Policies in WTO, EU and Turkey

Overview of Agriculture in Turkey

Overview of Subsidies and Measures

Long before the WTO and the EU, Turkey has been establishing the foundations of Agricultural reform and policies

Major Milestones in Turkish Agriculture



Source: Press, Helix analysis

Currently, Turkey fulfills import tariff obligations against WTO, no commitment has been made with regards to subsidies

Turkey's Status Within The Framework of WTO



WTO & Agreement on Agriculture



- As one of the first members of the WTO, **Turkey has fulfilled its tariff reduction** obligations defined at the Uruguay Rounds
- As stated by the Ministry of Agriculture, Turkey **successfully implemented export subsidy reduction requirements** in the ten years period covering 1995-2004
- Currently Turkey's international trade policies are **aligned with its commitments to WTO**

Import tariffs:

- As stated in WTO review, **applied duties on several agricultural products are lower than bound rates** demonstrating Turkey's progress in complying with WTO obligations

Subsidies:

- **Turkey did not pledge to reduce its Total AMS¹⁾**, along with other developing countries such as China, India, Indonesia and the Philippines
- Turkey also **did not pledge to reduce its 10% «de minimis»²⁾ percentage**

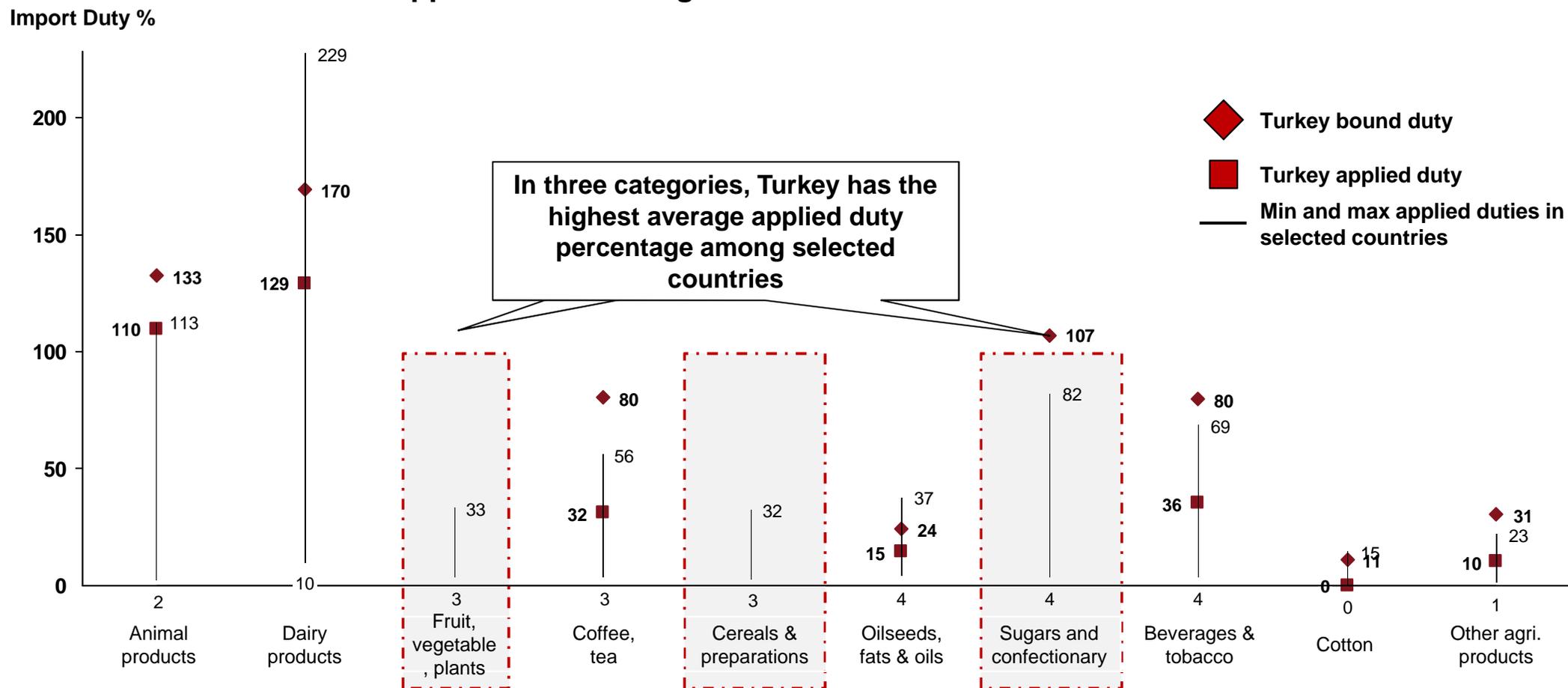
1) Aggregate Measurements of Supports

2) Minimal amounts of domestic support that are allowed even though they distort trade — up to 5% of the value of production for developed countries, 10% for developing.

Source: WTO, Ministry of Agriculture, Helix analysis

With regards to tariff compliance with WTO, Turkey has met its commitments in all selected categories

Minimum, Maximum Bound Rates and Average Applied Duties for Agricultural Products in Selected Countries



Note : Selected countries/regions for analysis are: Brazil, Canada, China, EU, India, Japan, Mexico, Russia, South Africa, Switzerland, Turkey and US
 Source: WTO, Helix analysis

In addition, alignment efforts with the European Union's Common Agriculture Policy are ongoing



The European Union & Common Agricultural Policy

- **Turkey is linked to EU** by the Association Agreement of **1964** and **Customs Union in 1995**
- **Turkey is a candidate country since 1999** and the **accession negotiations started in 2005**
- In the accession process, **only one of the three agriculture related chapters is opened**

Turkey's Status from the EU Perspective



Current Status in Agriculture Related Chapters

Chapter	Status	Progress
11. Agriculture & Rural Development	Pending	2 of 5 opening criteria met
12. Food Safety & Veterinary and Plant Health	Opened	Closure criteria need to be met
13. Fisheries	Pending	Opening criteria set pending

- Although Turkey made progress to harmonize its agricultural sector with the EU, there are still **pending issues** such as **agricultural statistics, general food safety, institutional capacity of the Ministry** and **restrictions on imports of live bovine**

Latest Developments on the Customs Union

- Turkey and the EU have been engaging in discussions related to a **potential update on Customs Union terms** since 2015
- Recently accepted program on exchanging refugees may **accelerate the EU related developments, such as Customs Union**

Source: EU, EU Secretariat General of Turkey, Ministry of Economy, Ministry of Agriculture, Helix analysis

Executive Summary

Agricultural Reform and Policies in WTO, EU and Turkey

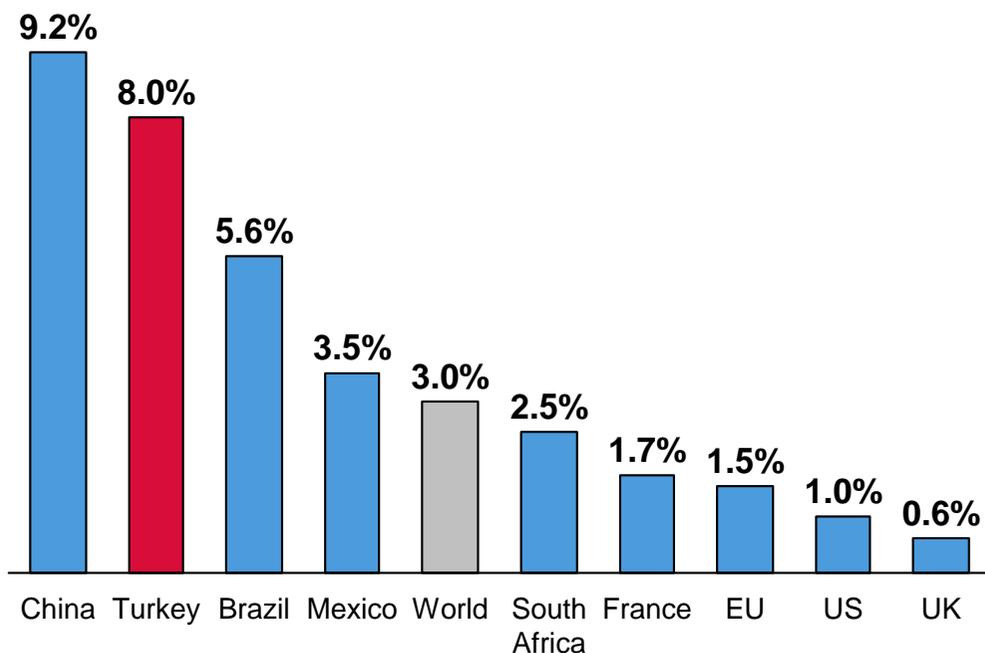
Overview of Agriculture in Turkey

Overview of Subsidies and Measures

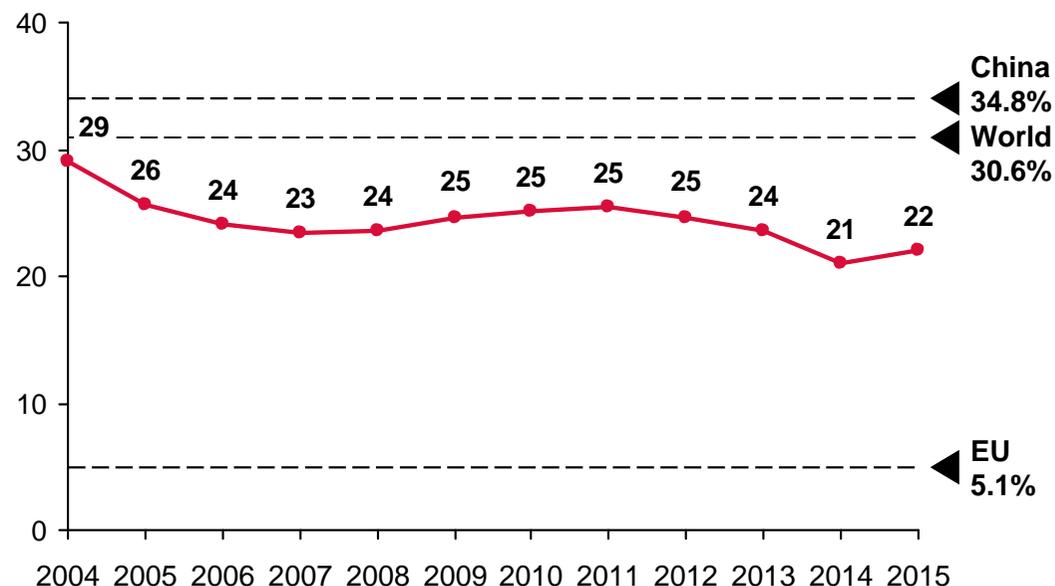
Agriculture is a crucial industry for Turkey; it corresponds to a significant share in total GDP and houses $\sim 1/4^{\text{th}}$ of the employment

Key Agribusiness Indicators

Agriculture Value Added – Turkey vs Selected Countries¹⁾
% Share in Total GDP



Share of Agricultural Employment in Total Employment – Turkey²⁾
% Share, 2004-2015



- Turkey is currently world's **7th largest agricultural producer**; and agriculture sector accounts for **8% of total GDP**, which is **significantly higher than the world average** of 3%
- Although **Turkey's agricultural employment is gradually declining**, it is **still one of the key industries** for people's livelihood with **$\sim 25\%$ share in total employment**

1) US and World data is for 2013., for all others data is for 2014

2) Benchmark data is for 2011 - 2013

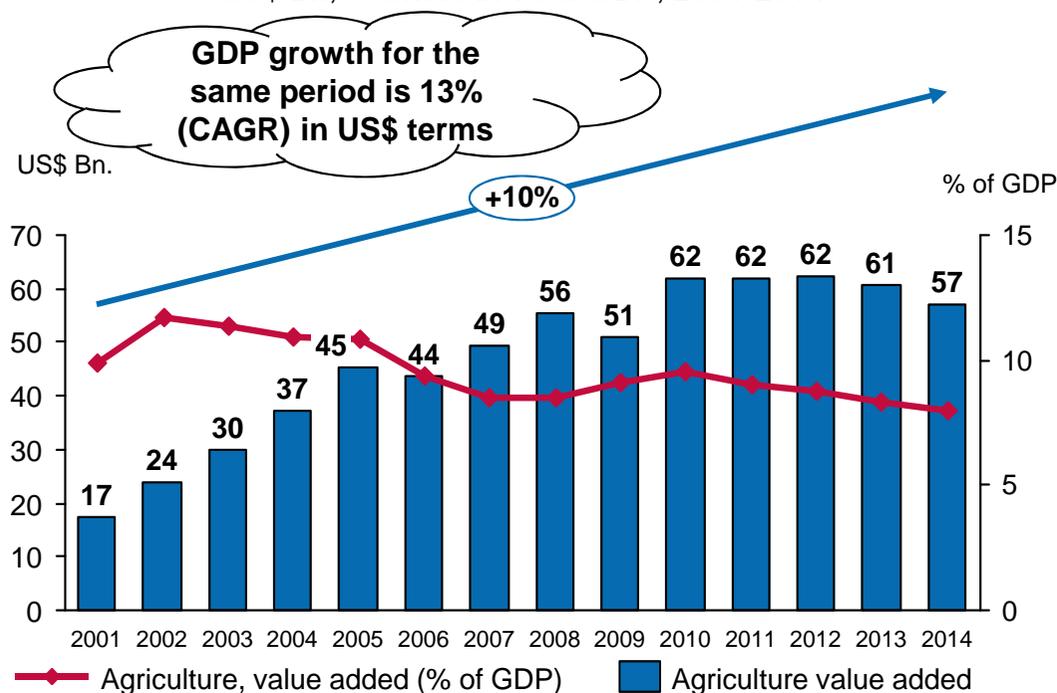
Source: World Bank, OECD, TurkStat, Helix analysis

Both the agricultural value added and the agricultural production have grown moderately over the last decade

Evolution of Agribusiness in Turkey

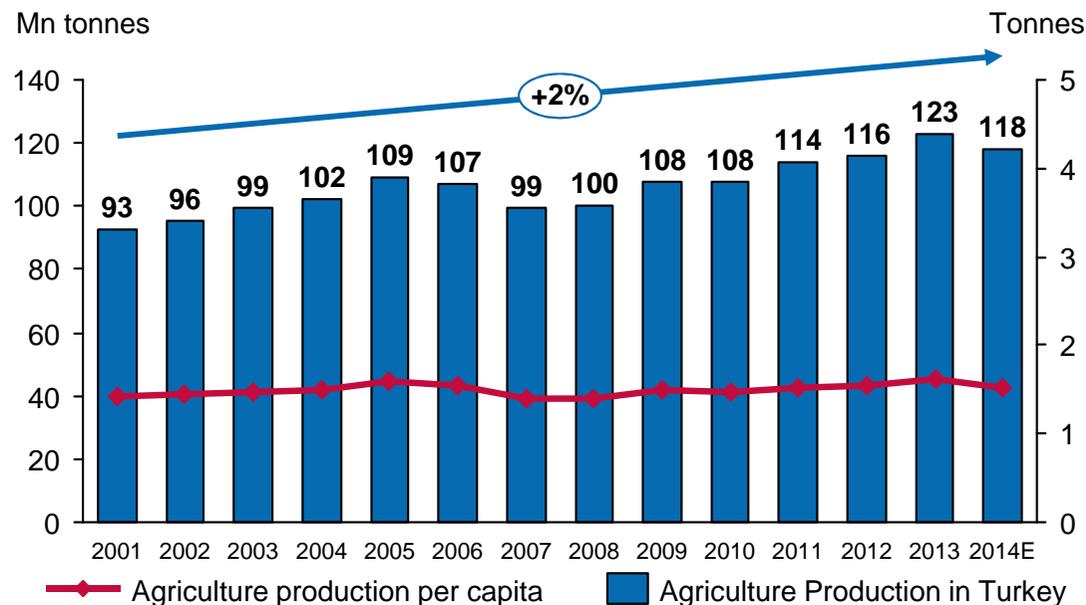
Agriculture Value Added in Turkey¹⁾

US\$ Bn, % Share in Total GDP, 2001-2014



Agriculture Production in Turkey²⁾

Million Tonnes, Tonnes per Capita, 2001 – 2014E



- Over the last decade, **agriculture value added** has grown at a **slightly slower rate than the overall economy**
- Growth was **mainly fueled by price increase; volume growth was rather limited**

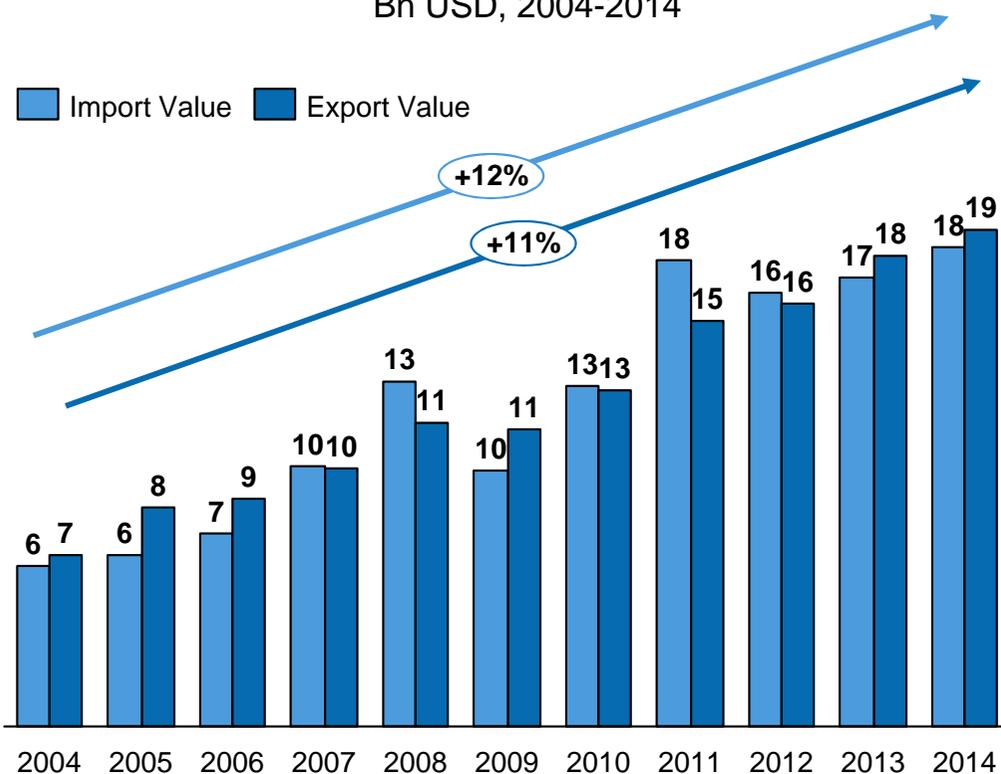
1) Annual US\$ inflation for 2001-2014 period is on average 2.3%

2) Selected primary products

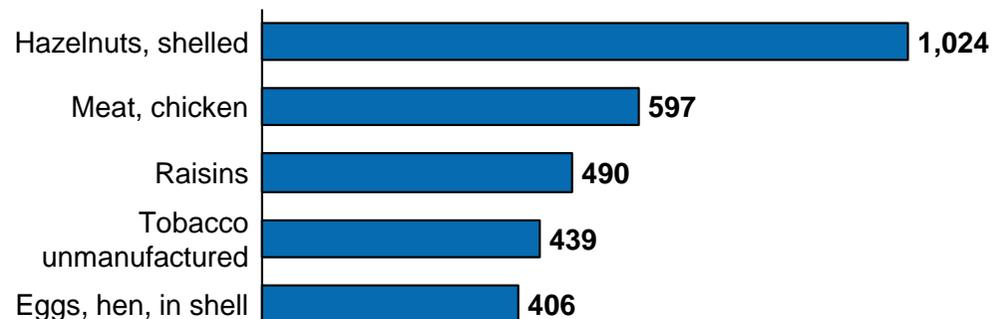
Source: World Bank, Faostat, Helix analysis

Turkey became a net exporter in agriculture products in 2013, mainly targeting Iraq, Russia, Germany, Italy and the US markets

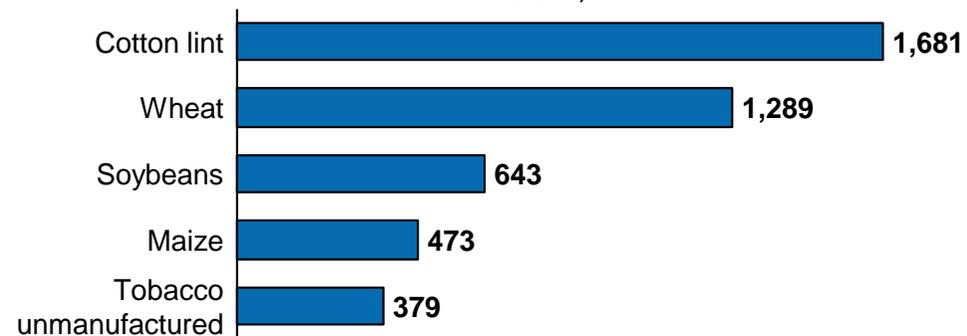
Turkey's Foreign Trade in Agricultural Products
Bn USD, 2004-2014



Top Five Exported Products¹⁾
Mn USD, 2013



Top Five Imported Products¹⁾
Mn USD, 2013



Comments

- Turkey's main export markets are Iraq, Russia, USA, Germany and Italy
- Turkey's main import markets are Russia, Ukraine, USA, Germany and Brazil

1) Processed foods are excluded

Source: TurkStat, Ministry of Agriculture, Faostat, Press, Helix analysis

In parallel, several government initiatives and accomplishments have been realized over the last decade

Recent Initiatives and Accomplishments

- ✓ **Agricultural supports** were almost quadrupled (from ~4 bn TL in 2005 to ~14 bn TL in 2015)
- ✓ **Legislations** were put into practice **towards protection of agricultural land and land consolidation**
- ✓ **Budgets** were increased for a variety of programs
- ✓ **Interest-free credits** were issued
- ✓ **Product mosaic determination project** was initiated and already finalized in **69 cities**
- ✓ **New national Rural Development Strategy** was declared
- ✓ **Rural development plan** was initiated
- ✓ **Pre-Accession Assistance Rural Development Program (IPARD) '13-'17** was implemented

Total subsidies exceeded 10 billion TL in 2015 and are expected to grow in the upcoming years

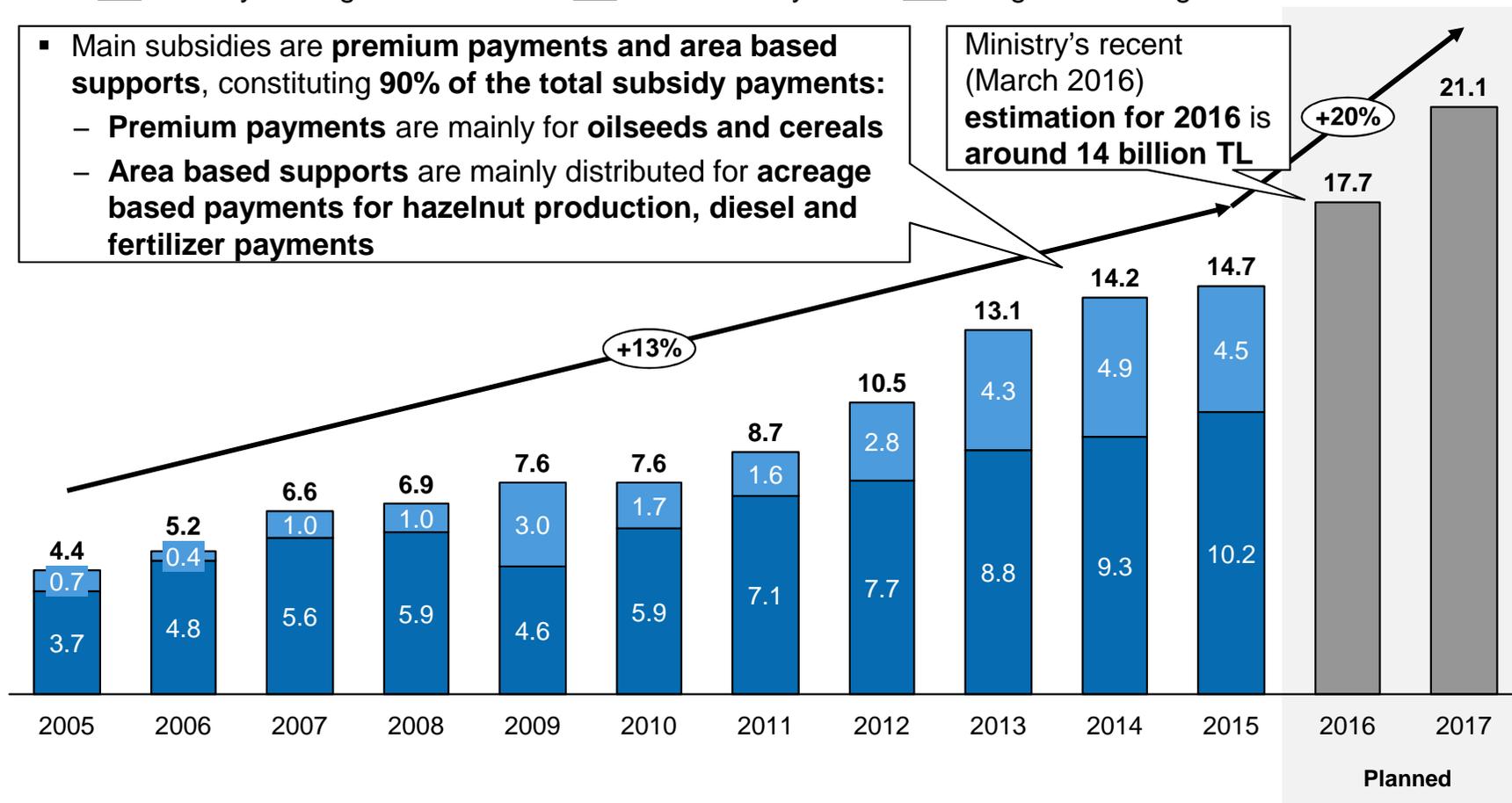
Ministry of Agriculture Budget and Total Subsidies to Agriculture in Turkey

Bn TL, 2005 – 2017F

■ Ministry Managerial Overhead
 ■ Total Subsidy Paid
 ■ Budget of Strategic Plan 2014-2017

- Main subsidies are **premium payments and area based supports**, constituting **90% of the total subsidy payments**:
 - **Premium payments** are mainly for **oilseeds and cereals**
 - **Area based supports** are mainly distributed for **acreage based payments for hazelnut production, diesel and fertilizer payments**

Ministry's recent (March 2016) estimation for 2016 is around 14 billion TL



Source: Ministry of Food, Agriculture and Animal Husbandry; Helix analysis

Despite promising developments, we observed a number of prevalent issues that challenge the agriculture industry

Issue	Description										
<h3>Productivity and Traceability Issues</h3>	<ul style="list-style-type: none"> Turkey faces productivity issues: <ul style="list-style-type: none"> Domestic breeds are less productive than imported ones such as Holstein Traditional seeds are inferior compared to certified seeds Fallow practices are insufficient Traceability of productivity improvement measures is not effective <div data-bbox="1361 443 1713 726"> <p>Cow Productivity '000 tonnes per cow</p> <table border="1"> <tr><td>USA</td><td>9.9</td></tr> <tr><td>Belgium</td><td>8.8</td></tr> <tr><td>Germany</td><td>7.5</td></tr> <tr><td>France</td><td>6.8</td></tr> <tr><td>Turkey</td><td>3.0</td></tr> </table> </div> <div data-bbox="1765 416 2145 746"> <p>'Nearly half of Turkey's raw milk production sells in the black market without traceability' <i>Ex-CEO of Major Producer</i></p> </div>	USA	9.9	Belgium	8.8	Germany	7.5	France	6.8	Turkey	3.0
USA	9.9										
Belgium	8.8										
Germany	7.5										
France	6.8										
Turkey	3.0										
<h3>Small Sized Land Plots</h3>	<ul style="list-style-type: none"> Despite being among top 5% globally, average farm size in Turkey is smaller than several developed countries Territorial integrity has been distorted through inheritance among family members Implications are decreased productivity and product diversification as well as increased input costs <div data-bbox="1377 774 2116 1077"> <p>Average Farm Size Comparison Decare per Enterprise</p> <table border="1"> <tr><td>United States</td><td>~1,560</td></tr> <tr><td>Germany</td><td>~560</td></tr> <tr><td>France</td><td>~550</td></tr> <tr><td>Turkey</td><td>~70</td></tr> </table> </div>	United States	~1,560	Germany	~560	France	~550	Turkey	~70		
United States	~1,560										
Germany	~560										
France	~550										
Turkey	~70										
<h3>Decreasing Sown Area</h3>	<ul style="list-style-type: none"> Total sown area has been decreasing over the recent years due to: <ul style="list-style-type: none"> Decreasing rural population Lower participation in agricultural production from new generations Implications of this issue are decreased production volume and insufficiency problems <div data-bbox="1534 1125 1971 1428"> <p>Total Sown Area in Turkey Mn decares 2010 - 2014</p> <p>-1%</p> <table border="1"> <tr><td>2010</td><td>21.4</td></tr> <tr><td>2011</td><td>20.5</td></tr> <tr><td>2012</td><td>20.6</td></tr> <tr><td>2013</td><td>20.6</td></tr> <tr><td>2014</td><td>20.7</td></tr> </table> </div>	2010	21.4	2011	20.5	2012	20.6	2013	20.6	2014	20.7
2010	21.4										
2011	20.5										
2012	20.6										
2013	20.6										
2014	20.7										

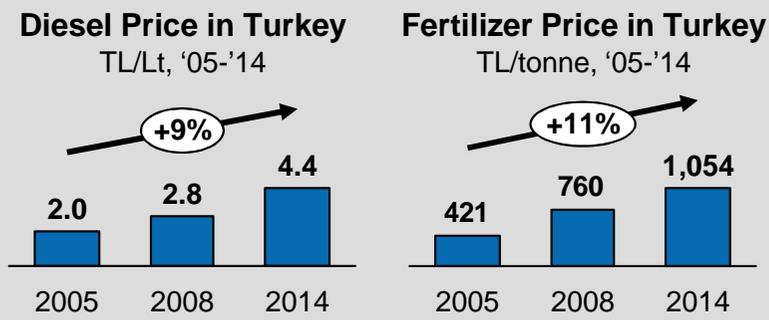
Source: TurkStat; Press, Market Experts, Helix analysis

Despite promising developments, we observed a number of prevalent issues that challenge the agriculture industry (cont'd)

Issue	Description
Distorted Product Mosaic	<ul style="list-style-type: none"> Farmers logically prefer to sow more profitable plants rather than indigenous plants Guaranteed public purchases (even at loss) encouraged farmers to change product mosaic Implications are decreased product diversification and land productivity
High Input Costs	<ul style="list-style-type: none"> Significant input costs such as diesel, fertilizer, pesticides and seed increased over years Over or misuse of inputs also increased input costs and implicitly decreased productivity (e.g. thickset seed/sapling, tractor usage in spare time) Implications are increased unit price and decreased global competitiveness
Post Harvest Oversupply Driven by Storage Issues	<ul style="list-style-type: none"> Because of low income and high input cost, farmers need immediate cash and cannot reimburse the storage costs Additionally, storage costs are significantly high since the number of available storages is insufficient Major drawbacks are sales at loss, and increased price seasonality/instability

"Sugar beet production in Central Anatolia decreased saturation percentage of soil and land productivity –Central Anatolia was known to be the barn of Turkey"
CEO of Major Producer

"Satsuma mandarin growing in Black Sea region has been negatively affected by tea growing backed by guaranteed public purchases"
CEO of Major Organic Food Producer



"Storages are limited in number and expensive, therefore many farmers sell their products to traders after the harvest when the prices are low"
Ex-CEO of Major Producer

Source: ICAR; TurkStat; Press, Market Experts, Helix analysis

Despite promising developments, we observed a number of prevalent issues that challenge the agriculture industry (cont'd)

Issue

Description

Economic Viability Dependent on Subsidies

- Profitability levels in certain product groups **depend significantly on subsidies**
- **Major products with subsidy dependency** are:
 - Barley
 - Cotton
 - Milk
 - Red meat
 - Soybean
 - Wheat

Ministry of Agriculture is aware of the current issues and planning to take concrete steps towards their resolution

Declarations of Minister of Food, Agriculture and Animal Husbandry / March 2016

«Despite the presence of 24 million decares of agricultural land, the usable land is limited to ~20 million decares. Through the last 26 years, four million decares of agricultural land is lost"»

«Turkey managed to consolidate a limited 4.6 million hectares in 13 years. Considering Turkey's 2023 land consolidation target of 14 million hectares, current approach is insufficient to reach the goal. Therefore, we are establishing a general directorate that will focus entirely on land consolidation."»

«Subsidies in Turkey are highly fragmented and they became depleted of the efficiency analysis in time. We are about to initiate a new subsidy program, consolidating 53 subsidies into three-four items"»

«We will improve storage activities by focusing on licensed storage and shifting TMO's operations from storage to acquisition. We are also working on further empowering TIGEM and ESK – While TIGEM will focus on breeder and seed production, ESK will have a regulatory role»

Executive Summary

Agricultural Reform and Policies in WTO, EU and Turkey

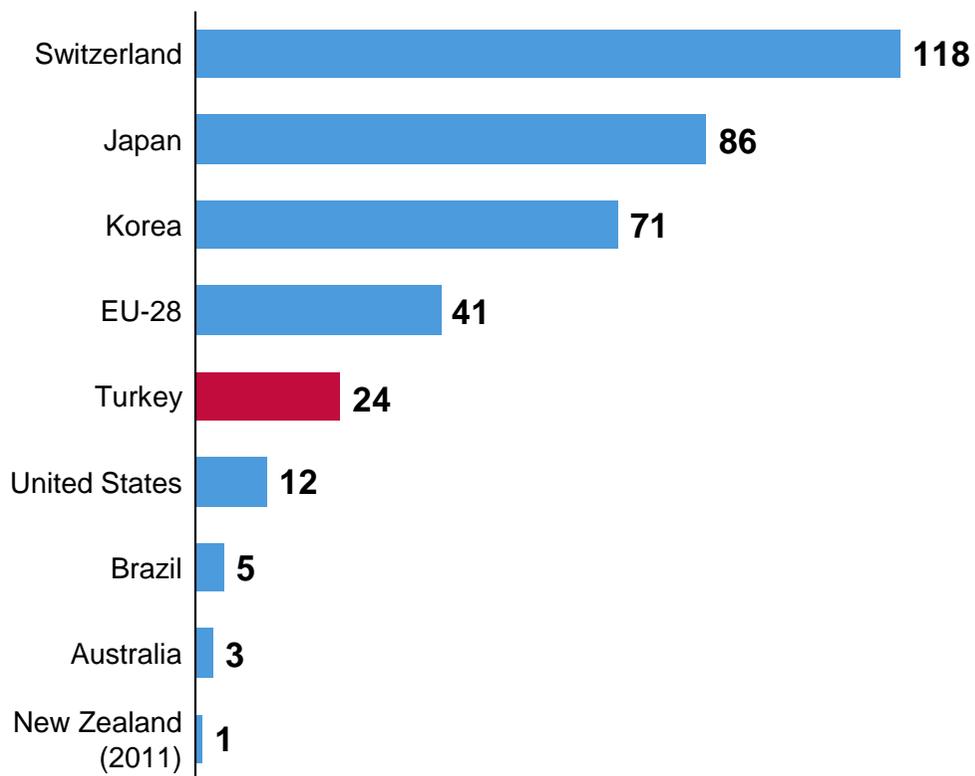
Overview of Agriculture in Turkey

Overview of Subsidies and Measures

Compared to other countries, level of agricultural subsidization in Turkey is moderate, close to the EU average levels

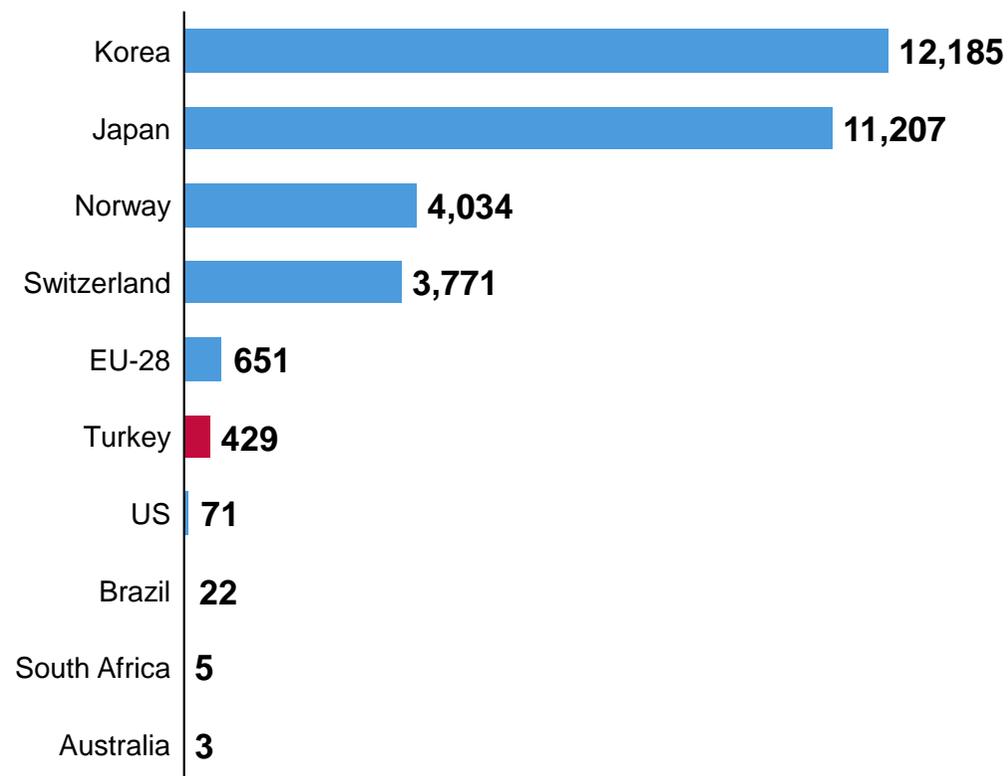
Producer Support Estimate (PSE) in Agricultural GDP

% of Agricultural GDP, Turkey vs Selected Countries, 2013



Producer Support Estimate (PSE) per Arable Land

USD/ha, Turkey vs Selected Countries, 2013



Source: OECD; FAO; World Bank; Helix analysis

In order to improve the agriculture industry, there are 18 major subsidies and measures that are effective in Turkey

Product Based Subsidies

- 1 Premium Payments
- 2 Certified Seed / Sapling Usage Subsidy
- 3 Export Refund
- 4 Organic and Good Agricultural Support
- 5 Diesel, Fertilizer and Soil Analysis Subsidy
- 6 Domestically Certified Seed Production Support
- 7 Acreage Based Payments for Hazelnut Production
- 8 Forage Crops Production Support
- 9 Animal Payments per Head
- 10 Indemnity Payment for Animal Diseases

Non-Product Based Subsidies

- 11 Farm Accounting Database System Participation
- 12 Agricultural Expansion and Consultancy Services Support
- 13 Research and Development Projects Support
- 14 Projects Aiming to Protect Agricultural Lands

Measures

- 15 Custom Duties/Tariffs
- 16 Phytosanitary Standards
- 17 Interventions
- 18 Land Protection and Use Law

We evaluated each major subsidy and measure in detail

Premium payments constitute one of the leading subsidies in Turkey with extensive reach

Subsidy Name/Type	Financials	Goals & Major Requirements	Usage Frequency										
<p>1</p> <p>Premium Payments</p> <p>Product Based</p>	<p>Subsidy Funded¹⁾ Bn TL, 2010-2014</p> <p>+4%</p> <table border="1"> <caption>Subsidy Funded (Bn TL, 2010-2014)</caption> <thead> <tr> <th>Year</th> <th>Subsidy Funded (Bn TL)</th> </tr> </thead> <tbody> <tr> <td>2010</td> <td>3.1</td> </tr> <tr> <td>2012</td> <td>3.0</td> </tr> <tr> <td>2013</td> <td>3.6</td> </tr> <tr> <td>2014</td> <td>3.6</td> </tr> </tbody> </table> <p>Cotton, wheat and sunflowers are leading products in relation to subsidies provided at product level</p>	Year	Subsidy Funded (Bn TL)	2010	3.1	2012	3.0	2013	3.6	2014	3.6	<p>Goals</p> <ul style="list-style-type: none"> Support agricultural products' cultivation in proper fields to self ecology through supporting products at select basins that fit individual climate preferences <p>Major Requirements</p> <ul style="list-style-type: none"> Registry to Farmer Registry System prior to harvest period Subsidization is provided to products that are produced and sold during the production period of the given year alone 	<p>Widely used Not widely used</p>
Year	Subsidy Funded (Bn TL)												
2010	3.1												
2012	3.0												
2013	3.6												
2014	3.6												

Products Subject to Premium Payments and Examined in Detail



Wheat



Barley



Cotton



Maize



Soybean



Sunflower



Milk



Tea



Fish



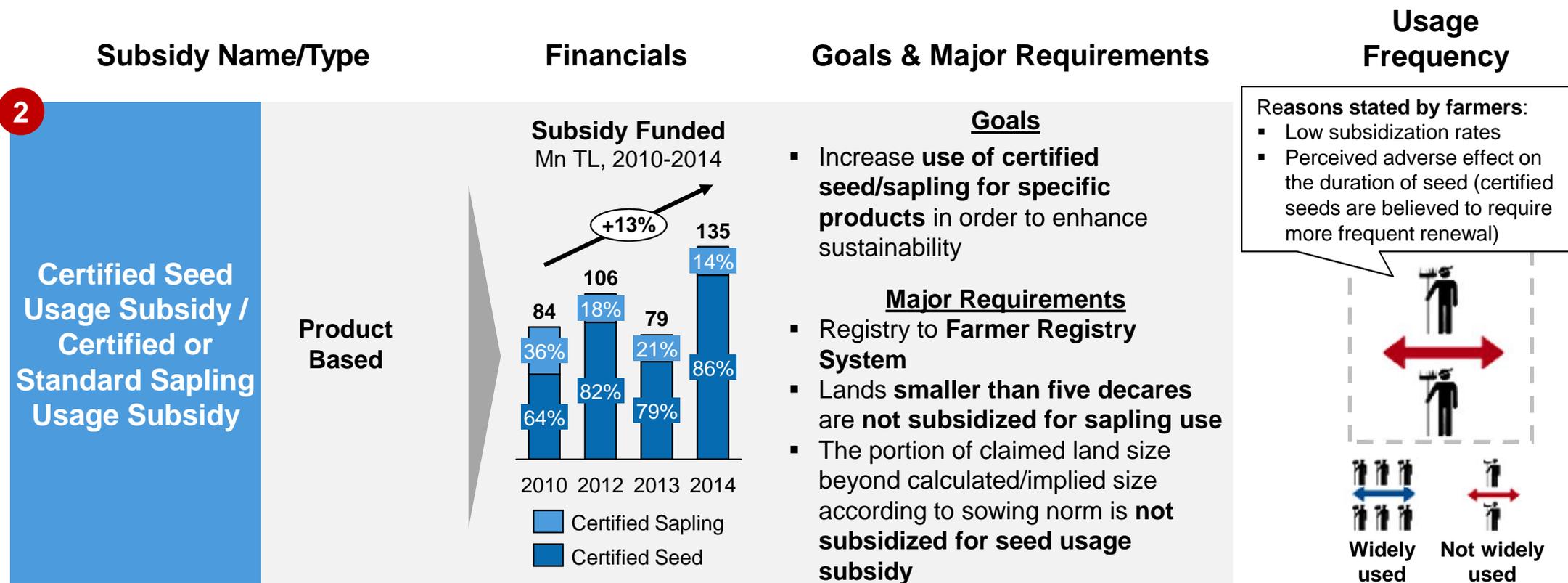
Lentils



Olives

1) Premium payments funded data is extracted from BÜGEM alone, hence animal related products such as milk and fish are not covered in provision figures provided above
 Note: Usage frequency is determined based on farmer and industry interviews
 Source: BÜGEM; Farmer interviews; Helix analysis

While the use of certified seed/sapling is promoted, this subsidy has limited reach

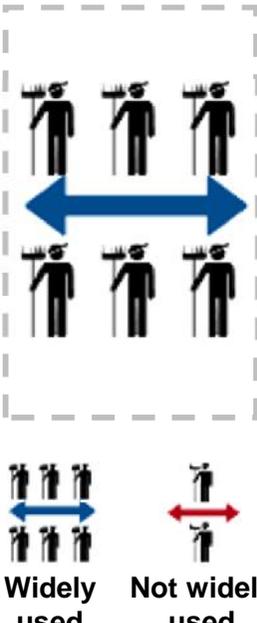


Products Subject to Seed or Sapling Subsidy and Examined in Detail



Note: Usage frequency is determined based on farmer and industry interviews
 Source: BÜGEM; Farmer interviews; Helix analysis

To increase agricultural competitiveness in select areas, Turkey provides export refund support

	Subsidy Name/Type	Goals	Major Requirements	Usage Frequency
<p>3</p> <p>Export Refund</p>	<p>Product Based</p> <p><u>Complexity</u></p> <ul style="list-style-type: none"> Changes in subsidized product pool and detailed sub legislation items are potential complexity items 	<ul style="list-style-type: none"> Aims to enhance competitiveness and export potential of agriculture sector in international markets for a set of select products Refund is based on some portion of FOB export value that is lower than pre-set maximum refund amount calculated as a proportion of the export value Organic certification yields 50% increase in the refund amount 	<ul style="list-style-type: none"> Producers are eligible to this subsidy only in cases of exporters' own subsidization transfer to them: <ul style="list-style-type: none"> Exporters are allowed to transfer no more than 65% of their subsidy amount to suppliers Payments are set off by debts rather than direct payments to farmers Transit transfer of goods, frontier trade, coastal trade, free of charge exports and exports with regards to outward processing regime are excluded from the scope of export refund 	<p>Usage Frequency</p>  <p>Widely used Not widely used</p>

Products Subject to Export Refund Support and Examined in Detail



Egg



Fish



Tomatoes



Olives



Grapes



Potatoes



Apricot



Chicken

Note: Usage frequency is determined based on farmer and industry interviews
 Source: BÜGEM; Farmer interviews; Helix analysis

Although still limited, organic and good agricultural support displayed significant growth in terms funded amounts

4	Subsidy Name/Type	Financials	Goals & Major Requirements	Usage Frequency															
<p>Organic and Good Agricultural Support</p>	<p>Product Based</p>	<p>Subsidy Funded Mn TL, 2010-2014</p> <table border="1"> <caption>Subsidy Funded (Mn TL, 2010-2014)</caption> <thead> <tr> <th>Year</th> <th>Good Agriculture</th> <th>Organic Agriculture</th> </tr> </thead> <tbody> <tr> <td>2010</td> <td>7</td> <td>9</td> </tr> <tr> <td>2012</td> <td>68</td> <td>74</td> </tr> <tr> <td>2013</td> <td>38</td> <td>49</td> </tr> <tr> <td>2014</td> <td>69</td> <td>88</td> </tr> </tbody> </table> <p>Legend: Good Agriculture (light blue), Organic Agriculture (dark blue)</p>	Year	Good Agriculture	Organic Agriculture	2010	7	9	2012	68	74	2013	38	49	2014	69	88	<p>Goals</p> <ul style="list-style-type: none"> Attaining healthy produces, natural resources protection, sustainable agriculture, traceability and food safety are the main goals <p>Major Requirements</p> <ul style="list-style-type: none"> Registry to Farmer Registry System, Organic Agriculture Information System and Good Agricultural Practices Certificate Organic certification requires a pre-defined transition period since the initiation of organic activities 	<p>Widely used Not widely used</p>
Year	Good Agriculture	Organic Agriculture																	
2010	7	9																	
2012	68	74																	
2013	38	49																	
2014	69	88																	

Products Subject to Organic and Good Agricultural Support and Examined in Detail



1) Premium payments funded data is extracted from BÜGEM alone, hence animal related products such as milk and beef are not covered in provision figures provided above

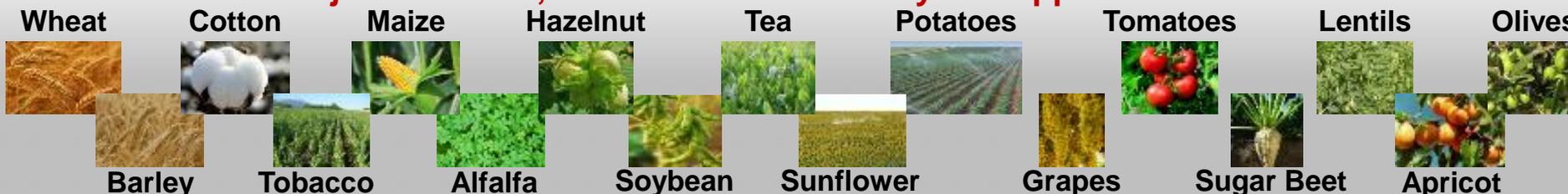
Note: Usage frequency is determined based on farmer and industry interviews

Source: BÜGEM; Farmer interviews; Helix analysis

Diesel, fertilizer and soil analysis subsidy stands out with its widespread use

Subsidy Name/Type	Financials	Goals & Major Requirements	Usage Frequency																									
<p>5</p> <p>Diesel, Fertilizer and Soil Analysis Subsidy</p> <p>Product Based</p> <p>Complexity</p> <ul style="list-style-type: none"> Soil analysis involves intense bureaucracy 	<p>Subsidy Funded Bn TL, 2010-2014</p> <p>+6%</p> <table border="1"> <caption>Subsidy Funded (Bn TL, 2010-2014)</caption> <thead> <tr> <th>Year</th> <th>Fertilizer (%)</th> <th>Diesel (%)</th> <th>Soil Analysis (%)</th> <th>Total (Bn TL)</th> </tr> </thead> <tbody> <tr> <td>2010</td> <td>52%</td> <td>43%</td> <td>6%</td> <td>1.2</td> </tr> <tr> <td>2012</td> <td>51%</td> <td>42%</td> <td>7%</td> <td>1.4</td> </tr> <tr> <td>2013</td> <td>50%</td> <td>43%</td> <td>7%</td> <td>1.4</td> </tr> <tr> <td>2014</td> <td>51%</td> <td>42%</td> <td>7%</td> <td>1.5</td> </tr> </tbody> </table> <p>Legend: Soil Analysis (light blue), Diesel (medium blue), Fertilizer (dark blue)</p>	Year	Fertilizer (%)	Diesel (%)	Soil Analysis (%)	Total (Bn TL)	2010	52%	43%	6%	1.2	2012	51%	42%	7%	1.4	2013	50%	43%	7%	1.4	2014	51%	42%	7%	1.5	<p>Goals</p> <ul style="list-style-type: none"> In light of the Development Plan and National Agriculture Strategy, farmers are supported in relation to these significant cost items Soil analysis is promoted to attain more scientific/productive use of fertilizer <p>Major Requirements</p> <ul style="list-style-type: none"> Registry to Farmer Registry System Lands smaller than one decare are not subsidized Soil analysis is a prerequisite for fertilizer support eligibility for lands larger than 50 decares 	<p>Usage Frequency</p> <p>Widely used</p> <p>Not widely used</p>
Year	Fertilizer (%)	Diesel (%)	Soil Analysis (%)	Total (Bn TL)																								
2010	52%	43%	6%	1.2																								
2012	51%	42%	7%	1.4																								
2013	50%	43%	7%	1.4																								
2014	51%	42%	7%	1.5																								

Products Subject to Diesel, Fertilizer and Soil Analysis Support and Examined in Detail



Note: Usage frequency is determined based on farmer and industry interviews

Source: BÜGEM; Farmer interviews; Helix analysis

Certified seed production support remains rather small compared to other subsidies in terms of funded amounts

Subsidy Name/Type	Financials	Goals & Major Requirements	Usage Frequency										
<p>6</p> <p>Domestically Certified Seed Production Support</p>	<p>Product Based</p> <p>Subsidy Funded Mn TL, 2010-2014</p> <table border="1"> <caption>Subsidy Funded (Mn TL, 2010-2014)</caption> <thead> <tr> <th>Year</th> <th>Subsidy Funded (Mn TL)</th> </tr> </thead> <tbody> <tr> <td>2010</td> <td>18</td> </tr> <tr> <td>2012</td> <td>35</td> </tr> <tr> <td>2013</td> <td>34</td> </tr> <tr> <td>2014</td> <td>38</td> </tr> </tbody> </table>	Year	Subsidy Funded (Mn TL)	2010	18	2012	35	2013	34	2014	38	<p>Goals</p> <ul style="list-style-type: none"> Develop seed sector's level of competitiveness by supporting products with insufficient domestic seed production <p>Major Requirements</p> <ul style="list-style-type: none"> Registry to Farmer Registry System Becoming an authorized enterprise is mandated for eligibility Subsidization is provided to products that are produced and certified in the given year 	<p>Widely used Not widely used</p>
Year	Subsidy Funded (Mn TL)												
2010	18												
2012	35												
2013	34												
2014	38												

Products Subject to Seed Production Support and Examined in Detail



Wheat



Barley



Alfalfa



Potatoes



Soybean



Lentils

Note: Usage frequency is determined based on farmer and industry interviews
 Source: BÜGEM; Farmer interviews; Helix analysis

Targeting one product only, acreage based payments for hazelnut are one of the largest subsidies in terms amount funded

Subsidy Name/Type	Financials	Goals & Major Requirements	Usage Frequency										
<p>7</p> <p>Acreage Based Payments for Hazelnut Production</p> <p>Product Based</p>	<p>Subsidy Funded Mn TL, 2010-2014</p> <table border="1"> <caption>Subsidy Funded (Mn TL, 2010-2014)</caption> <thead> <tr> <th>Year</th> <th>Subsidy Funded (Mn TL)</th> </tr> </thead> <tbody> <tr> <td>2010</td> <td>651</td> </tr> <tr> <td>2012</td> <td>710</td> </tr> <tr> <td>2013</td> <td>717</td> </tr> <tr> <td>2014</td> <td>789</td> </tr> </tbody> </table> <p>On top of this subsidy, government provides compensatory payments for hazelnut to minimize/eliminate hazelnut production in unauthorized fields (fruitful bottom lands that are suitable for other crops as well) and supply deficit in alternative products</p>	Year	Subsidy Funded (Mn TL)	2010	651	2012	710	2013	717	2014	789	<p>Goals</p> <ul style="list-style-type: none"> Support hazelnut farming in licensed fields in accordance to the Law regarding Hazelnut Fields Identification <p>Major Requirements</p> <ul style="list-style-type: none"> Registry to Farmer Registry System and Hazelnut Producers System In addition, Hazelnut Producer License is mandated 	<p>Usage Frequency</p> <p>Widely used Not widely used</p>
Year	Subsidy Funded (Mn TL)												
2010	651												
2012	710												
2013	717												
2014	789												

Note: Usage frequency is determined based on farmer and industry interviews
 Source: BÜGEM; Farmer interviews; Helix analysis

Import reliant on feed sector, Turkish agriculture industry's success depends to some extent on forage crops subsidy

Subsidy Name/Type	Financials	Goals & Major Requirements	Usage Frequency										
<p>8</p> <p>Forage Crops Production Support</p> <p>Product Based</p> <p>Complexity</p> <ul style="list-style-type: none"> Detailed payment terms create complexity (E.g. subsidization decision subject to university opinion regarding dry farming practice forced by climate conditions for alfalfa and maize for silage) 	<p>Subsidy Funded Mn TL, 2010-2014</p> <table border="1"> <caption>Subsidy Funded (Mn TL, 2010-2014)</caption> <thead> <tr> <th>Year</th> <th>Subsidy Funded (Mn TL)</th> </tr> </thead> <tbody> <tr> <td>2010</td> <td>232</td> </tr> <tr> <td>2012</td> <td>293</td> </tr> <tr> <td>2013</td> <td>311</td> </tr> <tr> <td>2014</td> <td>334</td> </tr> </tbody> </table>	Year	Subsidy Funded (Mn TL)	2010	232	2012	293	2013	311	2014	334	<p>Goals</p> <ul style="list-style-type: none"> Develop feed market's level of competitiveness by promoting quality coarse fodder cultivation <p>Major Requirements</p> <ul style="list-style-type: none"> For perennial crops, written contract is mandated assuring sowing will not be interrupted throughout the life cycle (e.g. four years for alfalfa) <p><i>To tackle potato wart, an additional 50% subsidy is provided for forage cultivation in cities with potato wart. Irrigated farming receives higher rates than dry practices</i></p>	<p>Usage Frequency</p> <p>Widely used Not widely used</p>
Year	Subsidy Funded (Mn TL)												
2010	232												
2012	293												
2013	311												
2014	334												

Products Subject to Seed or Sapling Subsidy and Examined in Detail



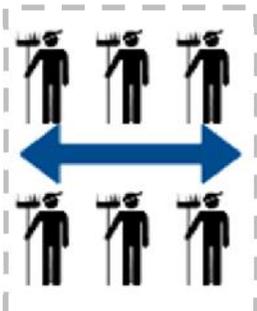
Alfalfa

Alfalfa is the only product investigated in detail subject to this subsidy. On top, products such as sainfoil and cultured grass fall under the umbrella of this subsidy

Note: Usage frequency is determined based on farmer and industry interviews

Source: BÜGEM; Farmer interviews; Helix analysis

Animal payments per head include a number of subsidies to support animal husbandry

	Subsidy Name/Type	Goals	Major Requirements	Usage Frequency
<div style="background-color: #0070C0; color: white; padding: 10px; text-align: center;"> 9 Animal Payments per Head </div>	<p>Product Based</p> <p><u>Complexity</u></p> <ul style="list-style-type: none"> Several registry requirements Complex interconnections (E.g. by receiving Diseases Free Farms subsidy, an enterprise loses eligibility for Mother Cattle Breeding Support) 	<ul style="list-style-type: none"> Support animal husbandry as a business to increase healthy production, enhance sustainability, protect and develop genetic resources, and fight animal diseases 	<ul style="list-style-type: none"> Membership to grower associations and register systems Minimum livestock requirements (e.g. at least five mother cattle presence for mother cattle breeding support) Designated insemination practices Birth in the discussed year for calves Vaccine support animal age requirements 	

Products Subject to Animal Payments per Head and Examined in Detail

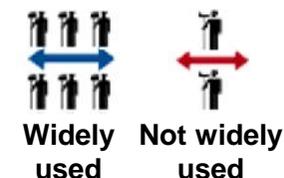
Several subsidies including birth supports, vaccine supports, genetic resource protection are grouped under animal payments per head



Beef



Milk

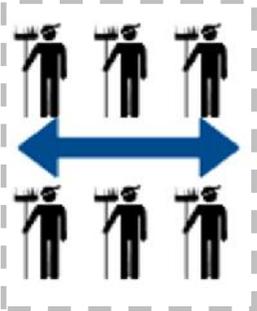


Note: Usage frequency is determined based on farmer and industry interviews

Source: BÜGEM; Farmer interviews Helix analysis

Indemnity payments aim at minimizing disease outbreaks

10

Subsidy Name/Type	Goals	Major Requirements	Usage Frequency
<p>Indemnity Payment for Animal Diseases</p>	<p>Product Based</p> <p>Complexity</p> <ul style="list-style-type: none"> Complex differentiation at disease level → different precautions are taken for different diseases Indemnity payment terms complexity 	<ul style="list-style-type: none"> Prevent outbreaks of animal diseases from happening through covering for costs associated with asset loss regarding mass animal slaughter Death through protective vaccination → veterinary report confirmation showing vaccination was carried out by veterinary surgeon Killing of animals detected with indemnity payment diseases → decision made by authorized or official veterinary 	

Products Subject to Indemnity Payment for Animal Diseases and Examined in Detail



Beef



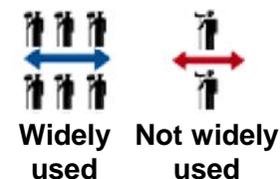
Milk



Chicken

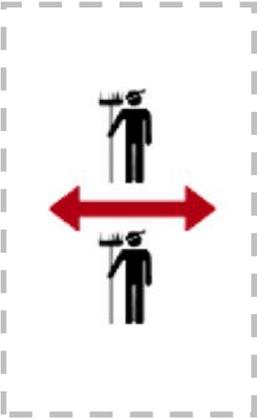
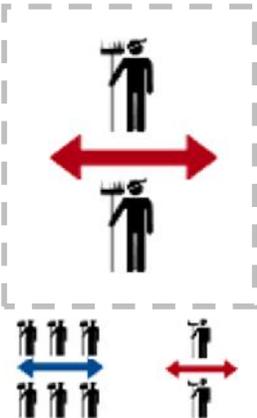


Egg



Note: Usage frequency is determined based on farmer and industry interviews
 Source: BÜGEM; Farmer interviews; Helix analysis

Although non-product based subsidies do not have extensive reach, they are still applicable for specific purposes

	Subsidy Name/Type	Financials	Goals	Major Requirements	Usage Frequency
<p>11</p> <p>Farm Accounting Database System Participation Support</p>	<p>Non-Product Based</p>	<p>N/A</p>	<ul style="list-style-type: none"> Increase registry rates to Farm Accounting Database System in order to better track the domestic agricultural performance 	<ul style="list-style-type: none"> Registry to Farmer Register System and/or any administrative register system created by the Ministry, participation in Farm Accountancy Database System are preconditions for eligibility 	
<p>12</p> <p>Agricultural Expansion and Consultancy Services Support</p>	<p>Non-Product Based</p>	<ul style="list-style-type: none"> Between 2009 and 2014, a total of 149 million TL was distributed as subsidy payments 	<ul style="list-style-type: none"> Attain efficient, productive and pluralist structure in agricultural consulting system 	<ul style="list-style-type: none"> Registry to at least one of the following register systems is mandated: Farmer, Animal, Greenhouse Cultivation, Aquaculture, Apiculture, Sheep/Goat, Organic Agriculture Information System 	

Note: Usage frequency is determined based on farmer and industry interviews
 Source: BÜGEM; Farmer interviews; Helix analysis

Although non-product based subsidies do not have extensive reach, they are still applicable for specific purposes (cont'd)

	Subsidy Name/Type	Financials	Goals	Major Requirements	Usage Frequency										
<p>13</p> <p>Research and Development Projects Support</p>	<p>Non-Product Based (Project Based)</p>	<ul style="list-style-type: none"> Between 2003 and 2014, 1.3 billion TL was provided in total Ministry of Food, Agriculture and Livestock has ranked 1st public body with regards to TUB TAK project acceptance rate 	<ul style="list-style-type: none"> Advancement and transmission of information and technology to farmers and agri industrialists 	<ul style="list-style-type: none"> Projects should be related with prioritized topics, which are discussed in detailed by the Ministry of Food, Agriculture and Livestock 											
<p>14</p> <p>Projects Aiming to Protect Agricultural Lands (ÇATAK)</p>	<p>Non-Product Based (Project Based)</p>	<p>Subsidy Funded¹⁾ Mn TL, 2010-2014</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Subsidy Funded (Mn TL)</th> </tr> </thead> <tbody> <tr> <td>2010</td> <td>10</td> </tr> <tr> <td>2012</td> <td>25</td> </tr> <tr> <td>2013</td> <td>37</td> </tr> <tr> <td>2014</td> <td>53</td> </tr> </tbody> </table>	Year	Subsidy Funded (Mn TL)	2010	10	2012	25	2013	37	2014	53	<ul style="list-style-type: none"> Tackle environmental issues such as maintaining the soil and water quality, sustaining natural resources and preserving the erosion 	<ul style="list-style-type: none"> Projects should be implemented in specified cities in relation to determined topics that Ministry of Food, Agriculture and Livestock has published 	
Year	Subsidy Funded (Mn TL)														
2010	10														
2012	25														
2013	37														
2014	53														

1) Payments are funded from internal sources –initial program was funded from World Bank
 Note: Usage frequency is determined based on farmer and industry interviews
 Source: BÜGEM; Farmer interviews; Helix analysis

Custom duties and tariffs are determined considering level of local production and self-sufficiency

15

Subsidy Name/Type	Rates	Product Specifics	Overview
<p>Custom Duties/Tariffs</p>	<p>Typical tax levels are within 25% to 40% interval</p> <p>0% ↔ >200%</p>	<p><u>Low Taxed Examples</u></p>  <p>Cotton Sunflower Alfalfa</p> <p><u>High Taxed Examples</u></p>  <p>Beef Milk Tea</p>	<ul style="list-style-type: none"> Import tariffs are implemented to support domestic production: <ul style="list-style-type: none"> In general, tariffs apply at low rates to products that have sufficiency issues (e.g. oilseeds, fodder crops) Tariffs tend to be high for products with sufficient domestic production (e.g. milk, tea and chicken) Exemptions are applicable – Bosnia, EU, Albania and Chile are frequent exempt countries

Applied Tariffs by Product

Product	Tariff Range	Product	Tariff Range	Product	Tariff Range	Product	Tariff Range
Wheat	0% ↔ 130%	Soybean	0%	Lentils	0% ↔ 19.3%	Apricot	0% ↔ 55.8%
Barley	0% ↔ 130%	Poultry & Eggs	0% ↔ 76.5%	Potatoes	0% ↔ 19.5%	Grapes	0% ↔ 54.9%
Maize	0% ↔ 130%	Red Meat & Milk	0% ↔ 225%	Tobacco	0% ↔ 25%	Olives	0% ↔ 39%
Cotton	0% ↔ 10%	Aquaculture	0% ↔ 30%	Alfalfa	0% ↔ 19.3%	Sugar Beet	0% ↔ 19.3%
Sunflower	0% ↔ 27%	Tea	0% ↔ 145%	Hazelnut	0% ↔ 43.2%	Tomatoes	0% ↔ 135.9%

Source: Ministry of Customs and Trade; TMO; Helix analysis

Import of several products are subject to phytosanitary checks; TMO conducts intervention purchases to protect farmers when

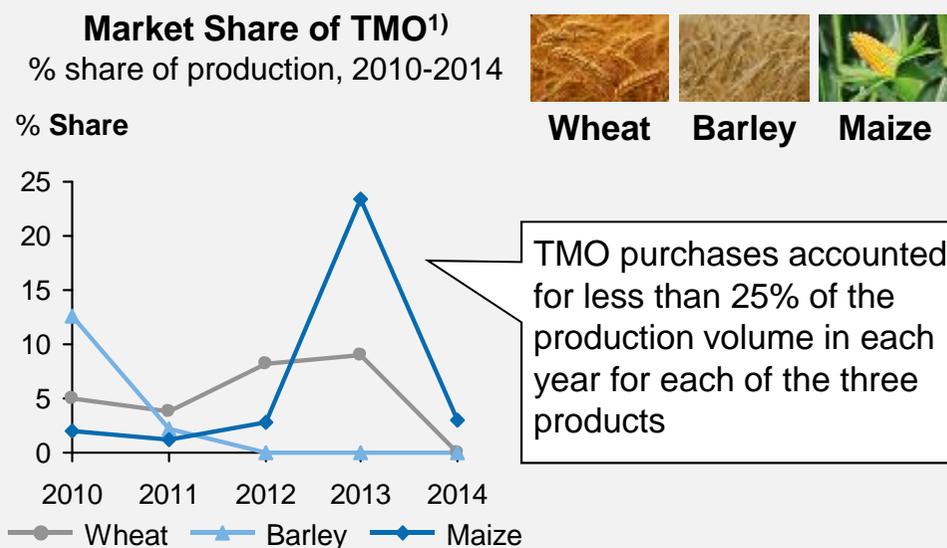
16

Phytosanitary Standards

- Import of several products belonging to the groups below are subject to phytosanitary controls:
 - Live trees & other plants, edible vegetables, fruits, nuts, peel of citrus/melons
 - Coffee, tea, mate & spices
 - Cereals
 - Oil seeds/misc. Grains/med.plants/straw, vegetable plaiting materials
 - Tobacco & manuf. tobacco substitutes
 - Wood & articles of wood, wood charcoal
 - Cork & articles of cork
 - Cotton, inc. Yarns & woven fabrics thereof
- Importers must provide documentation certifying that products are:
 - Inspected according to appropriate official procedures
 - Free from quarantine pests and conform with current phytosanitary standards of the importing country
- Additional information regarding disinfection process is also to be presented

17

Intervention Purchases



- TMO intervention is a mechanism providing farmers with the opportunity of selling their product to TMO at **any time during the purchase period at pre-set prices**
- With **immediate effects** on the market, intervention **protects market prices from falling significantly** – only carried out **when perceived necessary**
- Though mostly not aimed for, TMO carries out **stockpiling activities** in some years
- TMO also provides farmers with **storage services through covenant**

1) Toprak Mahsulleri Ofisi: Turkish Grain Board
Source: Ministry of Customs and Trade; TMO; Helix analysis

Though facing some challenges in application, land protection and use law is crucial for agriculture's development and sustainability

Goals

- **Hinder land loss** through natural and artificial ways as well as **quality loss** by providing **planned land use methods**
- **Determine land resource utilization in accordance to the scientific principles** and prevent out of purpose/misuse
- **Achieve land consolidation** to combine multiple parcels to create economic, ecologic and social benefit

Overview

- Agricultural enterprises **cannot be portioned** below **pre-set minimum land sizes** differing in accordance to the regional variations/traits
- Minimum land sizes below which no new parcels can be formed are **set as follows**:
 - Absolute, marginal and special product lands → 2 hectares
 - Planted lands → 0.5 hectares
 - Greenhouse cultivation → 0.3 hectares
- Land consolidation can be carried out with **tenant inquiry** (prioritized) **or not** shall Ministry see public benefit in consolidation
- Out of purpose/misuse applications are **fined at differing rates** depending on the land classification
- As a facilitator in land consolidation, Ministry of Agriculture is planning to **provide credit support** for farmers that are willing to broaden their land by acquiring **lands below desired sizes**

18

Land Protection and Use Law