



**STRUCTURAL CHANGES
AND REFORMS
IN TURKISH AGRICULTURE
2003-2016**



“We cannot move Turkey forward without
developing the agriculture sector”

Recep Tayyip ERDOĞAN

President




Binali YILDIRIM
Prime Minister



Dr. Ahmet Eşref FAKIBABA
Minister for Food Agriculture and Livestock

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TURKEY

Our priorities are better reciprocal relationship and cooperation between the West and the East; as well as improvement of the dialogue and alliance among civilizations.



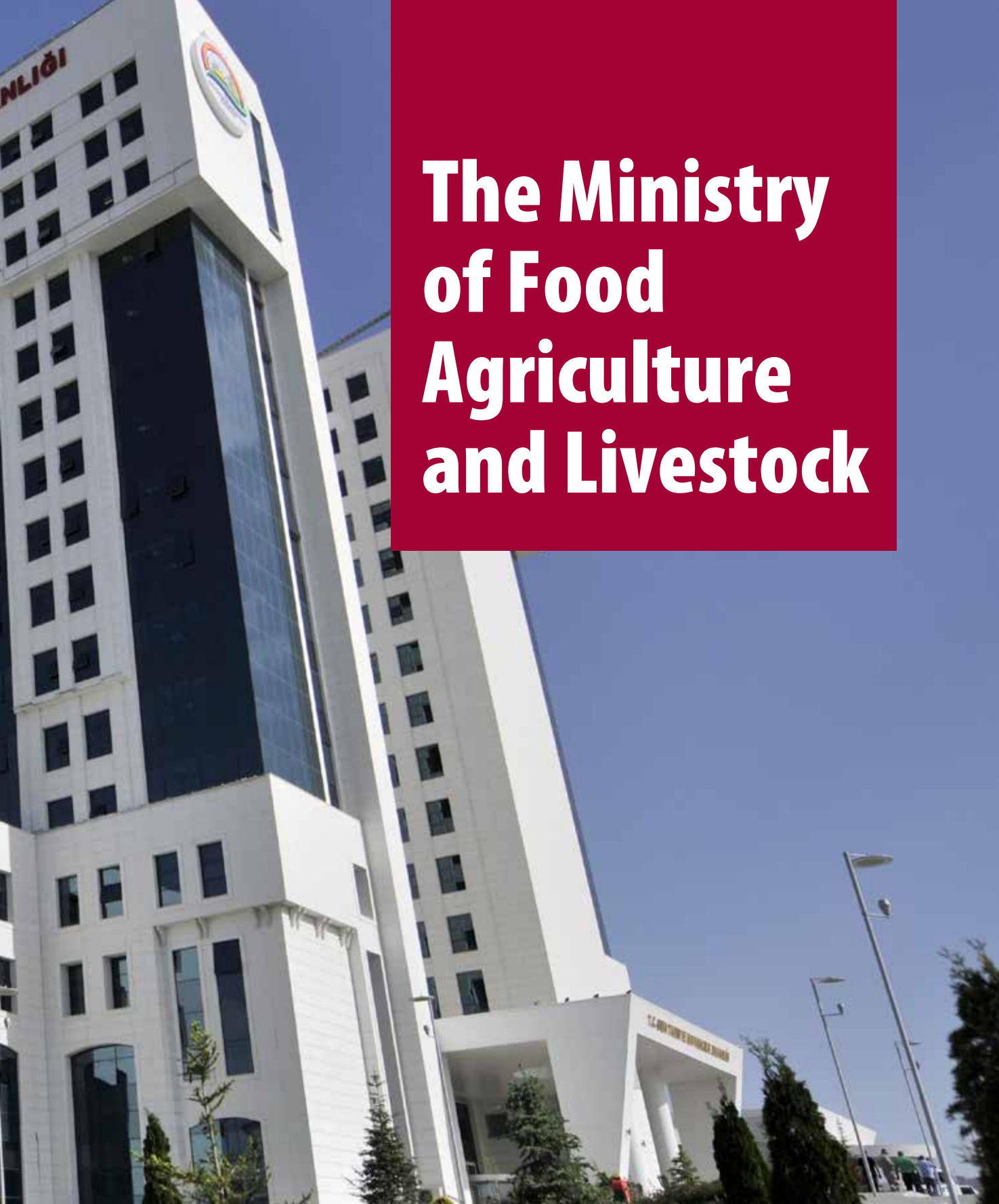
Turkish experience proves that integration with the world is possible by harmonizing the existing values and traditions with the modern world.





REPUBLIC OF TURKEY
MINISTRY OF FOOD AGRICULTURE
AND LIVESTOCK





The Ministry of Food Agriculture and Livestock

The Ministry of Food Agriculture And Livestock

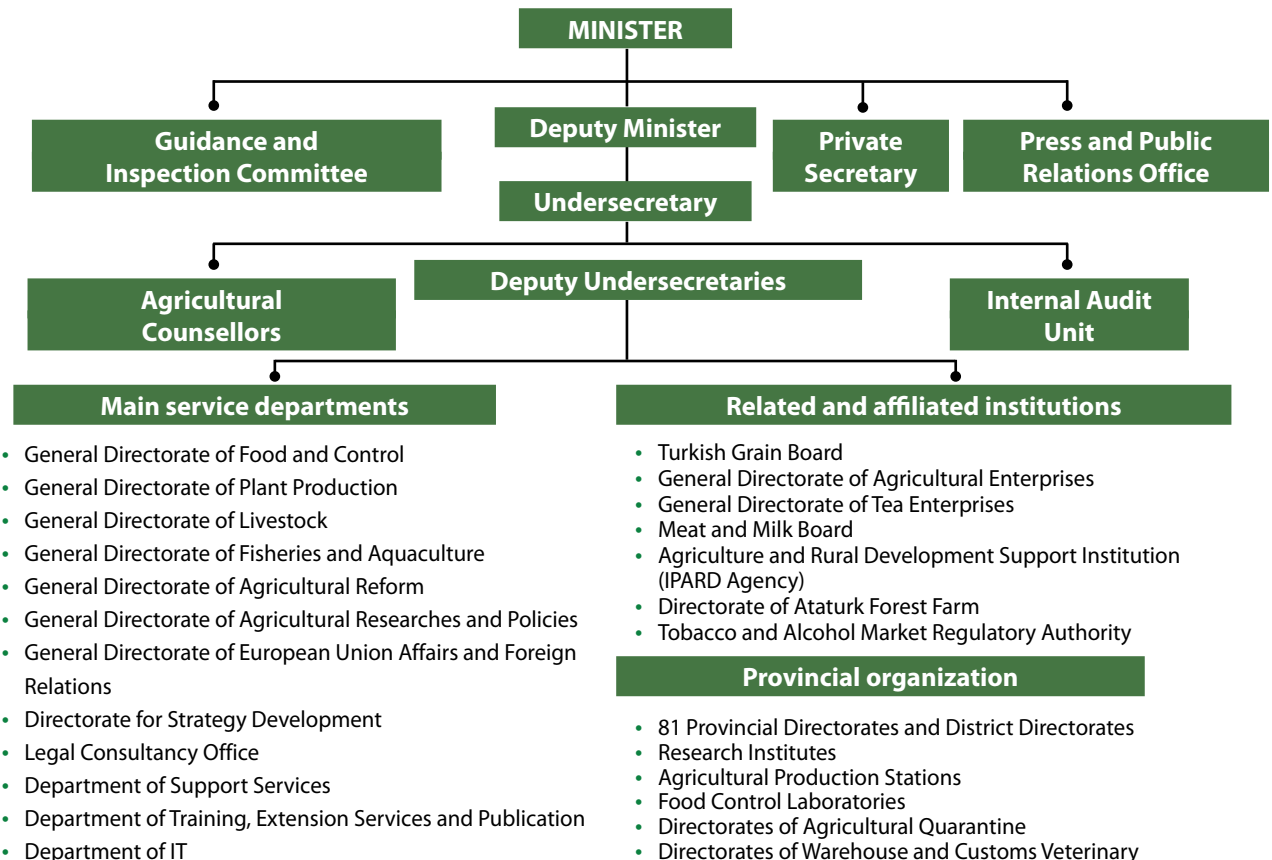


- The former Ministry of Agriculture and Rural Affairs was reorganised as the **Ministry of Food Agriculture and Livestock** in 2011.
- The Ministry is mainly responsible for policy formulation, monitoring and inspections of implementations in respect of food, agriculture and livestock.

The main activities of the Ministry are;

- Development of plant, livestock, aquaculture and fishery production,
- Research studies on the development of agriculture sector and determination of agricultural policies,
- Food safety and security,
- Rural development,
- Protection of land, water resources and biodiversity,
- Strengthening the institutional capacity and awareness of farmers and fishermen,
- Effective and efficient implementation of agricultural support programmes.

Organisation chart





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Basic Indicators of the Turkish Agriculture Sector





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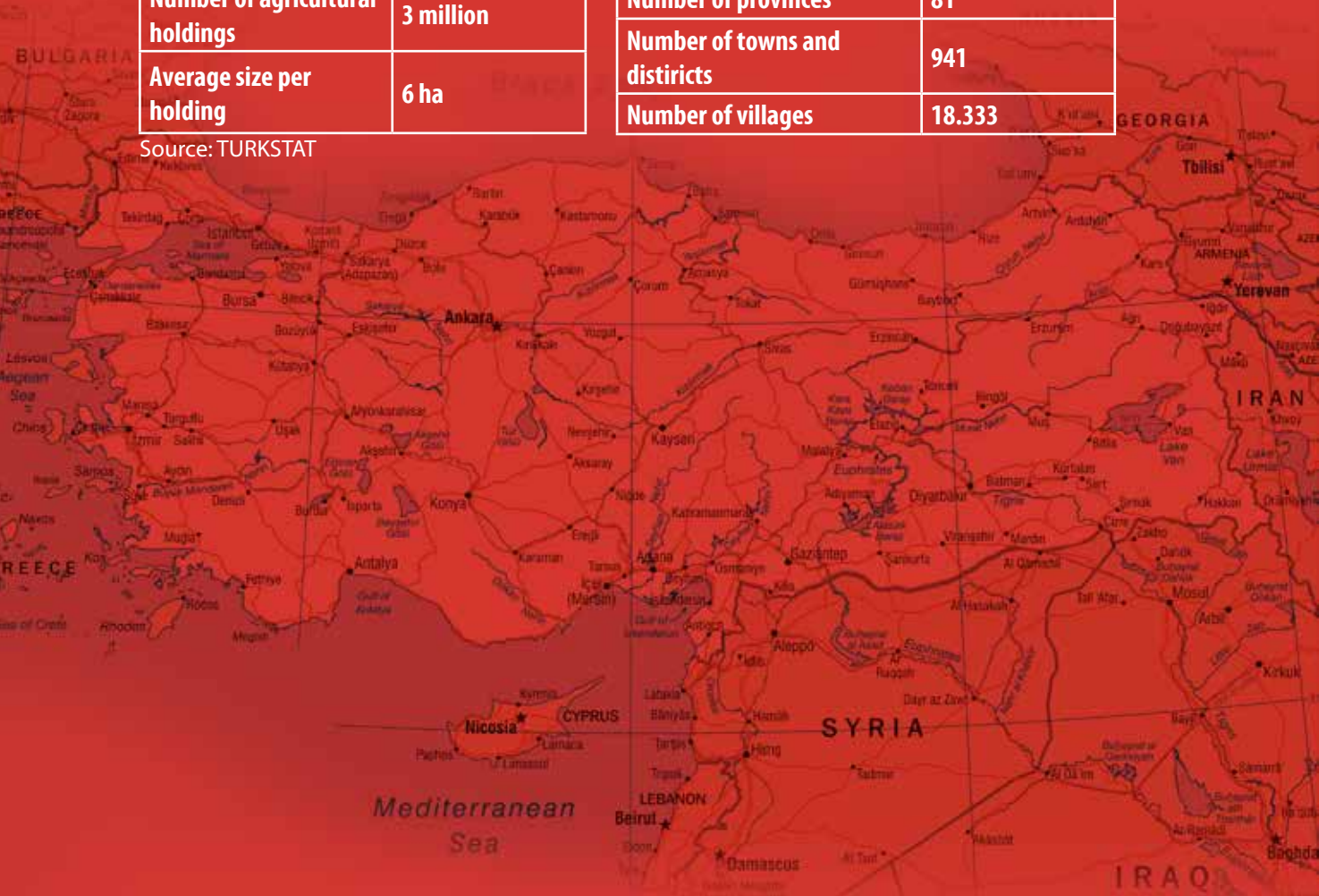
Agricultural Land	23,7 million ha
Pastures and meadows	14,6 million ha
Forests	22,3 million ha

Total Area	78.9 million ha
Population	78.7 million

Number of agricultural holdings	3 million
Average size per holding	6 ha

Number of provinces	81
Number of towns and districts	941
Number of villages	18.333

Source: TURKSTAT





Basic indicators

Basic Indicators	2002			2016		
	Turkey	Agriculture	Agriculture Share (%)	Turkey	Agriculture	Agriculture Share (%)
Employment (Million)	21,4	7,5	35,0	27,2	5,3	19,5
GDP (Billion \$)	230,5	23,7	10,3	856,8	52,3	6,1
GDP per employe (\$)	10.794	3.179	-	31.494	9.855	-
Exports (Billion \$)	36,0	4,0	11,2	142,6	16,9	11,9
Imports (Billion \$)	51,5	3,9	7,7	198,6	15,6	7,9



As Agriculture is Improving, Turkey is Developing

TURKISH

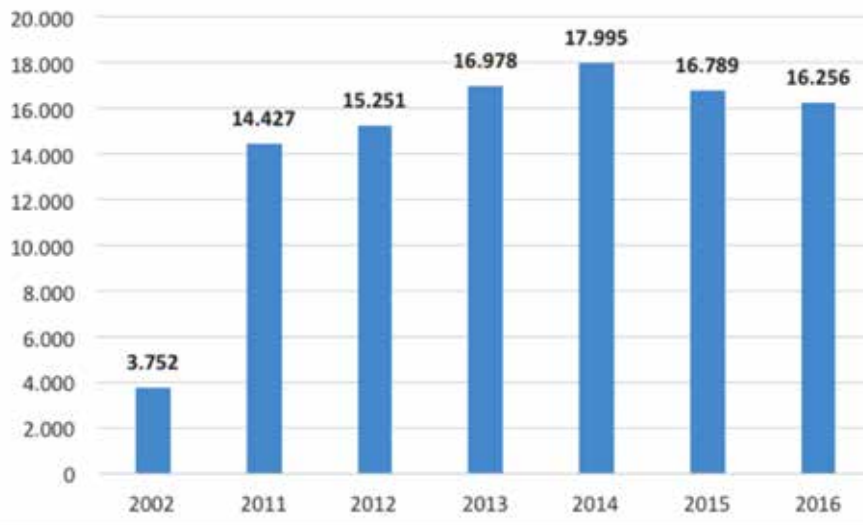
Year	Agricultural GDP(Billion \$)
2002	24,5
2003	30,8
2004	38,1
2005	46,4
2006	45,1
2007	50,8
2008	57,2
2009	52,4
2010	69,7
2011	68,6
2012	67,8
2013	63,9
2014	61,6
2015	59,2
2016	52,3

- While **the economic size of Turkish agriculture** with respect to world's agricultural economy ranked 11th in 2002, it has risen to **7th rank in the world and 1st in Europe according to OECD Reports and World Bank** since **2008**. Agriculture sector satisfies the need for food of 78,9 million Turkish citizens and about 40 million tourists.
- While the contribution of agriculture to National Income (GDP) was 23,7 billion dollars in 2002, it has reached to **52,3 billion dollars in 2016**.



Turkish Agricultural Products have become Favoured in World Tables

Agricultural Exports (Million Dollar)



Source: TURKSTAT Harmonized system

- The export of agricultural products has increased from 4 billion dollars in 2002 to **16,2 billion dollars in 2016.**
- Turkey exported **1.690 kind of agricultural products to 185 countries** in 2016.



A collage of hand-drawn sketches. At the top right is a pie chart with the title '2121/144' and four segments labeled with percentages: 21.2%, 18.4%, 21.2%, and 4.2%. To the left of the pie chart is a line graph showing a downward trend. Below the pie chart is a tree diagram with a root node and several child nodes. To the right of the tree diagram is a bar chart with three bars of decreasing height. Below the bar chart is a car. To the right of the car are two trees. At the bottom center is a house. To the right of the house is a vertical list of four circles. To the right of the house is a computer monitor. An arrow points from the house towards the tree diagram.



Strategic Plan (2018- 2022)

- The 2018- 2022 Strategic Plan of the Ministry of Food Agriculture and Livestock has been prepared.
- The following areas are determined as strategic within the scope of the Plan:



- AGRICULTURAL PRODUCTION AND SECURITY OF SUPPLY
- FOOD SAFETY
- PHYTOSANITARY, ANIMAL HEALTH AND WELFARE

- AGRICULTURAL INFRASTRUCTURE AND RURAL DEVELOPMENT
- MANAGEMENT OF AQUACULTURE AND FISHERIES RESOURCES
- RESEARCH AND DEVELOPMENT
- INSTITUTIONAL CAPACITY



Agricultural Vision for the Year 2023

Turkey on the road to 2023 as being a country which;

- Provides its population with sufficient, best quality and safe food,
- Improves its net exporter position in agricultural products,
- Increases its competitiveness in Global Market.



The main targets of Turkish Agriculture for 2023 have been identified as;

- Agricultural GDP reaching to **150 billion dollars**,
- Agricultural exports over **40 billion dollars**,
- Sustainable **agricultural growth**,
- Achievement of **land consolidation** on 14 million ha,
- Modern **irrigation systems** on all irrigable land.

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The background image is a landscape photograph. In the foreground, a green field with visible furrows from a plow or tractor stretches towards the horizon. A dark line of trees separates the field from the sky. The sky is filled with dramatic, orange and yellow clouds, suggesting a sunset or sunrise. An orange rectangular box is overlaid on the upper right portion of the image, containing the title text.

Reforms on Agriculture



15 Laws Related to Agriculture

- **15 laws** leading up Structural Change and Transformation period in agriculture have been adopted.
- Law on Agriculture,
- Law on Organic Farming,
- Law on Agricultural Producer Unions,
- Law on Protection of Plant Breeder's Rights for New Plant Varieties,
- Law on Agricultural Insurances,
- Law on Soil Protection and Land Use,
- Law on Seedling
- Law on Establishment of Agriculture and Rural Development Support Institution,



- “ Law on Licenced Warehouse”,
- Law on Veterinary Services, Plant Health, Food and Feed,
- Law on Biosafety,
- Decree Law Concerning the Organization and Duties of the Ministry of Food Agriculture and Livestock,
- Law on EXPO 2016 Antalya,
- Revision on Pasture Law.
- Law on Soil Protection and Land Use and Revision on Turkish Civil Law



To Prevent of Fragmentation of Agricultural Lands

- Legal arrangements have been carried out in order to prevent the fragmentation of agricultural lands.
- Within this scope, **“Indivisible Parcel Size”** was determined. It prevents the fragmentation of special product lands and marginal agricultural lands to less than 2 hectares, cultivated agricultural lands to less than 0,5 hectare and the greenhouse agricultural lands to less than 0,3 hectare. The sale of agricultural parcel shares of which size is under Indivisible Parcel Size was prohibited in 2007.
- And the result of 10 years of detailed and multiplied studies “Law on Soil Protection and Land Use and Revision on Turkish Civil Law” was published in order to prevent the fragmentation of agricultural lands in 2014 .
- in the last 3 years; total of 4.2 million agricultural parcels were transferred to the heirs without division and 651 thousand hectares of agricultural land is prevented from fragmentation by sale.



Land Consolidation Studies

- Land consolidation studies gained importance to bring together the small scale agricultural establishments.
- While 450 thousand hectares of land in total had been consolidated in Turkey between 1961 and 2002, in 41 years, 5 million ha land was consolidated between 2003 and 2016 in 14 years.
- Consolidation of one million hectares of land for each year has been projected.

A System that tracks and controls agricultural lands from space has been established



All stages from production to consumption are being controlled by using high levels of technology in agriculture.

- By using satellite images, all agricultural lands are identified on a parcel basis.
- Agricultural Information System was established by integrating all the systems.

Efficient and correct use of agricultural supports are monitored and controlled by this system.



Interest Free Financing in Agriculture

- The agricultural credit interest rate which was 59% in 2002, became interest **free for irrigation, forage crops, fisheries, certified seed, seedling, sapling production, modernization of greenhouses, livestock activities** and interest rate decreased to **8,25% for other agricultural activities in 2013.**
- Favorable interest rates were implemented for investments in the field of agriculture.

Introducing the “Firsts” to Turkish Agriculture



The Milestones in Agriculture sector;

- Electronic identification system in ovine animals has launched (2017).
- 141 of the 300 large scale agricultural lowlands those borders were determined were protected by the Decree of the Council of Ministers (2017).
- Restructuring of Turkish Grain Board, dissemination of licensed warehousing and enhancing agricultural product stock marketing studies have been launched (2017).
- The scope of agricultural insurance has been expanded (2017) .
- In the 81 provinces, the “Green Table” application was initiated and the requests, suggestions and complaints of the farmers started to be taken (2017).
- Agricultural Business Forums organized with various countries such as; Georgia, Iran, Ukraine, Czech Republic (2017)
- In our country first domestic broiler chicken “Anatolia T” breeding line is developed (2017).
- “ Turkey Geofit Garden” was established in Yalova (2014).
- “With the “Law on Soil Protection and Land Use and Revision on Turkish Civil Law” fragmentation of agricultural lands by legacy has come to an end (2014).”



- “In cities which are in development regions (GAP, DAP, KOP, DOKAP) 50 % grant support implementation was started for modernization and construction of barns and corrals (2014).”
- “In cities which are in development regions 80 % grant support was provided for purchasing male breeding materials (bull, ram, goat) (2014).”
- “Parcel based yield computing model was started to be implemented (2013).”
- “Agricultural Holdings Registration System was founded (2013)”
- The name of firms, producing unhealthy food products and making falsifications have been started to be declared (2012).
- The fruit growing basins were determined, product maps were prepared (2012).
- The first “Local Yoghurt Starter” of Turkey was developed and produced (2012).
- “Agricultural Museum” was opened (2011).
- “3rd largest Plant Gene Bank of the World” was opened (2010). “National Food Reference Laboratory” was put into service (2010).
- “Animal Biotechnology Center” was founded (2010).
- “Agricultural Drought Test Center” was established (2010).



- “Veterinary Border Control Points” were opened (2010).
- Agriculture Web- TV started to broadcasting (2010).
- Thrace Region has been identified free of Foot-and-Mouth Disease and the situation has been approved by World Animal Health Organisation and European Union (2010).
- The negotiations with the European Union were opened in 12th Chapter “Food Safety, Veterinary and Plant Health”(2010).
- “ALO 174” Food Call Centre was formed (2009).
- The mandatory use of prescriptions for sale of pesticides was initiated (2009).
- Product committees were established (2009).
- Good Agricultural Practices were supported (2009).
- Licensed Warehouse Applications were started (2009).
- “Food Safety Information System” was founded (2007).
- The “Indivisible Parcel Size” of agricultural lands was determined in order to enable an effective land consolidation (2007).
- “Agriculture and Rural Development Support Institution (IPARD Agency)” was established (2007).



- Law on Agriculture was adopted (2006).
- Support for Agricultural Insurance implementations were initiated (2006).
- Aerial spraying was ended for sunn pest, transition to normal spraying was realized completely and biological combating was started for sunn pest (2006).
- Accredited veterinary services were started to be given (2006).
- Support Programme was started for the Environmentally Based Agricultural Land Protection (2006).
- R&D support was provided for the private sector , university and non governmental organizations (2006).
- Genetic resources of domestic animals were taken under protection (2005).
- “Organic Agriculture Information System” was founded (2005).
- Vaccination support was given (2005).





Agricultural Supports





National Agriculture Project

- The National Agriculture Project, which was built on “Basin Based Support Model” and “Domestic Production Support Model in Livestock”, has been launched to reach our 2023 targets, increase the prosperity level of our farmers, to have more say in the global competition, to leave Turkey full of warehouses for future generations.

Basin-based Support Model in Plant Production

- Basin-based Support Model has been developed in order to plan and increase production while protecting natural resources and implementing an efficient and rational agricultural support policy based on agricultural basins.
- Within this scope, totally 941 agricultural basins have been identified through evaluation of data based on climate, soil, topography, land classes and land usage types.
- The products to be supported have been identified by determining the regions where the products that are most efficiently produced using Agricultural Basins data.





Domestic Production Support Model in Livestock

- Export-based growth has been identified as a strategic goal by meeting increasing demand for meat, improving breeder production, determining breeders' ratios, rationally using of pastures, effectively struggling against animal diseases, reducing calf losses, and ensuring sustainability in milk production. In this context:
- 30 provinces were declared as pastureland breeding areas.
- 38 calf breeding pregnant heifer production center, 31 lamb breeding ram-cheek production center, 13 lamb breeding buffalo production center and 4 turtle goose and turkey production center will be established.
- In the construction of animal shelters, license fees will not be collected in places within the borders of the metropolis.
- 7 animal restoration and control centers will be established.
- On February 22, 2017, the "Campaign to Combat Foot and Mouth Disease and Collective Vaccination Campaign" was launched nationwide. In this way, all of our country will be granted vaccination status from foot-and-mouth disease.
- "Vaccine Production Center" will be established where all vaccines used in animal health are produced in international standards.



Agricultural Insurance

- Implementation of agricultural insurance were started in 2006 to compensate grievance of producers affected from natural disasters.
- For the first time, flood and inundation were included in the scope of agricultural insurance in 2010.
- The scope of agricultural insurance was extended in 2011. The flowering period of fruits grown in open area, cattle fattening and milking cows were included in the scope of agricultural insurance scheme.
- In 2016, an area of 19,3 million da and 1.1 million heads of animals were insured.
- **“Beekeeping life insurance”** was included in the scope of agricultural insurance in 2014.
- In 2017, the scope of TARSIM was expanded and new topics were included.
- In 2018, the District-based Drought Yield Insurance will cover all grains.

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Plant Production



Significant Increases in Plant Production



Total Vegetable Production

- 28,8 tons of production in 2002 reached to 30,3 million tons in 2016.
- The increase in the last 14 years has been 17%.

Tomato Production

- 9,5 million tons of production in 2002 reached to 12,6 million tons in 2016.
- The increase in the last 14 years has been 34%.

Cucumber Production

- 1,7 million tons of production in 2002 reached to 1,8 million tons in 2016.
- The increase in the last 14 years has been 6%.

Total Fruit Production

- 13,3 million tons of production in 2002 reached to 18,7 million tons in 2016.
- The increase in the last 14 years has been 41%.

Banana Production

- 95 thousand tons of production in 2002 reached to 306 thousand tons in 2016.
- The increase in the last 14 years has been 222%.

Apple Production

- 2,2 million tons of production in 2002 reached to 2,9 million tons in 2016.
- The increase in the last 14 years has been 18%.



Cherry Production

- 210 thousand tons of production in 2002 reached to 600 thousand tons in 2016.
- The increase in last 14 years has been 155%.

Citrus Fruits Production

- 2,4 million tons of production in 2002 reached to 4,3 million tons in 2016.
- The increase in last 14 years has been 60%.

Total Crop Production

- 30,8 million tons of production in 2002 reached to 35,2 million tons in 2016.
- The increase in last 14 years has been 25%.

Corn Production

- 2,1 million tons of production in 2002 reached to 6,4 million tons in 2016.
- The increase in last 14 years has been 205%.

Paddy Production

- 360 thousand tons of production in 2002 reached to 920 thousand tons in 2016.
- The increase in last 14 years has been 156%

Sun Flower Production

- 850 thousand tons of production in 2002 reached to 1,7 million tons in 2016.
- The increase in last 14 years has been 98%.



Encouragement of Organic Farming

- There exists 1 million hectare of land where organic farming can potentially be performed in Turkey. Organic farming was included in the scope of support programme in 2005.
- “Organic Farming Strategic Plan of Turkey” and “Action Plan to Improve and Extend of Organic Farming” have been prepared.
- **Organic Farming Information System** has been established in order to provide a complete information exchange with competent organizations and provide a basis for the supports.
- Research&Development Projects and Training-Extension and Publication Studies are carried out within the scope of Organic Agriculture Dissemination and Control Project. Within the scope of the studies, various projects are being carried out in 54 Provincial Directorates and 11 Research Institutions of our Ministry in 2017.



As the result of studies performed by the Ministry;

- While 310 Thousand tons of 150 kinds of organic products have been cultivated within 90 Thousand ha area in 2002,
- 2,5 million ton of 225 kinds of organic products have been cultivated within 524 thousand ha area in 2016.
- In the period of 2002-2016, the increase in the number of products is **50%** and in production area is **483%** and in the amount of organic production is **698%**.
- The share of the organic farming area within the total agricultural area in Turkey has reached to **2%**.



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Animal Production



Significant Increases in Animal Production

Milk Production

- 8,4 million tons of production in 2002 reached to 18,5 million tons in 2016.
- The increase in last 14 years has been 120%.

Red Meat Production

- 421 thousand tons of production in 2002 reached to 1,2 million tons in 2016.
- The increase in the last 14 years has been 178%.

Poultry Meat Production

- 696 thousand tons of production in 2002 reached to 1,9 million tons in 2016.
- The increase in last 14 years has been 173%.

Aquaculture Production

- 61 thousand tons of production in 2002 reached to 253 thousand tons in 2016.
- The increase in last 14 years has been 315%.

- **In 2013, exports of milk and milk products to EU started after 14 years.**
- **For the first time in history, exports of certificated pregnant heifer in 2013 and saanen goat started in 2014.**



Improvement of the Animal Breed

- Artificial insemination studies, implemented in line with the animal husbandry improvement studies, have been accelerated and during the last 11 years a success story that can be an example in the world has been achieved.
- While the number of artificial insemination in 2002 was 624 thousand, it was reached to **3,6 million** in 2016.
- In the last 2 years approximately over 5 million of artificial inseminations have been achieved annually.
- The number of artificial insemination in the last **13 years** has been increased 6 times.



Pasture Improvement and Production of Fodder Crops

- The studies concerning the pasture improvement were intensified.
- While the area of pasture improvement studies that were carried out by 2002 was **83 thousand decares**, it was reached to **6,4 million decares** up until now .
- With the subsidies provided and breeding studies performed, the area for fodder crop production in Turkey was reached to **2,6 million ha** in 2014 while it was **1,1 million ha** in 2002.
- For the first time, the opportunity of land leasing for long periods has been provided to the private sector in accordance with the pasture improvement studies.

Fisheries and Aquaculture

- Turkey has recently risen to **1st** rank in trout production and **2nd** rank in aquaculture production in Europe.
- The exports of fishery and aquaculture products have risen to (67% of our exports to European Countries), **648 million dollars** in 2016. Turkey has **25% share** of sea bream and sea bass market in Europe.
- **“SUBİS- Fisheries Information System”** was established in 2007 and its functionality and scope has been improved.
- At the 43 landing points, fisheries port offices have been established.
- **“The Artificial Reef Master Project”** and **“Cleaning of Seas from Abandoned Fishing Gears Project”** have been implemented.
- **“The National Fisheries Data Collection Program”** has been started.
- In order to decrease over fishing capacity on stocks, total number of vessels longer than 10 m was reduced approximately %30.





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Food Safety



Safe Food Healthy Life

Food safety has become one of the target areas of agricultural policy. Important studies have been carried out and legal arrangements have been made regarding food safety.

Food Inspections have been increased;

- Regions and products at risk in terms of food safety have been identified.
- The number of inspections and controls was increased.
- While the number of inspectors was 1.500 in 2002, it increased to **6.303** in 2016.
- While the number of inspections was 39.646 in 2002, it increased to **900.000** in 2016.
- The number of feed inspections in 2016 was 21.759.
- In order to make the traceability of GMO feeds more effective, web based feed monitoring system studies are being done.
- “National Food Reference Laboratory” at international level was opened in 2010.
- The total number of accredited private and public Food Control Laboratories was increased to 126.
- “Food Safety Information System” (GGBS) was established.



- The production and import of active substance of 181 plant protection products have been prohibited within the scope of harmonisation with the EU.
- The use of food additives have been restricted for bread and for certain products.
- Usage standards and labeling rules of additives have been re-determined all over.
- Traceability of chemicals used in agriculture has been ensured.
- The use of poultry meat and red meat mixture have been restricted in meat products.
- Guidebooks on “Good Hygiene Applications” have been published.
- The name of firms, producing unhealthy foodstuff and making falsifications have started to be declared to the public.

ALO 174 Food Call Center



- In order to raise the awareness of the importance on safe food, 2009 was announced as the “Year of Food” in the scope of “**Safe Food- Healthy Life Campaign**” which has been the most comprehensive social responsibility project in recent years.
- “**ALO 174**” **Food Call Center** that consumers can convey their complaints, opinions and recommendations about food and food products has been established. The complaints and requests are received from the Call Center evaluated by Provincial Directorates, necessary actions are taken and the corresponding person is informed.
- Thanks to the web software, all kinds of requests, complaints and suggestions from the consumers are quickly transmitted to “Alo 174”.





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Plant and Animal Health

Our vision is;
**HEALTHY AGRICULTURAL
RAW MATERIAL
HEALTHY FOOD AND FOOD
PRODUCTS
HEALTHY GENERATIONS**

The production of healthy
food from unhealthy plant
and animal products is not
possible.

In line with this, our
basic strategy is to pay
particular attention to plant
and animal health and
production of healthy and
safe food.



Significant Studies on Plant Health

The attempts at prioritising human health and environment protection were intensified.

Combat against sunn pests, improvement of the quality of wheat and the protection of environment

- In order to enable biological combat; 93 million beneficial insects have been released to nature in the last 14 years.
- With 6,5 million sapling afforestation has been carried out in order to provide favourable habitat and feeding opportunities for useful insects.
- Implementation of “Prescriptive Agricultural (agrarian) Drug Sale” has been initiated.

- Registration and monitoring of the chemicals used in the production of fresh fruit and vegetables have become compulsory since February 2009.
- The registration of chemicals used in plant production has become compulsory since 2010.
- Aerial spraying which has negative effects on human health and environment is prohibited.
- According to the Montreal Protocol to which Turkey is a party, Methyl Bromide Application which is obliged to be repealed by 2016, has been terminated in 2007, earlier than required.
- The use of plant protection products has been authorised only to the persons holding **"Certificate for Plant Protection Products"**.



Plant Passport System

- The studies concerning **"Plant Passport System and Operator Registering"** have been initiated.
- Arranging a Plant Passport has become compulsory before the transportation of plants, plant products and relevant materials.





Bovine and Ovine Registry Systems

- All the bovine and ovine animals in Turkey have been identified with ear tags and registered to **TURKVET - Veterinary Information Registry System** and **KKKS - Sheep and Goat Registry System**.
- Immediate access to lots of data has been granted including the number of animals and outbreak of diseases.
- Movements of the animals have been brought under control with these systems.



More Effective Combat Against Animal Diseases

- The legislation with regard to animal welfare infrastructure in compliance with the EU has been adopted.
- For effective struggle with “Foot and Mouth Disease”, “Sheep and Goat Plague”, “Bird Flue” and “Newcastle Disease”, **Emergency Action Plans** have been adopted.
- For the first time a region in Turkey - **Thrace Region** has been identified as **free of Foot-and-Mouth Disease** and the situation has been approved by World Animal Health Organisation and European Union.
- **Animal population have been vaccinating regularly** against foot-and-mouth disease.



Successful Vaccination Campaigns

- With the successful implementation of vaccination campaign cattle plague disease has been eradicated. It is announced officially that **Turkey is being free of Cattle Plague.**
- In 2016, 12 million doses of vaccine were administered to ovine animals against sheep-goat plague without any charge. The aim was the **eradication of disease, initially in Thrace Region, in order to carry out controls in line with EU rules.**
- In order to control brucellosis, all cattle, sheep and goats are being vaccinated free of charge.
- Nation-wide struggle against rabies has been carried on. The prevalence of the disease has been decreased by vaccinating cats and dogs free of charge.
- Vaccination subsidy has been provided in order to increase the participation of farmers for the control and eradication of animal diseases.
- Turkey was officially announced as free of Cattle Plague.



Veterinary Border Inspection Posts

- “For controlling the animals and animal origin foods, the Veterinary Border Inspection Post Directorates number has been increased to 23 from 8 in the 2013-2014 period.”

Measures Against The Bird Flu (Avian Influenza)

- Early warning, rapid diagnosis and quick intervention mechanisms have been established for Bird Flu disease.
- For diagnosis of the Bird Flu, 3 laboratories at the category of biosafety level- III and 4 laboratories at the category of biosafety level (L2) –II have been established.



Disease Free Establishments are Being Supported

- For the purpose of effective combat against tuberculosis and brucellosis and to increase quality for milk production, disease free establishments have been supported since 2003

“ Microchip Identification of Equine Animals ”

- A national project has been carried out for struggling against the infectious anemia of the horses in which all the equine animals have been scanned in 25 provinces and have been marked with microchips. The disease has been brought under control by paying compensation for sick animals.

“Authorized Veterinarians”

- The veterinarians have been accredited and authorised to work in slaughterhouses to ensure food safety since 2005.

“Animal Welfare ”

- In terms of animal welfare international standards have started to be implemented.





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Rural Development







Rural Development Support Programme

- “Rural Development Support Programme” aiming the integration of agriculture and industry providing the producers with **50% grants** was initiated in 2006.
- Investments such as **processing, packaging, wrapping, storing of the agricultural products** and **purchase of machinery-equipment** have been supported under the programme.
- Within the scope of Rural Development Support Programme; **6.863 new processing facilities** have been constructed between 2006-2017. **1,1 billion TL grant** has been given to the enterprises.
- **Over 61 thousand persons have been employed** in these agrofood enterprises.
- **1,5 billion TL grant support** was provided for **262 thousand machineries and equipments** between 2007-2014.
- In total **2,3 billion TL** were paid for the beneficiaries under the Rural Development Support Programme for new facilities and machinery and equipment purchased by the farmers.



Pressurised Irrigation Investments

- For the farmers investing on pressurised irrigation systems 5 years termed and interest free loans have been provided under the free interest rate credit scheme.
- Within the scope of “Rural Development Support Programme” the pressurised irrigation investments have been supported by 50%.
- As a result of these two support programmes totally **6,8 million** decares area has been opened to irrigation with pressurised irrigation systems.



- In the period of 2003–2014, totally **2,2 billion TL credit** has been allocated for **1.858 cooperative** projects under the program named as “Social Support in Rural Areas”.
- Members of these cooperatives have received nearly 272.000 breeding heifers and nearly 414.000 breeding sheep in total under the support programme.

Agriculture and Rural Development Support Institution (IPARD Agency)



- The rural development funds have been used in line with the **Rural Development Programme (IPARD Programme)** in which the sectors and measures to be supported have been identified.

By summing up the national contribution which has been 291 million euros, totally 1,1 billion euros of public contribution was spent to support the development of rural areas.

- The sectors targeted by the Programme are; milk, meat, fruit and vegetables and fishery sectors under the measures “investments in agricultural establishments” and “processing and marketing of agricultural products”.



- The programme also includes the measure “Diversification of rural development activities” in which on-farm activities (bee-keeping, pharmacological-aromatic plants and ornamental plants), rural tourism, local products and microenterprises and aquaculture production have been supported.
- The Programme has been designed to be implemented in 42 provinces out of 81 provinces of Turkey (20 provinces in the first phase and additional 22 provinces in the second phase of the Programme). With the start of second phase, the programme is implemented in 42 provinces currently.
- “Within the scope of IPARD II Programme **1,1 billion euro** (EU contribution **801 million euro**, national contribution **244 million euro**) is allocated for the investors for the 2014- 2020 period.

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R & D Studies

- Our Ministry has a strong R & D infrastructure with 2.665 researchers working in 50 Research Institutes.
- The sub-projects of the Research Institutes of our Ministry have been opened for private sector and universities.

Researches on Plant Production

- In the seed, 940 varieties, which are 31% of the varieties registered to date, have been developed in our Ministry's Research Institute.
- In vegetables, the usage rate of domestic hybrid vegetable varieties has been increased from 10% to 60% in the last 14 years by "Public-Private Sector Cooperation Project in Development of Turkish F1 Hybrid Vegetable Varieties and Seed Production" initiated in 2004
- For the first time in the history of our country, tulip breeding trials and 3 domestic tulip varieties and 3 reverse tulip varieties have been developed and presented to the sector. In addition, a registration application has been made for the first native carnation type under the name of <Lycia>.
- In the last 10 years, 88 fruits and 84 grape varieties have been registered, production is presented.
- Hulless barley is improved for diet and submitted for registration.





Researches on Livestock

Researches on Animal Production

- Egg Chicken 3 breeding lines were developed.
- The first breeder chicken called "Anatolian T" was developed in our country.
- In the aquaculture, 10 new species have been gained to the aquaculture sector.
- Vaccine production technology has been developed against foot-and-mouth disease and an effective fight against disease has been achieved.
- Combined antisera has been developed for newborn calves, lambs, and kids.

Other Research Activities

- Native Immune Affinity Columns were first produced for commercial use in mycotoxin assays.
- Local microbial fertilizer alternative to chemical fertilizer was produced and presented to the testimonial.
- Protective tillage methods, especially agricultural technology without soil treatment, have been brought to our farms



Conservation of Genetic Resources

- Plant genetic resources have been conducted by “The Project on the Conservation of Plant Biological Diversity and Genetic Resources”. The conservation studies are going on by registering more than 12.000 plant species of which 4.000 are endemic.
- Two seed genebanks were established one of them is in İzmir in 1964 and the other world’s 3rd Biggest Plant Genebank was opened in Ankara in 2010. The capacity of the bank in Ankara which is 250 thousand samples and it is the 3rd biggest bank after China and USA. Our two banks have 120.000 seed samples.
- Since 2004, in total 62 genotype; sheep, goat, cattle, water buffalo, honey bee, chicken, rabbit, silkworm, cat, dog and pigeon species have been registered by Domestic Animal Registration Committee.
- Animal breeds have been conserved in 2 gene banks, institutions and breeders’ conditions within the scope of the project called ‘Conservation and Sustainable Utilization of Domestic Animal Genetic Resources’. One gene bank were established in Livestock Central Research Institute and the other in Marmara Research Centre belong to TÜBİTAK. The studies concerning with the cryoconservation and molecular identification of 6 cattle, 1 water buffalo, 13 sheep, 5 goat and 5 horse breeds have been carried out by using DNA, cell, embryo and semen.





Establishment of Agricultural Science, Technology and Training Centres

Agricultural Science, Technology and Training Centres have been established in order to increase yield, carry out new research, bring in qualified human resources together and sustain development of agriculture.

Within this scope,

- Agricultural Hydrology Research Institute in Menemen/İzmir, was transformed to **International Research and Training Centre (2009)**.
- In order to preserve and improve the rich biodiversity **Turkey Seed Genbank** with 250.000 material capacities was established in Ankara **(2010)**.
- **"The Drought Testing Centre"** was established in the premises of the Bahri Dağdaş International Agricultural Research Institute in Konya **(2010)**.
- **"The Aromatic and Pharmacological Plants Centre"** was founded in the premises of Western Mediterranean Agricultural Research Centre in Antalya **(2010)**.
- **"Bull Testing Centre", "Genbank" and "Biotechnology Unit"** was opened under Lalahan Livestock Central Research Institute in Ankara **(2011)**.



- **“Research Centre for Agricultural Practices for Energy”** under the Black Sea Agricultural Research Centre was established in Samsun (2011).
- **“Development Center of Layer Hens”** was established in Ankara (2011).
- **“GAP (Southern Anatolia Project) International Research and Training Centre”** was established in Diyarbakır (2012).
- **“GAP Agricultural Irrigation Training Center”** was established in Şanlıurfa (2014).
- **“Vegetative Biotechnology Centre”** under the Arable Crops Central Research Centre was established in Ankara (2014).
- **“Vegetative Biodiversity and Geofit Research Center”** was established in Istanbul (2014).
- **“Agricultural Biotechnology Center”** was established in Mersin (2014).
- **“Modern Plant Breeding and Generations Gaining Center** was established in Adana (2016)”.
- **“Crawfish Research and Production Center** was established in Isparta (2016).
- **Plant Biotechnology Research Institute in Ankara 2016**



Research and Training Centers Under Construction

1. Turkey National Botanical Garden (Ankara)
2. Plant Tissue Culture Center (İzmir)
3. Brooding Broiler Development Center (Eskişehir)
4. Livestock Biotechnology Center (Balıkesir)
5. Aquaculture Gene Bank and Biotechnology Center (Trabzon)
6. World Olive Collection Garden (İzmir)
7. International rust diseases center (İzmir)
8. Biotechnologic Combat and Pest Control Technique Center (İzmir)"
9. "Anatolian Brunette Development Center (Konya)"
10. "International Livestock Research and Education Center (Ankara)
11. Limnological Research Institute (Isparta)



12. Anatolian Buffalo Improvement and Development Center (Balıkesir)
13. National Merinos Development Project (Balıkesir, Konya)
14. Aquaculture Advanced Research and Development Center (Antalya)
15. National Corn Breeding Technology Research Center (Sakarya)
16. Grain Reference Materials Center (Ankara)
17. Resistance to Diseases originating from soil Testing Center (Eskişehir)
18. Plant Diversity and Genetic Resources Coordination and Production Renewal Center (İzmir)
19. National Sunflower Breeding Technology Research Center (Edirne)
20. Grape Technologies Research Institute (Tekirdağ)
21. Plant Health Researches Center Laboratory (Ankara)

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International Relations and European Union

Opening of Negotiations for Chapter 12 “Food Safety, Veterinary and Plant Health”



- The Negotiations with the EU started in 2005 and have been carried out in 35 Chapters. Three chapters are directly related to agriculture and under the responsibility of Ministry of Food Agriculture and Livestock;
 - Chapter 11 Agriculture and Rural Development
 - Chapter 12 Food Safety, Veterinary and Plant Health
 - Chapter 13 Fisheries
- The opening benchmarks concerning **Food Safety, Veterinary and Plant Health (Chapter 12)** have been fulfilled and the negotiations for this Chapter were opened on 30 June 2010.
- The procedures for the approval registration and control of all food production and selling places have been aligned to EU Standards.
- Within the scope of Turkey-EU Financial Cooperation;
 - **43 projects** with **255 million** euro budget have been completed.
 - **25 projects** with **123,5 million** euro are still proceeding.

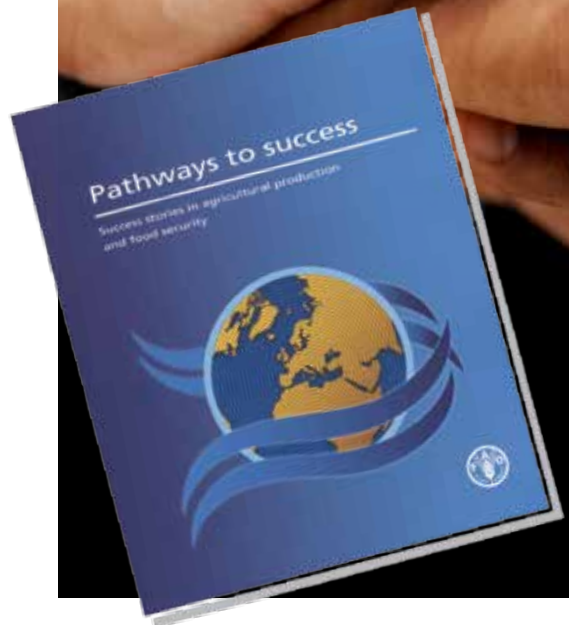
Success Stories in FAO

- The report “**Pathways to Success- Success Stories in Agricultural Production and Food Security**” that includes the success stories of different Countries in the field of agriculture and food was published in 2009 by Food and Agriculture Organisation of the United Nations.
- Turkey has taken its place as one of the success stories in the report named “Transformation in Agriculture to meet Global Demands”.

FAO Central Asia

Sub Regional Office

- **Central Asia Sub Regional Office of Food and Agriculture Organisation (FAO)** was opened in **Ankara**.
- More effective projects have been initiated with Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan in the field of agriculture.
- Turkey has gained a significant place in providing **20 million dollars** of funding for the projects in Central Asia via FAO Central Asia Sub Regional Office.





Turkey, the Most Successful Country in the World in Supplying Food to Its Citizens

- This is stated in the “Global Hunger Index Report 2012” of International Food Policy Research Institute (IFPRI).
- In the 1990-2012 period, **Turkey was the most successful country** among 15 countries which reduced their Global Hunger Index (GHI) more than 50% getting ahead of the countries which have great agricultural potential such as China, Brazil, Indonesia, Mexico.



- In the Report, Global Hunger Index in Turkey; was 5,7 in 1990 and it was 3,1 in 2001, it decreased to 1,5 in 2012.

Global Hunger Indexes

Countries	1990	2001	2012	2014
Turkey	5,7	3,1	1,5	<5
Argentina	2,4	1,8	1,9	<5
Mexico	7,9	4,3	3,3	<5
Brazil	7,4	5,4	3,4	<5
Iran	8,8	5,7	3,5	<5
Malaysia	8,9	6,6	5,2	5,5
China	11,8	6,7	5,7	5,5
Indonesia	18,5	14,2	12,1	10,1

Source: International Food Policy Research Institute (IFPRI) Report



Other Activities





- EXPO 2016 Antalya, one of the most important organizations of the world, was held in Antalya with the theme of “Flowers and Children”.
- Turkey’s first EXPO, EXPO 2016 Antalya, one of the most important organizations of the world, held in Antalya city with the theme of “Flowers”.
- EXPO 2016 Antalya has reached 4.7 million visitors just a day away from its date of expiry on national fairs calendar.

On 22 April 2016, EXPO 2016 was opened in Antalya Botanical Exhibition with the theme of “Flowers and Children”.



Important investments have been made in the EXPO field:

- EXPO lake, hill, tower, country gardens,
- Congre Centre,
- Agriculture and Biodiversity Museum, Children Science and Technology Center,
- Amphitheatre for 5000 people, Mosaic Culture and the other buildings,
- 25.000 tree and forest consisting of 133.000 hedges
- 4,5 million flowers
- 350.000 m2 sod area, theme gardens, activities areas and green areas.

EXPO 2016 Antalya was visited by 4.7 Million people from 57 countries. With this participation, EXPO 2016 Antalya became the second EXPO organization with the highest attendance after the Botanic EXPO in 1990 in Osaka, Japan.



Private Sector Investments in Agriculture

- Capital Investments have been encouraged via the new reforms on agricultural policies.
- Agricultural supports and incentives have been provided for the domestic and foreign investors who intend to make investment on the agriculture sector.
- The share of agriculture within the capital investments of private sector was **1,8 %** in 2016.
- In 2016, totally **15,7** billion TL fixed capital investment of which **5,7 billion TL** by the private sector has been made in agricultural sector.
- Totally **124,2 billion TL** fixed capital investment has been made for agriculture sector between the years 2003-2016 of which **57 billion TL** belongs to the private sector in this period.
- In the field of agriculture, food, beverage and tobacco, the amount of Foreign Direct Investment (FDI) has risen to **612 million dollars** in 2016 when it was **14 million dollars** in 2002 and **9 billion dollars** FDI was made In the last 14 years.
- Turkish banking system has also improved in line with the recent changes as well as the harmonization with EU. The banks have started to implement substantial supports via special campaigns for medium and large scale agricultural investments.



- **“Agricultural Investors Guidance Center”** has been established within the Directorate of Strategy Development of the Ministry to give information on the opportunities and incentives provided for the national and international investors intending to make an investment in the field of agriculture.
- Advisory services are given on supports, incentives and also effective use of resources and production via web page (www.taryat.gov.tr), e- mail (taryat@tarim.gov.tr) and telephone.



Agricultural Training, Extension and Publications Studies

Training and publishing activities are conducted throughout the year to improve the technical and practical capacity of our farmers.

- Farmer training, extension and publications studies
- Agricultural Cooperative Training
- Dissemination of Agricultural Innovations and Diversification of Our Farmers
- Agricultural Innovation and Information System Applications
- Training, Extension and Publications for effective water use
- Agricultural Population Rejuvenation Project
- Herd Management Personnel My ProjectMilk Hygiene Trainings
- Safe Tractor Use and Safe Use of Agricultural Vehicles
- Competition of people who appreciate agriculture
- Handicrafts Training Activities
- In-service Training Studies



Activities for female farmers

- Training, extension and publications studies for female studies
- Cooperative Training for Women in the Countryside
- Strengthening Women's Initiative in Agriculture Program
- Female Farmers Meet the Innovations Program
- Special Projects Program for Female Farmers
- Leading Children's Agricultural Camp Program
- Safe Agriculture and Healthy Nutrition Project with Women and Their Families
- Biodiversity Project for Nutrition and Food

Green Table Application

- Our Ministry initiated the Green Table application in 81 provinces in 2016. Citizens can communicate all kinds of requests, complaints and suggestions to the units concerned with this application.

Advantages of Green Table Application

- Effective delivery of services
- reduce bureaucratic procedures



Agriculture WEB TV

- For the first time, WEB Agriculture TV began broadcasting on the web address **www.tarimtv.gov.tr** in order to provide agricultural information, documentation and news on a daily basis for producers (2010).
- The aim is to convey the agricultural agenda and developments regarding the agricultural production, food safety, rural development and hobby gardening by reaching to producers via WEB Agriculture TV with a rich archive and expertise.
- Working like an “information bank” with over 300 educational movies and over 600 videos, **Web Agriculture TV** is being followed by 124 country and with “e-newsletter” application servicing news to 6.000 followers.
- **A model in European Union:** The Information Portal of European Commission “E-practice” has given place to “Web Agriculture TV” in its webpage as a Model study.



- In order to increase productivity providing to meet developed agricultural technology and information needs;
- In total, 700.000 books are distributed to 7.000 villages.
- In the campaigns, totally 100 books which have 5.200 pages, have been distributed to the farmers by agricultural consultants who are working in 81 provinces.

Training Children on Food Safety

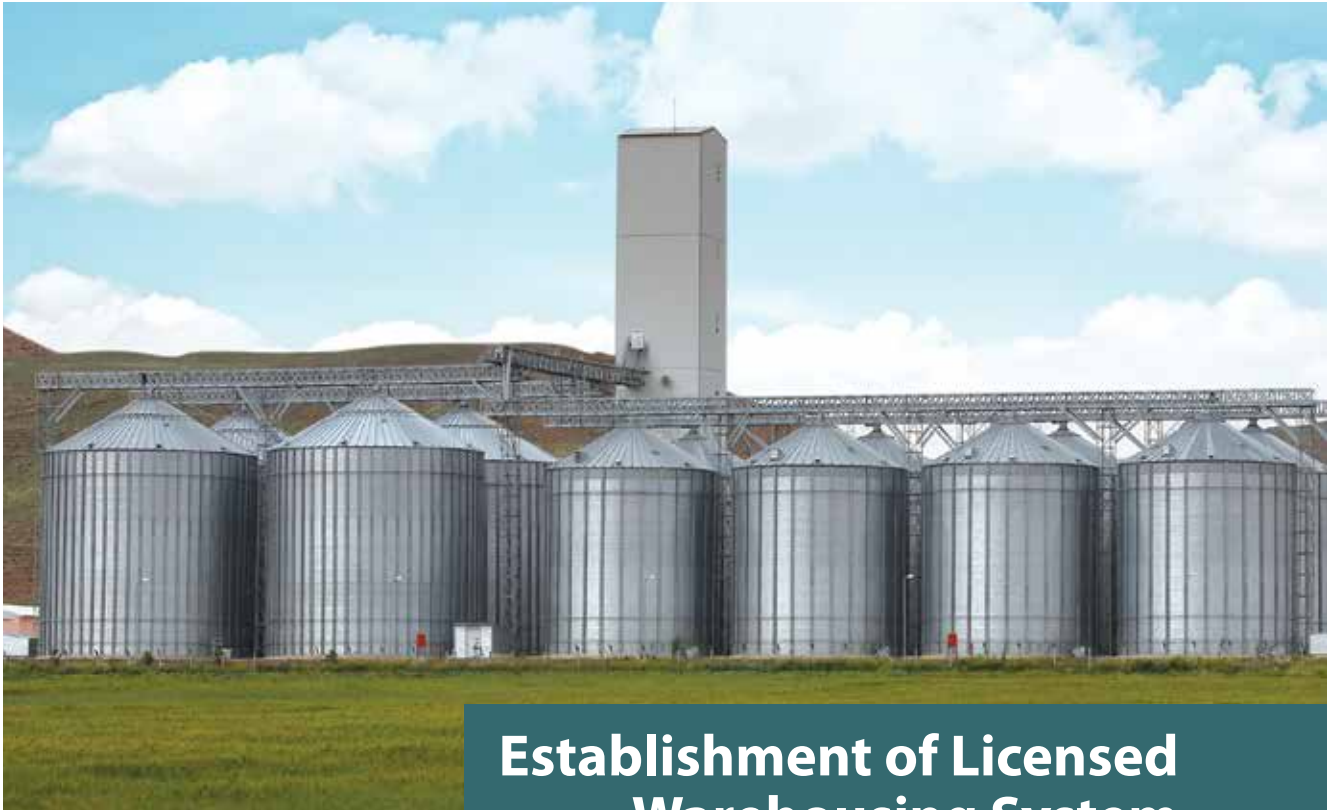


- 135.000 coloring books, short stories and activity books have been prepared in the context of "Safe Food, Healthy Life" for primary school students in order to raise awareness and knowledge of children about the importance of food safety.
- The books have been distributed to schools free of charge.

Human Resources of the Ministry



- Approximately 33.000 staff were recruited between the years 2003-2016 in order to increase the human resources of the Ministry.
- In total approximately 59.000 personel are working in the Ministry.



Establishment of Licensed Warehousing System

- The Law on Licensed Warehousing of Agricultural Products was issued in 2005 which forms the basis for the system.
- Our Ministry, together with other relevant ministries and agencies, does important work towards the development of “Licensed Warehouse”.
- The licensed warehousing system aims to facilitate the trade of agricultural products, to establish a system to keep the products in healthy condition and to make standardization of the products.
- Construction of a licensed warehouse with a capacity of 3 million tons has started. Until the end of this year, 300 thousand tons will be finished. The remaining 2.7 million will be finished end of 2018.



Sectoral Cooperation Meetings

- Sectoral Cooperation Meetings have been organised in 58 provinces with a total of 500 participants including producers, suppliers, industrialists and NGO's in order to determine the problems and solutions of subsectors with a participatory approach.
- "Regional Sectoral cooperation and common sense meetings" have been held in 7 regions with 17 subsectors
- The primary problems have been determined for the sector and action plans have been elaborated on the basis of subsectors.
- With the sectoral meetings on the provincial bases the agricultural potential of our provinces has been revealed, the projects which will improve the agricultural sector has been determined and "33 Action Plan" have been implemented.



Strategy and Action Plan to Combat with Drought

- Significant studies and implementation of extensive measures have been initiated to combat against drought which is one of the most important risk areas in agriculture. Legislative infrastructure has been strengthened.
- “Strategy and Action Plan to Combat against Drought” have been prepared.
- Crisis Centers for Drought at the provincial level have been established. Provincial Drought Action Plans have been prepared.
- Monitoring, Early Warning and Prediction Committee, Risk Assessment Committee and Agricultural Drought Management Coordination Board have been established.
- The studies for development and extension of varieties resistant to drought have been accelerated.
- “Agricultural Drought Test Center” was founded within Bahri Dağdaş International Agricultural Research Institute.

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