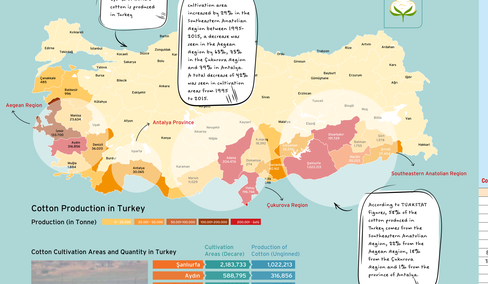
FROM FIELD TO CONSUMER: COTTON PRODUCTION AND SUPPLY CHAIN IN TURKEY

DRAFT SEPTEMBER 2016

COTTON PRODUCTION

3,5 % of world's cotton is produced in Turkey

While the cotton cultivation area increased by 19% in the Southeastern Anatolian Region between 1993-2015, a decrease was seen in the Aegean Region by 15%, 55% in the Çukurova Region and 59% in Antalya. A total decrease of 15% was seen in cultivation areas from 1993 to 2015.



Cotton Production in Turkey

Production (in Tonne) 1 - 25,000 | 25,001 - 50,000 | 50,001-100,000 | 100,001-250,000 | 250,001 - 500

According to TURKSTAT figures, 87% of the cotton produced in Turkey comes from the Southeastern Anatolian Region, 13% from the Aegean Region, 1% from the Çukurova Region and 1% from the province of Antalya.

Cotton Cultivation Areas and Quantity in Turkey

	Cultivation Areas (Decare)	Production of Cotton (Unginned)
Şanlıurfa	2,183,733	1,022,213
Aydın	588,795	316,856
Diyarbakır	396,869	191,729
Hatay	371,066	196,766
Adana	363,898	204,487
İzmir	234,945	133,700
Mardin	104,614	55,203
Gaziantep	80,725	40,162
Adıyaman	73,608	35,242
Antalya	56,740	30,065

Source: TURKSTAT, 2015

Number of cotton farmers in Turkey 89,000

COTTON TRADERS

▶ A large portion of cotton traders are also the owners of ginning factories. They gin the cotton they purchase and obtain fibre cotton.

▶ Traders sell their cotton to traders

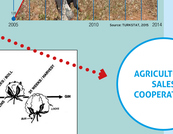
▶ Direct sale by farmers to ginning factories

COTTON PRODUCTION

GOOD COTTON PRACTICES

The cotton cultivated in Turkey is not genetically modified.

Cotton producers of Turkey sell a portion of their cotton to the Agricultural Sales Cooperatives of which they are a partner. Cooperatives purchased 3.5% of the total amount of cotton in the 2014/2015 season.



Percentages of Cotton Picking with Machines

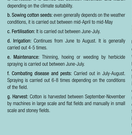
Aegean Region	98%
Çukurova Region	80%
S.Eastern Anatolian Region	60%

Source: From data collected during field visits

In about 140 days after planting or 45 days after bolls appear, the cotton bolls will begin to naturally split open along the bolls seams or **carpels** and dry out, exposing the underlying cotton segments called **lacks**. These dried carpels are known as the **lear**, and it's this lear that will hold the locks of cotton in place when fully dried and fluffed, ready for picking.

Kaynak: www.cottonpayers.com/storyofcottonbag/12.asp

Process of Cotton Cultivation



a. Soil preparation: Soil preparation begins as soon as the cotton is harvested. It is carried out between November and March depending on the climate suitability.

b. Sowing cotton seeds: even generally depends on the weather conditions, it is carried out between mid-April to mid-May.

c. Fertilization: It is carried out between June-July.

d. Irrigation: Continues from June to August. It is generally carried out 4-5 times.

e. Maintenance: Thinning, hoeing or weeding by herbicide spraying is carried out between June-July.

f. Combating disease and pests: Carried out in July-August. Spraying is carried out 6-8 times depending on the conditions of the field.

g. Harvest: Cotton is harvested between September-November by machines in large scale and flat fields and manually in small scale and stony fields.

Children Working in the Cotton Harvest

Utilisation of the labour force during cotton cultivation can be defined in two separate phases. The first is preparing the soil, weeding, hoeing, irrigating and combating against disease and pests. The other is harvesting of the cotton. Small scale farm owners generally carry out their own work, while medium and large scale farm owners employ others. Further, there is an increasing tendency to use machinery at a higher level. There is especially a high level of mechanisation for preparation of soil, sowing seeds, hoeing, irrigating and combating disease. Those employed for these tasks are generally local adult workers. In fields where cotton is not harvested with machinery, the harvest is done manually. As the salary for harvesting is paid according to the amount of cotton harvested, children are also working in the cotton harvest. In the cases where the cotton is harvested with machines, the farm owners allow the local families to harvest the cotton collected by the machines from the field for their own account. These families include their children in the harvest.

The share of cooperatives purchasing and marketing cotton in Turkey has dropped significantly. While the share of Turkey Cotton Union, ÇUKOBİRLİK and AKTİBİRLİK was approximately 25% in 1994, this percentage became 15% in 2005 and reduced to 7% in 2014. Cooperatives purchased 3.5% of the total amount of cotton in the 2014/2015 season.

AGRICULTURAL SALES COOPERATIVES

MAIN AGRICULTURAL SALES COOPERATIVES
- ÇUKOBİRLİK
- AKTİBİRLİK
- TARİS

▶ Agricultural Sales Cooperatives sell their fibre cotton through the commercial exchanges.

▶ The Agricultural Sales Cooperatives also sell their fibre cotton through the commercial exchanges.

▶ Fibre cotton traders also purchase fibre cotton from Agricultural Sales Cooperatives.

▶ Fibre cotton traders also purchase fibre cotton from Agricultural Sales Cooperatives.

In contrast farming takes place between farmers and ginning factory owners.

GINNING

REGIONAL DISTRIBUTION OF GINNING FACTORIES

Marmara Region	Aegean Region	Mediterranean Region	S. Eastern Region
1%	19%	28%	52%

Cotton Ginning and Labour in Turkey

There are close to 500 ginning factories in Turkey which carry out cotton ginning. Some of these ginning factories are owned by agricultural sales cooperatives, while some are owned by the private sector. Cotton is brought to the ginning factories by cotton traders and/or cotton producers. The cotton ginned in these factories is sold to thread manufacturing companies by licensed cotton warehouses, ginning factories, agricultural sales cooperatives or fibre cotton traders. Since the mechanisation of cotton harvest has became widespread, the harvested cotton is ginned in a short time, allowing the ginning process to start in September and be completed by January. Meetings with experts in the scope of the project showed that there is no child labour in the ginning factories; however the general working conditions are characterised by noise and dust including health and safety issues in work places.

Fibre cotton is bin ginned

World Fibre Cotton Production (Thous.Tonne)

Countries	2013/14	2014/15
India	6,770	6,510
China	6,929	6,480
USA	2,811	3,550
Pakistan	2,078	2,310
Brazil	1,705	1,550
Uzbekistan	940	890
Turkey	760	847
Australia	890	450
Other	3,402	3,543
Total	26,283	26,130

Source: ICAC Cotton This Week-Sept 2016

Cotton Cultivation Areas Worldwide (Thous. ha.)

Countries	2013/14	2014/15
India	11,650	12,250
China	4,700	4,310
USA	3,053	3,783
Pakistan	2,914	2,840
Uzbekistan	1,275	1,290
Brazil	1,010	1,017
Burkina Faso	644	644
Turkmenistan	545	545
Turkey	451	468
Argentina	506	456
Other	5,934	5,806
Total	32,682	33,417

Source: ICAC World Cotton Statistics - December 2015

Fibre Cotton Bales

In the 2014/15 season, Turkey has produced 847 thousand tonnes of cotton, imported 810 thousand tonnes of fibre cotton and exported 154 thousand tonnes of fibre cotton.

Licensed Fibre Cotton Warehousing

Law No. 5300 for Licenced Storage of Agricultural Products, published in the Official Gazette on 17/02/2005, was passed to bring standardisation to basic and processed products suitable for storage such as grains, legumes, cotton, tobacco, hazelnut, oily seeds, sugar, sesame and hyperacid. In licenced warehouses by enterprises and for these products to be stored by issuing product vouchers.

COTTON WAREHOUSING

There are no agreements signed between thread companies and ginning factories.

Fibre cotton traders purchase fibre cotton from warehouses.

Owners of ginning factories can sell their fibre cotton through licenced warehouses.

GINNING FACTORY OWNERS

Owners of ginning factories can sell their fibre cotton to trader companies or to thread manufacturing companies through cotton agents.

Ginning factories are able to sell fibre cotton through the commercial exchange.

TIER 3

GINNING

FIBRE COTTON TRADE COMPANIES

Fibre cotton traders purchase cotton from commercial exchanges.

COTTON AGENTS

Thread manufacturing companies purchase fibre cotton from cotton agents, directly from ginning factories or the commercial exchanges.

COMMERCIAL EXCHANGES

Thread companies purchase fibre cotton from the commercial exchanges.

Ginning mill process

Kaynak: http://www.ari.usda.gov/Manitoba.htm?boon=5260

Province distribution of different types of ginning machines

No.
0 - 50
51 - 100
101 - 150
151 - 200
201 - 250
Kırıkkale
Karaman
Konya
Sinop
Samsun
Tokat
Erzincan
Bayburt
Gümüşhane
Trabzon
Giresun
Ordu
Rize
Artvin
Ardahan
Kars
Iğdır
Van
Hakkari
Bartın
Zonguldak
Kastamonu
Çankırı
Amasya
Çorum
Yozgat
Sivas
Tunceli
Bingöl
Muş
Bitlis
Siirt
Karabük
Düzce
Bolu
Sakarya
Kocaeli
Bilecik
Eskişehir
Kırşehir
Kayseri
Malatya
Elazığ
Batman
Şırnak
Kırklareli
Tekirdağ
Edirne
Çanakkale
Balıkesir
Kütahya
Afyon
Aksaray
Niğde
Adana
Mersin
Hatay
Osmaniye
Kahramanmaraş
Gaziantep
Kilis
Şanlıurfa
Mardin
Antalya
Isparta
Burdur
Denizli
Uşak
Manisa
İzmir
Aydın
Muğla
Ankara
Çankırı
Zonguldak
Bartın
Kastamonu
Sinop
Samsun
Tokat
Giresun
Ordu
Rize
Artvin
Ardahan
Kars
Van
Hakkari
Bayburt
Erzurum
Erzincan
Tunceli
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Şanlıurfa
Adıyaman
Kilis
Gaziantep
Osmaniye
Kahramanmaraş
Adana
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