ICAC
Working Group on Government Measures

Reporting Injury to National Economies from Low Cotton Prices

Report of Turkey

By:
Dr Sebahattin GAZANFER
Delegate of Turkey,
Working Group on Government Measures
sgazanfer@hotmail.com

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1. Summary and Conclusions

Turkish cotton production sector has been under increased pressure due to the low world prices, which have given rise to imports of increased quantities, decreases in area and production, the latter being dramatic especially on regional level, significant losses of farm income and many similar adverse effects on related industries, resulting in serious economic consequences on national level. Attempts have been made to quantify and document these adverse effects, where possible and practicable.

As similar problems are also experienced by many other cotton producing countries, it is hoped that appropriate ways and means will be jointly identified to address these problems for a healthier world cotton economy.

2. Overview of the Cotton Sector in Turkey

Analysis of cotton production and consumption data since 1930s reveal that, while cotton production has shown a trend of moderate increase, cotton consumption has displayed almost an exponentially increasing behaviour *(Figure 1)*. Despite the vast land potential of Turkey for production of agricultural commodities, production of cotton (and many other agricultural commodities) could not keep up the pace with the increasing demand, owing to the unattractive world price developments in these commodities, especially in cotton during the last two decades. Hence, after mid-1980s, cotton consumption in Turkey started to exceed the production, which forced the doors open to relatively lower priced and in most cases subsidised cotton imports *(Figure 2).*

As it has been reported before,[(1)] three distinct periods in the Turkish cotton sector can be identified based on the foreign trade of cotton. These are:

Up to 1985/86 : Net exporter country, with no cotton imports
1986/87-1991/92 : Net exporter country, with increasing cotton imports
1992/93 - present : Net importer country, with incresing cotton imports

Cotton production witnessed an accelerated increase from 1950 onwards up to 1973, during which time significant investments in textiles production also took place. Starting from 1973, when the first petrol crisis was experienced, up to 1980 Turkey experienced serious economic difficulties which was evident in very high inflation rates and in the scarcity of foreign exchange. Cotton production during this period more or less stagnated, while cotton consumption enjoyed a steady upward trend.The import substitution policy practised until 1980 was totally abandoned and an immediate switch to export oriented growth policy together with liberalisation measures showed their positive results in the significant increases in exports as well as in the GDP. Price support policies, in the form of cooperative purchases, did not stimulate much incentive to increase the cotton production because the prices set by the governments were near to or sometimes even below the prevalent world prices. Towards mid-1980s the textile industry had no alternative but to import cotton for their rising needs.

Between 1988/89-1990/91 seasons there had been no price support mechanism, neither any trade restrictions on exports and imports of cotton. During this period the Turkish cotton farmers were open to world competiton [(2)], frequently to cotton imports originating mainly from countries which heavily subsidised the production and exports of cotton.

The deterioration of world cotton prices in the beginning of 1990s, forced the government to return to the support price mechanism. However, this mechanism did not provide sufficient impetus for cotton production increase because of several reasons. Firstly, the level of support prices set were not adequate in comparison to the supports given in some other countries. Secondly, the support price

system was implemented through the agricultural sales cooperatives unions (ASCUs), which procured roughly 1/6 to1/3 of the total crop, the remaining quantity being left to private sector procurements. This meant that the private sector generally would not pay anything above the price level calculated for the imported cotton. Hence demand for domestic cotton remained at a minumum and would only be meaningful if and when the domestic market prices were comparable to the prices of imported cotton or in exceptional circumstances, when some mills had to cover their immediate needs from the local market, in which case they would have paid higher for their raw material costs. Thirdly, the ASCUs had to incur heavy losses arising from the implementation of the support price mechanisms. These losses were not immediately reimbursed by the treasury.

In 1993/94 season the government decided to discontinue with the inefficient sytem of price support mechanism. Instead, it introduced the direct income support policy in the form of price premiums. The upward price developments during that season was a good pretext for the government to discontinue with the premium system and *leave the cotton farming again with no support* for the following four seasons, during which time imports mainly from subsidising countries increased at an accelerated pace, while cotton exports from Turkey diminished significantly to negligibly low levels, putting Turkey into "a net importer country" category for cotton since 1993.

The persistent high inflation rates continued also during 1990s, which resulted also in high cost of production owing to high input costs, such as labour, energy, chemicals, etc. Very modestly set premium payments put into effect for the 1998/99, 1999/00, 2000/01 and 2001/02 seasons were far from remedying the problem faced by the producers which in turn resulted in underutilisation of the vast potential for cotton production increases and the production deficiencies thus created were steadily balanced by low priced imports.

Today, as the world cotton prices continue to remain well below the cost of production, and as some countries continue to heavily subsidise their cotton industries, leaving the world with exessively high stocks and with little expectation of increased consumption worldwide, the cotton production sector in Turkey, like many other producing countries, is bound to remain under increased pressure.

3. Impact on Production

Observation of the total cotton growing area for the whole country, as shown in *Figure 3(a),* would indicate that there has been no significant change in total area over the last two decades. Area decrease is noticeable since 1995/96 season. The decrease in total area has been compensated by gradual increase in yields until recently which resulted in a modest increase in lint cotton production *(Figure 3(b))*. However, looking at these figures alone would be somewhat misleading since one cannot capture the seriousness of the impact of low prices on cotton production. It is, therefore, necessary to analyse the impact of low prices on regional basis.

Figures 4(a) and (b) show the area and production graphs since 1980/81 season for ***the Aegean Region.*** Although the cotton from this region has always been the most saught after type by the domestic industry, hence the production figures should have been reflecting an accelerated increase as a response to rising demand by the textile sector, the actual trend has been a steady decrease in area and in production. The rising needs of the textile industry especially after 1992/93 had to be met by rising imports of cotton of similar quality.

The ***Antalya*** and ***Chukurova Regions*** shows an even more dramatic trend as can be observed from *Figures 5 (a),(b) and 6 (a),(b)*. Despite some increases in yield over the years, significant decreases in area and in production have been witnessed in these two regions. The growers in these regions have

mostly switched to alternative crops. The decreases in area and resulting drops in production in the regions mentioned above, have partly been compensated by significant increases in both area and production in ***the Southeast*** *(also known as* ***GAP) Region,*** *(Figures 7(a) and (b))***.** However, even in this region, despite its vast potential for production increase, the rise in production has not been as fast as it could have been due to rising production costs and unattractive price prospects. Furthermore, a visible drop in area and ups and downs in production figures during recent few years would be an indication of adverse impact of low prices on cotton production even in this region.

Yields have generally shown a steadily increasing trend. However, the rising cost of labour, fuel, fertilisers and other chemicals during the recent few years, as against to the low cotton prices, have built up an increasing pressure on low income farmers, who have become obliged to pay less care to the production side, which may, inevitably, result in lower yields in the forthcoming seasons. The effect of weather factors on yield has not been significant during the last decade.

4. Impact on Related Industries

i) Impact on ginning industry: Significant underutilisation of ginning capacities occured in Chukurova, Antalya and, to some degree, in the Aegean Regions. Although normal ginning period is between mid-September and April with full capacity, decreases in production in the above mentioned regions resulted in slow-downs in operations, in reduced number of shifts, earlier closures and in some cases total seasonal closures of the ginneries. The end-result of the above translates into job losses, losses of income by the ginners, as well as higher operating and overhead costs.

In order to document the ginners' income losses in a more simplified form and make some comparison of these losses since 1995/96 season, *Table 1* has been prepared. A simplifying assumption has been made regarding the ginning cost. Survey of ginning costs on a number of ginneries for the 2001/02 season in the Aegean Region showed an average cost of 150 US$/tonne of lint cotton produced. Although this cost varies from one ginnery to another in a given region, from one region to another or even from one season to another, the above mentioned average cost figure has been used for all the regions and seasons in the compilation of *Table 1*. It can be seen from this table that big losses have occurred in Antalya and in Chukurova regions, while significant gains being obtained in the Southeast Region.

ii) Impact on transportation: Significant income losses have occurred also in the transportation sector in those regions where production decreases have been severely experienced. These were in the transportation of seed cotton from fields to ginneries, in the lint cotton transportation from ginneries to warehouses, in the transportation of cotton pickers, as well as the transportation of fertilizers, chemicals, etc. Although an accurate assessment of the loss of income in the transportation sub-sector has not been made, it is estimated that the total transportation costs would represent around 2-3 % of the overall value of the baled cotton. Again these losses are more noticeable on regional bases.

iii) Impact on other industries: These industries will include the seed production, irrigation facilities, agricultural equipment, agricultural inputs such as fertilisers and chemicals, seed crushers, cotton seed oil refineries, feed industries, and their marketing and distribution channels . It is beyond the scope of this report to calculate the multiplying effects resulting from decreases in cotton area and production.

iv) Impact on trade: Decreases in cotton production would naturally decrease the trade volume of cotton, both in the domestic and export market. Assuming that an average of 2 % commission is involved on the trade, this would constitute roughly 20 US$ for each ton of lint cotton not traded. Trader's profit margin would be much higher than the above mentioned figure. Furthermore,

decreases in cotton prices would also result in lower commissions or profit margins. The impact on trade would be more noticeable on regional bases. However, since the production has not been sufficient to meet the demand of the domestic industry and since the world prices have not been promising, the exports have diminished in volume which resulted with the closure of businesses by many exporters, some of whom having transformed their businesses into importing.

iv) Impact on the textile industry: The textile industry has been facing an increasing shortage of domestic cotton as the consumption increases on one side, and the production decreases on the other. The management of procurement and stock control activities, as well as importing the right quality and quantity of cotton in the right time, and coping with current financial and economic problems, have all added new challenges to the textile industry(3).

5.Impact on employment

Although the cotton production sector in Turkey is moderately mechanised, there are many production activities which are still labour intensive. This is especially true for harvesting which is mostly carried out by hand picking. Therefore, the labour cost occupies a large portion of the production costs in all the regions. It has been calculated that in average a total of 60 man-days are required per hectare of cotton production. However, as the working periods are scattered during the production season, it is difficult to quantify the exact number of farm labourers needed on annual bases. Assuming that these labourers find other work when they are not engaged in cotton production activities, it is estimated that around one seasonal labourer would be necessary who for 60 working days (totalling around three months) per year per hectare on cotton production. *Table 2* shows the change in direct farm employment on regional basis and for country total since 1995/96 season. As can be seen from this table, significant losses in direct farm employment have occurred in Antalya, Chukurova and partly in Aegean Regions in comparison to the employment levels of the 1995/96 season. The Southeast Region, on the other hand, shows a sigificant increase due to the rapid expansion of cotton growing areas in this region. Again taking the 1995/96 season as the reference point, approximately 10% loss in direct employment has so far occurred on national level.

Adverse impact on employment has also occurred in the related industries, as briefly explained (in item 4) above. However, the calculation of this impact has not been made owing to its immense complexity.

6. Impact on income by sector and at the national level

Table 3 has been prepared to document the losses of farm income due to decreases in production. It would be appropriate to make some clarification on some of the assumptions made during the construction of this table. Firstly, the purchase prices implemented by the agricultural sales cooperative unions in respective regions have been used as the average purchase prices paid to farmers both by the unions and by the private traders (usually the ginners). In most cases, this assumption is on the conservative side since the prices paid by the private traders have frequently been above the cooperative purchase prices. Secondly, in addition to calculating the percentage change in income in comparison to the previous season, a new column has been added to show the percentage change in income loss in comparison to the 1995/96 season. The reason for taking this season as the reference point is that it is this season in which the growers had the strongest drive to plant cotton, following the highest price levels which occured in 1994/95 season. *Perhaps, one might also make a rough hypothesis that this price level could also be hit frequently, if the subsidies of all sorts and other trade distorting practices were globally eliminated.* Using the 1995/96 season as the reference point, curves have been drawn to illustrate the trend in percentage changes in farm income. Production curves have also been

superimposed on the same graphs to see the relationship between the income losses and production levels. These graphs, representing the data on the four different production regions, as well as the country total are given in *Figures 8 (a), (b), (c), (d) and (e).*

It is interesting to note in *Figure 8(a)* that even in the Aegean Region, where the production decreases have not been so much dramatic as the Antalya and Chukurova regions, percentage change in income loss in comparison to the 1995/96 level has been as much as 46.6 %. These figures for Antalya and Chukurova regions are around 75% and 70%, respectively *(Figures 8(b) and (c))*. Another interesting finding is in *Figure 8(d)*, where one can notice that although the production in 2001/02 has increased by 73% in comparison to the 1995/96 level, total farm revenue has fallen short by around 2% to reach the total farm revenue of the 1995/96 season. Finally, when considering the trends on national level in *Figure 8(e),* it can be concluded that although the total production in 2001/02 season has increased by roughly 5% in comparison to the 1995/96 level, farm income has dropped by 40% nationwide.

Before concluding the discussion on the determination of farm income losses, it would be worthwhile to note that these calculations have been made on the conservative side by multiplying the productions with the *average prices of the season concerned*, as it has been suggested in the Memorandum No.2 of WGGM. Since these are the prices at which the production losses have already occurred, in other words, since many growers have decided not to grow cotton because of these low price levels, a better estimate of income losses can be made by using a higher price level, such as the 1995/96 level, as it has been suggested above.

6. Impact on income by sector and at the national level:

In the above sections, the loss of farm income and ginners' income at national level have been quantitatively demonstrated. Similarly the losses in related industries have been partly quantified, and, where possible, the adversely affected various sub-sectors have also been identified. However, the complexity of the problem and the widespread multiplying effects which are inherent in the cotton industry, rendered it impossible to make a comprehensive quantitave determination of impact on income on national level.

7. Impact on the value and volume of exports and imports

The value and volume of exports and imports, which are actual data as registered at the border points are given in *Table 4*. Similar to the above presented exercises, calculation of increased volume and value of imports, arising from low cotton prices, have also been made in the same table.

8. Level of added government expenses as a result of low prices

As mentioned above, to relieve the cotton growers partly from the heavy losses which they had been subjected to, a premium payment system was implemented in the seasons 1998/99, 1999/00 and 2000/01 seasons in the value of 12, 10 and 9 US cents per kg of seed cotton, respectively. It is apparent that these premium payments were far from meeting the serious losses which have occurred in the cotton production sector, in its related industries and in national economy.

References:

1. ***Gazanfer,S.:*** *Panel Presentation on Government Subsidies and Other Measures Affecting Cotton, 58th Plenary Meeting of ICAC, Charleston, SC., USA, (1999.)*
2. ***Gazanfer,S.****: Contribution to the Discussions on " Volatility in Cotton Prices", Proceedings of the 50th Plenary Meeting of ICAC, Montpellier, France(1990).*
3. ***Gazanfer,S.****: "Turkish Textile Industry Shows Strength in Hard Times", Cotton International Magazine, Meister Publ.,(2002)*

(Note: Tables and Figures are presented as separate attachments)

Figure 7(b). Production (Southeast Region)

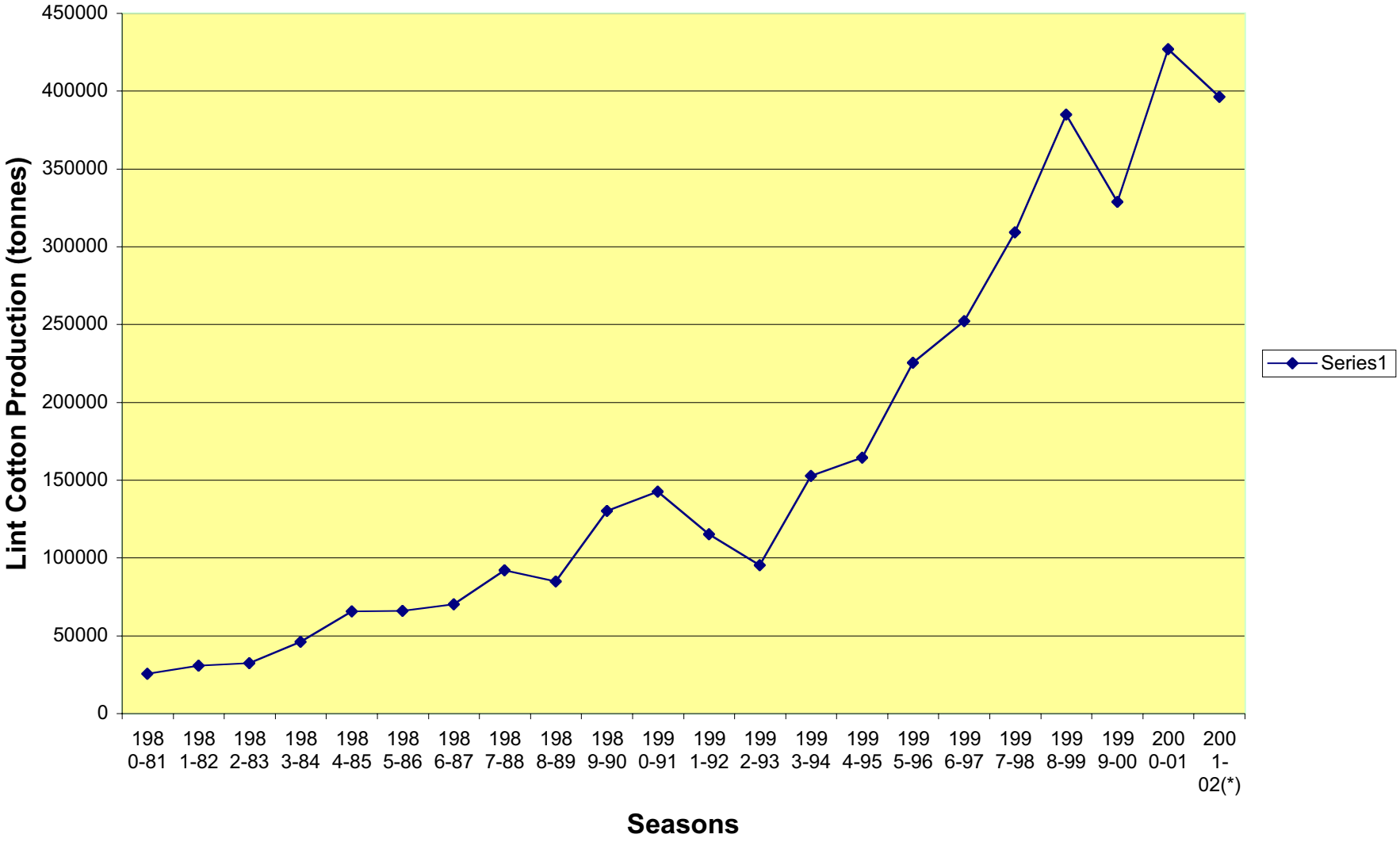

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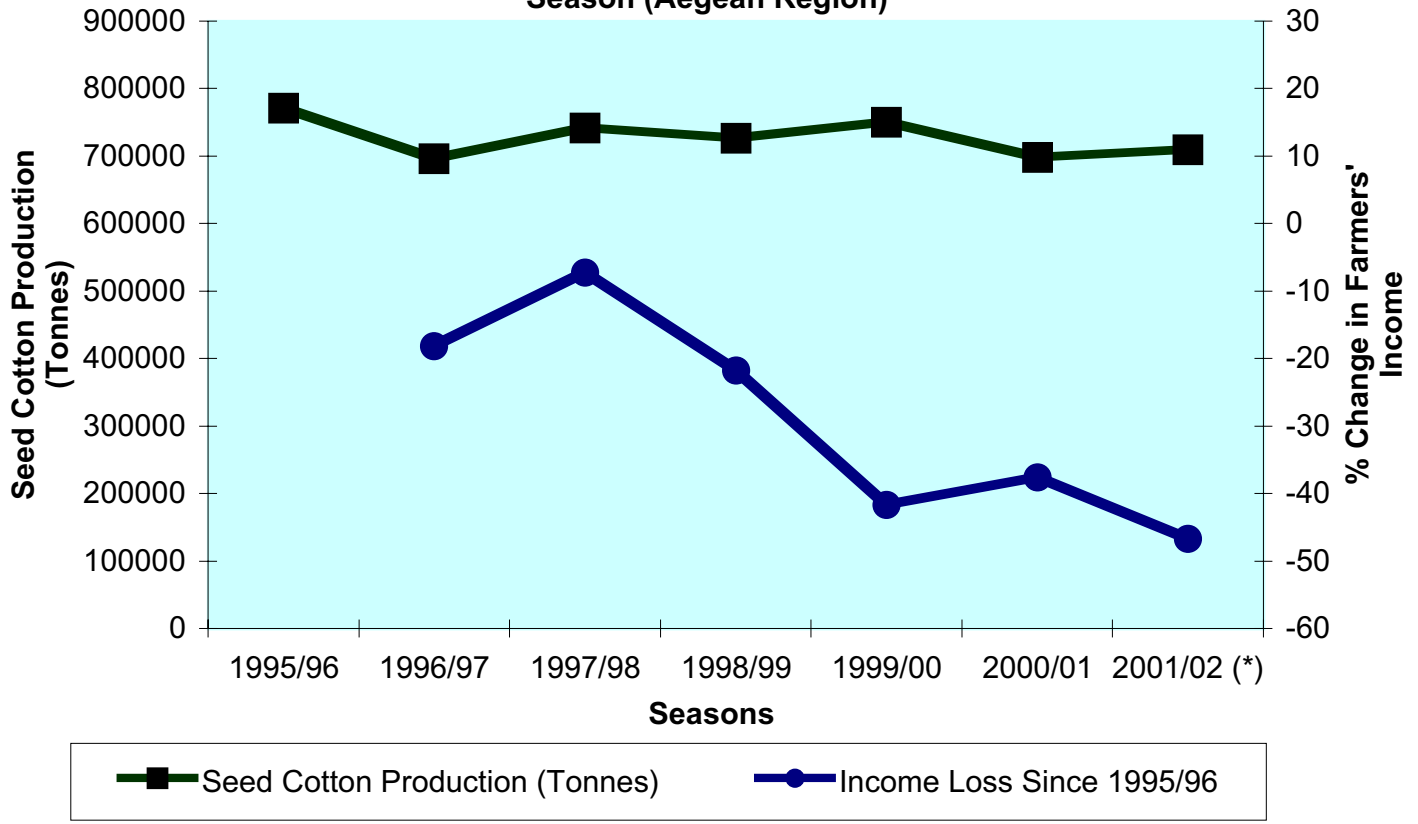
Figure 8(a): Comparison of Seed Cotton Production with Change in Farmers' Income since 1995/96 Season (Aegean Region)



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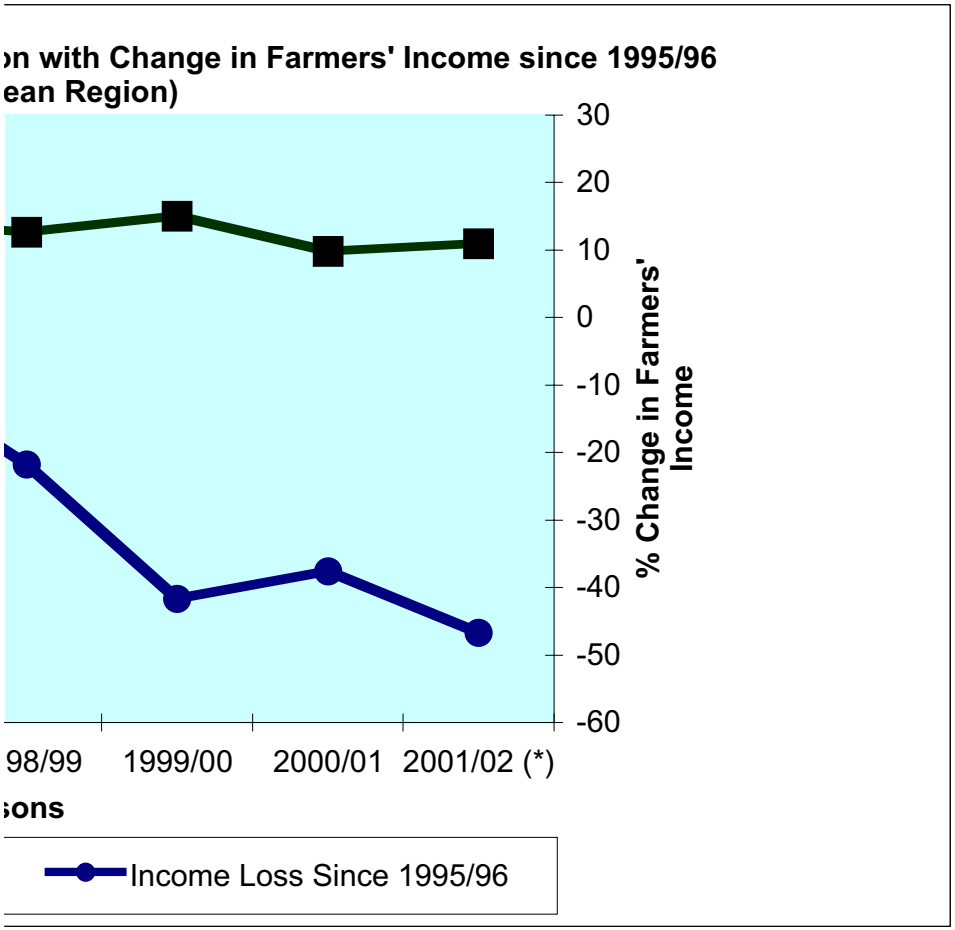

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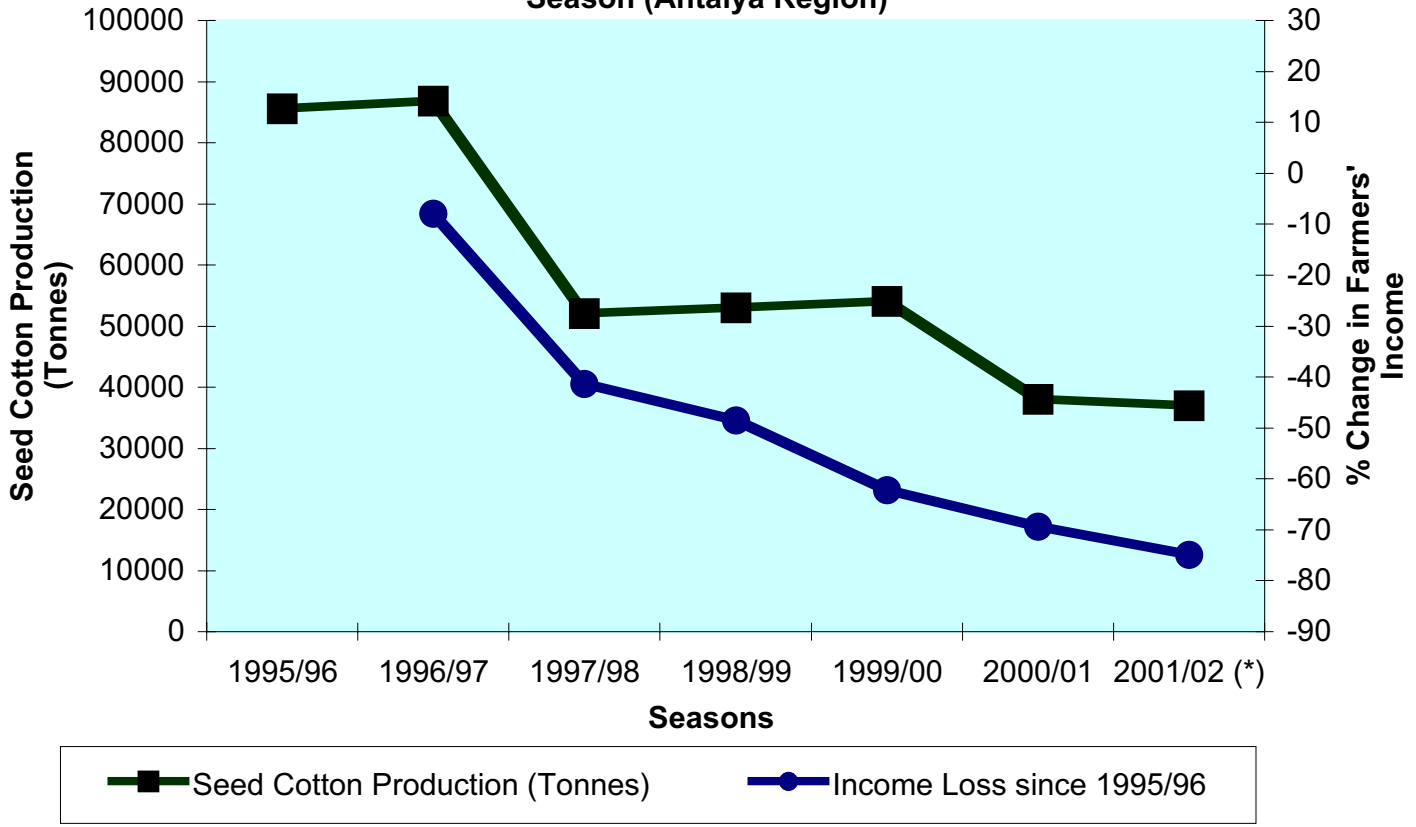
Figure 8(b): Comparison of Seed Cotton Production with Change in Farmers' Income since 1995/96 Season (Antalya Region)



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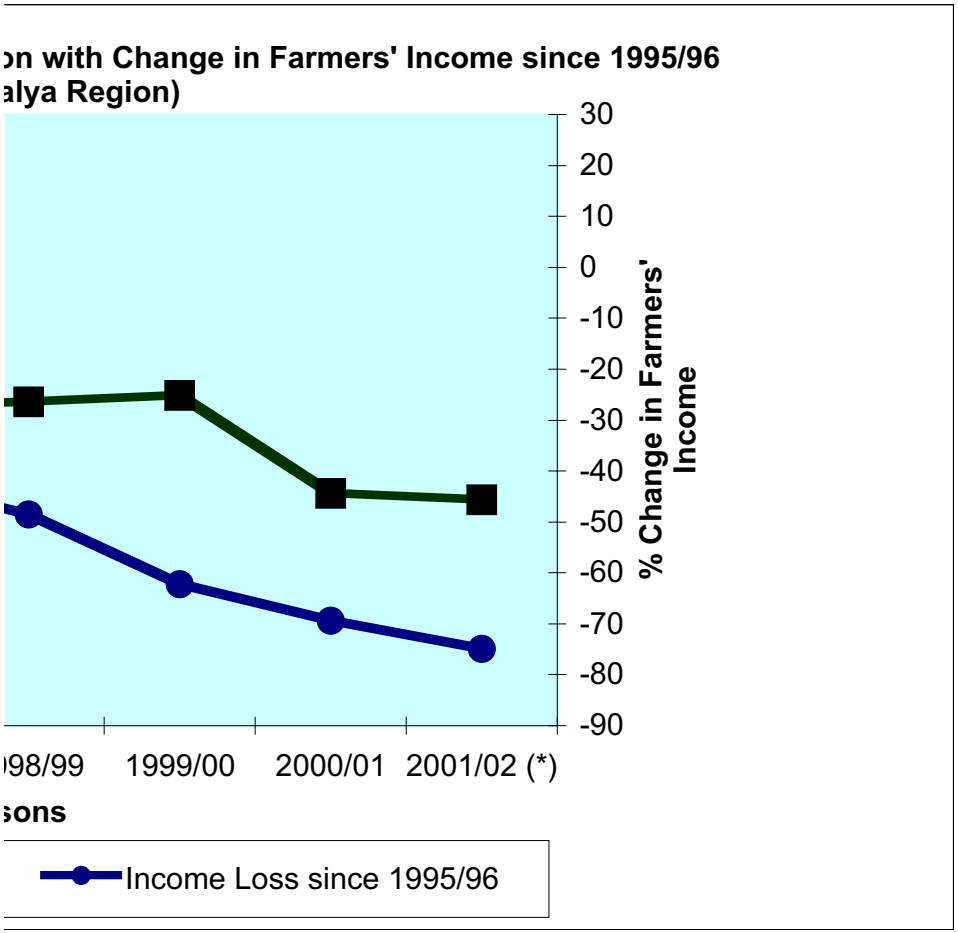

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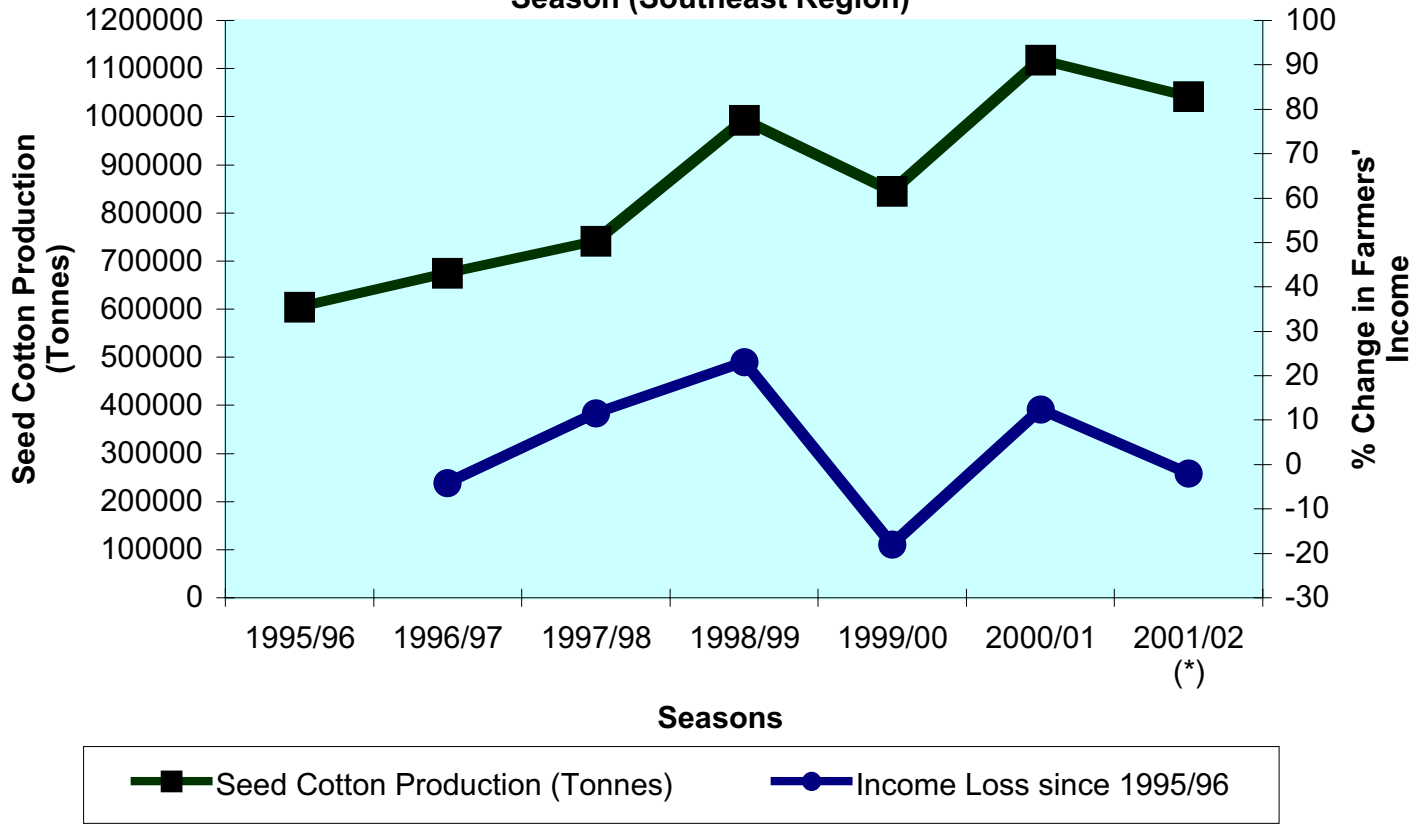
Figure 8(d): Comparison of Seed Cotton Production with Change in Farmers' Income since 1995/96 Season (Southeast Region)



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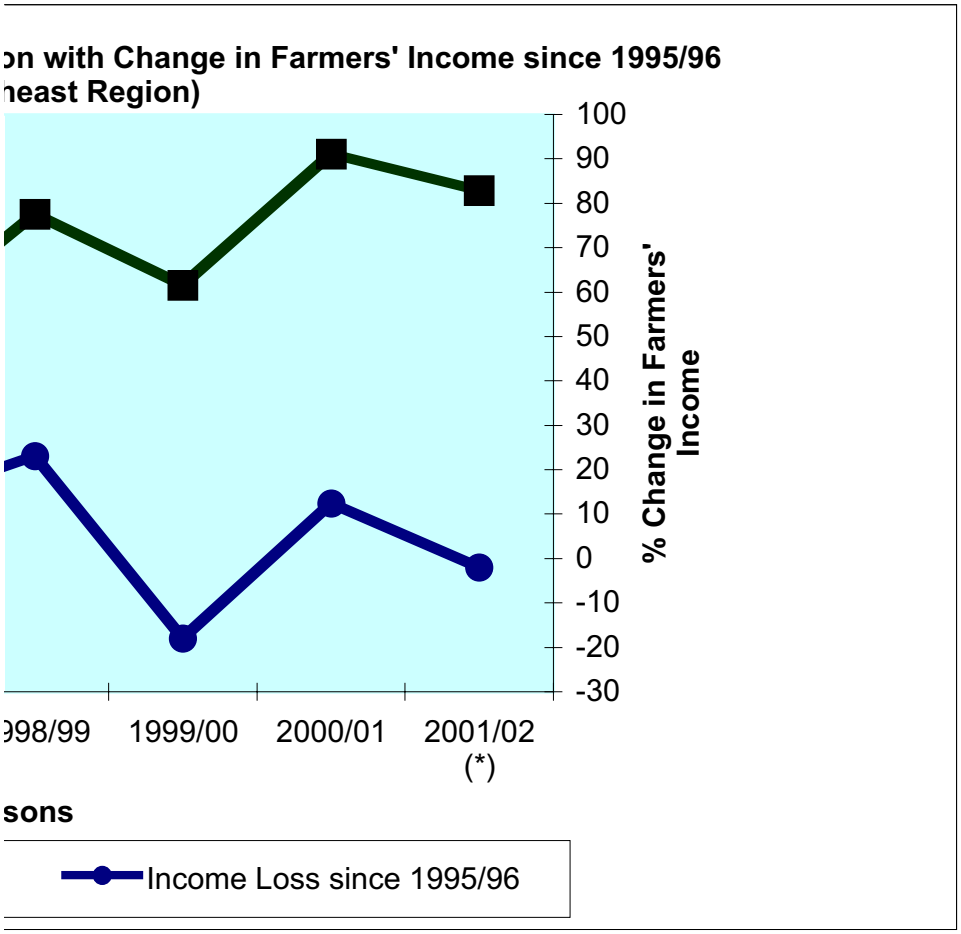

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Figure 8(e): Comparison of Seed Cotton Production with Change in Farmers' Income since 1995/96 Season (Turkey Total)

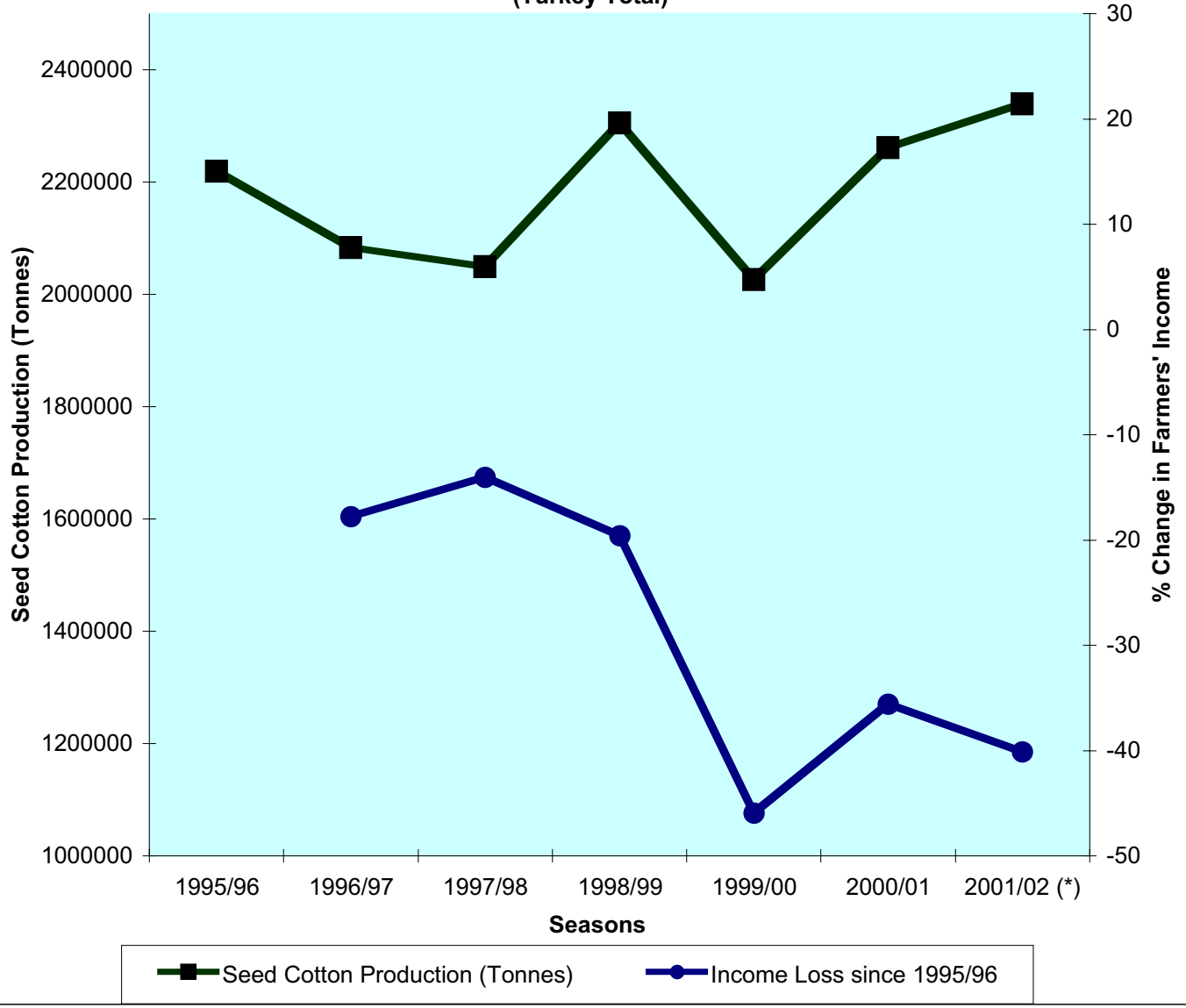

Table 4: Cotton Exports and Imports

	Exports		Imports		Net Imports	Change over Previous Season	Increased Vol of Net imports since 1995/96 Season	Value of increased imports since 1995/1996 Season
Seasons	(000) Tonnes	Million US$	(000) Tonnes	Million US$	(000) Tonnes	(000) Tonnes	(000) Tonnes	Million US$
1995/96	58.5	97.4	129.0	241.4	70.5			
1996/97	42.9	64.7	342.4	598.0	299.5	229	299.5	399.1
1997/98	22.7	34.4	408.0	658.4	385.3	85.8	385.3	508.1
1998/99	81.5	84	287.9	418.0	206.4	-178.9	206.4	197.3
1999/00	36.7	39.3	520.7	607.6	484	277.6	484	482.5
2000/01	19.2	34.3	404.2	496.9	385	-99	385	386.6
2001/02**	20	20	400.0	420.0	380	-5	380	324.9

**estimate*

Source: Undersecretariat of Foreign Trade

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