Agricultural Journal 1(2) : 41-47, 2006

The Impact of the Reforms: Impoverished Turkish Agriulture

Emine Olhan
Department of Agricultural Economics Faculty of Agriculture,
Ankara University, Turkey

Abstract: The Government of Turkey has embarked on structural adjustment and stabilization program of historic dimensions. The conceptual framework of this program was laid by the policy dialogue with the Bank over the last several years, which has included extensive analysis of the current agricultural support systemand recommendations on how to reform it. These recommendations have been adopted in the Government's Letter of Sectoral Strategy Policyand formed the basis for the Agricultural Reform Implementation Project approved by the Bank's Board and made effective in July 2001. Once completed, these reforms will help Turkey adjust itself to EU accession with more sound policies and systems. These reforms are aimed at dramatically reducing artificial incentives and Government subsidies and implementing more effective policies. In the frame of the reforms Direct Income Support System was begun to implement instead of the other support policies such as input subsidy and price supports in 2001. The reform program reduced cost of the agricultural support policies from $6 billion to $1.1 billion during the period of 1999-2001. The impact of new agricultural policy on agricultural production in case of input use level, land use and agricultural income will be examined in this study.

Key words: Turkish agriculture, reforms, impoverished

INTRODUCTION

Because of its strategic importance, agriculture sector is supported in every country with an agricultural policy specific to the country's economic structure and within the limits of its resources. Fundamental aim of policies implemented in the agricultural sector is to have a organized, highly competitive and sustainable agricultural sector, which takes economic, social, environmental and international dimensions as a whole within the general orientation of efficient use of resources. Basis of agricultural policy is balanced and sufficient nutrition of a growing population taking also food safety approach into account. In Turkey, agricultural policies to date have dominated the agenda regarding problems such as supports being insufficient, falling their purpose and their burden to the general budget.

In recent years changing country specific and international conditions have brought up different approaches and reform necessity in the agricultural sector. With the agricultural reform initiated in 1999 the budgetary expenditures in Turkey have been disciplined by reshaping them. Despite the fact that it is still early to evaluate whether or not reforms have been successful some indicators reveal that agricultural sectors has diminished. However, considering the fact that the country was in an economic crisis in this period the reforms are expected to sustain the agricultural sector instead of providing solutions to accumulated problems of Turkish agriculture. This study is an in-depth assessment of factors affecting the change in agricultural policies in Turkey and the policies implemented within the framework of reform.

Factors affecting the policy change in turkish agriculture: Until 2000, in Turkey agricultural sector is essentially guided by short-term price dominant support policy instruments which are dependent on political conjuncture and do not contain any structural measures. Support policies were implemented in the form of price supports and subsidies for input, product or credit. While total number of products, which are price- subsidized were 20 in 1970s this was reduced to 8 in 1994[1]. Input subsidies given to fertilizers, seed, feed grain, agricultural chemicals, study and insemination had been provided, even though temporarily. Product based dairy and meet incentives were also implemented periodically. Credit subsidies, on the other hand, had been available for input gathering in general and have been more advantageous in comparison to market conditions[2].

Reformation of Turkish agricultural policies has started as a result of the pressures of international organizations and as an outcome of the fact that agricultural policies implemented until 2000, which are in the form of input and price subsidies, have not brought much success in the agricultural sector while adding

heavy burdens to the budget. Agricultural Reform Implementation Project-ARIP forms the basis of this reform program.

ARIP has brought to the agenda of Turkey in 2000 within the context of an agreement signed with the World Bank. Agricultural reform, the objective of which is to reduce the burden over the budget and support the growth in agricultural sector, has three main elements [2,3]. These are Direct Income Support (DIS), Phase out price and input subsidies and Privatize State Economic Enterprise in the agricultural sector, thus reduce the state interference in the processing and marketing of agricultural goods. In this context, the objectives are to eliminate price, input and credit subsidies and replace them with DIS, to support transition from over produced goods to alternative productsand to restructure member services of Agricultural Sales Cooperatives Unions (ASCU).

Dynamics affecting the change process of subsidy policies can be divided into two. First one is external dynamics which means that Turkey has some obligations stemming from its membership in and/or relationship with international organizations, countries and country ensembles. The second one, on the other hand, is internal dynamics stemming from country's conditions and needs[2,4].

External dynamics:

World Trade Organization: Departing from the purpose of liberalizing international trade, WTO sets the course of trade policies directly and support policies within a country indirectly. WTO takes action in a way that effect of support policies on market mechanism will be at the minimum level.

European Union: The support policies in the EU have a guidance nature for Turkish agricultural policies since Turkey makes legal changes to harmonize its legal system with that of the EU in order to become a full member.

IMF and World Bank: Support policies are adjusted within the context of agreements signed with the IMF and the IBRD for structuring the economy and for obtaining finance and letters of intent presented to these institutions.

Internal dynamics:

- One of the fundamental motives of reforms in support policies is that price supports and input subsidies provided until the year 2000 has brought a heavy burden to the budget.
- Foreign debt burden and loans have a restrictive effect on support policies In terms of the budget prospects.
- Current accounts deficit affects the support policies because it indirectly makes difficult to have new loans and increases debt burden.
- Another factor pressuring for change is the fact that supports do not reach the target masses.

Internal dynamics pressuring for the reform in Turkish agriculture did not first emerge during 1990s. They have the characteristics of the policies implemented since 1950s. Eradication of troubles in Turkish agriculture depends on resolution of the structural problems. Leading structural problems are small size agricultural holdings, fragmented and scattered farms, low efficiency, large agricultural population, insufficiencies regarding production and marketing infrastructures and unorganized structure. Deep political changes under the title of Reform in Agricultural Policies have undergone as a result of external influences rather than lengthy internal causes. Actually, direction of change in support policies in agriculture has been determined by the assurances given in the IMF Stand by Agreement signed in December 1999.

Reform process and its impact: Structural change and stabilization program initiated at the end of 1999 has brought about the change of agricultural policies. In the agricultural sector, instead of conventional support methods DIS has been introduced during the 2001-2005 period. With the abolition of conventional support methods such as price, input and loan subsidies the share of DIS payments in total agricultural supports has dramatically increased[5]. While in 2001 the share of DIS in total supports provided to agricultural sector was 7.6 % in 2004 this value has risen to 70.5 %. However, Ministry of Agriculture and Rural Affairs plans to reduce the share of DIS in total supports provided to agricultural sector to 45% in upcoming years (in the period of 2006-2010)[6].

DIS practice, which is the first element of the reform program was implemented in 2000 in 4 cities as a pilot project and then implemented throughout the country[7]. In the economic program prepared in agreement with IMF, real objective of DIS practice is stated as to partly balance the negative impact of reducing or abolishing the supports and protections provided to the agricultural sector on the incomes of small and medium sized enterprises[8].

DIS System as practiced in Turkey is based on direct income payments made independent from production by eliminating all agricultural subsidies such as input and

output based supports[9]. Peculiarity of this policy is that decisions related to production, consumption and foreign trade are taken in accordance with market conditions and the expenditures are transparent. Besides, maximum land size is restricted in DIS payments (50 ha), it is believed to bring about a more just income distribution[4].

With this scheme farmer registration system is initiated and in 2004 2.77 million farmers (90 % of producers) are registered. Although with the establishment of a farmer registration system related purpose is achieved to an extent DIS, as practiced, is not appropriate for Turkish agriculture.

This form of payment that is independent from production is implemented in developed countries where there is high productivity and excess agricultural product with the aim of increasing producer incomes without causing a rise in production. It is not clear to what agricultural policy purpose this practice serves in Turkish agriculture. Cost-benefit analysis demonstrates that DIS practice does not have an impact increasing the producer welfare. In Turkey, DIS, as practiced currently, does not have an effective power over production and it has a feature more of a social aid[10]. With the substitution of input subsidies by DIS income loss in cotton production only 54 % could be compensated[11].

In Turkey DIS system, which is based on land size, is not a policy instrument that can improve the already existing agricultural structure and resolve existing problems in agriculture. Following the completion of farmer registration system its function cannot go beyond contributing to producers' input expenditures. Instead of this system DIS practice based on products is more appropriate to the Turkish agriculture. This is also the expectation of the farmers[10]. Actually, 4 years of DIS it is widely recognized that this payment form cannot be the sole agricultural policy support instrument. As a result of the Project Review in 2004, new factors are included in the project and it Is decided to prolong it until year 2006.

After 2006, it is planned to reduce the share of DIS in total support provided to agricultural sector to 45 %.

The second element of the project that is to abolishment of price and input subsidies has been achieved apart from for a few exceptions. There is not any price subsidy, but there are compensations for some products and premium payments. In terms of input subsidies, there are payments for fuel used in agriculture since 2003 and for fertilizers since[12]. These payments that are not related to the amount of the fertilizer and fuel used in agriculture, are based on a uniform per hectare payment such as DIS.

Third element of the project is the privatization of state economic enterprises and diminishing state interference in the processing and marketing of agricultural products. In this context, Sugar and Tobacco Laws are promulgated and sugar and tobacco production is disciplined and in this way there has been 26.2 % decline in sugar production while there has been 53.9 % decline in tobacco production during the period of 1999-2003. On the other hand in terms of privatization there has not been much success while restructuring of Turkish (State) Grain Board (TMO) and Agricultural Sales Cooperative Unions are still continues.

Cuts in state aid for agriculture: Effects of the reform program that has accelerated in 2001 were seen also in the transfers made to agriculture. In 2001 transfers made to producers have been reduced to one seventh in comparison to the previous year[13]. In 2003, in accordance with program, inputs subsidies and artificial support measures provided to certain goods have fallen significantly and share of supports in the agricultural sector in GDP has fallen below 1 %. This decline is due to mainly abolishment of credit subsidies and decline in price subsidies and in product purchases by state. Government has introduced DIS program in order to pay off the fall in subsidies. DIS does not differentiate between different

Table 1: Agricultural subsidy by type (Million $)

	1999		2000		2001		2002		2003		2004	
	$	%	$	%	$	%	$	%	$	%	$	%
Price support	644.2	21.1	335.2	22.6	112.4	12.3	381.2	21.7	-	-	-	-
Input support	263.4	9.0	176.4	11.9	76.8	8.4	-	-	225.4	11.4	224.3	8.8
Supp to animal husbandry	-	-	19.3	1.3	34.7	3.8	43.1	2.5	90.6	4.6	135.3	5.3
Premium incentives	23.9	0.8	19.3	1.3	9.9	1.1	11.3	0.6	-	-	-	-
Compensations	45.5	1.6	46.5	3.1	22.3	2.4	25.0	1.4	-	-	-	-
Loan support	1676.3	57.4	563.0	37.9	277.7	30.4	-	-	-	-	67.6	2.6
Defic. and compensatory payment	265.8	9.1	298.3	20.1	283.5	31.0	111.9	6.4	189.8	9.6	266.8	10.4
Agr.cooperatives projects	-	-	28.9	1.9	27.3	3.0	13.7	0.8	14.5	0.7	60.1	2.4
Direct income support	-	-	-	-	69.4	7.6	1173.1	66.7	1456.5	73.7	1802.7	70.5
Total	2919.1	100.0	1486.9	100.0	914.0	100.0	1759.3	100.0	1976.8	100.0	2556.8	1000

Resource: MARA,[5].,[13] HM

Table 2: Quantity Indices for input types, 1999=1

	1998	1999	2000	2001
Seed	99.3	100.0	97.9	97.1
Manure	102.0	100.0	100.3	96.4
Chemical Fertilizer	100.9	100.0	93.2	74.2
Fuel	97.7	100.0	101.8	102.5
Pesticides	108.7	100.0	95.9	107.8
Irrigation	96.3	100.0	102.0	102.7

http://siteresources.worldbank.org/INTTURKEY/Resources/361616-1121189080247/turkey-ag-complete.pdf[14]

Table 3: Agricultural credits given by the agricultural bank and the agriculture credit cooperatives (million $)

	1999	2000	2001	2002	2003	Changes (%)
AB	5.132	5.467	2.436	1.802	2.581	-49,7
ACCs	1.157	1.129	176	91	52	-95,5
Exchange rates	(417.581)	623.419	1.210.000	1600.000	1.380.000	

Resource: SIS[15]

product types; rather it is payment made to every hectare (approximately 90$). This was done to partially compensate for the removal of the old subsidy system and to continue to provide adequate income support to the rural sector, but in an incentive-neutral way. In 2004 DIS program encompassed 90 % of the farmers and formed 70.5 % (1.8 billion $) of the support provided to agricultural sector. However, amount of agricultural subsidies are still below the level of 1999. In this sense, it is calculated that 50 % of the income loss of producers is compensated by DIS[7].

With the commencement of reforms there have been significant restrictions over supports provided to agricultural sector. While total amount of agricultural supports in 1999 was 2.919,1 million $ in 2001, when the reform process was started it fell to 914 million $, yet there has been a rise in the following years and in 2004 it rose to 2.556,8 million $ (Table 1).

Decline in subsidies for and use of input: Agricultural inputs in general, fertilizers specifically, have been subsidized until 2000 with the aim to meet the food needs of increasing population in Turkey. With the reforms in agricultural policies input subsidies are abolished. With the end of support there has been reduction in input use (Table 2).

Fertilizer subsidies have taken the biggest share among the input subsidies before the reform period. With the abolishment of input subsidies in the framework of reforms biggest decline in input use has been in the use of chemical fertilizers with 25%. With the reduction of chemical fertilizer subsidies, which were up to 50 % and their total abolishment in November 2001 rice in fertilizer prices in this period has exceeded 30 %. In the period when producer prices were declining the increase in fertilizer prices have diminished demand for fertilizer considerably. Even though the fertilizer consumption has increased in the following years, it could not reach the level in year 1999.

During the decade before 1998 agricultural credit interest rates were at negative levels and annual average was approximately 20 %. In the reforms reel interest rates are kept at positive levels and it reached to 30 % during 2001-2002. Abolition of subsidizing agricultural credit interests resulted in decline in actual loan use. During the reform period, credit portfolio of two crucial agricultural credit institutions, namely Ziraat Bankasi (Agricultural Bank-AB) and Agricultural Credit Cooperatives-ACCs have fallen significantly (Table 3).

Reason of decrease in use of credits can be related to abolition of credit subsidies and thus, rising interest rates. Credit subsidies which have reached 1.6 billion $ in 1999 are abolished completely in 2002[15].

Declining cultivated area and crop-livestock output: Practices within the reform program have resulted in agricultural subsidy cuts, decline in prices of agricultural products and increase in input prices. Parallel to these developments during the period of 1999-2002 agricultural GDP has declined from 27 billion US $ to 22 billion US $. After deductions, the effect of reforms on producers has been annual loss that amounts to 4 billion US $[16]. In the period of 1999-2002, despite 4 % decline in agricultural production decline in agricultural incomes has been 16 % (US $ 2.7 billion). This is a result of rising input prices despite falling agricultural product prices. However, another important reason for fall in production is the decreasing cultivated area. In 2003 overall cultivated area decreased 789 000 hectares (2.9%) in comparison to 1999 (Table 4).

Parallel to shrinking cultivation area there have been decreases in the amount of the agricultural production. The amount of crop production has fallen 6.1 % in the period of 1999-2003.

Table 4: Changes in agricultural land (000 hectares)

	1999	2000	2001	2002	2003	Changes (%)
Field area	23.489	23.033	23,001	23,163	22,540	-4,0
Area sown	18.450	18.207	18,087	18,123	17,563	-4,8
Fallow	5.039	4,826	4,914	5,040	4,991	-9,5
Vegetables gardens	790	793	799	831	818	+3,5
Vineyards	535	535	525	530	530	-0,9
Orchards	1.393	1,418	1425	1435	1500	+7,6
Olive groves	595	600	600	620	625	+5,0
Total	26.802	26,379	26,350	26,579	26,013	-2.9

Resource: SIS,[17].

Table 5: Selected field crop production (Tons)

	1999	2003	(1999-2003) Changes (%)
Total production of field crops	59,346,066	55,742,253	-6,1
Wheat	18,000,000	19,000,000	+6
Barley	7,700,000	8,100,000	+5.5
Maize	2,297,000	2,800,000	+5.2
Lentils	380,000	540,000	+21
Cotton (lint)	791,000	919,531	+16,2
Cotton seed	1,157,583	1,337,065	+15.5
Sugar beet	17,102,326	12,622,934	-26.2
Tobacco	243,468	112,158	-53.9
Sunflower	950,000	800,000	-15.8
Potatoes	6,000,000	5,300,000	-11.7

Resource : SIS,[15].

Table 6: Number of animals milked and milk production

Animals milked (000 head)	1999	2003	Changes (%)
Cow	5538	5040	-8.9
Buffalo cow	80	57	-28.7
Sheep	16.473	12.477	-24.2
Goat	4.086	3.127	-23.4
Milk production (000 tons)			
Cow	8.965	9 514	+6.1
Buffalo cow	75	49	-34.7
Sheep	805	770	-4.3
Goat	237	287	+21.1

Resource: SIS,[15].

Table 7: Animals slaughtered and meat production

Animals slaughtered (000 head)	1999	2003	Changes (%)
Cattle	1119	929	-17.0
Calf	888	662	-25.4
Buffalo	22	8	-63.6
Sheep	3891	1236	-68.2
Lamb	3214	2318	-27.8
Goat and kid	1309	607	-53.6
Meat production (tons)			
Cattle	186.443	160.172	-14.1
Calf	163 238	130 284	-20.2
Buffalo	4 495	1450	-66.8
Sheep	84.420	28002	-66.8
Lamp	48.056	35.004	-27.1
Goat and kid	23.694	11 487	-51.5

Resource: SIS,[15].

Among general crop types the highest fall in product quantities has been in tobacco production with 53.9 % and in sugar beet with 26.2 %. With the Law on Sugar and Tobacco, which is promulgated during reform period cultivation of these products is restricted (Table 5).

Due to the fall in income levels stemming from economic crisis experienced during the reform period has resulted in declining demand for animal products. Declining demand has resulted in a higher fall in animal production in comparison to crop production. Number of animals has decreased 20% during 1999-2003 period. Despite decreasing numbers of milk animals, dairy production did not fall to the same extent and this can be explained by rising productivity (Table 6).

There has been a general decline of 28 % in number of animals slaughtered during 1999-2003 period and biggest decline has been in number of sheep with a 68.2 % fall.

On the other hand decrease in meat production has been much more significant and meat production in general has declined 45 %. For the meat production biggest fall has been for buffalo, sheep and goat meat (Table 7).

Foreign trade of agricultural products: Fall in the amount of agricultural production during the reform period was reflected in the foreign trade as well. In the period of 1999-2003, there has been rise in Turkey's total exports and imports, however share of agricultural products in export and import has declined. In the period of 1999-2003, share of agricultural products in total exports has fallen from 16.7 to 11.1 %, while its share in imports has fallen from 8.3 to 7.6 %. In this period there has been a rise in exportation and importation of agricultural products, yet this rise is minor in comparison with the rise in general exports and imports. As a matter of fact, if data of 1999 is 100 total exports in 2003 were 176.3 while exports of agricultural products were 117.2. In the same manner total imports in 2003 were 169 while total agricultural imports were 153.7. In this period there has been a 17.2 % rise in the quantity of agricultural products while imports of agricultural products have risen 53.7 %. As can be seen in Table 8, Turkey's longstanding net exporter position in agricultural products is lost in this period and it became a net importer (Table 8).

Support policies for Turkey's agricultural sector have resulted in shrinking sector. In the period 1990-1999 annual growth rate in agricultural sector was 1.6 % while in the period of 2000-2003 the sector has shrunk 0.4 %[18]. Turkish government is searching for new alternatives because the implemented policies did not resolve the problems of agricultural sector rather they deteriorated the sector. The reason is that to give more than 70% of total subsidies for agricultural sector in the form of DIS was not enough to shape the sector. It is not expected that the reform program would solve the longstanding problems of Turkish agriculture in short period yet, deterioration in the

Table 8: Foreign trade (Million $)

Years	General export		General import		Export(agricultural products)		Import(agricultural products)	
	Value	Index	Value	Index	Value	Index	Value	Index
1999	26.587	100.0	40.671	100.0	4.442	100.0	3.398	100.0
2000	27.775	104.5	54.503	134.0	3.855	86.8	4.156	122.3
2001	31.334	117.8	41.399	101.7	4.349	98.0	3.079	90.6
2002	36.059	135.6	51.554	126.7	4.052	91.2	3.995	117.5
2003	46.878	176.3	68.734	169.0	5.207	117.2	5.223	153.7

Resource: The Undersecreteriat of Treasury,[17].

Table 9: Support Instruments in the Period 2006-2010

Support Instruments	Share in the Agri. Subsidies (%)
DIS Payments	45
Deficiency Payments	13
Animal husbandry subsidies	12
Rural development supports	10
Compensatory payments	5
Product insurance payments	5
ÇATAK (*) program supports	5
Other supports	5
Total	100

Resource: MARA,[5]. (*)ÇATAK: Agricultural Area Protection for Environmental Purposes

sector have caused criticisms to the reform program itself. For this reasons it became a must to include new instruments in the support institutions. In April 2004 Strategy Document that explains agricultural policies to be implemented in the period of 2006-2010 has been presented to World Bank. Instruments that will be used in the new period's support system and their share in agricultural subsidies are given in Table 9.

As can be seen in Table 9, new components have been included among the subsidy instruments to be used in Turkish agriculture. Although DIS is dominant among the new subsidy instruments to be implemented, difference payment practice, cattle-breeding subsidies and rural development supports will have an important place as well.

CONCLUSION

Structural change and stability program started in 1999 has brought about alteration in agricultural support policies in Turkey. Within the framework of the reform form of subsidizing has been changed and transfers to the producers have decreased one-seventh in 2001 in comparison to the previous year. Among the agricultural supports input and product subsidies are abolished and instead of them direct income support independent from production has become dominant support instrument. This alteration in support instruments has diminished the agricultural sector along with the economic crisis Turkey has experienced. Abolishment of credit subsidies credit use has declined and Turkish farmers who are in financial straits have decreased the use of inputs.

Rise in input prices despite the fall in agricultural product prices and abolishment of input subsidies have resulted in declining input use in Turkish agriculture and the biggest decline in input use has been in the chemical fertilizer use with 25 %.

In the aftermath of the reforms Turkish farmers have given up cultivating 789 000 hectare agricultural land. Fall in input use together with shrinking cultivated area have resulted in fall in the amount of agricultural crops. Total crop production has experienced a 6.1 % fall, while there has also been a fall in animal production and in this period there has been a 45% fall in meat production.

Parallel to these developments in the period of 1999-2002 Agricultural GDP has declined from 27 billion US $ to 22 billion US $. In the same period, fall in agricultural income has been 16 %. In order to compensate the farmers income loss as a result of the policy changes DIS was introduced as a subsidy instrument. However, calculations demonstrate that only 50% of income loss of producers was compensated by DIS. As practiced in Turkey, DIS system is not a policy instrument that can improve existing agricultural structure and that can resolve problems faced in agricultural sector. This subsidy system in the actual form is not in harmony with the socio-economic structure of producers and Turkey's production levels. Since Turkey is a country that could not solve its production problems yet DIS practice should be associated with production and quality. To that purpose DIS can be used in controlling excess products, encouraging shortage products and also as an inducement policy instrument to reach optimum agricultural holding size, which is one of the fundamental targets of Turkish agriculture. Another alternative in support policies is to transform this subsidy form into guarantee price and difference payments, which take place in blue box in accordance with WTO regulations. Premium payments should be also used to increase productivity and quality in production.

Markets should be interfered within the limits of WTO obligations. Within the De-minimis, product or input can be supported yet this product and input should be well selected so that competitive edge of these products shall continue even when support is over.

Turkish economy incorrectly determined priorities and policies is under a vast debt burden and accordingly uses a high proportion of its budgetary incomes for interest payments. In such a budgetary structure, it is impossible to solve problems of the sector with the resources used for agriculture. For that reason public finances shall be disciplined, unregistered economy should be prevented, incomes shall increase while expenditures shall be restricted with a public expenditures reform and more resources shall be allocated to agriculture.

REFERENCES

1. Olhan, E., 2000. Türkiye'de Gübre Sübvansiyon Politikalari-Içel Ili Turunçgil Üreticileri Açisindan Bir Değerlendirme. Türkiye Ziraat Odalari Birliği. Ankara.
2. Yavuz, F., *et al*., 2004. Tarimsal Destekler II: Tarim şurasi. Tarim ve KöyiŞleri Bakanliği Ankara.
3. Abay, C., E. Olhan, Y. Uysal, F. Yavuz and B. Türkekul, 2005. Türkiye'de Tarim Politikalarinda DeğiŞim. Türkiye Ziraat Mühendisliği VI. Teknik Kongresi 3-7 Ocak 2005, Ankara.
4. Eraktan, G., 2001. Tarim Politikasi Temelleri ve Türkiye'de Tarimsal Destekleme Politikasi. Uzel Yayinlari. ISBN975-8437-01-1. Istanbul.
5. MARA, 2005. Ministry of Agriculture and Rural Affairs Data, Ankara.
6. http://www.tugem.gov.tr/tugemweb/dvdvecks.html. 17.11.2005 .
7. Yeni, R. and C.Ö. Ve Dölekoğlu, 2003. Tarimsal destekleme politikasinda Süreçler ve Üretici Transferleri. Tarimsal ekonomi Araştirma Enstitüsü. Ankara.
8. Lundell, M., J. Lampietti, R. Pertev, L. Pohlmeier, H. Akder, E. Ocek and S. Jha, 2004. Turkey A review of the Impact of the Reform of Agricultural Sector Subsidization. The world bank. Usa.
9. Sahinöz, A., A. Özaltan and I. Gökduman, 2005. KüreselleŞme Sürecinde Türkiye Tarimi. Türkiye Ziraat Mühendisliği VI. Teknik Kongresi 3-7 Ocak Ankara.
10. Eraktan, G., C. Abay, B. Miran and E. Olhan, 2004. Türkiye'de Tarimin Teşvikinde Doğrudan Gelir Desteği sistemi ve Sonuçlari. Istanbul Ticaret Odasi Yayon No:2004-53. Istanbul.
11. Ören, M.N. and T. Binici, 2004. Doğrudan Gelir Desteği uygulamasinin GAP Alani Tarimsal Yapi ve Gelirlerine Etkileri. Türkiye VI. Tarim Ekonomisi Kongresi. Gazi Osman PaŞa Üniversitesi. Tokat.
12. www.tugem.gov.tr/tugemweb/destekler.html. 1.12.2005 .
13. Çakmak, E. and H. Akder, 2005. DTÖ ve AB'deki GeliŞmeler IŞiğinda 21. Yüzyilda Türkiye Tarimi. Türk Sanayicileri ve Işadamlari Derneği. Yayin No. TÜSIAD-T/ 2005-06/379. Istanbul.
14. HM, 2005. Hazine MüsteŞarliği Dosyalari. Ankara.
15. http://siteresources.worldbank.org/INTTURKEY/Resources/361616-1121189080247/turkey-ag-complete.pdf 11.11.2005 .
16. SIS, 2004. Turkey's statistical yearbook, State Institute of Statistics, Prime Ministry Republic of Turkey, ISSN 0082-691X.
17. Günaydin, G., VI. Teknik Kongreyi Sunarken. Türkiye Ziraat Mühendisliği VI. Teknik Kongresi Ocak, Ankara, pp: 3-7.
18. The Undersecreteriat of Treasury, 2004. Treasury Statistics 1980-2003.The Undersecreteriat of Treasury General Directorate of Economic Research ISBN Ankara, pp: 975-1019, 3613-3619.
19. Firat, O., 2004. IMF Politikalari Kiskacinda Türk Tarimi. Türkiye Vi. Tarim Ekonomisi Kongresi. Gazi Osman Paşa Üniversitesi. Tokat.