

**Review Of Commodity Trading And Challenges to Viable
Derivatives Contracts In Turkey**

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TÜRKİYE'DE ÜRÜN BORSALARININ YAPISI VE GELİŞTİRİLME OLANAKLARI

Özet

Dünyanın pek çok ülkesinde olduğu gibi Türkiye'de de içinde tarımın da yer aldığı pek çok alanda devletin rolü giderek azalmaktadır. Dünya genelinde ekonomik rasyonalizmin temel alınması yaygınlaştığından, devletler pek çok ekonomik faaliyet alanından çekilmekte ve daha önce destek verdikleri tarım vb sektörlerle daha az kaynak ayırmaktadırlar. Bu nedenle daha önce devlet tarafından sunulan hizmetlerin birçoğu ekonomik faaliyet alanı haline gelmektedir. Tarım sektörünün böyle bir ortamda varlığını sürdürebilmesi, dinamik ve karlı bir faaliyet alanı olmasına bağlı olacaktır. Bunu gerçekleştirebilmek için küresel rekabet gücünü sağlayabilecek şekilde tarım sektöründe yeniden yapılanmaya gidilmesi gerekmektedir. AB üyeliği adaylığı çerçevesinde politikaların uyumlaştırılması, IMF gözetiminde enflasyon ve kamu borçlarının azaltılması, Dünya Bankası gözetiminde sürdürülebilir kalkınmanın sağlanması konusunda yapılan çalışmalar sonucunda Türkiye'de birçok sektörde olduğu gibi tarım ve tarımsal piyasalar konusunda da yeniden yapılanma gündeme gelmiştir. Tarım ürünleri piyasaları Türkiye ekonomisi içinde önemli bir yer tutmaktadır. Serbest piyasa koşullarında rekabetçi bir ortamda tarım ürünleri piyasalarını para ve sermaye piyasalarıyla bütünleşen piyasaların kurumsallaşmasını sağlayan ve Türkiye'de vadeli işlemler piyasaları ve lisanslı depoculuk uygulamalarının temelini oluşturan ticaret borsalarının önemi oldukça fazladır. Bu çalışmada Türkiye'de tarım ürünleri pazarlama sistemi ve Ticaret Borsalarının tarımsal pazarlama sistemindeki rolü ile vadeli işlemler borsası ve lisanslı depoculuk uygulamalarına geçişte taşıdığı önem üzerinde durulmuş, mevcut sorunları ve çözüm önerileri tartışılmıştır.

Abstract

As in many other parts of the world, in Turkey as well the role of the state is diminishing in many areas and sectors including agriculture. Since economic rationalization is more widely adopted throughout the world, states are withdrawing from many areas of activity or allocating fewer resources to some areas, like agriculture, which they once used to support. Hence, many services previously delivered by the state are now turning into fields of economic activity. If the sector of agriculture is to sustain itself under these circumstances, it has to turn into a dynamic and profitable field of activity. This, in turn, requires restructuring in the sector so as to maintain its global competitive power. As a result of initiatives for the alignment of policies in the context of EU accession, bringing down inflation and public debt stock under the observance of IMF and for sustainable development under the observance of the World Bank, restructuring has become the agenda of many sectors including agriculture and agricultural markets. Markets for agricultural goods have their important place in Turkish economy. Also important is the place and role of commodity exchanges which, in free market conditions and in a competitive environment, ensures the institutionalization of markets that bring agricultural markets together with money and capital markets and which lays the basis of futures markets and licensed warehousing. This study deals with the role of commodity exchanges in agricultural marketing in Turkey and its importance in transition to futures markets and licensed warehousing practices together with discussions on existing problems and suggestions for solution.

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1. INTRODUCTION

Under the impact of globalization, the structure of both agriculture and trade in agricultural goods are changing rapidly worldwide. Besides globalization, this change is guided by consumer demand, gradually increasing market shares of international companies and implications of newly developed technologies. Also increasing under the impact of change is competition among producers and pressures over small farming enterprises. Traditionally, farmers adopt production based approaches to their engagement and target selling their goods in markets at reasonable prices. This production based approach has often led farmers produce without taking due account of consumer demand. In our present day, however, in the face of increased importance attached to food safety and consumer preferences, a market based approach has to be adopted instead. Consumers in diverse countries make their choices over a wide range of globally produced goods. Most important criteria influencing consumer preference include quality assurance, product standards, price, “consumer friendliness”, availability throughout the year and production patterns that take account of environmental concerns. Hence, both producers and industrialists who generate added value by processing agricultural goods need to perceive consumer demands correctly.

As in many other parts of the world, in Turkey too the role of the state is diminishing in many areas and sectors including agriculture. Since economic rationalization is more widely adopted throughout the world, states are withdrawing from many areas of activity or allocating fewer resources to some areas, like agriculture, which they once used to support. Hence, many services previously delivered by the state are now turning into fields of economic activity. If the sector of agriculture is to sustain itself under these circumstances, it has to turn into a dynamic and profitable field of activity. This, in turn, requires restructuring in the sector so as to maintain its global competitive power.

As a result of initiatives for the alignment of policies in the context of EU accession, bringing down inflation and public debt stock under the observance of IMF and for sustainable development under the observance of the World Bank, restructuring has become the agenda of many sectors including agriculture and agricultural markets. In this context, the model of price support which had hitherto placed heavy burden on public budget was abandoned. The target now is to introduce commodity exchanges to ensure that agricultural goods are traded at prices formed on free market conditions and to develop licensed storage activities to reduce costs of keeping stocks which the state has to cover as a result of support purchases (Anonymous, 2004b)

Markets for agricultural goods have their important place in Turkish economy. This is natural since in the process of economic development which gives weight to industrialization the sector of agriculture is still significant with its share of 10.3% in GDP and 29.5% in total employment. Also important is the place and role of commodity exchanges which, in free market conditions and in a competitive environment, ensures the institutionalization of markets that bring agricultural markets together with money and capital markets and which lays the basis of futures markets and licensed warehousing.

This study deals with the role of commodity exchanges in agricultural marketing in Turkey and its importance in transition to futures markets and licensed warehousing practices together with discussions on existing problems and suggestions for solution.

2. BACKGROUND

The background of commodity exchanges in the country can be traced back to the 19th century. The first reference to commodity exchanges can be found in Regulations titled “*Meclis-i Ziraat ve Ticaret*” which was a part of the Reformation Act (*Islahat Fermanı*) of 1856. Later, in 1887, Chambers of Commerce, Industry and Agriculture were founded and these three chambers were merged in 1887 as “İstanbul Chamber of Commerce, Industry and Agriculture” (Erdal, 2005). The Regulations envisaged the establishment of commodity exchanges for trade in agricultural goods, industrial products and securities.

The “General Regulations on Stock Exchanges” was issued on 15 April 1886. This document introduced first legal arrangements relating to the operation of commodity exchanges. In addition to securities and foreign exchange transactions, the Regulations also include provisions on commodity exchanges (Akova, 1995).

The first commodity exchange in Turkey was that in İzmir launched in 1891. It was followed by commodity exchanges in Konya (1912), Adana (1913), Antalya (1920), Edirne and Bursa (1924) and Istanbul (1925).

After the enactment of legislation no. 655 on “Chambers of Commerce and Industry” the number of commodity exchanges increased rapidly. The Legislation no. 4355 on “Chambers of Commerce, Industry and Artisans and Tradesmen and Commodity Exchanges” taking effect on 11 January 1943 made it possible for commodity exchanges existing and operating as branches of chambers of commerce and industry to restructure as separate legal entities (Tuncer, 1994).

The law no. 7457 on the “Union of Chambers and Stock Exchanges of Turkey” taking effect upon its publication in the Official Gazette no 7457, dated 15 March 1950, introduced some new arrangements in commodity exchanges. The most recent arrangements in this field took place under the law no. 5174 enacted on 18 May 2004. The law no. 5590 was repealed upon the taking effect of this new law.

With new arrangements introduced during the Republic the number of trade unions has reached 60 as of 1990. In 1990, the Ministry of Finance issued the circular no. 164 on Income Tax which mandated stock exchanges to collect income taxes from producers or conduct relevant inspections in this field. As a result, the number of commodity exchanges further increased and reached 113 in 2005 (Yılmaz and Mirahmetoğlu, 2007). (Figure 1)

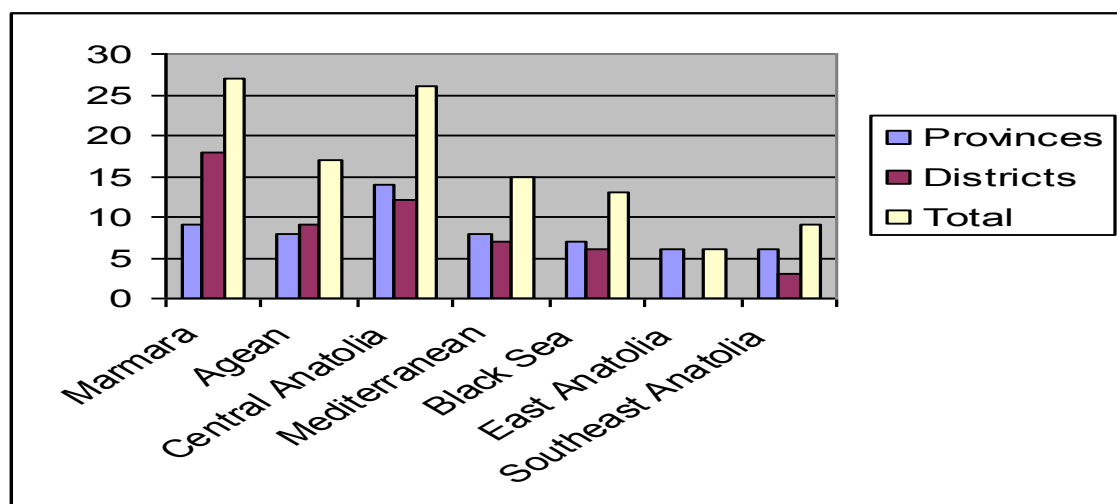


Figure 1: Distribution of Commodity Exchanges by Regions (Anonymous, 2004c)

3. AGRICULTURAL MARKETING SYSTEM IN TURKEY

The farm holdings in Turkey consist of small family holdings. Agricultural activities are carried out by farmers and family members, and during labor demand peak seasons farmers hire labours from outside. The average land size of the farm holdings is small and their lands are considerably fragmented. Generally the farm holdings’ need for operating capital is huge. Conventional production is widely performed on the farms. In most of the farm holdings, input use and agricultural technology level is insufficient and factor efficiency is low. Farm holdings are mostly small holdings whose marketing facilities are limited.

Thanks to the convenient climatic and soil conditions, many crops are grown in Turkey. As well as the yield and quality increase, marketing the crops in line with the consumer demand is obligatory. The market supply of agricultural crops shows fluctuations considerably during the course of the year as well as from year to year. While some of agricultural crops are consumed directly, others are consumed as processed crop. Increase in the income and educational level of consumers have also

increased the demand for processed agricultural crops. The processing of agricultural crops has led to the extension of the usage period and marketing period at the same time. Today especially global marketing mentality is dominant, the focus point is meeting the consumer needs. The gradual rise in consciousness about food quality and safety is supported by legal regulations increased competitiveness. Therefore it is important that decisions concerning crop, price, distribution and promotion, which are the elements of marketing mix, be taken and implemented at the proper time. Farmer cannot get higher income without paying attention the quality of the crop. A proper marketing system requires marketing research, before the agricultural production decision and marketing research can be conducted within a developed vertically organized marketing system.

The marketing rate of agricultural products in Turkey varies from crop to crop. The marketing rates of the crops used as human food and animal feed are relatively low in comparison with the ones used as industrial raw materials. After production, agricultural crops generally reach to the consumer through various marketing channels. In these channels there are numbers of commission agents, traders, wholesalers, retails, exporters, etc. Depending on the quality of crops, distance between production and consumption areas, the level of the process technique and the level of development of the marketing organization, length of the marketing channels, type and number of intermediaries vary.

The distorted nature and structuring of agriculture in Turkey has its bearings on the marketing system as well. The outcome is a marketing system where there are too many intermediaries, long channels of marketing, high profit margins and poor marketing services. In this marketing system where product quality is not reflected in prices, both producers and consumers suffer. Moreover there are significant problems which derive from lack of information or sufficient infrastructure in such fields as standardization, packaging, labeling and quality management systems when marketable agricultural goods are concerned.

Table 1 shows the marketing system in effect for major product groups of economic importance and institutions playing roles in this system. The marketing system varies with respect to product characteristics. The leading institutions in marketing channels include the public and private sectors, cooperatives and commodity exchanges. As can be seen in the table commodity exchanges play an important role in the marketing of such agricultural products as cereals, legumes, dry and hard crust fruits, cotton, sunflower and live animals. About 20% of the supply of agricultural goods is transacted in commodity exchanges (Emeksiz et al,2005).Wheat and cotton lead the list of transacted goods.

Table 1: Marketing System of Agricultural Crops (Emeksiz et al, 2005)

	Cereals	Legumes	Fresh Fruit - Vegetable	Dry Fruit and Nuts	Industrial Crops					Animal products		
					Cotton	Sugar beet	Sunflower	Tobacco	Tea	Livestock	Meat and Meat Products	Milk and Dairy Products
Public	X					X		X	X		X	
Private sector	X	X	X	X	X		X	X	X	X	X	X
Cooperatives and Unions	X	X		X	X	X	X		X		X	X
Commodity exchanges	X	X		X	X		X			X		
Collectors and wholesalers		X	X							X		X
Wholesale Markets		X	X									

3.1. Cereals

In Turkey, cereals production takes place in about 50% of area sown and in 85% of all agricultural enterprises (Anonymous, 2005a). Cereals production, the major source of human nutrition and animal feeding is also the main activity providing livelihood to a significant number of people. Besides firms from the public and private sector, cereals are marketed also by cooperatives, tradesmen and commodity exchanges. The Turkish Grain Board (TMO) is the leading public agency having a significant share in the marketing of cereals. The main aim of Turkish Grain Board's purchase is to prevent declining of wheat price and provision of guaranteed price.

The other marketing channel in Turkey is commodity exchanges. Commodity exchanges have recently started to play an important role in cereals marketing. Especially in exchanges with laboratory facilities, product prices are set in line with the quality of the product concerned. Wheat which is transacted in commodity exchanges constitutes 6 % of the production and 9 % of the marketing amount (Anonymous, 2004b). TMO plays a stabilizing role with its purchases in commodity exchanges where spot crops are sold. Apart from commodity exchanges, cereals are also transacted, though in small amounts yet, in futures markets as well. For example red wheat for bread is among products transacted in Futures and Option Market started in İzmir in 2005. Apart from TMO and commodity exchanges, cereals are marketed by traders and private sector firms. The most important point faced is the formation of cereal prices and the declaration of TMO's purchase prices.

3.2. Legumes

Cereals is the most important agricultural crops, legumes follow them. As can be seen in Table 1, private sector, cooperatives, commodity exchange, collector and wholesaler and wholesaler markets are the actors involved in marketing channels for legumes. The amount of legumes transacted in commodity exchanges has recently been increasing along with cereals. The farmers generally sell directly to the consumer or to the wholesalers. Legumes are reached to the exporters or retailers by collector intermediaries or collectors; sometimes cooperatives can also take place in the marketing chain. Cooperatives both can sell to exporters and also export directly. However, the activities of the cooperatives in the marketing of legumes have considerably decreased recently.

3.3. Fruits and Vegetables

Production of fresh fruits and vegetables is of great importance as essential elements of healthy and balanced nutrition. Yet, market oriented production in the absence of production planning leads to the emergence of a marketing problem. With her share of 2.6%, Turkey ranks 6th after China, EU countries, India, the US and Brazil in world fresh fruit and vegetable production (Anonymous, 2008a). In Turkey, there is no effective system in marketing fresh fruit and vegetables. Marketing of these products is governed by the Law Decree no. 552 on the Regulation of Fresh Fruit and Vegetable Trade and Wholesale Markets. However, upon the identification of some loopholes in implementation, the legislation mentioned above was amended in 1998 and 2007. According to this legislation fresh fruits and vegetables are marketed through wholesale markets in Turkey. For the retail sale of fresh fruit and vegetable, purchase should be realized through wholesale markets. In this way, registration of commerce of fresh fruit and vegetable is required. Various expenses imposed on producers in wholesale markets push prices up in a chain to swell the ultimate consumer prices of products. (Anonymous, 2008a).

Processing industry also takes place in the marketing of fruit and vegetable. The processing industry provides their raw materials by either collectors or contract farming.

Starting in the 1980s, market oriented organic farming has since then developed and expanded rapidly. The organic fruit and vegetable have a different marketing system. Production is realized by the authorized firms and crops are processed, packed and exported by the firms. Small amount of organic crops are marketed in the supermarkets or in shops. A large amount of these crops are offered to foreign markets, another amount is marketed directly to consumers and the rest comes up in the mixture of final products.

The marketing of agricultural crops such as hazelnut, pistachio and dried fruit (e.g. dried fig, dried raisin, and dried apricot) has a different marketing structure than fresh fruit. TARIŞ and traders market dried fig. The figs produced are marketed in domestic market as a fresh and also are marketed in domestic and foreign markets as dried fig. Within the marketing channel of sultana, traders have the biggest share. This is followed by the TARIŞ purchase. Sultana is transacted in commodity exchange. The commodity exchange' sales are fulfilled mostly by traders. In the marketing of pistachio, Güneydoğu Birlik (Southeast Agricultural Sales Cooperatives) and traders take place actively. In the marketing of dried apricots, The Union of Apricot Agricultural Sales Cooperatives is influential. Some of the dried apricot purchase is also realized by traders (Emeksiz et al., 2005).

Hazelnut has taken place within the scope of supportive purchase for 35 years except for the last few years. Reasons for the inclusion of hazelnut into the scope of support purchase can be summarized as preventing the price to decline below a certain level in the domestic and the foreign market, increasing hazelnut export value and protecting the growers. Fiskobirlik Hazelnut Agricultural Sales Cooperatives) was appointed for the specified support purchase. With a new regulation, hazelnut purchase task has been assigned to TMO since 2006. By purchasing 162,000 tons of hazelnut from markets in the harvest and export season of 2006/2007, the TMO tried to compensate for the negative effects of excess supply on price stability. (Anonymous, 2008b). Traders also take place in the channel of hazelnut marketing.

3.4. Industrial Crops

Cotton, sunflower, sugar beet and tobacco can be listed as the important industrial crops. The marketing stage of these crops show differences, generally cooperatives and state economic enterprises take place in the marketing channels.

Major actors in cotton marketing are agricultural trading cooperatives, traders and commodity exchanges. Cooperatives such as ANTBİRLİK (Antalya Agricultural Sales Cooperatives), ÇUKOBİRLİK (Çukurova Agricultural Sales Cooperatives) and TARIŞ have dominant roles in cotton marketing as biggest purchasers influencing prices. Half of the cotton production is transacted in the commodity exchanges. A large portion of the cotton production is purchased by the private sector. Premium system is implemented in cotton and the Çukurova and İzmir Commodity Exchanges are considerably influential in formation of cotton prices(Anonymous,2008c).

There are only two institutions involved in sugar beet marketing in Turkey. One of these is State Sugar Company and the other one is PANKOBİRLİK (Sugar Beet Growers Cooperatives).

Farmers sell their sunflower to unions, traders during the purchasing season, or store and sell to traders or oil plants later. Trakyabirlik (Thrace Agricultural Sales Cooperatives) buys almost half of their production and the rest is transacted in Commodity Exchanges or bought by traders or oil plants. Sunflower is processed mainly by Karadeniz Birlik (Black Sea Agricultural Sales Cooperatives) in the region of Black Sea and by traders in the other regions(Anonymous,2004).

Ranking 6th in world tobacco production, Turkey has about 5,000 villages engaged in cotton farming and 40% of these villages are located in the Aegean Region. About 215,000 families mainly subsist on tobacco farming. Population engaged in tobacco farming and processing reaches 1.5 million when family members are also included. Tobacco farming contributes significantly to national economy in terms of employment and export revenues (Özkul and Sarı, 2008).Tobacco production was marketed by a state monopoly called TEKEL (Tobacco, Tobacco Products, Salt and Alcohol Enterprises) and traders until 2002. Till that year, the trader had marketed the tobacco to private domestic cigarette plants or sold abroad. And TEKEL had both fulfilled support purchase task and processed tobacco its own plants and exported as well. However, within the framework of the law no. 4733 which put into force in 2002, the tobacco is marketed by contract or public auction.

Turkey ranks 7th in the world in terms of the size of land under tea culture and 5th in terms of dry tea leaf production. Turkey jumps to 4th rank when it comes to average annual per capita tea consumption. The marketing of tea is realized by ÇAY-KUR (General Directorate of Tea Establishments) and private sector firms. At present there are 274 ÇAY-KUR and private tea processing facilities with total capacity of 15,416 tons/day (Anonymous, 2009).

3.5. Livestock and Animal Products

According to the Agricultural Census of 2001, 2.63% of farm holdings in Turkey are engaged exclusively in livestock production. Crop and livestock production take place in 67.43% of all farm holdings together. The share of livestock production in total agricultural revenues is 57% in the UK, 46.9% in Germany, 47.4% in Poland, 38.1% in France, 41.9% in EU-25 and 31% in Turkey (Anonymous, 2008c). In Turkey livestock are marketed in fairs, municipal markets and animal exchanges. Breeders and collectors buy livestock from farm holdings in order to market them in local animal markets, fairs and livestock commodity exchange.

Because Livestock and red meat trade is intermingled, the system seen in livestock marketing (middlemen, collectors and livestock commodity exchange, etc.) is same as the red meat marketing. There is a great number intermediary in red meat marketing. High number of in middlemen in the marketing chain has the effect of pushing prices up. This situation causes producer-consumer price gap to widen. In the existing marketing system, no price and purchasing guarantee can be given to producers and, furthermore, there are bottlenecks in supplying raw materials regularly to the meat processing industry.

While poultry production practiced by small farm holdings in the 1970s, it was undertaken by integrated facilities in the 1980s. Firms in this sector made considerable investment in the 1990s to catch up with relevant world standards. Integrated companies producing products on-contract basis market them through their own marketing networks.

Dairy plants make up the most important actor in the marketing of milk and milk products. Of total milk production, 11% is marketed through street vendors, 35% is used by farms and 54% is used as input in food industry. While 19% of industrial milk produce is processed by modern enterprises, it is assumed that 35% is processed by small scale dairy plants called “*mandıra*.” (Anonymous, 2008c). The National Milk Council established in 2009 with the active involvement of the Union of Milk, Meat and Food Producers and Industrialists (SETBİR) has the objective of promoting milk farming, ensuring high quality milk production and transforming milk and dairy products industry into a modern structure.

Farmers and bee-keepers either offer their egg and honey directly to the consumer in farmyard or sell to exporters and collectors. In terms of egg, cooperatives are continuing their activities successfully. A small number of cooperatives are engaged in honey marketing.

4. ROLE OF COMMODITY EXCHANGES IN AGRICULTURAL MARKETING SYSTEM

Instability of both prices and incomes is the main characteristic of the market in agricultural goods. Price instability has its causes relating to both supply and demand. Since agriculture is climate-dependent as a sector, prices maintain a certain level during harvest seasons, but then rise until the next harvest. In goods that can be stored these price fluctuations may be contained through to a limited extent whereas in others no such opportunity exists.

State interference in the formation of prices of agricultural goods prevents pricing in free market conditions. Thus prices remain above world prices. In recent years it became apparent that radical measures need to be taken in order to eliminate problems deriving from this interference and ensure that prices are formed in more rational processes more or less confirming to international markets. Consequently, agricultural products covered by state purchase scheme were limited to cereals, tobacco, and sugar beet and hazel nut. Also, the practice of financing supporting agencies directly or indirectly by the Central Bank was abandoned. Instead, policies were adopted to ensure that more goods are subject to commodity exchange transactions and drive prices to more rational levels by promoting the participation of the private sector and farmers' unions to markets. It is therefore assumed that agricultural goods would have their real worth in a competitive environment and quality would be encouraged thanks to standards observed in commodity exchanges.

Commodity exchanges have important roles to play in the economic, social, cultural and political life of any given country. In its broadest sense, commodity exchanges are meant to help the establishment and institutionalization of the system of free competition in industry; support decisions and practices to this end; take the record of marketable agricultural goods and to provide enlightening and transparent services to social environments by purporting their views and opinions when necessary.

4.1. Establishment of Commodity Exchanges

Commodity exchanges are establishments of corporate identity established to engage in the trade of goods including setting, registering and announcing prices in line with the provisions of the Law no. 5174 (Anonymous, 2005b). Commodity exchanges have their important functions including setting market prices, ensuring price stability, reducing uncertainties in markets, dispersing and ensuring the sharing of risks and providing data necessary for macroeconomic planning.

Commodity exchanges are established in provinces where they are needed by the Ministry upon the positive recommendation of the Union. Any commodity exchange works within the boundaries of the province where it is established. However, this domain may be expanded by the Executive Board of the Union so as to cover neighboring provinces temporarily until the establishment of commodity exchanges in these provinces.

Those who are engaged in trading goods subject to commodity exchanges have to register with the exchange of the province where they are active.

Functions:

- a) Arranging for and ensuring the registry of goods subject to trade,
- b) Setting and announcing daily prices of goods as they emerge in the market,
- c) Effecting overall arrangements to govern transactions of buying and selling,
- d) Observing developments in domestic and international markets and guiding their members in pricing, electronic trade and internet networks,
- e) Arranging for and endorsing relevant documents required for transactions,
- f) Establishing or joining the establishment of laboratories and technical offices in charge of types and qualifications of goods,
- g) Identifying traditions, customs and tendencies towards commodity exchanges in respective regions and submitting necessary arrangements to the approval of the Ministry in charge,
- h) Submitting proposals and making applications to relevant authorities in issues related to commodity exchange activities; bringing law suits on their own capacity or on behalf of members when necessary,
- i) Following and, when necessary, reporting to authorities those decisions, agreements or actions which may distort competition,
- j) Performing those functions which originally rest with governmental ministries and other governmental agencies and delegated to commodity exchanges as specified in relevant legislation,
- k) Issuing necessary documents needed by their members and delivering related services,
- l) Evaluating applications for the organization of domestic fairs and bringing proposals to this end to the Union,
- m) Performing other duties and assignments assigned by the Union and the Ministry as specified in relevant legislation (Anonymous, 2005).

Revenues of Commodity Exchanges:

- a) Registration fees,
- b) Annual membership dues,
- c) Transaction registry fee,
- d) Fees charged for services delivered,
- e) Fees for documents issued,
- f) Revenues from publications,
- g) Donations and other assistance,
- h) Fines applied,
- i) Rental from buildings, returns to securities, commercial profits and foreign exchange revenues,
- j) Other.

Among these sources of revenue, registration fees make up from 50% to 70% of those exchanges which have their labs and sales halls and 70% to 90% of others which do not have these facilities (Yılmaz and Mirahmetoğlu, 2007).

Advantages of commodity exchanges as an important institution of liberal economies can be outlined as follows:

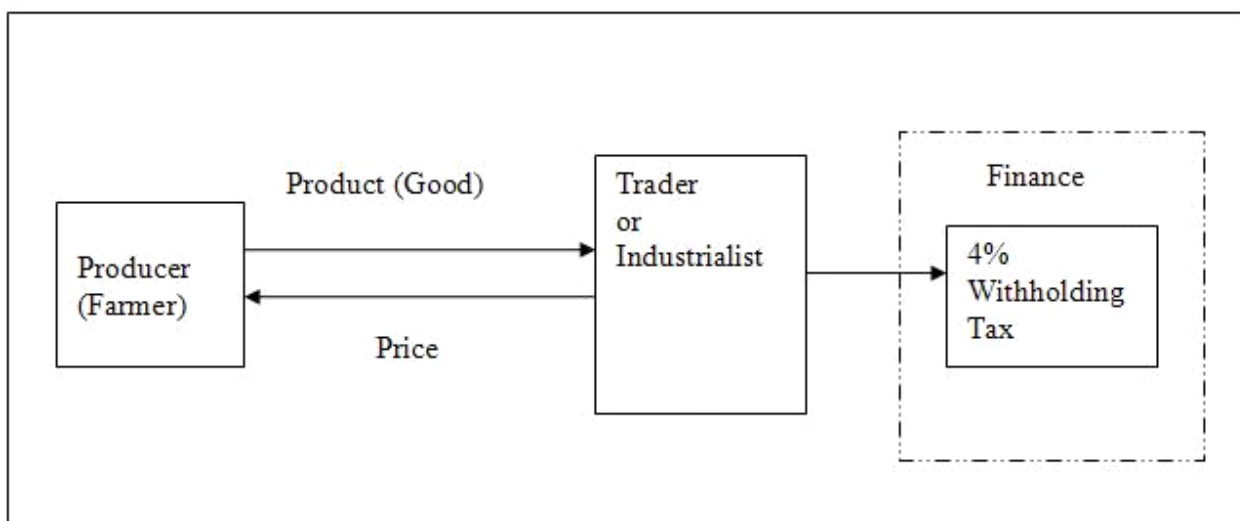
- As long as farmers' products are paid fair prices, the burden that falls upon the State for support and subsidy policies is mitigated.
- Upon the registry of trade over crops and animals the domain of informal economy gets narrower and hence loses in withholding, value added and other taxes are reduced.
- Commodity exchanges are functional in stabilising fluctuations that are projected earlier.
- Traders can avoid risk of failing to comply with committed amount and date of delivery by engaging in on-term purchases in the commodity exchange.
- By engaging in similar contracts of purchase, exporters in such fields as foodstuffs and textiles enjoy the opportunity of complying with their export commitments in terms of amount, quality and timing.
- By compensating at least partially price differentials in terms of time and location, commodity exchanges contribute to fair and real price setting especially in widely produced and consumed items.
- Commodity exchanges constitute a market in which producers supply their products to multiple potential buyers and thus enable them to get rational prices for their products.
- Only registered members can be active and conduct transactions in commodity exchanges. Agricultural producers are the only exception to this rule. Hence, agricultural producers make up a significant part of each commodity exchange.
- Disputes between members are settled by arbitration boards.

4.2. Working of Commodity Exchanges

The “Project on the Promotion of Commodity Exchanges” was launched in 1999 in order to rearrange existing exchanges in cooperation with the FAO and World Bank and to create specialized commodity exchanges so as to put necessary financial and physical infrastructure in place. Wheat and cotton were selected as pilot crops. The project covered the local commodity exchanges of Konya, Eskişehir, Polatlı and Edirne for wheat and İzmir, Adana and Şanlıurfa exchanges for cotton. Completed in 2003, this project laid the basis of developing specialised commodity markets and licensed warehousing. Among pilot commodity exchanges, Konya, Polatlı, Eskişehir and Edirne were provided labs, computer hardware and software, buildings and infrastructure. As a result of these investments, agricultural goods can now be quality checked and classified in labs and relevant transactions take place at public places also supported by computed backed systems.

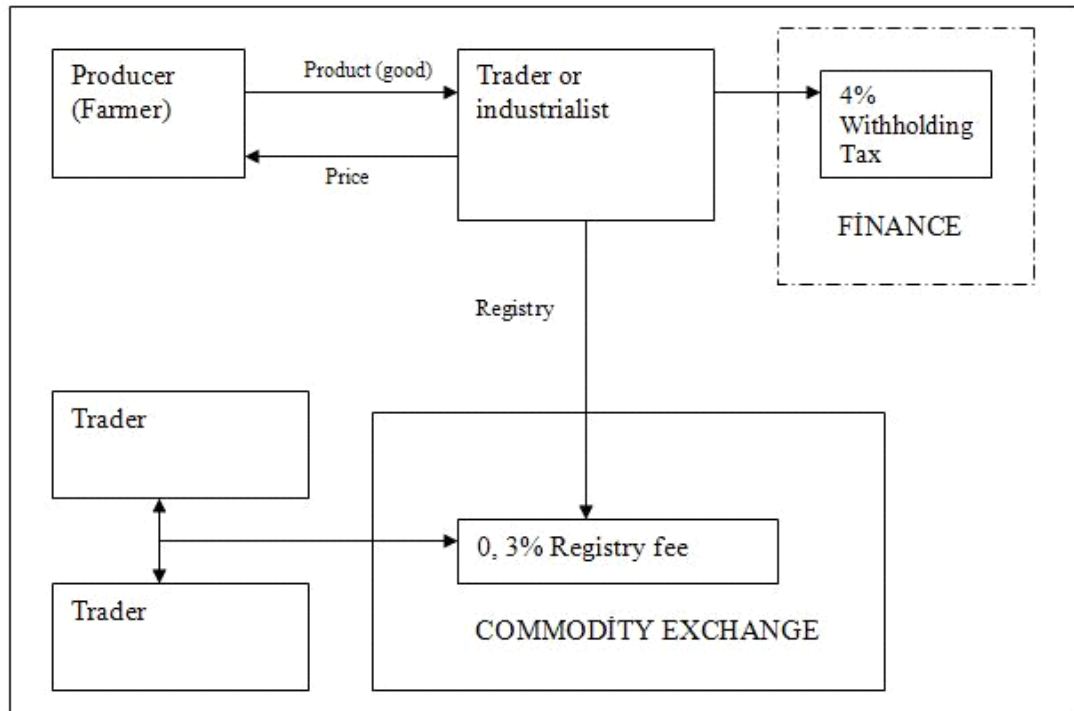
When agricultural goods are traded without any transaction in commodity exchanges, a withdrawing tax of 4% is payable to the Ministry of Finance. These are cases when traders buy goods directly from farmers (Figure 2).

Figure 2: Trade out of commodity exchange (Demirbilek et al, 2000)



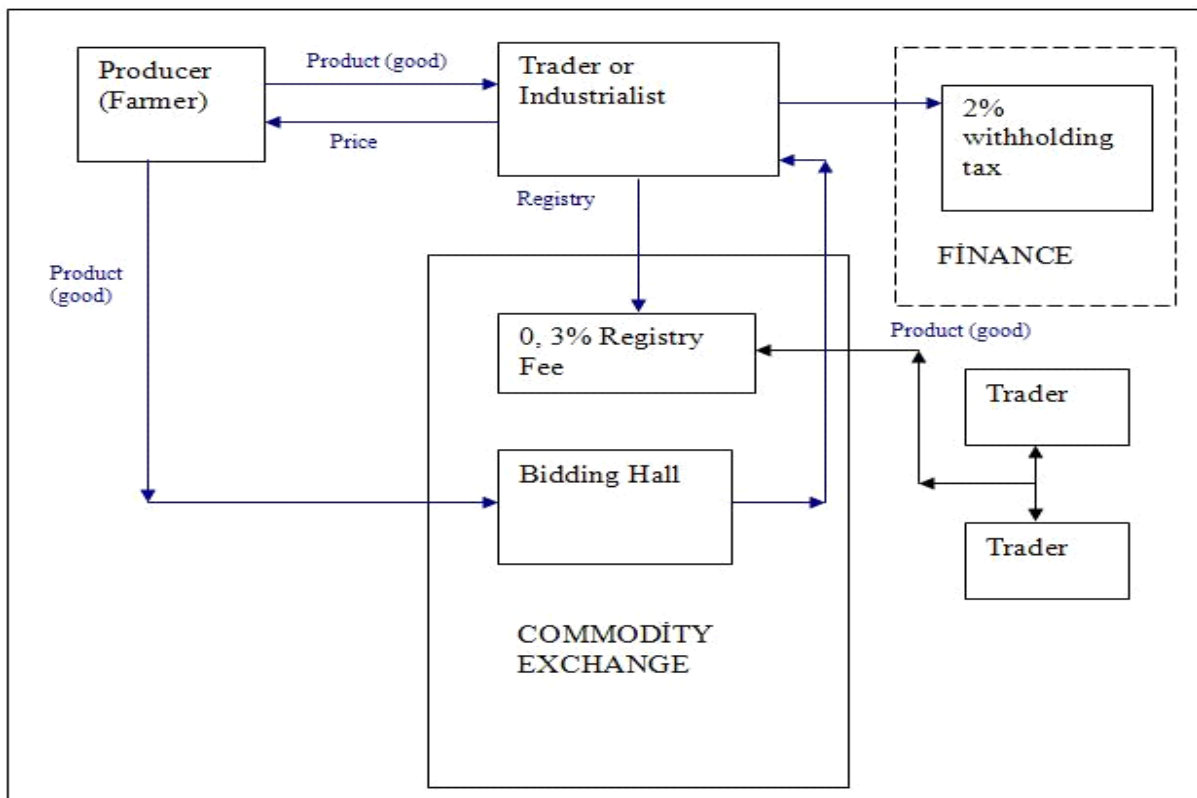
Under article 46 of the Law no. 5174, goods that go through transaction in commodity exchange have to be registered. In case transaction takes place at points specified by commodity exchanges this registration is made on the very same day; as to goods that are allowed to be traded in channels other than exchanges this registration has to be made within 30 days at most (Anonymous, 2005b). In the latter case, trader buying goods directly from producers calls at the exchange only for registering. A given commodity exchange charges a registration fee of 0.01 to 0.03% of the amount specified in invoice. When traders register their transactions in due time, their profit gains tax exemption. Of 113 commodity exchanges presently active in Turkey at present, many are engaged only in this registration procedure. Significant amount of tax loss occurs since 80% of goods bypass commodity exchanges and registration. In order to combat informal (unregistered) transactions and encourage transactions related to agricultural products through commodity exchanges where prices are settled in free market conditions, the Council of Ministers issued the decision no. 93/5148 published in the Official Gazette no. 21805, dated 31 December 1993. This decision stated, to be effective as of 1 January 1994 that tax deductions would be up to 50% in case transactions were carried out with registry through commodity exchanges. Hence a withholding tax by 2% is applied to goods subject to transaction in commodity exchanges.

Figure 3: Case where Only Registration is made in Commodity Exchange (Demirbilek et al, 2000)



In commodity exchanges where there is sales hall, traders/industrialists examine samples provided by providers, offer a price and prices are set this way. In this system, samples taken from producers are exhibited to trades ready in the hall; then products are sold to the highest bidder and registered (Figure.4). In these exchanges where there are spot transactions, the most important factor affecting prices is demand which is in turn shaped by product quality. However, since there is no lab or classification scheme in determining the quality of any product, the process goes on according to personal assessments of traders/industrialists and related data is obtained afterwards by grouping goods sold out basing on these subjective assessments of buyers.

Figure 4: Case where Open Transactions are made in Commodity Exchange (Demirbilek et al, 2000)



Advantages of the system:

- Price is set as a result of competition by more than one buyer,
- Producers can make estimations about the worth of their goods by looking at sales figures,
- No serious problem is experienced in the collection of payments,
- No tax loss is incurred since traders cannot hide the profit margin which remains between buying and selling prices,
- Goods can be classified by type (i.e., hard, semi-hard in wheat),
- Commodity exchanges are functional in making transactions registered.

Disadvantages of the system:

- Prices may remain the value of goods when there is not enough buyers in the hall,
- Since quality is not identified on the basis of concrete data, price setting may not be based on objective criteria reflecting quality,
- Since there is no classification by quality, statistical information relating to quality issues is also absent, which in turn prevents standardization,
- Since statistical information is not based on laboratory tests, there are loopholes in both agricultural practices during the growing phase (i.e. application of pesticides) and in import policies responding to the needs of the industry (i.e. importation of high quality of wheat),
- It is difficult to lay the ground for future developments (i.e. commodity exchange's move towards forward, optional and future transactions as a result of such factors as farmers' shift

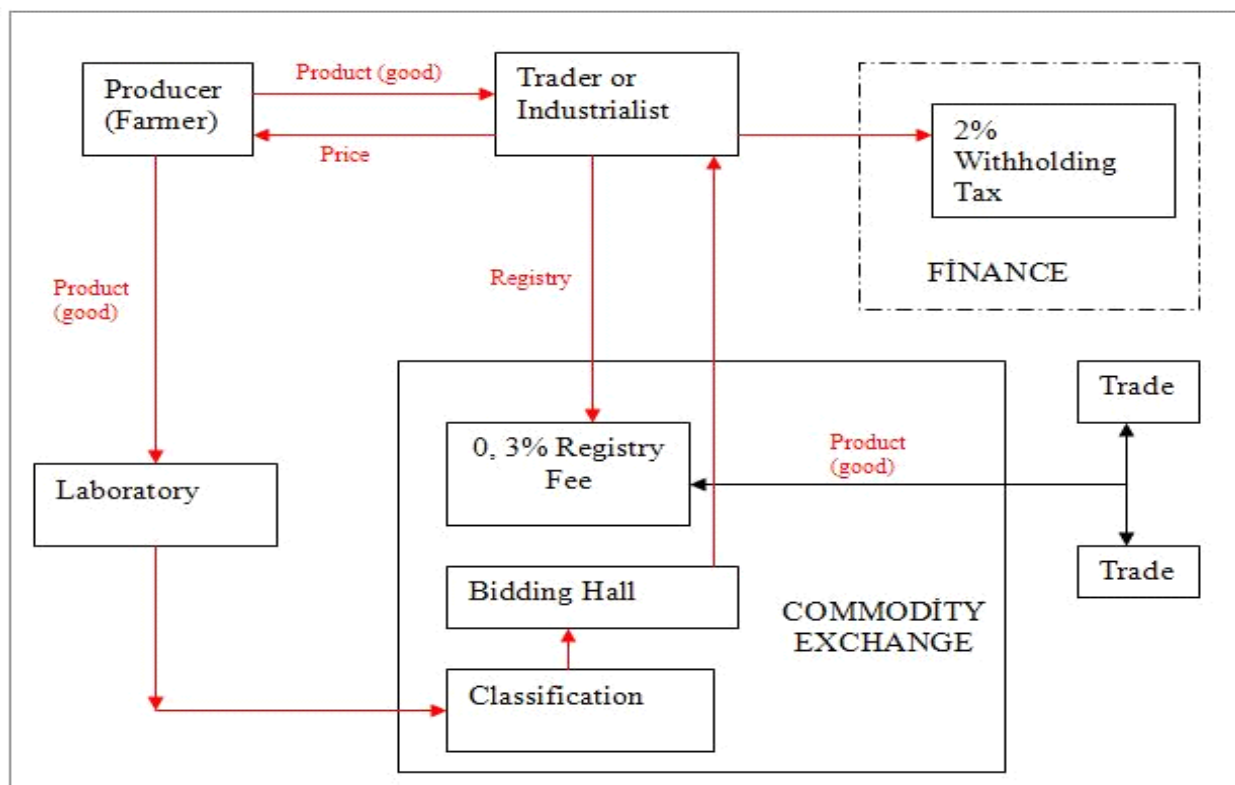
from one type of seed to another and advancement in farming techniques, etc.) (Demirbilek et al, 2000)

The commodity exchanges of Konya, Polatlı, Eskişehir and Edirne who invested in laboratories with financial assistance they received under the project for Promoting Commodity Exchanges are able to present products to open trade after having them tested in laboratories for their characteristics (Figure.5). In these exchanges all characteristics of products for sale can be examined in detail in computers and resulting database is presented to the use of decision makers and researchers.

These Commodity Exchanges further classify marketable products by quality and standardizes goods to be traded. Such a practice lays the ground including relevant database for forwarding, optioning and futures transactions as well as licensed warehousing in near future. Indeed this standardisation will be the basis of relevant transactions and warehousing; identifying what type of product is transacted on; determining the value of product on the basis of these transactions and settling disputes which may arise. Other advantages of this practice include:

- Quality wise classification of all traded goods on the basis of laboratory tests,
- Exposing the technology in those areas where quality crops are grown,
- Assessing any harm caused by pests in a given region and warning relevant authorities accordingly,
- Possibility for those using goods as raw materials to select goods in their preference without being misled by plain outer observance,
- Possibility for producers to compare prices with the outcomes of lab tests,
- Possibility for traders to stock their purchases by quality criteria, offer industrialists different choices in terms of price and present lab test outcomes as proof of the quality of their goods.

Figure 5: Outcomes of Quality Analyses Conducted by Commodity Exchange Labs (Demirbilek et al, 2000)



4.3. Structural and Legislative Problems Related to Commodity Exchanges:

At present there is need to analyze and compare laws and regulations which provide the framework for the establishment and operation of commodity exchanges in western countries and the Law no. 5174, relevant regulations and other legislation which have implications on the same in Turkey. While focusing on legislation in effect in western countries, the structure of commodity exchanges in these countries should also be examined and its main features should be adopted to promote commodity exchanges in Turkey.

The following are the first steps to be taken: Gathering goods to be transacted in commodity exchanges in categories that can be distinguished in terms of quality; use of statistical outcomes at stages of production and trading; creation of necessary quality classification systems for goods to be stored in their respective categories and building consensus among commodity exchanges on laboratories so as to make the system work.

Furthermore, agricultural policies need to be developed so as to avoid distorting Governmental interventions to the market of agricultural goods. First of all, the TMO and Unions should not interfere directly to markets; they should rather play a role of regulating markets by purchasing when prices fall below a certain level and sell when prices are above that level. At the next stage these agents should be converted into entities that are engaged in trade in commodity exchanges entirely in line with the rules of free trade. For all these to take place, the State should abandon price support purchases and put in place, as it is the case in western countries, agricultural policies which allow markets to make projections and engage in trade activities based on these projections.

5. DERIVATIVES EXCHANGE AND DERIVATIVES MARKET

In the course of the historical development of exchanges, need was felt for mechanisms to add a temporal dimension to transactions and thus compensate for imbalances in supply and demand and price risks associated with it. This need led to the introduction of derivatives exchange in addition to classical spot transactions.

In the producer-trader-exporter-importer-industrialist chain, forward exchange provided opportunities for setting more or less stable prices in the long-term; saving from costs of storing, financing and transportation for planning for and engaging in future commitments.

However, in such transactions, there is no specific standard set in relation to the price agreed on, terms and place of delivery, quality and amount. Since there is no full standardization and guarantee mechanism ensuring the fulfillment of commitments, risks are shared by parties involved.

Futures exchange (contract) denotes a standardized contract citing obligations for the purchase or sale of a standardized good in specific amount in some time in future at a price agreed on currently. The market where such transactions take place is known as futures market.

Hence, futures contracts are distinguished by the basic characteristic that there is full standardization in regard to term, place of delivery, quality standards and amount.

Finally, options exchange denotes rights to undertake the obligation enshrined in a futures contract in return for a payment and to buy/sell a futures contract at a specific price and for a specific time period. These transactions too are governed by standardized contracts.

5.1. Preconditions of Derivatives Exchange and Selection of Goods for Transaction in These Markets

Establishment and smooth functioning of derivatives exchange requires, first of all, selection of goods fit for transaction in these markets. This selection, in turn, has to take into account economic realities of the country and the sector concerned as well as relevant practices in the world and develop appropriate mechanisms accordingly.

Here, reserving for the formation of derivatives exchange for financial instruments, precious metals, etc. there is need to specify basic criteria in the selection of agricultural goods to be traded in markets and the nature of such markets.

However, while making these specifications, first there is need to consider such questions as the kind of infrastructure that these markets require, which current problems these markets can solve or whether they can make any contribution at all to the solutions of these problems. Answers to these questions will make it clear whether there is any need for such mechanisms in the first place.

It is common knowledge that in agricultural markets price mechanism cannot ensure price stability because of the dependency of supply to natural conditions and existence of continuous demand. Hence, in order to stabilize prices and to protect the supply side (producers) against vagaries caused by this instability, the State interferes in a way to influence both supply and demand and thus emerging prices. Most common forms of State intervention in Turkey include “setting floor prices and “support purchases.” It is further known that methods of direct intervention employed by the State have its negative effects in terms of both efficiency in resource utilization and effectiveness of market prices. Furthermore, these methods of intervention add to financial burden over the State and cause inflationary pressures by increasing money supply more than needed by actual production. Hence, forward, futures and options markets which have their positive contributions to efficient resource utilization and effective price setting are often regarded as alternatives to State intervention.

The crucial point in derivatives exchange is the equalization of the spot price of a good to its future price over a specific rate of interest. Although it contributes to the elimination of risks faced by producers since delivery is mandatory, the role of forward transactions in ensuring price stability remains behind futures markets mainly for insufficient volume of related transactions.

As for futures markets, they contribute to price stability mainly through information they provide concerning the possible future levels of market prices since there is full standardization and delivery rates are very low. Thus, decision making-price sensitive units are able to assess given situations not only by considering past and present but also possible future prices.

In sum, derivatives exchange presents opportunities of accounting for price fluctuations and instability through relevant information as well as planning and risk transfer mechanisms and ensuring prices driven by market dynamics and efficiency in resource utilization. Therefore, such markets should be considered first of all in the context of those agricultural goods subject to State interference.

Existence of a competitive spot market is a sine qua non of derivatives exchange. A “competitive market”, in turn, implies too many buyers and sellers at the same time. Here, neither buyers nor sellers, individually or collectively, can affect market prices. In other words, for the full operation of such markets, buyers or sellers should not dominate the market through various forms of merging or organization.

Derivatives exchange and spot markets are parallel channels of interrelated and intercommunicative nature. In this respect, if spot markets of assets to be transacted in futures markets work in environments of imperfect competition, this situation negatively affects derivatives exchange as well. The failure of the spot market to yield real (competitive) prices means that derivatives exchange will have no prices to transact on. In a market where big buyers and sellers can play with prices as they wish, there will be no real prices of indicative value for derivatives exchange and unfair earnings may emerge.

In forward transactions, existence of competition in the spot market is often sufficient condition and although it may be useful in respect to the effectiveness of transactions presence of a tradition of commodity exchange is not crucial. In futures markets, on the other hand, a competitive market as well as spot exchange tradition is a crucial factor.

In spot markets, there is need for an established exchange and a single and collective price. Furthermore, the existing spot market should have authoritative and representative power in relation to the commodity concerned. Besides this presence of intensive supply and demand, it is also required that price emerging in the market can be used also in extra-market transactions. In other words spot markets should be mature enough to yield “indicative” prices.

Sustained nature of spot markets for goods is an important precondition for the emergence of forward and futures markets in these goods. In case these markets are not sustained; i.e. they are seasonal, periodical or dependent on importation or exportation, derivatives exchange based on them will naturally have the same character and do not work. That is, permanence in spot market is a must. In any case, when existing spot markets are devoid of price etc. risks and parties are satisfied with that exists, there is no need for derivatives exchange. That is to say, the need for derivatives exchange should derive from the existing structure of the market which embodies the risk of price fluctuation and some degree of instability.

Considering the requirement that contracts, especially in futures and options markets, should be fully standardized, it can be inferred that standards of goods to be traded in these markets should also be well defined. If not, commodity standards in derivatives exchange contracts cannot be set in clear and absolute terms and this, in turn, will make it impossible to standardize contracts. Consequently, disputes that may arise during cash agreement or delivery over the quality of the good concerned will totally disrupt the working of these markets. Hence a commodity not sufficiently standardized falls at odds with the nature and logic of futures and options markets.

Identification of goods eligible for derivatives exchange and other conditions relating to the establishment of such markets:

-Whether goods considered for derivatives exchange can draw the interest of traders and financing circles in the same and other sectors – the extent to which given infrastructural facilities and services can respond to the needs of these markets;

-Existence of intermediaries who can take on responsibility in these markets and the extent to which they are institutionalized;

- Whether guarantee mechanisms and practices of existing spot markets and exchanges relating to the consummation of trade transactions can be converted into serious mechanisms of barter and clearing;

-One of the most important steps to be taken for further development is transition to specialized commodity exchanges based on specific goods; such exchanges should specialise in very few, preferably in only one good;

-Derivatives exchange in particular is extremely important for production planning, stock utilization, and taking advantage of some risk factors and, beyond all these, for the establishment of a sound tax regime.

5.2. Turkish Derivatives Exchange (TURKDEX)

The history of derivatives exchange in Turkey dated back to cotton trade in Adana, İzmir and Kahramanmaraş. While starting cotton farming, farmers used to secure funds they needed in return for future cotton delivery. At the end of harvesting, they repaid their debts by delivering the amount of cotton to traders from whom they had received loans. Wealthier farmers just delivered some sample crops to traders or intermediaries to decide on the price later on. Traders, on their part, immediately sold this cotton to plants thus assuming some risk. This transaction involved some risk since the price they had to pay for the cotton they sold to plants at a specific price would be set later. Later, in winter months when the price of cotton climbed up farmers could request traders to give a price to their earlier cotton delivery. Finally, traders gave a price according to current trends and paid their debt to farmers.

At the end of these transactions either farmers or traders gained or lost depending on the movement of cotton prices. Such transactions are locally called as “sales to vacuum.” Of course all these take place on the basis of mutual trust between the parties in the absence of any organized market. The issue of reliability pointed out to the need for an organized market. Otherwise, in cases where unfavorable climatic conditions preclude the delivery of cotton to trader’s right after harvest, both farmers and traders incur losses. Again both farmers and traders suffer from high prices prevalent in specific periods which make payment extremely difficult. All these pointed out to the urgency of an organized derivatives market.

Legal status:

Upon the amendment made on the Capital Market Law, no. 2499 in accordance with Capital Market Law, no. 4487, the regulatory framework¹ has made it possible to establish a derivatives exchange in

¹ In accordance with the 40th article of Capital Market Law no. 2499, TURKDEX is the first private exchange in Turkey, established on the Cabinet’s resolution no. 2001/3025 which has been officially announced through Official Gazette, dated October 19, 2001, following the State Ministry’s resolution no. 2381, dated September 3, 2001 on the basis of approval statement no. 9/1101 of Capital Markets Board of Turkey, dated August 17, 2001.

Turkey. Such legal framework permits Turkish Derivatives Exchange (TURKDEX) to design and develop markets where derivative contracts of assets, liabilities and indicators are traded in a competitive and secure environment. TURKDEX, started its operation right after the company was registered in Registry of Commerce. This registration was officially announced through the Gazette of Registry of Commerce, dated July 4, 2001.

Share holders of TURKDEX are as follows;

- The Union of Chambers of Commerce, Industry, Maritime Trade and Commodity Exchanges of Turkey
- Izmir Mercantile Exchange, is the institution, taking a leading role in the establishment of Turkdex, with a background of experience and knowledge going beyond a century.
- Istanbul Stock Exchange (ISE)
- Is Investment Securities
- Kocbank
- Vakıf Investment Securities
- Garantibank
- Akbank
- Industrial Development Bank of Turkey
- ISE Settlement and Custody Bank
- The Association of Capital Market Intermediary Institutions of Turkey

Purposes:

One of TURKDEX's main objectives was to develop and provide financial instruments that would help individuals and institutions to manage their risks effectively against abrupt price swings of volatile business environment. With this objective in mind, several projects were launched to form the basic infrastructure of TURKDEX. Purchasing and setting up an electronic trading platform, designing clearing activities, establishing an efficient internal control system and preparing an educational CD Rom which aimed to educate both retail and institutional market participants.

TURKDEX has strategic and economic responsibilities in terms of establishing an efficient and successful risk management platform to meet needs of investors and to maintain a robust economic system. The priorities of TURKDEX are as follows: protection of investors, transparency in executions, optimal response to market demands, integration with international markets and becoming an exchange in terms of global standards.

TURKDEX is aiming to develop a dynamic and efficient futures and options market that is compatible with current Turkish money and capital markets. With this intention TURDEX are focusing on both offering new incentives to attract investors and developing new contracts.

It is believed that TURKDEX will take place among internationally recognized derivatives exchanges in a short time. For this reason investor education and promotional activities are considered as the key factors to success.

Since we are specifically interested in the commodity component of the TURKDEX which is only in its infancy in Turkey, we are going to deal with cotton and wheat futures below.

Commodity Futures Contracts:

Now with the introduction of the cotton and wheat futures contract; farmers, traders or merchants have the chance to hedge this risk effectively and be able to make longer future plans. Other than hedging, cotton and wheat futures contract also offers investment opportunities for people who are looking for new and alternative investment tools

TURKDEX-Aegean cotton Futures:

Cotton is one the major agricultural products of Turkey. Farmers, cotton traders and all the other people who buy or sell cotton or its derivatives face the cotton price risk. Now with the introduction of the cotton future contract, these people have the chance to hedge this risk effectively and be able to make longer future plans.

TurKDEX-Anatolian Red Wheat Futures:

As well as cotton, wheat is also a major agricultural product of Turkey. Farmers, wheat traders and all the other people who buy or sell wheat face the wheat price risk. Now with the introduction of the wheat future contract, these people have the chance to hedge this risk effectively. Wheat producers and people who use the wheat as raw material will be able to know the wheat prices much before the harvest time and be able to make longer future plans. Other than hedging, both cotton and wheat future contract also offers investment opportunities for people who are looking for new and alternative investment tools.

5.3. Current Problems of Derivatives Exchange in Turkey

Firms engaged in international trade and consumers face the double risk of exchange rate (Forex) and commodity price. Producers, on the other hand, run the risk of price which is shaped by markets and quality. Farmers in Turkey often focus on their monetary earnings (YTL) and thus run the risk of price. In the TURKDEX, while there is high number of foreign exchange contracts, commodity contracts unfortunately had almost no transaction since the initiation of the market.

There are many reasons that can explain this situation in the TURKDEX.²

Role of education:

Educational achievement is indeed one of the primary reasons. Uneducated and uninformed people cannot be expected to invest in derivatives exchange. After all, there are only few who are experienced in derivatives exchange. The problem is related to both sides: If farmers remain uneducated they will not sell their goods in the TURKDEX; if consumers are uneducated they will not buy from the TURKDEX or engage in hedging. Steps to be taken include educating both producers and consumers and starting small-scale transactions at the beginning to demonstrate the benefits of such exchange to both parties.

It should also be mentioned that the finance section in the IMKB (İstanbul Stock Exchange) is partly alien to commodity (cotton and wheat) contracts and there are very few people in Turkey specialized in derivatives exchange. At present, there is no bridge between the IMKB and TURKDEX in terms of such bills and financiers from the country or abroad have grown no interest in such bills. Unfortunately, again, many banks and intermediary firms regard such contracts as “novice” and trivial and follow the path “we’ll see later.” Consequently, at present only foreign exchange and index goods are transacted on in the TURKDEX. Maturation in this field may take long time in Turkey (Casaretto 2005, p.35).

² This part mainly depends upon Casaretto (2005) and a personal interview with him

Price setting

Another reason is related to the dynamics of price formation. In Turkey, 35% of total population live in rural area while this proportion does not exceed 15% in Europe, on average.³ Such a large section of population naturally makes up a significant constituent in elections. Uninformed agricultural policies, particularly pricing policies have made farmers accustomed to receive state support. Yet, the sector of agriculture should be closed to price-related interventions and prices should emerge as a result of internal dynamics without intervention as it is the case in other sectors. For this, it is mandatory that state agencies such as TMO withdraw from the market. Organized exchanges should bring farmers and consumers together for their free deals. Commodity exchanges should protect both farmers and consumers. In an organized setting where supply and demand meets, any transaction can take place only when both parties are satisfied. In the presence of the TMO, on the other hand, there is a floor price given externally to the TURKDEX and this is a barrier to free market. Apart from wheat, other unions (Cukobirlik, Trakyabirlik, Fiskobirlik and Marmarabirlik) may also be seen as agents making it difficult for other products to be transacted in exchanges. In any country, it is better if exchanges cover those goods which are raised in large volumes.

Prices of agricultural goods are much higher in Turkey compared to world prices. The main reason is Governments' assignment of high floor prices. For example, world prices in wheat average around 150-160 dollars it is as high as 350-360 dollars in Turkey. In cotton, prices are integrated with world prices since there is no restriction on importation or exportation. Meanwhile there is no single spot price for either cotton or wheat. For example, wheat of same quality may command different prices in exchanges of Konya, Eskişehir, Edirne and Polatlı. Neither is there any standard for crop quality. "Anatolian Red Hard Wheat" is priced differently in Konya exchange and in spot market in Polatlı. The same is also true in cotton. Aegean (Tariş or Bergama), Diyarbakır or Çukurova cotton may be sold at different prices in their respective spot markets. The fact that spot prices are not determined in competitive environments, that is the absence of any spot exchange working in proper sense means the absence of a single price that can be used as the basis of cash agreement in futures market. Such a situation damages the reliability of futures market, different spot prices lead to disputes in cash agreements and futures market does not work. This is the primary reason why there is no transaction over commodities in the TURKDEX.

Delivery:

The third reason is related to delivery. In contracts, there are specifications pertaining to the sale and purchase of a commodity. One party commits to deliver and the other to receive the delivery. Here, some problems may arise as a result of specific reasons (i.e. unfavorable weather conditions, drought, unexpectedly bad yield, etc.) where goods cannot be delivered or received.

In such cases the worrying point is incompliance with contractual obligations. Let's suppose that a farmer sold his cotton for coming December at price x . Will he deliver his cotton if market price of cotton is above x in December? What sanctions are applicable if he doesn't? Or let's supposed that a buyer committed to buy cotton at price x at a specific date in future. If market price at that date is lower than what he had committed to pay, will he buy it? These are important questions that must be raised. Indeed, considering past examples in physical commodity trade, waiving is a frequent and serious problem concerning both parties. The question is: Can impossibility of waiving in TURKDEX transactions be one of the reasons for the absence of such transactions?

Another reason: warehousing

At the end of the term, positions are either "rolled" to the contract of the next month or closed. In technical and physical terms, buyers can receive goods from a warehouse specified by sellers. In TURKDEX, the minimum amount specified for a wheat contract is 5 tons. This minimum is kept low in order to attract small investors. Yet, this convenience did not prove effective in increasing the volume of transactions. In our opinion, it will take some time for such transactions to be a serious

³ Families are crowded and the size of land per family member is much smaller than in the US or in EU. Accompanied by high costs, this situation makes farmers gloomy.

component of TURKDEX. For example, the problem of warehousing has not been solved yet. Without warehousing exchange will have no function either and there will be no physical delivery at the end of the term. However, with the establishment of licensed warehousing in Turkey, as we will touch upon, it is expected that problems related to pricing, quality and delivery will be largely solved.

6. LICENSED WAREHOUSING

For achieving sound and dynamic commodity exchanges as in developed countries, there is need to create modern and smoothly working institutions and mechanisms at all stages from production to consumption. In this context, licensed warehousing has several functions including making trade in agricultural goods easier, expanding markets, promoting commodity exchange, contributing to price stability and facilitating the procurement of necessary raw materials by industrialists. This system also provides a modern institutional infrastructure which serves as an important instrument to prevent informal transactions. Once the system is fully in place, the country concerned enjoys significant improvements in agro-trade, employment, position in world trade, competitive power, national income and consequently in tax revenues. In our present day, countries who fail to put this system in place often turn into dependent and secondary markets of others who have it and their share in international trade and added value generated in this trade diminishes.

6.1. Importance of specialized exchanges and licensed warehousing

Many developed countries including the US in the first place have managed to establish their systems of licensed warehousing successfully. Giant US firms, the Cargill for instance, are engaged in worldwide investments to create licensed warehousing networks and dominate trading and marketing in this field. Commodity exchanges in the US too evolved from spot transaction unit, as in Turkey now, to commodity exchanges engaged in long-term transactions. In these exchanges, contracts on many items including cotton, coffee, corn, orange juice, soybean, wheat and many others are subject to transaction. Exchanges engaged in futures transactions work in an integrated manner with licensed warehouses and delivery is made by these licensed warehouses in time bound contracts. The US Government supports the system by keeping goods which it purchases for its strategic needs in specially licensed warehouses. The US Department of Agriculture in fact supports agriculture through various instruments used at the stages of production to warehousing and from marketing to exportation. In the US licensed warehousing and commodity exchanges remain fully in the domain of the private sector.

In Turkey, warehousing takes place in unfavorable environments and without any supervision, depending on individual needs and capacities of enterprises or individuals. There is no enterprise, with the exception of the TMO, storing agricultural products. The TMO too has not been successful in licensed warehousing due to various reasons including VAT problems, insufficient lab facilities and limited capital layout. Since there is no warehousing infrastructure for products and they cannot be used as guarantee, they have to be sold out in conjunctures where supply is high and prices are low. This is naturally to the disadvantage of producers. Both the quality standards and the system of labs to test products are insufficient, unreliable and poorly recognized. Since there is no objective quality assessment while products are marketed, quality cannot find reflection in prices and quality production remains without any incentive. Active merely at province and district level, commodity exchanges in Turkey lag far behind in a world which itself became a whole market through e-trade. Only a small part of agricultural crops including wheat and cotton is traded through biddings in commodity exchanges while the remaining bulk goes through informal channels of trade.

6.2. Licensed Warehousing in Turkey⁴

Turkey is presently in the process of integrating with global economic order and full accession to the EU. For our commodity markets to turn into as sound units as those in the US, it is necessary to introduce appropriate mechanisms and institutions at all stages from production to consumption. In this context, specialized commodity exchanges and the system of licensed warehousing are both

⁴ Most of the discussions here about Licensed Warehousing in Turkey are summarized from Akay (2006) and TOBB (2006).

crucially important in the solution of many problems which Turkey is presently facing in many areas including quality assurance, warehousing, price setting, registration, marketing and financing. Promotion of commodity exchanges and successful implementation of licensed warehousing system is a must to fill the vacuum in the market for agricultural goods and eliminate deficiencies in the working of the system.

Legal Status:

Under the project for “Development of Commodity Exchanges” (1999-2003) preliminary work for a system of licensed warehousing had already been conducted. Projected licensed warehousing will facilitate the domestic and international marketing of agricultural products. Legislative framework for the establishment of specialized commodity exchanges in the status of joint stock Company, much stronger than presently active 113 commodity exchanges, is ready. With the contribution of the Ministry of Finance, legislative arrangements have taken place including the Law no. 5174 on TOBB Chambers and Commodity Exchanges and Law no 5300 on Licensed Warehousing in Agricultural Goods⁵ as well as 8 associated Regulations.⁶ Another significant development will take place when, under the Agricultural Reform and Implementation Project (ARIP), Agricultural Marketing Cooperatives and Unions start licensed warehousing through which they have access to funds other than from the Government sector, reduce stocking costs and bring their burden on the public down to a minimum.

The legislation on licensed warehousing will ensure the following:

- Introduction of a system of licensed warehousing which is urgently needed in Turkey,
- Trade in agricultural goods governed by standards,
- Insuring agricultural goods,
- Guaranteeing the interests of members through an indemnity fund
- Guarantee by licensed warehousing,
- Commodity exchange guarantee in trade,
- Introduction of e-trade
- Use of expert examination and arbitration in settlement of disputes.

⁵ Adopted by the Grand National Assembly on 10 February 2005 and took effect upon its publication in the Official Gazette dated 17 February 2005.

⁶ **Legislative Arrangements:**

- Establishment of specialised commodity exchanges is provided for in Article 53 of the Law no. 5174 published in the Official Gazette no. 25479, dated 1 June 2004.
- Regulations relating to the establishment of specialised commodity exchanges were published in the Official Gazette no. 25750, dated 9 March 2005.
- The Law on Licensed Warehousing was published in the Official Gazette no. 25730, dated 7 February 2005.
- Through the Futures Transaction and Option Exchange becoming active on 4 February 2005, futures transactions on wheat started.
- Draft legislation for the protection of agricultural goods from natural disasters is presently in the agenda of the Grand National Assembly.

Actors in the system

- Farmers/traders
- Speculators/industrialists
- Licensed warehouses
- Commodity exchanges
- Banks
- Insurance companies
- Ministry (Ministry of Industry and Trade)

The system has two major instruments:

Agricultural good: Under the present law, cereals, legumes, cotton, tobacco, hazel nut, oil seeds, vegetable oil, refined sugar and other raw and processed goods that can be standardized and acceptable by licensed warehouses.

Authorized classifier: Under the present law, laboratories managed by real or corporate persons that are licensed and capable of analyzing agricultural goods, identifying their quality and characteristics, making classifications in compliance with agreed standards and issuing documents to substantiate their analyses and classifications.

Smooth working of the system depends on some basic conditions given briefly below:

- Existence of commonly recognized product,
- Network of labs/reference labs,
- Appropriate communication network participated by the instruments of the system,
- Existence of licensed and reliable warehouses charging fairly,
- Exchanges where papers are traded,
- VAT exemption,
- A stable foreign trade regime comprising the exportation and importation of agricultural goods,
- Free market led price setting without any outer interference.

All these will have their positive implications on the trading of agricultural goods. Upon the introduction of licensed warehousing system, it will be possible in Turkey too, as in developed countries, to safely keep agricultural goods in licensed warehouses, to market such goods in domestic or international markets as commodity through papers and to extend low-cost loans to farmers. Informal transactions will be minimized and it will be possible to develop healthier agricultural production and support policies. Meanwhile, trade confirming to established standards will encourage quality production through the higher price marketing of high quality products. Further, introduction of licensed warehousing will mediate in the formation of longer term prices and provide the ground for time-bound and optional markets that will protect producers and industrialists from price related risks. Such development will also provide efficiency and financial depth to commodity exchanges.

Advantages of specialized commodity exchange and licensed warehousing:

a-For producers:

- Safe, insured and secure warehousing facilities,
- In harvesting seasons, the possibility of keeping goods in licensed warehouses instead of selling out at low prices and reaching loans at reasonable terms by furnishing warehouse documents as guarantee,
- Opportunities of identifying the standards of any product objectively in lab settings; asking for prices that reflect quality; easy marketing end motivation for higher quality products,
- Minimization of costs of transport and possibilities of reaching remote markets,
- Benefiting from the competition of multiple buyers instead of having to sell to few buyers around,
- Enjoying the possibility of storing goods and using loans to keep goods at hand and sell them when prices get higher.

b-For industrialists/tradesmen:

- Avoiding the cost and burden of building storage separately and concentrating on their core areas of activity,
- Possibilities of having access to quality goods in desired amounts in a safe way through electronic environment without being limited by space,
- Using bills to avoid negative price fluctuations that may emerge, reducing risks and better position to make profit/loss estimations,
- Possibility of reaching bank loans by furnishing bills at hand as bond besides providing for input needs of enterprises,
- For industrialists/traders having bills, possibilities of receiving goods from nearest licensed warehouse and thus minimizing transport costs.

c-For commodity exchanges:

- Increase in registry revenues through trading of bills,
- Contribution to real price setting and increased volume of transactions by bringing buyers and sellers together on a much larger platform,
- Further expansion of trade through the development of e-trade while commodity exchanges modernize and assume their core functions,
- Emergence of a strong and modern commodity exchange network capable of enjoying larger shares in the marketing of goods from neighboring countries as well,
- Encouraging otherwise weak and inefficient commodity exchanges to merge and transform into specialized commodity exchanges.

d-For the State:

- Development of commodity exchanges and licensed warehousing which are both envisaged under the agricultural re-structuring project (ARIP) have the objective of encouraging the private sector to take more active role in marketing and reducing purchasing burden on the State,
- The new system will contribute to the solution of possible marketing problems that may emerge as public institutions such as TMO, unions and state monopolies cease to engage in purchases,
- The cost of purchasing and storing incurred by the State will be reduced at least in some goods as a start,
- It will be possible to collect better and more reliable statistical data on agricultural production and product quality and to give more definitive directions to agricultural policies,
- The system will bring along advantages in terms of formalizing trade in agricultural goods and reducing tax leakages,
- When quality specifications and standards are set on more objective terms, high quality goods will enjoy higher prices, thus encouraging producers to comply with such standards,
- Emerging warehousing and laboratory testing system will create new lines of employment in the sectors of banking and insurance.

e-Other advantages:

- Bills offer an area of investment alternative to shares, foreign exchange, gold, interest loans, etc.,
- System of standardized goods and licensed warehousing will provide the infrastructure for transition to futures markets,
- A promising potential for e-trade,
- New income and employment channels through such activities as product analysis, warehousing, insurance and loan use,
- Emergence of an infrastructure and enhanced means of marketing and distribution through domestic and external branches of licensed warehouses and specialised commodity exchanges.

6.3. Tax incentives in licensed warehousing: Cases of US and Bulgaria and suggestions for Turkey:

In the US there is no VAT or any other tax applied in the trade or transfer of bills in commodity exchanges. VAT, however, is applied in Bulgaria. Nevertheless, this country considers VAT as the most important obstacle to the further development of licensed warehousing and is now trying to eliminate it. In neither of these countries, there is any stamp duty or so on warehousing contracts or bills. Furthermore, while indemnity funds are exempt from taxation in both countries, operational profits from licensed warehousing activities are subject to corporate tax. It is stated by authorities from the Ministry of Industry and Commerce that it would be quite appropriate to accord tax exemption to licensed warehousing enterprises which require an initial capital outlay of 3-5 million YTL for a period of 5 to 10 years until the system is well grounded. (Akay 2007). In both US and Bulgaria there

is no withholding tax on trade of goods and bills and producers and traders are subject to income and corporate tax over their stated profits at the end of the year. The Ministry holds that it would be appropriate to postpone withholding tax until the system fully establishes itself and producers are accustomed to the practice of storing their goods.

7. CONCLUSION AND SUGGESTIONS

In this final part of the study, the recent developments in the sector are addressed and some policy suggestions are made for future course of action.

7.1. Evaluation of Recent Developments

For the first time action has been taken this year to abandon direct income support gradually and to introduce the system of premium. This is an important step in preventing informal transactions. Recording and registry of transaction in wheat trade will make it possible to obtain reliable data. Arrangement of commodity bills on TMO⁷ guarantee and extension of credit support by financing institutions is another positive development, yet insufficient in itself. While goods delivered to the TMO are taken as guarantee for credit extension, protection against future price fluctuations must be provided through transactions in derivatives exchange.

Existing wire discrepancies between domestic and world wheat prices mainly emanate from differences in input costs and yield per acre. Recent Government decision for diesel support of 0,30 TL to farmers is a considerable step taken to reduce input costs. However, efforts should also be made to increase yield. In this context, encouragement of high quality seeds and combat against pests seem to be essential steps to be taken.

Above mentioned efforts should target bringing domestic wheat prices in line with world prices. Giving depth to derivatives exchange in wheat with the active participation of TMO, farmers and industrialists will help estimate future wheat prices. This will give farmers opportunity to estimate their future earnings before sowing while industrialists will be able to offer more competitive prices by avoiding possible future risks.

A healthy new era can be given start with the introduction and development of derivatives and options exchange, specialized commodity exchanges, insurance against natural disasters and licensed warehousing.

7.2. Suggestions for development of the sector:

In Turkey one of the most important problems that accompanies given structural problem of agriculture is related to marketing. Farmers consider prices of the year before while determining what to grow and immediately sell out their harvest because of financial bottlenecks and debt repayment obligations. In cases where there is excess supply this situation further depresses prices and leaves

⁷ **2005/2006: TMO policies and support to farmers:**

- The Council of Ministers Decision no.2005/8871 provides a framework for TMO purchases in 2005/2006.
- This year premium support to wheat production was given for the first time upon the decision of the Council of Ministers (no. 2005/8872).
- Prior to transition to the system of licensed warehousing, it was decided to extend TMO guaranteed credit for goods delivered to the TMO in return for receipt (applied levies: KKDF 0% and BSMV 1%).
- It was decided that the TMO should make immediate payment upon delivery p to 10 tons and pay within one month for deliveries up to 30 tons.
- It was adopted that the TMO should act by taking due account of market trends and engage in trade under normal market conditions.
- TMO is authorised to engage in derivatives exchange transactions.

farmers in a difficult position. For the sector of agriculture 99% of which is composed of small family farms first structural problems need to be solved, followed by the creation of agricultural markets where goods are sold at prices determined according to quality classification.

Establishment of specialized commodity exchanges and licensed warehousing will remove existing constraints and give dynamism to markets. Still for the system to work effectively it is essential to provide for necessary conditions starting from production to trade bills. The following briefly summarizes what needs to be done in this regard:

- a) **Production:** In Turkey farmers grow without taking account of quality standards and sell their crops at market prices. Cost of inputs is quite important in overall costs of production. Thus, instead of certified seed, which is an additional cost item, farmers prefer to use cheaper seeds. Quality production is barred by the fact that prices are not determined according to quality standards and that farmers are not aware that quality products would go with higher prices. Since prices of agricultural goods will be determined on the basis of quality criteria in licensed warehousing system, it is of utmost importance to inform farmers on this issue. Hence there is need to start, as soon as possible, informing farmers about product standards, building awareness in relevant issues and introducing pertinent incentives in this regard.
- b) **Marketing:** Marketing their goods individually, farmers generally have no bargaining power vis-à-vis buyers. They don't have much choice but accept prices offered by intermediaries in the marketing chain. Hence, organization of farmers in various forms is important in terms of both low-cost input procurement and having some bargaining power in marketing. In the US and EU countries such organizations work actively and engage in activities at all levels for the benefit of their members. Especially in the process of EU accession, it will be quite difficult for individual farmers in Turkey to deliver the floor amount of crops to intervention agencies that will be in charge of purchases in crops subject to common market arrangements. Hence farmers should get organized and be prepared for future course of events and practices.
- c) **Storing:** For an effectively working system of licensed warehousing, such components as licensed warehouse, laboratory authorized for classification, commodity exchange and central registry need to be considered together and these components need to be introduced simultaneously and work in a coordinated and integrated manner. Hence, some time is required for the establishment and full working of the system. High cost of establishing a system of licensed warehousing is a dissuasive factor at the beginning. In order to mitigate the effect of this factor and encourage the establishment of such a system, various incentives need to be introduced at early stages (tax immunity and exemption, no VAT, subsidization of farmers to be paid by farmers, etc.). Until commodity exchanges are established and fully working, markets with high bidding and transaction volume should be used. Also, initiatives should be taken immediately for the establishment of laboratories to conduct analyses necessary for the standardization of products. These should be authorized laboratories equipped with quality management systems, also accredited by relevant EU institutions. The chair will be completed with reference laboratories which are supposed to test and confirm the findings of the former.
- d) **Derivatives exchange:** There is need for the introduction of legal and economic infrastructure so as to increase the volume of transactions in the commodity component of derivatives exchange (TURKDEX) in the context of futures exchange and setting future prices in advance. The spectrum of crops which is presently limited to cotton and wheat should be gradually enlarged so as to cover other important crops including corn, barley and even sunflower. Despite its specific status, hazel nut in which Turkey controls 70% of world trade should also be quoted. An exchange can be considered also for legumes. Of course, all these require the absence of any state intervention including assignment of floor and sales prices. This way, domestic prices which are presently 2-3 or even 4 times as high as average world prices can be pulled down. In such a setting, prices are determined freely by buyers and sellers accompanied by relevant information and statistics that both parties can use as their starting ground. Furthermore, a genuine derivatives

exchange may emerge with the inclusion of cattle, fish and flour; but all these require considerable increase in the volume of transactions. Meanwhile, training and counseling services should not be omitted; such services delivered in various environments including farms, investors' places or training halls will contribute much to further developments in this area. The ultimate aim is to introduce and promote these markets in Turkey and include new crops and products for further economic gains at both micro and macro levels.

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Annex. 1 see Source: www.VOB.org.tr

TurkDEX-Aegeancotton" Futures Contract Specifications

Underlying Asset	Aegean Standart 1 Cotton
Contract Size	1 tone
Price Quotation	New Turkish Lira (TRY) per kg with three digits. Sample quote = 1,825 or 1,830
Daily Price Limit	% ± 10 above or below the prior day's settlement price
Minimum Price Fluctuation (Tick)	0,005 = 5 TRY
Contract Months	5 nearest months out of March, May, July, October and December
Final Settlement Day	Last business day of the contract month
Last Trading Day	Last business day of the contract month
Settlement Method	Cash Settlement
Final Settlement Price	<ul style="list-style-type: none">▪ Weighted arithmetic mean of Aegean Standard 1 cotton prices announced by Izmir Mercantile Exchange at the last trading day of the contract month and minimum two business days prior to the last trading day.▪ If there are insufficient trades during these days, price quotations are taken from minimum twelve members of Izmir Mercantile Exchange (Price interval must be lower than %1). After eliminating the best and the worst prices, the arithmetic mean of the available prices at the Izmir Mercantile Exchange is declared as the last settlement price. Settlement Price Committee decides whether trades at spot market is sufficient or not.
Daily Settlement Price	<p>Daily Settlement Price calculated as mentioned below:</p> <p>Weighted average of all prices during the last 10 minutes of trading at TURKDEX.</p> <ul style="list-style-type: none">▪ If there are insufficient trades (less than 10) during the last 10 minutes of trading, weighted average of last 10 prices during the day. <p>If daily settlement price can not be calculated through above methods or Settlement Price Committee determines that the settlement price doesn't reflect the market very well, daily settlement price is calculated through the methods as mentioned below:</p> <ul style="list-style-type: none">▪ Weighted average of all prices during the session,▪ Prior day's settlement price,▪ Mean of the best bid and ask quotations,▪ Theoric future price calculated by the Settlement Price Committee.

Annex. 2:Source: see www.VOB.org.tr

"TurkDEX-Anatolian Red Wheat" Futures Contract Specifications

Underlying Asset	Anatolian Red Hard Wheat
Contract Size	5 tonnes
Price Quotation	New Turkish Lira (TRY) per kg with four digits. Sample quote = 0,3865 or 0,3870
Daily Price Limit	% \pm 10 above or below the prior day's settlement price
Minimum Price Fluctuation (Tick)	0,0005 = 2,5 TRY
Contract Months	5 nearest months out of March, May, July, September and December
Final Settlement Day	Last business day of the contract month
Last Trading Day	Last business day of the contract month
Settlement Method	Cash Settlement
Final Settlement Price	<ul style="list-style-type: none">▪ Arithmetic mean of the prices belonging to Anatolian Red Hard Wheat announced by Polatli, Edirne, Eskisehir, Konya, Gaziantep, Karaman, Corum, Uzunkopru and Yozgat Mercantile Exchanges on the last trading day of the contract month and one business day before that day.▪ If there are no trades at the Exchanges mentioned above or If the Settlement Price Committee determines that the settlement price doesn't reflect the market very well at those days, the last settlement price should be calculated and declared by the committee.
Daily Settlement Price	<p>Daily Settlement Price calculated as mentioned below:</p> <ul style="list-style-type: none">▪ Weighted average of all prices during the last 10 minutes of trading at TURKDEX.▪ If there are insufficient trades (less than 10) during the last 10 minutes of trading, weighted average of last 10 prices during the day. <p>If daily settlement price can not be calculated through above methods or Settlement Price Committee determines that the settlement price doesn't reflect the market very well, daily settlement price is calculated through the methods as mentioned below:</p> <ul style="list-style-type: none">▪ Weighted average of all prices during the session,▪ Prior day's settlement price,▪ Mean of the best bid and ask quotations,▪ Theoric future price calculated by the Settlement Price Committee.

Annex. 3 Basic characteristics of and specifications for specialized commodity exchanges⁸

- Helping supply and demand meet; mediating trade over goods with specified standards in physical or electronic environments; capable of conducting transactions over bills and futures and following alternate markets; adequately equipped with technical and electronic facilities as well as specialized personnel
- Domain of activity: regional, national or international
- Joint stock company
- All shares are issued to the name
- Floor capital outlay: 5 million YTL for those to be active at regional level; 10 million YTL for national level and 15 million YTL for international level
- Official permission from the Ministry for establishment and operation
- Commodity exchanges may have partnership in specialized exchanges or operate as their agents
- Specialized exchanges and commodity exchanges can establish licensed warehousing companies
- In relation to bills issued, registration, transfer, payment for and protection of the rights of third persons are all under the guarantee and responsibility of the commodity exchange concerned
- Trade in bills and futures have to be registered in specialized exchanges
- Other conditions (capital outlay, partnership structure, membership, technical endowment, organization and service units, registration system, etc.) are specified in relevant Regulations.

⁸ Annex 1-3 are summarized from Akay (2006)

Annex 4 Basic characteristics of and specifications for licensed warehouses

- Joint stock company
- official permission from the Ministry for establishment and operation
- Paid capital of at least 1 trillion TL depending on warehousing capacity
- Deposit at the rate of at least 15% of the current value of goods delivered.
- Compulsory insurance of facilities and goods stored
- Obligation to act a contract with the relevant commodity exchange
- Other conditions and technical specifications mentioned in Regulations.

Annex. 5 Guarantee mechanisms of the system

- Insurance:
- Facilities and stored goods are insured.
- Licensed warehousing guarantee:
- Deposit at the rate of at least 15% of storing capacity
- Licensed warehousing indemnity fund:
- Corporate identity.
- Fund management: by a board comprising sector representatives and a representative from the ministry.
- Main source of revenue: 0.5% of the cost of licensed warehousing service; 10% of the fee for product registry bill and 0.005% of the value of transactions.
- Main expenditures: Compensation of losses incurred by members and current expenditures of the fund.
- Guarantee from and control by relevant commodity exchange:
- In relation to bills issued, existence of the good concerned in the warehouse, registration, transfer, payment for and protection of the rights of third persons are all under the guarantee and responsibility of the commodity exchange concerned
- Ministerial supervision and inspection,
- Close observance and supervision of licensed warehouses and other legal or real persons licensed under this law is envisaged.

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