

## *Full Length Research Paper*

# **An overview to accounting applications on agricultural activities in Turkey within historical progress**

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**The goal of this study is to analyze the accounting applications on agricultural activities of 1923 - 2007 in Turkey within historical progress. Although Turkey was an agrarian state in the past, the agriculture didn't develop in the private sector. The reason for this is that the agricultural activities were conducted as small family enterprises. Furthermore, the relatively big agricultural enterprises own by public have made important contributions on forming and developing the agricultural accounting applications in Turkey. In the study, it was intended to report the outcomes, which were collected by the record scanning method, of the accounting applications of the state agricultural enterprises until today that were set up in 1937. Furthermore, some studies were also conducted on the doctrine books about the agricultural accounting.**

**Key words:** Accounting, accounting history, agricultural accounting in Turkey

## **INTRODUCTION**

Agriculture is still a crucial sector of the Turkish economy. However, agriculture's share in overall income has fallen progressively, declining from almost 50% of GDP in 1950 to around 10% of GDP by 2007. One of the most important structural problems of Turkish Agriculture is that the sector has very small size of farm businesses. According to the latest statistics issued by Turkish Statistical Institute, average farmland size is approximately 15 acres per farm business and average number of livestock is around 3 animals. Almost 99% of agricultural crops have been produced by small family type farms. Most of the small family farms are able to produce just for their own domestic consuming. In other words, they have not been producing for market.

These farms have not been able to apply the methods and rules of modern business due to having very small business scale. Furthermore, interest of these kinds of agricultural business to accounting or information to be gathered by accounting system has never been. However, in Turkey more and more companies have been investing in the sector for several years. New farms are being equipped with modern farm machinery, technology, etc. and mechanization is getting increasingly popular all over Turkey.

The goal of the study is to analyze the progress of the accounting applications in the republican period related to the agricultural operations in Turkey. Hence, briefly eva-

luating the progress of the accounting applications in the republican period, the applications in terms of agricultural operations were emphasized. To this end, I wanted to introduce the accounting applications of agricultural enterprises within a historical progress. As a matter of fact, the agricultural enterprises in Turkey were established and run by public. The private sector, however, has made some noticeable investments in this area recently; the study was conducted upon the accounting applications of agricultural public enterprises.

## **AN OVERALL PROGRESS ON THE ACCOUNTING APPLICATIONS**

The only legal arrangement in terms of accounting applications in the early years of the Turkish Republic was the Code of Commerce, which came in force in 1850 in the reign of the Ottoman Empire. This code remained in force until 1925 and it served as a key in terms of accounting applications in that process. This included important decrees about bookkeeping and related issues (Marsap and Akbulut, 2007: 367). The accounting applications of this period were predominantly formed by French applications.

The Turkish accounting applications during 1926 - 1960 were predominantly formed by German applications. The importance of the Code of Commerce enacted in 1926

was very noticeable on this. In this act, the commercial registers were counted and the need of balancing the books according to the year-end inventory was discussed (TBMM, 1926: 788 - 791). Another important act made in the same year was the enactment of The Code of Income Tax. In this code of law, bookkeeping, preparing balance sheet and income statement were made necessary. This act made important legal arrangements related to the issues such as the arrangements of financial statements, evaluation of assets and source, etc (Guvemli, 2001, 138). Furthermore, in 1938 the law item 3460 was legislated to apply the management plan related to budgets and to standardize the management and control of the State Economic Enterprises (SEEs). Probably the most important issue in terms of accounting was the prescience of starting the standardization in financial statements to provide comparability of financial reports between the SEEs. As is known, the accounting applications of the SEEs made important contributions to the development of accounting knowledge and skills in Turkey in the following years.

In 1949 the Tax Procedure Law no 5432 was legislated. After being revised in 1961, this law has been developed into the Tax Procedure Law no 213, which is still in force. Both 1949 and 1961's Tax Procedure Law have made important contributions to the development of accounting applications. The scope of these contributions varies from accounting records to the evaluation of assets. Probably the most important contribution of it was the formation and development of the obligatory accounting culture.

In 1964, a new law no 440 related to the SEEs and their associated enterprises was legislated. This law, on principle, replaced the law no 3460 legislated in 1938. According to the new law, "the Committee of Rearranging the SEEs", was constituted in 1938. This committee prepared "the Uniform Accounting System", which was successfully applied to the SEEs from 1972 to 1994. This system and its application lasting for 20 years have made important contributions to the accounting applications.

In 1992, the Uniform Accounting System was issued to all sector-specific enterprises apart from financial bodies by Finance Ministry. This application was arbitrary for the year 1993 and as from 1994 it was obligatory. At present, the most common and comprehensive accounting application is put into practice according to this legal arrangement.

There were also some arrangements made related to the publicly traded companies, which are amenable to Securities Exchange Act. The Turkish Capital Markets Board (CMB) was set up in 1981. CMB issued "The Rudiments Regarding Standard Financial Reports" in 1983 to provide standardization in the accounting application and reporting of the companies that are in its own sphere of influence. The financial reports of the companies that are amenable to Securities Exchange Act were called for to

be arranged within the format prescribed by CMB. Subsequently, "Chart of Standard General Accounts (CSGA) and Terms of Principle of the Chart" was issued by taking the obstacles met during the first year of the application into account. However, by practicing "the Uniform Accounting System" in 1994, the arrangements made by CMB was repealed. The capital market intermediary institutions, however, carry on to applying the format of chart of accounts and the financial report that was arranged specially for them by CMB. Notwithstanding, after 2005, the companies listed on the stock market are to arrange and submit their financial reports according to the International Accounting Standards.

In 1986, a "Uniform Accounting Chart" was also issued for the banks in Turkey. Being noticeably revised, this chart of accounts is still practiced. While applying the uniform accounting chart, banks are also obliged to report according to International Accounting Standards.

An important institutional progress in accounting in Turkey was legislation of the law related to the Accounting Standards Board in 1999. The board became active in 2002 and 1 conceptual framework, 39 TMS/TFRS and 21 comments were issued. These are all totally consistent with the Standards and Comments issued by State Agricultural Enterprises Institution.

## **THE ANALYSIS OF THE ACCOUNTING APPLICATIONS ABOUT AGRICULTURAL ACTIVITIES**

The substantial portion of agricultural activities in Turkey is conducted by small family enterprises. Most of them don't produce for the market. In the meaning of modern business, big farm businesses have been established and managed by the government. In the early years of the Turkish Republic, the private sector didn't have capital accumulation, knowledge and experience to set up a company; thus, this necessitated the existence of the enterprises formed by government capital in the economy.

Firstly, agro industrial complexes were established in 1937 to produce food for the army and for the public if needed. Then, open fields that were in the public domain were found all around the country and they were converted into farmlands. In 1938, the State Agricultural Enterprises (SAEs) was established to apply the modern agricultural methods, to develop the agro industry and lead the farmers about the issues. In 1950, Agro Industrial Complexes and State Agro Enterprises Association were united under the name of State Production Farms (SPFs) by the law legislated in 1949 and it was reorganized under the name of Directorate General of Agricultural Enterprises in 1984. 38 relatively big enterprises where stock farming and plantation were conducted together were placed in the organization throughout the country. In recent years, some of those enterprises have been leased to private sector enterprises.

When accounting applications about agricultural activities in Turkish history are implied, other than agro public enterprise are not discussed. Thus, the study includes the enterprises worked under the name of DGAE, which had been named as State Agro Enterprises Association and State Production Farms before.

### Data collection

Data were collected with Record Scan Method. In this scope, the record offices of the Prime Ministry High Auditing Board (PMHAB), State Agricultural Enterprises Institution (SAEI), State Production Farms (SPF), and Directorate General of Agricultural Enterprises (DGAE) were used. The PMHAB's Annual Audit Committee Records of the enterprises worked in the agricultural sector as from 1938 were accessed. In this context, the documents about the accounting applications of the enterprises owned by the SAEI, SPD and at present by DGAE were collected. From the audit letters collected, the chart of accounts and balance formats arranged for the agricultural enterprises were studied. Besides, the criticisms and suggestions peculiar to the sector were scanned and we focused on the ones related to accounting.

Since the agricultural public enterprises didn't have regular record system, only the limited number of documents related to the audit period was able to access. By studying the accessed sources, the accounting applications related to the agricultural activities and the variation and developments of the applications were tried to be determined.

The other data collection method was scanning the library and data sources. By this method, it was tried to access the publications of agricultural accounting. It was noticed that the fewest publications in Turkey were probably about agricultural accounting literature. The substantial portion of those consists of the academic studies that make suggestions about the development of national agricultural accounting applications.

### Findings and their evaluation

**The period of 1938 - 1949:** This period should be evaluated upon the accounting applications of State Agricultural Enterprises, which were established in 1938. Because in that period, it was impossible to mention any other small or big agricultural enterprises designed within the principles of operation.

**(a) The chart of accounts and balance:** When the written sources about agricultural accounting of the pre-republic and early republic period were studied, the application of the single entry was noticed. When the sources, in which the importance of accounting was highlighted in terms of farming financial management, were scanned, it

was determined that the double-entry bookkeeping was also discussed. However, as the double-entry bookkeeping was considered complicated at that time and lack of skilful personnel who could apply this hindered its application. By using the single entry system, detailed suggestions about the proceeding of farm inventories and cash in and out flow and recordings of agricultural products were made (Guvemli, 2000: 664 - 688). It is possible to describe the accounting applications suggested for the farms in that period as the single entry accounting applications including detailed inventory records. It was impossible to access enough sources about the applications in the agricultural enterprises.

In this period, the process related to the accounting applications of SAEI is as follows:

- i. In 10.12.1938, the chart of uniform accounts was accepted to be applied in all State Agricultural Enterprises. The chart of accounts that was planned to be applied as from 1938 wasn't practiced by various reasons. The most important reasons were the detailed chart of accounts and lack of skilful personnel who could apply it.
- ii. Following the chart of accounts prepared in 1938, which couldn't be applied, two more uniform charts of account preparations (one was in 1940 and the in 1943) were made. A prospect was prepared to enable the application of the charts of account, which were prepared in 1943 and planed to be applied in 1944, and to provide the uniform system of accounts (UMH Report, 1940: 25). As a matter of fact, by using only one charts of account in all the State Agricultural Establishments, it was intended to make trustable comparisons among the establishments.
- iii. In the same period, some important preparations were made about the balance type and body of balance. The balance formats, which were required to be arranged according to the types of enterprises aimed at public enterprises, were prepared. The balance formats were prepared by Public Audit Committee and related commissions consisted of the representatives of those enterprises. In this process, a different balance format was prepared for the Agricultural Enterprises Association (UMH Report, 1939: 5). These balance formats were used by State Agricultural Enterprises with some variations.

State Agricultural Enterprises made the reporting of the assets related to agricultural activities in the balances they prepared from 1938 to 1950 (Table 1).

The followings are the findings from scanning of the balance sheet items:

- i. The items about agricultural activities were noticeably discussed in the balance sheet formats prepared by the State Agricultural Enterprises between 1938 and 1949. Especially, in the period of 1945 – 1949, the assets

**Table 1.** Assets related agricultural activities presented on the balance sheets (1938-1949).

1938 - 1939	1940 - 1944	1945 - 1949
Releated assets	Releated assets	Releated assets
Inventories	II. Tangible assets	II. Tangible assets
A. Raw Materials and Supplies	1. Land and Earth	1. Land and Earth
B. Containers	a. Agricultural land	a. Agricultural land
C. Agricultural and Animal Products	b. Garden land	Irrigated land
D. Products	c. Forestry land	Non-irrigated land
	d. Green land	b. Orchard Land
Tangible assets	e. Feeding ground	c. Vegetable –Garden Land
A. Land	f. Derelict land	d. Forestry land
B. Trees and Gardens	g. Bogs	e. Green land
C. Buildings	2. Wanting assets	f. Feeding ground
D. Machines and Systems	3. Land Improvements	g. Bogs
E. Agricultural Appliances	4. Road and Other Systems	h. Roads and Water Resources
F. Other Fixtures	5. Conservation Appliance	i. Stand and Stone Beds
Animals	6. Plant Capital	j. Derelict land
A. Beef	7. Livestock Capital	Accumulated Depreciation (-)
B. Sheep	a. Work animal	2. Land Improvements
C. Horse	b. Income animal	a. Irrigation canals
D. Fowl	c. Other animal	b. Draining
E. Others	8. Tool and Machines	Accumulated Depreciation (-)
Costs to future years	a. Plough tools	3. Plant Capital
A. Agricultural Costs	b. Machines	a. Stone fruit trees
B. Industrial Costs	c. Hand and other tools	b. Multi-Stone fruit trees
	9. Transport Vehicles	c. Vines
	Accumulated Depreciation (-)	d. Olive trees
	V. Preliminary work	e. Citrus trees
	Relating to Future Years:	f. Ornament tress
	1. Land Improvement	g. Wood trees
	2. Plantation	h. Other trees
	3. Care	Accumulated Depreciation (-)
	VI. Current assets	4. Transport Vehicles
	A. Stocks	c. Livestock
	1. Base Metal and Material	Accumulated Depreciation (-)
	2. Product and Crops	12- Studs
	A. Product of soil	a. Cattle
	B. Product of animal	b. Buffalos
	C. Other products	c. Sheep
		d. Horses
		e. Sheep
		f. Poultry
		G. Honey bees
		h. Zoo animals
		Accumulated Depreciation (-)
		III. Preliminary work
		1. Cost Relating to Future Years:
		a. Wheat
		b. Barley
		2. Cost Relating to Future Years For Sheep Breeding

Table 1. Contd.

	VI. Current assets
	1. Storehouse
	b. Agricultural crops and goods
	Provisions for crop impairment (-)
	2. Slaughtering animals

related to the agricultural activities were provided elaborately.

ii. It is determined that the "Livestock" group that was required to be reported under another heading in IAS-41 related to the account for agricultural activities was reported elaborately. It is obvious that this group that is discussed to be formed in the uniform system of accounts applied today in Turkey was applied 70 years before by the State Agricultural Enterprises.

iii. Furthermore, another important detail is that the assets such as fruit trees and Vines planted on fields were reported separately. This approach is consistent with the international accounting standardizations.

iv. The expenses of the production activities whose revenues would be gained the following year were given in the balance. This indicates that it was the right approach to match the income and expenditure. It is also clearly understood from the regulations that this issue was discussed in detail.

v. Another noticeable subject in the balance format used in the period of 1945 - 1959 was the separately reported accumulated depreciation of the real assets.

vi. In the balance arranged in the period of 1938 - 1939, assets were classified based on their relative liquidity, starting the most liquid asset. The balance listed liabilities in order in which they must be paid. In the following years, assets were listed by starting less liquid assets and long term liabilities at the top and short term liabilities below.

### Amortizations

When the balance format used between 1938 and 1939 was scanned, it was determined that there weren't any amortizations for the "Animal" group placed in capital assets.

There was an amortization for the capital assets in the balance of 1940; however, no detailed info was found about the ratio of the assets accounted.

There was a request in the audit report of 1943, which is about revising the amortization rates of all the enterprises. Addition to this, the report asked the managers of enterprises to determine amortization ratios of agricultural equipments according to their usage at the end of each accounting period (UMH Report, 1943: 25).

By scanning the association activity report of 1945, it was determined that the assets in the group of "Studs" and "Plantation Capital", which are placed under the group of "Capital Assets", were subjected to amortization. However, there were no information found about the amortization ratio applied for them and the amortization method used (UMH Report, 1945: 11)

It was found from the 1949's audit letter that amortization of 1 - 5% to the plantation capital, 10 - 20% to transportation vehicles and 20% to Studts were counted (UMH Report, 1949: 35).

### Some notable issues found in the audit reports

i. When the "birth and biological transformation" assets, which were important in agricultural activities, were determined, it was explained that the local current value had to be predicated on (UMH Report, 1940: 4 - 9)

ii. It was explained in the audit report that field and the fruit trees on it had to be recorded by counting them (UMH Report, 1943: 259).

iii. Although the sale of the zoo animals was not discussed, it was criticized because they were placed in the current assets group instead of capital assets group (UMH Report, 1943: 259).

iv. In various audit reports, it was mentioned that colts which were in the transportation vehicle group, had to be in the Studts group until they grow up to horse.

**The period of 1950 - 1984:** The State Agricultural Enterprises Association was restructured as the Directorate General of State Production Farms in 1.3.1950 with the law no 5433. It has been operating as a floating capital enterprise since then. The followings are found when the association's accounting applications, chart of accounts, balance format and evaluations were taken into consideration:

**(a) Chart of accounts and balance:** The same chart of account and balance format was used in the period of 1951-1984. However in this process, some changes were made on the balance format and accordingly on the chart of accounts. By scanning the balance of 1958, it was found that the livestock was reported under the heading of "Livestock" by taking off from the heading of

“Storehouse of Crop and Goods” (UMH Report, 1956; 1957; 1958; 1959; 1960).

By scanning the balance of 1951 - 1981 of the State Production Farms, the accounts related to agriculture that was checked as the control account before was demoted to the sub account and the balance formats were gradually simplified.

### Amortizations

When the audit reports were scanned, the amortizations were determined separately for each livestock that were in the main group of “Livestock” and the sub group of “Studs”. (UMH Report, 1950: 26). Furthermore, it was determined that an amortization was reserved for the work animals that were in the main group.

Only one amortization ratio was applied for the “Plantation Capital” group from 1950 to 1943. In 1953, separate amortization ratio was designated for each item according to their features under the heading of Plantation Capital (DUC, 1960: 168). The reason for that change was that the assets placed in this group had different beneficial existence.

It was found from the reports of 1981 that they were subjected to amortization as of they became parents if the live inventory was a Stud and as of the time they were employed if they were work animals.

### Some notable issues found in the audit reports

- i. It was designated that when the live inventory was taken into account from the time of birth, the set prices had to be predicated on by the senior management (DUC-Revolving Capital Account Code of Practice, 1950).
- ii. The nursery to be sold was found to be in capital assets and this was criticized by the auditors. It was stated that the nurseries had to be in the current assets separately from their gardens (UMH Report, 1950: 21)
- iii. When the audit report of 1952 was scanned it was found that the animals to be sold as slaughtering animals were placed in capital assets and it was stated that those had to be taken off and placed under the heading of the current assets in the account of Crop and Goods (UMH Report, 1950: 74).

As the State Production farms operated as revolving capital and also took fund from the government budget, they were subjected to the Court of Auditors. These enterprises were out of the inspection of Prime Ministry High Auditing Board (PMHAB) for some time. Thus, no consistent sources were found about the audit of accounting during the period of 1960 - 1984. Furthermore, we may say that the State Production Farms maintained the previous accounting applications in this period.

An important development in the period of 1950 - 1984

was that the SEEs started to use the uniform accounting system in 1974. However, as required by its character, the State Production Farms couldn't apply the uniform accounting system enacted for the SEEs.

Until the year 1984 in Turkey, both the State Agricultural Enterprises and the State Production Farms used American System as a booking system.

**The period of 1984 - 2008:** 1984 was the year when Directorate General of Agricultural Enterprises (DGAE) was established. Thus, the accounting applications about the agricultural activities from 1984 to the present were analyzed upon this enterprise. On principle, one part of the DGAE is dated back to the Ottoman Empire and the other to the early year of our republic. DGAE was formed by the corporation of the stud farms, which were set up in the early years of the Ottoman Empire to raise horse and to meet the food supply of the palace, and the State Production Farms (Agricultural Complexes and State Agricultural Enterprises).

The legal tender of DGAE was public service until 1995, but then its status was changed to a body managed according to the commercial rudiments.

### Chart of accounts and balance

- i. As from its establishment, DGAE started to apply the Uniform Accounting System, which was issued for the SEEs in 1972, and carried on this application until 1994.
- ii. The agricultural enterprises previously used sector-specific chart of accounts and balance formats. After the DGAE was established, the chart of accounts and balance formats applied for the SEEs started to be applied. The external reporting of the agricultural activities was converted into a more general structure with this application.
- iii. The part of the balances related to the agricultural activities from the year 1984 to 1993 and from 1994 to the present in Table 2
- iv. DGAE dealt with the control account related to the agricultural activities in its chart of accounts applied. For example, although it is in the uniform chart of accounts, the accounts related to the agricultural activities like “155-Live inventories”, “154- By-products”, “296- Biological Assets / Livestock” are used in the recording. DGAE also follow up the accounts by the book of entries in detail.
- v. Although DGAE particularly follows up the accounts related to the agricultural activities in the chart of accounts used in the nominal ledger level, these are reported in the related asset item in the balance sheet. Moreover, preparing additional tables related to agricultural activities presents additional information.
- vi. In the balance, consistent with the uniform account system, prepared by DGAE, some agricultural activities and their outcomes are as follows:

**Table 2.** Assets related agricultural activities presented on the balance sheets (1984 - Today).

1984 - 1993	1994 - Continue
Releated assets	Releated assets
1. Current assets	I. Current assets
E. Inventories	E. Inventories
- Loss of inventory value provision	1. Raw materials
F. Other current assets	2. Semi-finished goods
- Other current value provision	3. Finished goods
II-Fixed assets	4. Merchandise
E. Real assets	5. Other inventories
- Accumulated depreciation	6. Loss of inventory value provision (-)
F. Intangible assets	F. Prepaid expenses and accrued income
- Accumulated depreciation	D. Real assets
H. Other real assets	1. Estates and lands
-Loss value provision	2. Land improvements
	3. Buildings
	4. Machines and devices
	5. Vehicles
	6. Inventories
	7. Other real estates
	8. Accumulated depreciation (-)
	E. Intangible assets
	6. Other intangible assets
	7. Accumulated depreciation
	F. Private consumption assets
	3. Other private consumption assets
	4. Accumulated depletion allowance (-)
	G. Prepaid expenses and accrued income
	1. Expenses of the following months
	H. Other fixed assets
	3. Other various fixed assets
	4. Loss of inventory value provision

Agricultural lands are in the group of "Real Estates" under the heading of "Lands",

Live inventories are in the group of "Inventories" under the heading of "Trade Goods" or "Products",

vii. Livestock is in the group of "Real Assets" under the heading of "other Real Assets", The activated expenses related to the afforested fields and the establishments such as artificial feeding grounds for the stockbreeding are followed up under the heading of "Assets Subjected to Private Consumption".

viii. The assets in the balances were listed from the most disposable assets to the least disposable assets and the sources were listed parallel to the assets.

### Amortizations

i. The amortization applications related to agricultural activities applied by DGAE enterprises between the years 1984 - 2005 were made according to the beneficial existence

designated by the enterprises taking the upper limit determined by the tax authorities into consideration (the upper limit of general application was 25% until 1995 and 20% until 2005).

ii. In period of 1984 - 2004, the beneficial existence such as fields and feeding grounds was accounted according to the crops grown (BYDK Report, 1993: 243).

iii. After 2005, the amortization of activated agricultural assets was made to the beneficial existence related to the agricultural sector by the ministry of finance. The beneficial existences related to some assets declared by the ministry of finance for the agricultural sector are shown in Table 3.

### Some notable issues related to agricultural activity accountings

No noticeable criticism or suggestions were found in the evaluation and accounting related to the agricultural

**Table 3.** Useful life and depreciation rate for some assets for agricultural sector.

Assets	Useful life/Year	Depreciation rate (%)
Olive groves	50	2,00
Mulberry groves	40	2,50
Hazel not groves	25	4,00
Ornament trees, rose gardens	20	5,00
Vines	20	5,00
Citrus trees	25	4,00
Peach trees	10	10,00
Apricot, plum, almond trees	25	4,00
Apple, pear, quince, fig trees	25	4,00
Morello and cherry trees	20	5,00
Walnut, chestnut, pistachio trees	40	2,50
Other fruit trees	10	10,00
Greenhouses	20	5,00
Dairies	5	20,00
Dairy and stud cattle	10	10,00
Horses	5	20,00
Dairy sheep and goats	5	20,00
Honey bees	2	50,00
Poultry for eggs	10	10,00
Poultry raising facilities and buildings	5	20,00
Sea and fresh water fish	5	20,00
Other animals (Dogs, work animals, etc.)	5	20,00

activities in the DGAE's audit reports. Moreover, some notable issues related to the agricultural activities found in the accounting applications of DGAE (Subasi, 2007, 19 - 381):

- i. First entry of the crops harvested was made upon the previously set values. The designated figures in the budget were used to figure this out and they made the transformation of them into actual costs in the end-of-period.
- ii. Whole of the expenditure for products that would be harvested the following year was capitalized.
- iii. The costs related to the cancelled fields because of the frost and droughts are included in the product cost account.
- iv. The by-products are recorded with their net realizable values.
- v. The cost sharing in the products, from which more than one output is gained, are made according to the net realizable values of the products.
- vi. Previously set values are used in the first entry of the new born cattle in the stockbreeding.
- vii. The biological transformations are made upon previously set values. In the end-of-period, it is transformed to actual cost value.
- viii. The animals losing their stud quality are taken into livestock group upon the actual cost value. The related accumulated depreciation is adjusted.
- ix. When a government grant is taken or it becomes a credit, they are recorded as actual activity revenue.

x. The vast majority of the farmers were exempted from tax with the changes made in the Revenue Code In 1964 and this helped the agricultural accountings in private sector to become prevalent in general use (Demirkol, 2007: 38).

### AGRICULTURAL ACCOUNTING DOCTRINE BOOKS

The accounting issues related to the sector-specific areas in Turkish accounting literature are grouped under the name of specialization accountings. Banking accounting, insurance accounting and agricultural accounting are in the scope of the specialization accountings. The agricultural accountings are the least interesting area of specialization for accountants. There are not many publications related to the accountings of agricultural activities; however, there are few adequate ones. Some information about them is given here under:

#### **Agricultural accounting (Muhasebe-i Ziraiye); Aram; 1885**

This was written by Aram the agricultural engineer and was published in 1885 in Salonika. As Aram hadn't known the double-entry bookkeeping system, he suggested single entry bookkeeping; however, he suggested the double-entry bookkeeping system to be learned and used in the farms. In the book written in the old Turkish



language, he emphasized the importance of accounting in farm management and suggested some accounting issues related to agricultural activities (Guvemli, 2000:664).

**Agricultural accounting principles and farm accounting (Amele-i Usul-i Muhasebe-i Ziraiye ve Ciftlik Muhasebesi); Ibrahim Fazil; 1922**

It was written by Ibrahim Fazil in 1921 - 1922. The double-entry system was discussed in the book. However, he stated that this system was very complicated and he said that the application of single entry system would be more advisable. He gave some information about the book-keeping in this system (Guvemli, 2001: 250)

**Accountings and organization of agricultural enterprises (Zirai Isletmeler Muhasebesi ve Teskilati); Baha Esad Karova; 1938**

This book that was the publication of the First County and Agricultural Progress Assembly of the Ministry of Agriculture was written by Baha Esad Karova, who was the vice manager of the State Agricultural Enterprises of that time. The book discussed about the applications of the chart of accounts prepared for the State Agricultural enterprises in 1938, financial accounting and specialty accounting related to agricultural activities. Some document samples were also given at the end of the book.

**Agricultural cost accounting (Zirai Maliyet Muhasebesi); Sedat Unalan and Salih Ozel; 1966**

The book was published by Sedat Unalan and Salih Ozel, who were the members of Gazi University, in 1966. The book mainly discussed about the formation of the financial accounting system in agricultural enterprises and use of the system. The book, in which the applications of the process costing system in agricultural enterprises were focused on, discussed the rules and essentials of the direct product costing. Although the book was prepared as a textbook, the practice was predicated on and it made some suggestions.

**Agricultural enterprises and accounting, (Tarim Isletmeleri ve Muhasebesi); Mehmet Ali Aktuglu; 1972**

It was published by Mehmet Ali Aktuglu while he was a member of the Ege University. Firstly, some information was given about the agricultural economics and the agricultural activities were studied. Then he discussed about the account operations in agricultural enterprises and focused on the accounting issue in agricultural enterprises. The agricultural accountings were analyzed in term of small, medium and big agricultural enterprises separate-

ly. Although it is a textbook, in which the product cost account in big enterprises was focused on, it also gives some important suggestions for practice. The tax assignments of the agricultural enterprises were also discussed in the last section of the book.

**Income tax of a farmer and accounting in agricultural enterprises (Ciftcinin Gelir Vergisi ve Tarim Isletmelerinde Muhasebe); Hasan Dogan; 1975**

It was published by Hasan Dogan, who was a financial adviser and a general accountant in the ministry of finance. The book consists of two sections. In the first section, the subjects related to the taxation of the farmers are discussed and in the second section, the accounting applications of the agricultural enterprises were focused on. The book focused on the accountings of the output costs of agricultural activities and it is more of a practice dominated.

**Accounting organization in agricultural enterprises (Tarim Isletmelerinde Muhasebe Duzeni); Cengiz Erdamar; 1985**

It was published by Cengiz Erdamar, who was a member of Istanbul University, in 1985. The goal of the book is to apply the accounting applications in industry and trade enterprises to agricultural enterprises. The book discussed the financial accounting in terms of agricultural enterprises and also the cost accounting. A sample event of an agricultural enterprise was also given in the last section of the book.

**Agricultural accounting (Tarim Muhasebesi); Ali Aras; 1988**

It was published as a textbook by Ali Aras, who was a member of Ege University, in 1988. The book generally discusses about farm records and the accounting applications in agricultural enterprises.

**Agricultural accounting (Tarim Muhasebesi); Bahattin Cetin and Tolga Tipi, 2007**

It was written as an agricultural accounting textbook by the members of Uludag University. The book discusses the agricultural applications and taxation of agricultural enterprises.

When the doctrine books about agricultural accounting were surveyed, it was found that there are just a few books about agricultural accounting contrary to other subjects of accounting. There are sections about agricultural activities on the financial accounting books. However, the studies related to the agricultural sector are

inadequate. Another finding about this issue is that agricultural engineers are more interested on these issues than accountants.

The publications accessed directly or indirectly were given above. Apart from these books, there are also many published articles and handouts and postgraduate thesis. However, it was also obvious that the publications about agricultural accountings are really very few.

## Conclusion

In the study, which overviews the agricultural accounting applications in Turkey within historical progress depending on the record scanning, the outcomes are as follows:

(1) Since the agricultural fields were small and there were tax exemptions for the farmers, the accounting applications of the private sector related to agricultural activities couldn't develop. Moreover, we should state that there have only been a few number of private sector enterprises applying the accounting practices properly until the recent years.

(2) In 1937 Ataturk, the founder of Turkish Republic donated his real property to the public. With his leadership and by the establishment of Turkish Agricultural Enterprises owned by public, the accounting related to the agricultural activities started in the literal sense.

(3) In 1938 - 1984, various chart of accounts and statement of accounts formats were used. It was determined that very detailed accounts related to agricultural activities were used in those charts of accounts and statements of accounts. It was found that each activity was separately followed up in the publicly -owned agricultural enterprises that conducted many agricultural activities together and that the records of the biological assets were kept in detail.

(4) The agricultural enterprises that were united under the roof of DGAE started to use the chart and statement of accounts, which were applied in all the bodies of the SEEs. This structure caused the information related to the agricultural activities to be presented generally, especially in the statement of accounts. However, it was found that the agricultural accounting applications were maintained progressively in terms of accounting.

(5) The transformations of the biological assets became the issue of the accounting as part of the rules and regulations designated by the senior management of the enterprise since 1938. Especially by the establishment of the State Production Farms in 1950, the biological transformations were followed up and accounted in detail.

(6) The accounting records related to the agricultural products obtained by harvesting, biological assets obtained by birth and the biological transformation of the biological assets were recorded with the previously set ratios. However, the assets recorded with their budget values trans-

formed into cost values in the end-of-periods.

(7) Since the publicly- owned agricultural establishments are not-publicly-traded, they don't have to be up to IFRS-41. The Accounting Standards related to Agricultural Activities. Although the substantial portion of the accounting applications upon this issue are up to the standard no 41, it is obvious that there are some variations on the evaluation of the agricultural products and biological assets within the actual value. However, those variations will disappear when the Small and Medium size Enterprise (SMEs) have applied the application of IFRS.

Consequently, the accounting applications related to the agricultural activities in Turkey have been developed by the state agricultural enterprises. The reasons for developing the agricultural accounting applications are; the state agricultural enterprises are bigger in size than private-sector enterprises, the administrator of those enterprises don't have to account to TGNA and they have an opportunity to employ qualified employers in all areas.

## REFERENCES

- Aktuglu MA (1972). Tarim Isletmeleri ve Muhasebesi, Ege Universitesi Matbaasi, Bornova, Izmir.
- Aras A (1990). Tarim Muhasebesi, Ege Universitesi, Ziraat Fakultesi Yayini, Izmir.
- BYDK Report (1984). Basbakanlik Yuksek Denetleme Kurulu Tarim Isletmeleri Genel Mudurlugu Report Yil: 1984.
- BYDK Report (1993). Basbakanlik Yuksek Denetleme Kurulu Tarim Isletmeleri Genel Mudurlugu Report Yil: 1993.
- Demirkol OF (2007). Seracilikta Uluslararası Muhasebe Standartları'na Gore Urun Maliyetlerinin Hesaplanması, Yayınlanmamış Doktora Tezi, Gazi Üniversitesi, Sosyal Bilimler Enstitüsü, Ankara.
- DUC (1960). Devlet Uretim Ciftlikleri Talimat ve Tebligleri (Circular Letters and Announcements), Maliye Bakanlığı, Ankara.
- DUC (1981). Devlet Uretim Ciftlikleri Talimat ve Tebligleri (Circular Letters and Announcements), Maliye Bakanlığı, Ankara.
- Guvemli O (2000). Turk Devletleri Muhasebe Tarihi (Tanzimattan Cumhuriyet'e), Volume 3, Istanbul.
- Guvemli O (2001). Turk Devletleri Muhasebe Tarihi (Cumhuriyet Donemi XX. Yuzyil), Volume 4, Istanbul.
- Marsap B, Akbulut Y (2007). "The Effects Of The Uniform Accounting System Studies And The Development Of Tax Regulations On Accounting Applications During The Period Of The Turkish Republic (1923-2006)" The Balkan Countries 1st International Conference On Accounting And Auditing (Bcaa), 7-10 March, Edirne-Turkey.
- Subasi A (2007). TIGEM Tekduzen Muhasebe Sisteminin Tarim Isletmelerinde Uygulanmasi, Ankara.
- TBMM (1926). Turkiye Buyuk Millet Meclisi Zabıt Ceridesi, Ankara.
- UMH Report (1939). Basvekalet Umumi Murakabe Heyeti Devlet Ziraat Isletmeleri Report.
- UMH Report (1940). Basvekalet Umumi Murakabe Heyeti Devlet Ziraat Isletmeleri Report.
- UMH Report (1941). Basvekalet Umumi Murakabe Heyeti Devlet Ziraat Isletmeleri Report.
- UMH Report (1943). Basvekalet Umumi Murakabe Heyeti Devlet Ziraat Isletmeleri Report.
- UMH Report (1945). Basvekalet Umumi Murakabe Heyeti Devlet Ziraat Isletmeleri Report.
- UMH Report (1949). Basvekalet Umumi Murakabe Heyeti Devlet Ziraat Isletmeleri Report.
- UMH Report (1950). Basvekalet Umumi Murakabe Heyeti Devlet Ziraat Isletmeleri Report.

UMH Report (1952). Basvekalet Umumi Murakabe Heyeti Devlet Uretme Ciftlikleri Report.  
UMH Report (1953). Basvekalet Umumi Murakabe Heyeti Devlet Uretme Ciftlikleri Report.  
UMH Report (1954). Basvekalet Umumi Murakabe Heyeti Devlet Uretme Ciftlikleri Report.  
UMH Report (1955). Basvekalet Umumi Murakabe Heyeti Devlet Uretme Ciftlikleri Report.  
UMH Report (1956). Basvekalet Umumi Murakabe Heyeti Devlet Uretme Ciftlikleri Report.

UMH Report (1957). Basvekalet Umumi Murakabe Heyeti Devlet Uretme Ciftlikleri Report.  
UMH Report (1958). Basvekalet Umumi Murakabe Heyeti Devlet Uretme Ciftlikleri Report.  
UMH Report (1959). Basvekalet Umumi Murakabe Heyeti Devlet Uretme Ciftlikleri Report.  
UMH Report (1960). Basvekalet Umumi Murakabe Heyeti Devlet Uretme Ciftlikleri Report.