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A Basic System of Farm Accounting for Family Farm

M. KAIHARA

Professor, Farm Accounting Institute and Department of Agricultural Economics
Faculty of Agriculture, Kyoto University

Introduction

Farm business in the developed economy is usually concerned with purchasing materials and services, operating agricultural production and selling the produce from the farm. Main interest of the farmer is in obtaining more net cash income with desirable level of his farming effort. It will be possible to describe economic activity on the farm by means of systematic record of transaction for market. As the result, financial situation of the farm at a given time and economic activity on the farm during a period of time can be summarized without difficulty in sophisticated forms called a balance sheet and a profit and loss statement.

In the developing economy on the other hand economic activity itself is usually very simple. Farm accounting, however, is not so easy. For a farmer subsistence is a large part of his economy and market transaction is only a part. Consequently, record of transaction for market does not tell even an outline of farming. Production, consumption and also primitive capital formation should be regarded as the total economic activity of the farm. For accounting it materials and services produced, consumed and worked on the farm have to be evaluated by money term and recorded with each amount of them. Of course this method of accounting farm economy presents some difficulties. It,

however, might help to rationalize farm living in developing economy.

In this brief paper I will present a very simple farm accounting method called "self-accounting system" which has been developed at College of Agriculture, Kyoto University and it played a substantial role in the improvement of farming and farm life and helped administrators and policy makers on their survey and analysis of financial situation of the farm and farmer's economy. At present it is still an adequate accounting system for many family farms in Japan, even though advanced system of farm accounting is necessary for farming and living under more developed economic and social status.

Outlines of the self-accounting system for family farm

1) Unit (Entity)

The unit for the farm accounting system is the farming and living economy of a farmer as a whole. It includes economic activity on production in the farm, consumption of the farm products by the farmers and direct capital formation in the unit. Business and household account of the unit are not separated.

Farm living is accounted by two actions: purchase of materials, services and other payment for living, and delivery of the farm products for self-consumption by the farm

family. They are shown as Fig. 1.

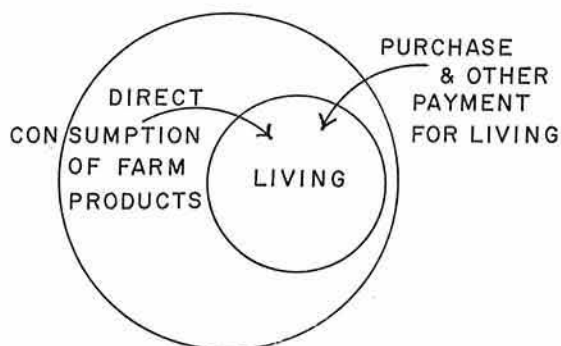


Fig. 1 Farmer's Economy

2) Accounting system and the books

The system is based on a single entry and it consists of static and dynamic method of accounting. The "static" is in aggregation of assets, liabilities and then the net property of the farm at a given point of time and comparison with the amount at the other point of time.

The "dynamic" means economic activity for a period of time accounted by revenues for the products which are exchanged, consumed directly by the farm family, and expenditures for purchase and the other payment for earning and living.

The book for the former is called "property

book". To keep the book three groups of assets and liabilities should be mentioned. First, fixed assets are filled in the form shown in Fig. 2-A at the present value subtracting depreciation or adding increase in value from the cost. No consumer's durable goods on farm for living are counted at all, except the house. Secondly, accounts receivable, prepaid expenses, stocks, bond, deposit and cash on hand are kept in the form shown in Fig.2-B. It is the same for the liabilities. Thirdly, the inventories are filled in the form shown in Fig.2-C and it aggregates farm products on hand, supplies including single use goods which are not used yet, value of the intermediates in the farm, value of tools which are in use, and value of young grass, crops, vegetables, etc. on the field.

The dynamic accounts daily transaction and monetary amount of the delivery of the home-raised products to be used for living. They are kept in the book shown in Fig. 3. It consists of "external transaction" or "cash transaction" and "products used for living." External transaction is, of course, divided by receipts and expenditures. There are "income receipts" and "exchange receipts" in the receipts side and "income expenditures", "living expenditures" and "exchange expenditures" in the expenditures side.

Item	Description	At the Beginning of the Year		Depreciation	Appreciation	Increase or Decrease by Exchange transactions	At the End of the Year	
		Quant.	Value				Quant.	Value
			¥	¥	¥	¥		¥

Fig. 2-A

Item	Description	At the Beginning of the Year		Increase or Decrease by Exchange transactions	At the End of the Year	
		Quant.	Value		Quant.	Value
			¥	¥		¥

Fig. 2-B

Item	Description	At the Beginning of the Year		Decrease	Increase	At the End of the Year	
		Quant.	Value			Quant.	Value
			¥	¥	¥		¥

Fig. 2-C

Date	Description	External (or Cash) Transaction							Products Used for Living			
		Receipts			Expenditures				Balance	Item	Quant.	Value
		Item	Income Receipts	Exchange Receipts	Item	Income Expenditures	Living Expenditures	Exchange Expenditures				
			¥	¥		¥	¥	¥			¥	

Fig. 3

Transactions for capital assets and liabilities are the objective of the accounts of the "exchange receipts" and "exchange expenditures". The deposits are also included in them. It is filled in "income receipts" and "income expenditures" to make gain and loss for farm economy. In the "living expenditures" the purchases and the other payments for living are kept. "Balance" should be the amount of currency on hand in the unit.

For the book all transactions are kept with currency base at the time of the event. A few example showing how to fill in these books are demonstrated as follows.

a) Bartering a farm products g for consumption good b from B is translated by the farmer A as sale g for "income receipts" and purchase b for "living expenditures" by the amount q, if q is the value of b estimated by A. This transaction is accompanied by no change in the amount of currency on hand.

b) Deposit of an amount of currency C in the

bank B is written as the amount C in "exchange expenditures" and then decrease of C is written down in the "balance" subtracting C from cash on hand.

c) A purchase of fertilizer from the dealer F by paying a check for amount M by the bank K is kept as M in "exchange receipts" for withdrawing M from the bank K and the M is also entered in "income expenditure" for purchasing fertilizer from the dealer F. The transaction makes no difference in "balance" because currency on hand is not used.

The amounts of the column in "exchange receipts" and "exchange expenditures" work a check for the balance and also the records of transaction. The summation of the amounts in "balance" which should be the amount of cash on hand at the beginning of a period, and in both "receipts" has to equal the summation of the amounts in all expenditures and in the "balance" at the end of the period.

In the "products used for living" the mone-

tary amount of the delivery of the home-raised products to be used for living is entered.

3) Closing of the books and calculation of summary for the period

To calculate the summary for the period is very simple in this system. Summation of the amounts in each column: "income receipts", "income expenditures" and "living expenditures" takes simple aggregation to find gross income, the expenditure for getting income, and the paid amount for living during the period respectively.

At the closing time depreciation should be considered. It will be obtained from the "property book" shown in Fig. 2-A. Increase and decrease in the inventories during the period of time should be accounted as the difference of the amounts at the end and the beginning from the book shown in Fig. 2-C.

There are two important adjustments. The first is direct investment of family labor as primitive capital formation such as building up constructions, labor input for taking care of orchard trees in the growing period, etc. by family labor itself. Inputs of supplies and services for them in the growing period are also accounted and added to the assets as growth value during the periods. They are called "growth value" or "appreciation" in the property book shown in Fig. 2-A. The amount, of course, should be added to form net income for the farm economy.

Secondly, estimated amount of board for the hired labor should be subtracted from the living expense and then added to the amount of the expenditure for getting income. Income in this system of bookkeeping and aggregation comes out very simply as a net income on family farm economy as a whole. Itemizing receipts, expenditures and delivery of the farm products for living is a matter of business after closing books and counting income.

Description of family member and account of labor inputs for farming and non-agricultural earning are kept in subsidiary books.

In order to give special attention to some items such as accounts receivable and payable for particular person, flow in flow out of the supplies, farm products subsidiary books are also prepared. In this system, however, they are not necessary.

Economic Analysis for Farming and Farm Living from the Data

Data from this accounting system make possible to calculate returns of the farm or the farmers with different categories. To find them is the introduction to business analysis of farming. Furthermore, Planning farm business is also possible with the data. Some structural change in farmer's economy is found from the chronological data.

It will be interesting to present a few remarkable examples in recent Japan. Percentage of the monetary amount of the delivery of the home-raised products to be used for living in living expense which consists of it and other living expenditures is decreasing: 34.6% in 1957, 32.5% in 1963 and 28.7% in 1965. Percentage of income receipts in gross income of the farm is increasing: 68.7% in 1957, 77.3% in 1963 and 78.6% in 1965. The figures mean that farm economy is becoming more and more market economy type in that farmers use more cash. In addition to that, percentage of net surplus in farm economy in farmer's income is increasing: 22.4 % in 1957, 28.6% in 1963 and 28.8 % 1965. The data are based on 50 - 70 farmers in the Kinki district who practice the system.

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