



The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

No endorsement of AgEcon Search or its fundraising activities by the author(s) of the following work or their employer(s) is intended or implied.

Agriculture - Econ. aspects - Taiwan

GIANNINI FOUNDATION OF
AGRICULTURAL ECONOMICS
LIBRARY

FEB 14 1964

**PROCEEDINGS OF
AGRICULTURAL ECONOMICS SEMINAR** *Taipei,*
Taiwan, SEPTEMBER 16-20, 1958

HELD AT THE COLLEGE OF AGRICULTURE
NATIONAL TAIWAN UNIVERSITY

TAIPEI, TAIWAN, CHINA
MARCH 1959

AN ANALYSIS OF FARM RECORDS DESIGNED FOR FARM MANAGEMENT PRACTICES

Ching-yuan Chao

Associate Professor of Farm Management
National Taiwan University

SUMMARY

I. Designation of Farms

Most of our Chinese students understand thoroughly the principles of farm management, but are unable to apply them to actual farm due to the lack of farms for experiment.

Three years ago an attempt was made by the author to supply the need by designating farms for farm practices. Since 1955 eight private rice farms near the university campus have been selected for the purpose of providing an opportunity for junior students of the department to get some practical experience in farm organization and management. Operators of these farms were given a brief account of the course, including objectives, content, and the importance of the experiment in enabling the students to understand the management problems.

II. Farm Management Practices

(1) Visiting the farm

Two or three junior students were assigned to a farm. They were required to visit the farm twice a week. When they visited the farm to observe or practise its organization and operation such as environmental conditions, equipment, enterprises, crop and livestock system, farming practices, land improvements, supervising labourers, financing and marketing, they discussed those problems with the operator and made recommendations for him to consider.

(2) Keeping farm record

A farm record book was designed by the author. After visiting the farm, the students would keep the records such as farm receipt, farm expenditure, farm labor, crop production, livestock and poultry production, fertilizer and feed for the farm.

(3) Assigning special experiment

Besides visiting and recording, students were assigned to work out the following special experiments to follow farm management lectures.

- A. Designing farm record forms
- B. Taking the farm inventory

- C. Budgeting the farm business
- D. Laying out the farm
- E. Preparing farm calendar
- F. Farm work simplification
- G. Net worth statement
- H. Analysis of farm income and cost
- I. Measuring of performance
- J. Analysis of financial returns

Students were given instructions for each special experiment such as its objectives and contents before it was assigned to them. For instance, the author guided the students to work on experiment of farm layout as follow:

A. Objectives:

- a. To observe and study the present farm layout of the farm.
- b. To revise layout for the experimental farm to make it the most convenient and economical.

B. Contents:

- a. Planning farm layout.
- b. Drawing present layout and a revised layout for the farm.
- c. Discussing the revised layout with the farm operator.
- d. Writing a supplementary report based on comments and criticisms of the operator.

(4) Making field trips

Although students had had much experience from their experimental farms, they did not know the organization and management of other farms. Hence, field trips were made for them to visit Taiwan Sugar Corporation Hog Breeding Farm, Cooperative Farm of Taoyuan and other farms.

III. Analysis of Farm Records

Farm records were analyzed at the end of each record year. From April 1955 to March 1958, the average results of eight farm records analysis are summarized as follows:

A. Farm Resources Used

- | | |
|----------------|------------------|
| 1. Land | 1.64 ha. |
| 2. Investment* | NT\$ 145,817.59 |
| 3. Labor** | 671.44 work days |

B. Farm Income and Cost

1. Farm Income

- | | | |
|--|---------------|--------|
| a. Sales of crops and their by-products | NT\$ 5,291.25 | 12.92% |
| b. Sales of livestock and their products | 21,203.55 | 51.79 |
| c. Sales of poultry and their products | 302.44 | 0.74 |

*Including NT\$94,487.50 for land for agricultural use, NT\$27,778.59 for farm building and land improvement, NT\$2,282.81 for farm implements, NT\$12,200.74 for livestock, NT\$3,248.86 for plants, NT\$4,163.01 for commodities and NT\$1,656.08 for cash and quasi-cash.

**Including family labor and hired labor.

d. Sales of agricultural processing	184.55	0.45
e. Products for farm and home used	12,166.69	29.72
f. Others	1,795.01	4.38
Total	NT\$40,943.49	100.00%

2. Farm Cost

(1) Cost of the farm

i. Direct cost of production

a. Labor	NT\$ 4,093.94	13.35%
b. Feed	10,240.43	33.40
c. Fertilizer	2,353.45	7.68
d. Seed and seedling	771.09	2.52
e. Livestock and poultry	4,286.43	13.98
f. Material for processing	294.62	0.96
g. Medicine	161.85	0.53
h. Light and fuel	1,105.12	3.60
Total	NT\$23,306.93	76.02%

ii. Indirect cost of production

a. Rental	NT\$ 4,550.26	14.84%
b. Land tax and farmer's association membership fee	904.22	2.95
c. Repair	848.91	2.77
d. Farm implement	324.11	1.06
e. Land improvement	37.23	0.12
f. Interest for agricultural loan	14.55	0.05
g. Miscellaneous	670.22	2.19
Total	NT\$ 7,349.50	23.98%
Grand total	NT\$30,656.43	100.00%

(2) Cost of rice production per hectare

i. Direct cost of production

a. Seed and seedling	NT\$ 277.68	2.25%
b. Fertilizer	1,588.18	12.87
c. Man-labor	Wage 4,751.16	38.49
	Working days 226.23	
d. Animal labor	Wage 628.00	5.09
	Working days 28.96	
e. Material	108.20	0.88
Total	NT\$ 7,353.22	59.58%

ii. Indirect cost of production

a. Rental	NT\$ 2,949.07	23.89%
b. Tax	820.75	6.65
c. Depreciation	887.54	7.19
d. Others	332.38	2.69
Total	NT\$ 4,989.74	40.42%
Grand total	NT\$12,342.96	100.00%

(3) Cost of hog production per head

a. Value of pig	NT\$	135.59	24.26%
b. Feed expense		290.34	51.95
c. Labor expense		109.79	19.64
d. Material and miscellaneous		23.17	4.15
e. Production cost per head	NT\$	558.89	100.00%
f. Average weight per head		58.12 kg.	
g. Production cost per 100 kgs of body weight	NT\$	957.17	

C. Efficiency

1. Crop yield index		144.27	
2. Returns per NT\$100 feed all livestock	NT\$	145.32	
3. Crop hectares per man-equivalent		3.68 ha.	
4. Hog production per man-equivalent		5,628.92 kg.	
5. Gross profits per man-equivalent	NT\$	39,787.92	
6. Labor efficiency index		125.41	
7. Rate of turnover		39.84%	
8. Rate of return on investment		19.58%	

D. Financial Returns

1. Net farm income	NT\$	18,674.12	
2. Labor income	NT\$	7,250.68	
3. Farm capital earnings	NT\$	15,910.02	
4. Farm family earnings	NT\$	27,365.91	
5. Profits	NT\$	-9,524.70	
6. Net cash income	NT\$	5,740.27	
7. Management return	NT\$	2,637.11	