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CHINESE FARM ECONOMY

CHINESE FARM ECONOMY

A Study of 2866 Farms in Seventeen
Localities and Seven Provinces
in China

By

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FOREWORD

THE University of Nanking is pleased to be able to present within this volume the results of the studies in rural economy in China made by the Department of Agricultural Economics, Farm Management and Rural Sociology, under the direction of Professor Buck, which are the first of their kind in this country. The value of this work has been most generously recognized by the Institute of Pacific Relations, through the recommendation of their China Council, in funds which have made possible its publication in this form. It is with much gratification that this gift is acknowledged. Such cooperation is of importance not only in the particular aspects of one university, but in far more widespread meaning, namely, that of international understanding and of mutual and constructive study of the countries of the world. In this larger sense, also, we are glad to be cooperators.

Y. G. CHEN, *President*

The University of Nanking, Nanking, China.

The *Book of Filial Piety* gives these requirements of a good farmer:

*Work according to seasons,
Suit crops to soils for profit,
Guard behavior, spend wisely,
Nurture parents with honor.*

PERFACE

THIS study of farm management and rural social conditions on 2866 farms in seventeen localities of China is the outgrowth of a desire for systematic knowledge of Chinese farming. It was begun with the purpose of giving students practical experience in the collection of data and with the hope of obtaining material for teaching purposes. After the first studies were completed, the possible usefulness of the information for students of agricultural and social conditions abroad, as well as in China, became apparent, and gradually the scope of the data increased until it included a fair number of farms in China, infinitesimal as compared with the total, but representative of the widely separated seventeen localities. The study includes a farm area of 8500 hectares or 21,000 acres, the capital investment is nearly \$5,000,000 Chinese currency, and the rural population approximates 17,000 persons.

While this book is not planned for the general reader, it is intended, nevertheless, to be such that anyone can follow the text without difficulty; meanwhile, it is hoped the technician will find the tables useful as source material for additional interpretation, since it has been impossible in this one volume to interpret all aspects of their contents. For convenience in arrangement, the tables have been kept with the subject matter of each chapter rather than put into the appendix; thus data pertaining to a single subject have not been separated.

Acknowledgments are made first of all to the students and other field investigators, whose names appear in table I, and to the 2866 farmers, who cooperated to the extent of giving the desired information. In the tedious work of analysis special mention must be made of P. H. Hwa, who aided in the finding of suitable clerical assistants in the first years of the work: of W. Y. Swen, who rendered much help in the direction and supervision of the assistants; of C. M. Chiao, who has not only assisted, but contributed to the method of analysis of the

PREFACE

chapters on Farm Ownership and Tenancy, The Farm Family and Population, the Standard of Living and Food Consumption; of H. C. Li, a very careful and accurate clerical assistant, who aided in apportioning the work among the assistants, but who died in the midst of the work, leaving a place difficult to fill; of S. L. Ling, who has so efficiently taken up the work left by H. C. Li; of P. K. Chen, who besides the work of analysis, has so carefully drawn all the charts; of T. L. Hsu, for his special assistance in the biometric analysis and of R. H. Fang and S. F. Yang, who, like those already mentioned, have assisted from the beginning to the completion of the work; of L. L. Chang for his careful proof reading; of Miss G. C. Mertsy particularly for compiling the index; and of all others who have helped for briefer periods of time. For editing I am greatly indebted to my wife.

Grateful acknowledgment is given to the Bureau of Plant Industry of the United States Department of Agriculture for the use of certain photographs taken by C. A. Reed, illustrations 1, 6, 11-15, 17, 26, and 30; to Mr. Guy Thelin for illustrations 2, 3, 27, and 28; and to G. E. Ritchey for illustrations 18 and 19. The other photographs are by the author.

A number of persons have read parts of the work either in manuscript or in proof form and their suggestions have been most welcome. Special mention must be made of Dr. G. F. Warren's help in reading those chapters pertaining more particularly to the farm management aspects of the study.

Much appreciation is due Dr. J. B. Condliffe, Director of Research of the Institute of Pacific Relations, whose keen interest in all economic research led him to present the manuscript of this book to the China Council of the Institute of Pacific Relations.

JOHN LOSSING BUCK.

July 1, 1930
Nanking, China

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APPENDICES

APPENDIX I

TABLE 1. RELATION OF SIZE OF FARM TO 30 VARIABLES†
124 farms, Hwaiyuan Hsien, Anhwei, China (1924-1925)

VARIABLES	AVERAGE OF EACH VARIABLE FOR SPECIFIED SIZE OF FARM GROUP (FARM AREA)					
	Small	Medium small	Medium	Medium large	Large	All farms
Profits:						
1. Farm earnings	\$ 9.18	39.89	82.07	133.81	205.04	79.47
2. Operator's labor earnings	\$-14.89	-9.36	-2.77	23.00	-0.01	-2.91
3. Farm labor earnings	\$-14.86	-9.42	-4.98	23.48	-0.08	-3.12
4. Family earnings	\$ 76.26	102.23	158.04	209.55	376.49	164.97
5. Family earnings per adult-male unit	\$ 29.15	28.99	37.68	49.31	57.83	41.76
6. Labor returns	\$ 17.46	48.78	83.89	130.64	183.14	80.97
7. Labor returns per man-equivalent §	\$ 15.76	28.02	36.90	52.18	53.57	33.92
9. Net profits per crop mow	\$ -3.24	-1.02	-0.59	-0.09	-0.12	-1.32
10. Income from other than farm sources	\$ 85.39	15.14	13.06	16.32	72.20	30.33
Size of business:						
11. Farm area	11.4	27.6	48.0	67.1	112.5	46.1
12. Crop area	10.7	25.9	44.8	63.4	106.2	43.4
13. Crop mow	17.0	42.4	72.0	107.0	165.7	70.0
14. Man-work units	68.3	150.6	249.6	377.9	572.2	247.1
15. Man-equivalent	1.21	1.79	2.41	2.69	3.98	2.21
16. Animal-work units	25.9	49.0	83.4	126.1	193.7	95.3
17. Index of double cropping	160.	164.	162.	170.	157.	162.
18. Size of family (adult-male units)	2.6	3.5	4.2	4.3	6.5	4.0
19. Farm capital	\$300.38	616.22	1088.09	1379.07	2563.95	1032.36
20. Farm receipts per mow‡	\$ 4.94	4.60	4.22	4.38	4.45	4.46
21. Farm expenses per mow‡	\$ 4.08	3.06	2.39	2.27	2.52	2.63
Labor efficiency:						
22. Man-work units per man-equivalent	65.2	91.7	109.1	147.8	152.6	105.8
23. Crop mow per man-equivalent . .	16.5	25.7	31.5	42.1	43.8	29.5
24. Animal-work units per labor animal unit	43.1	47.4	52.0	77.6	72.1	63.5
25. Crop mow per labor animal unit	36.4	41.0	45.0	65.9	61.7	56.1
26. Value of family and hired labor per crop mow	\$ 1.89	1.36	1.19	0.98	1.12	1.17
Quality of business:						
27. Crop index	104.	99.	101.	96.	103.	100.
28. Land value per mow‡	\$ 19.26	15.57	17.06	15.65	17.21	17.14
Capital efficiency:						
29. Capital per mow‡ in buildings..	\$ 5.30	3.28	2.47	2.36	2.83	2.91
30. Capital per mow‡ in implements	\$ 0.43	0.80	0.83	0.52	0.54	0.60
31. Interest on capital investment per mow‡	\$ 2.25	1.91	1.94	1.74	1.93	1.90

†Variable number 8 was purposely deleted after the type was set.

‡The variables for these seventeen localities (tables 1-17) are the average for each farm during the period of one year. The unit for land measure is the local mow. Most of the factors were calculated for each individual farm and the average here presented is the sum of the value of each factor on each farm divided by the number of farms. Exceptions to this are family earnings per adult-male unit, labor returns per adult-male unit, receipts per mow, expenses per mow, animal-work units per labor animal unit, crop mow per labor animal, capital per mow in buildings, capital per mow in implements, and interest on capital investment per mow. For these factors the gross values for each size-group were divided by the number of farms in the group. This method was used because these factors were added later in the process of analysis and the more laborious and time consuming process of computing for each farm did not seem worth the cost in light of the fact that for a number of these factors actual comparison shows no great difference between the weighted average and the average of average. Net profits per crop mow is an exception in that the weighted average and the average are quite different. The value for animal-work units are the average of farms having such units rather than an average of all farms and are used because some farms borrow or hire animals. Since many of these values are averages of averages they cannot be used to compute values for other variables in the table with the expectation that the same results will be obtained.

‡Crop area.
§Farm area.

APPENDIX I

TABLE 3. RELATION OF SIZE OF FARM TO 30 VARIABLES
152 farms, Pingsiang Hsien, Chihli, China (1923-1924)

VARIABLES	AVERAGE OF EACH VARIABLE FOR SPECIFIED SIZE OF FARM GROUP (FARM AREA)			
	Small	Medium	Large	All farms
Profits:				
1. Farm earnings	\$ 53.77	83.78	162.39	102.23
2. Operator's labor earnings	\$ 22.39	26.66	32.50	27.39
3. Farm labor earnings	\$ 21.89	25.85	32.45	26.94
4. Family earnings	\$ 62.61	103.95	207.98	127.86
5. Family earnings per adult-male unit	\$ 26.16	33.45	46.56	37.71
6. Labor returns	\$ 28.99	43.60	74.95	50.12
7. Labor returns per man-equivalent	\$ 27.61	38.23	45.29	37.38
8*				
9. Net profits per crop mow	\$ -2.62	-0.39	0.15	-0.90
10. Income from other than farm sources	\$ 3.75	8.16	21.70	11.58
Size of business:				
11. Farm area	7.2	15.7	35.9	20.2
12. Crop area	6.4	14.0	30.6	17.5
13. Crop mow	8.2	17.4	36.9	21.4
14. Man-work units	31.4	62.3	133.7	77.9
15. Man-equivalent	1.01	1.22	1.87	1.89
16. Animal-work units	11.8	21.2	45.9	34.1
17. Index of double cropping	130.	125.	121.	125.
18. Size of family (adult-male units)	2.5	3.1	4.4	3.4
19. Farm capital	\$398.56	724.09	1624.32	941.12
20. Farm receipts per mow	\$ 10.14	7.92	7.57	7.96
21. Farm expenses per mow	\$ 1.68	1.93	2.26	2.11
Labor efficiency:				
22. Man-work units per man-equivalent	32.2	56.1	72.3	54.3
23. Crop mow per man-equivalent	9.3	15.9	21.0	15.6
24. Animal-work units per labor animal unit	14.7	20.6	39.1	31.4
25. Crop mow per labor animal unit	15.4	21.7	41.6	33.4
26. Value of family and hired labor per crop mow	\$ 0.81	0.97	1.13	1.05
Quality of business:				
27. Crop index	102.	89.	103.	100.
28. Land value per mow	\$ 38.01	34.18	33.46	35.14
Capital efficiency:				
29. Capital per mow in buildings	\$ 13.86	8.90	8.40	9.14
30. Capital per mow in implements	\$ 0.44	0.38	0.62	0.54
31. Interest on capital investment per mow.. . . .	\$ 5.01	4.14	4.25	4.31

*Variable number 8 was purposely deleted after the type was set.

CHINESE FARM ECONOMY

TABLE 4. RELATION OF SIZE OF FARM TO 30 VARIABLES
150 farms, Yenshan Hsien (1922), Chihli, China (1922-1923)

VARIABLES	AVERAGE OF EACH VARIABLE FOR SPECIFIED SIZE OF FARM GROUP (FARM AREA)				
	Small	Medium small	Medium large	Large	All farms
Profits:					
1. Farm earnings	\$ 46.63	78.72	\$103.73	\$178.76	\$100.67
2. Operator's labor earnings	\$ 23.07	38.03	38.72	58.54	39.68
3. Farm labor earnings	\$ 23.07	38.03	38.72	58.54	39.68
4. Family earnings	\$ 77.70	98.96	133.40	240.61	135.14
5. Family earnings per adult-male unit . .	\$ 34.19	28.02	30.98	38.70	33.31
6. Labor returns	\$ 39.42	67.98	95.80	214.97	102.30
7. Labor returns per man-equivalent . . .	\$ 50.06	57.29	70.68	87.27	65.73
8*					
9. Net profits per crop mow	\$ -0.11	0.46	0.33	0.37	0.28
10. Income from other than farm sources . .	\$ 28.21	10.50	9.94	15.06	15.33
Size of business:					
11. Farm area	7.6	15.6	24.6	52.5	24.5
12. Crop area	7.6	14.9	23.6	47.2	22.8
13. Crop mow	12.2	22.8	36.5	71.4	34.9
14. Man-work units	49.8	93.3	146.8	237.5	141.2
15. Man-equivalent	0.89	1.27	1.54	2.49	1.54
16. Animal-work units	20.4	30.0	46.0	90.9	54.4
17. Index of double cropping	161.	153.	155.	152.	155.
18. Size of family (adult-male units) . . .	2.3	3.5	4.3	6.2	4.1
19. Farm capital	\$294.66	508.61	812.66	1502.56	762.38
20. Farm receipts per mow	\$ 8.65	7.60	7.26	7.10	7.36
21. Farm expenses per mow	\$ 2.49	2.33	2.87	3.31	2.94
Labor efficiency:					
22. Man-work units per man-equivalent . .	60.8	81.6	108.3	118.9	91.8
23. Crop mow per man-equivalent	14.6	19.9	27.1	29.5	22.6
24. Animal-work units per labor animal unit	46.6	51.8	71.1	62.5	61.9
25. Crop mow per labor animal unit	37.1	40.9	56.4	49.1	48.8
26. Value of family and hired labor per crop mow	\$ 0.36	0.51	0.58	0.77	0.63
Quality of business:					
27. Crop index	107.	102.	101.	100.	100.
28. Land value per mow	\$ 20.92	17.78	19.59	18.19	18.98
Capital efficiency:					
29. Capital per mow in buildings	\$ 13.23	9.04	7.96	6.00	7.55
30. Capital per mow in implements	\$ 0.47	0.59	0.71	0.81	0.72
31. Interest on capital investment per mow	\$ 3.11	2.72	2.75	2.55	2.67

*Variable number 8 was purposely deleted after the type was set.

APPENDIX I

TABLE 5. RELATION OF SIZE OF FARM TO 30 VARIABLES
133 farms, Yenshan Hsien (1923), Chihli, China (1923-1924)

VARIABLES	AVERAGE OF EACH VARIABLE FOR SPECIFIED SIZE OF FARM GROUP (FARM AREA)			
	Small	Medium	Large	All farms
Profits:				
1. Farm earnings	\$ 21.70	53.87	113.65	62.31
2. Operator's labor earnings	\$-11.12	-45.85	-136.73	-63.48
3. Farm labor earnings	\$-11.42	-46.76	-137.55	-64.16
4. Family earnings	\$ 48.82	110.82	184.83	113.77
5. Family earnings per adult-male unit	\$ 21.81	27.89	33.81	29.27
6. Labor returns	\$ -0.68	-3.11	-42.41	-15.00
7. Labor returns per man-equivalent	\$ -0.88	-2.39	-12.03	-5.00
8*				
9. Net profits per crop mow	\$ -2.77	-1.88	-1.52	-2.07
10. Income from other than farm sources	\$ 18.38	22.58	10.24	17.17
Size of business:				
11. Farm area	13.4	37.4	87.7	45.6
12. Crop area	12.8	35.0	80.4	42.2
13. Crop mow	18.4	51.1	115.3	60.8
14. Man-work units	76.9	261.1	441.7	236.9
15. Man-equivalent	1.02	1.74	2.83	1.85
16. Animal-work units	33.5	64.3	140.8	97.0
17. Index of double cropping	139.	146.	142.	142.
18. Size of family (adult-male units)	2.3	4.0	5.5	3.9
19. Farm capital	\$414.04	1257.98	3140.07	1580.93
20. Farm receipts per mow	\$ 3.02	3.35	3.28	3.27
21. Farm expenses per mow	\$ 1.32	1.81	1.86	1.79
Labor efficiency:				
22. Man-work units per man-equivalent	80.9	125.9	160.9	122.0
23. Crop mow per man-equivalent	19.6	32.0	42.0	31.0
24. Animal-work units per labor animal unit	82.6	108.0	88.0	93.0
25. Crop mow per labor animal unit	65.8	86.6	72.1	75.6
26. Value of family and hired labor per crop mow	\$ 0.56	0.81	0.79	0.78
Quality of business:				
27. Crop Index	86.	96.	102.	100.
28. Land value per mow	\$ 25.17	26.74	29.90	27.23
Capital efficiency:				
29. Capital per mow in buildings	\$ 5.32	3.99	3.34	3.77
30. Capital per mow in implements	\$ 0.42	0.69	1.07	0.90
31. Interest on capital investment per mow	\$ 2.59	2.88	3.12	3.00

*Variable number 8 was purposely deleted after the type was set.

CHINESE FARM ECONOMY

TABLE 6. RELATION OF SIZE OF FARM TO 30 VARIABLES
144 farms, Sincheng Hsien, Honan, China (1923-1924)

VARIABLES	AVERAGE OF EACH VARIABLE FOR SPECIFIED SIZE OF FARM GROUP (FARM AREA)				
	Small	Medium small	Medium large	Large	All farms
Profits:					
1. Farm earnings	\$117.74	200.54	304.89	703.77	269.03
2. Operator's labor earnings	\$ 43.08	66.80	77.75	271.69	91.04
3. Farm labor earnings	\$ 88.82	68.31	72.38	275.41	87.97
4. Family earnings	\$176.23	290.40	416.11	689.66	340.24
5. Family earnings per adult-male unit ..	\$ 44.00	59.16	61.98	94.15	63.44
6. Labor returns	\$ 90.72	137.34	181.43	403.67	170.58
7. Labor returns per man-equivalent .. .	\$ 37.41	47.42	44.41	89.71	49.98
8*					
9. Net profits per crop mow	\$ 0.64	0.86	0.61	1.54	0.84
10. Income from other than farm sources ..	\$ 21.21	35.95	56.60	17.30	33.52
Size of business:					
11. Farm area	18.4	33.4	56.1	106.0	44.0
12. Crop area.. . . .	17.8	32.5	54.8	104.6	43.0
13. Crop mow	31.4	55.4	93.0	174.9	73.1
14. Man-work units	105.4	181.0	298.3	560.9	236.9
15. Man-equivalent	2.48	3.23	4.34	5.37	3.55
16. Animal-work units	57.4	97.9	165.3	319.8	129.9
17. Index of double cropping	177.	170.	171.	169.	172.
18. Size of family (adult-male units) .. .	4.0	4.9	6.7	7.3	5.4
19. Farm capital	\$986.48	1715.33	2906.39	5354.47	2263.24
20. Farm receipts per mow	\$ 9.75	8.69	7.94	8.26	8.47
21. Farm expenses per mow	\$ 3.12	2.52	2.38	1.53	2.22
Labor efficiency:					
22. Man-work units per man-equivalent ..	46.5	63.7	73.3	123.2	69.2
23. Crop mow per man-equivalent	13.9	19.5	22.9	38.4	21.3
24. Animal-work units per labor animal unit	92.4	97.0	99.4	123.1	104.1
25. Crop mow per labor animal unit	50.6	55.0	55.9	68.1	58.2
26. Value of family and hired labor per crop mow	\$ 1.49	1.23	1.09	0.74	1.06
Quality of business:					
27. Crop index	104.	101.	100.	98.	100.
28. Land value per mow	\$ 46.36	44.42	44.03	43.24	44.70
Capital efficiency:					
29. Capital per mow in buildings	\$ 4.01	3.12	4.30	4.00	3.82
30. Capital per mow in implements	\$ 0.51	0.77	0.96	0.71	0.77
31. Interest on capital investment per mow..	\$ 4.45	4.22	4.25	4.09	4.21

*Variable number 8 was purposely deleted after the type was set.

APPENDIX I

TABLE 7. RELATION OF SIZE OF FARM TO 30 VARIABLES
149 farms, Kaifeng Hsien, Honan, China (1923-1924)

VARIABLES	AVERAGE OF EACH VARIABLE FOR SPECIFIED SIZE OF FARM GROUP (FARM AREA)				
	Small	Medium small	Medium large	Large	All farms
Profits:					
1. Farm earnings	\$189.66	258.28	390.18	629.41	860.52
2. Operator's labor earnings	\$ 81.76	137.19	194.81	269.57	174.55
3. Farm labor earnings	\$ 81.76	137.13	195.28	270.66	175.03
4. Family earnings	\$184.20	289.45	426.73	643.90	392.76
5. Family earnings per adult-male unit ..	\$ 43.17	58.26	68.89	88.07	68.48
6. Labor returns	\$107.65	172.23	271.09	434.96	250.29
7. Labor returns per man-equivalent .. .	\$ 88.17	99.71	104.43	113.49	101.58
8*					
9. Net profits per crop mow	\$ 0.84	1.09	1.22	1.01	1.06
10. Income from other than farm sources ..	\$ 23.42	10.36	1.51	1.35	7.68
Size of business:					
11. Farm area	16.7	35.2	60.2	112.6	57.3
12. Crop area	15.9	34.1	58.4	109.0	55.5
13. Crop mow	26.9	58.7	99.6	183.5	94.2
14. Man-work units	63.4	141.1	236.2	433.9	223.6
15. Man-equivalent	1.38	1.80	2.72	3.89	2.47
16. Animal-work units	58.7	125.4	211.4	385.0	198.5
17. Index of double cropping	168.	172.	171.	169.	170.
18. Size of family (adult-male units) .. .	4.3	5.0	6.2	7.3	5.7
19. Farm capital	\$723.81	1451.31	2436.02	4484.38	2318.61
20. Farm receipts per mow	\$ 11.20	8.88	8.39	7.71	8.29
21. Farm expenses per mow	\$ 2.44	1.44	1.71	1.94	1.80
Labor efficiency:					
22. Man-work units per man-equivalent ..	51.8	82.6	89.8	112.1	86.7
23. Crop mow per man-equivalent	22.0	34.1	38.2	47.4	36.4
24. Animal-work units per labor animal unit	87.5	112.9	104.2	133.8	117.8
25. Crop mow per labor animal unit .. .	42.1	52.8	49.1	63.8	55.8
26. Value of family and hired labor per crop mow	\$ 0.98	0.58	0.75	0.89	0.77
Quality of business:					
27. Crop index	113.	101.	102.	98.	100.
28. Land value per mow	\$ 31.83	31.19	30.46	30.60	30.98
Capital efficiency:					
29. Capital per mow in buildings	\$ 4.09	4.59	4.91	4.36	4.53
30. Capital per mow in implements	\$ 0.83	0.93	0.95	0.91	0.92
31. Interest on capital investment per mow	\$ 3.64	3.41	3.33	3.29	3.34

*Variable number 8 was purposely deleted after the type was set.

CHINESE FARM ECONOMY

TABLE 8. RELATION OF SIZE OF FARM TO 30 VARIABLES
251 farms, Wusiang Hsien, Shansi, China (1922)

VARIABLES	AVERAGE OF EACH VARIABLE FOR SPECIFIED SIZE OF FARM GROUP (FARM AREA)					
	Small	Medium small	Medium	Medium large	Large	All farms
Profits:						
1. Farm earnings	\$ 41.80	75.44	107.55	157.40	223.19	118.49
2. Operator's labor earnings	\$ 23.58	41.86	51.27	77.17	67.65	51.29
3. Farm labor earnings	\$ 23.24	41.62	50.92	75.39	65.10	50.36
4. Family earnings	\$ 66.74	97.52	140.73	185.86	301.98	154.12
5. Family earnings per adult-male unit	\$ 24.62	86.51	86.17	46.89	70.77	44.99
6. Labor returns	\$ 26.98	47.50	66.84	102.46	152.43	76.57
7. Labor returns per man-equivalent	\$ 40.50	54.80	59.18	85.44	80.32	62.94
8*						
9. Net profits per crop mow	\$ -2.82	-0.61	-0.17	0.62	0.41	-0.45
10. Income from other than farm sources	\$ 26.54	23.48	34.57	30.72	66.01	35.42
Size of business:						
11. Farm area	8.0	15.2	25.3	35.6	63.1	28.4
12. Crop area	7.9	15.1	25.0	35.6	62.7	28.2
13. Crop mow	8.0	15.4	25.9	37.6	65.6	29.4
14. Man-work units	45.6	82.2	131.1	186.7	313.9	146.7
15. Man-equivalent	0.77	0.95	1.15	1.26	2.00	1.21
16. Animal-work units .. . . .	...	26.8	41.0	57.8	95.9	54.1
17. Index of double cropping	101.	102.	104.	106.	105.	103.
18. Size of family (adult-male units)	2.7	2.7	3.9	4.0	4.3	3.4
19. Farm capital	\$232.06	422.81	707.81	1025.08	2038.09	851.67
20. Farm receipts per mow	\$ 6.05	5.92	5.44	5.70	5.54	5.63
21. Farm expenses per mow	\$ 0.77	0.93	1.15	1.27	1.90	1.44
Labor efficiency:						
22. Man-work units per man-equivalent	67.8	95.2	116.9	153.6	174.0	119.4
23. Crop mow per man-equivalent.. . .	12.2	18.0	23.4	31.0	33.3	23.1
24. Animal-work units per labor animal unit .. . . .	...	99.9	102.6	101.3	95.1	98.5
25. Crop mow per labor animal unit .. . .	...	60.3	64.9	65.9	65.0	64.5
26. Value of family and hired labor per crop mow	\$ 0.21	0.23	0.48	0.60	1.24	0.77
Quality of business:						
27. Crop index	101.	99.	96.	101.	102.	100.
28. Land value per mow	\$ 20.63	20.93	21.08	22.04	23.81	21.63
Capital efficiency:						
29. Capital per mow in buildings	\$ 5.76	4.47	3.92	3.80	5.28	4.64
30. Capital per mow in implements	\$ 0.52	0.46	0.46	0.49	0.47	0.47
31. Interest on capital investment per mow	\$ 2.34	2.24	2.26	2.31	2.60	2.41

*Variable number 8 was purposely deleted after the type was set.

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TABLE 9. RELATION OF SIZE OF FARM TO 30 VARIABLES
226 farms, Wutai Hsien, Shansi, China (1922-1923)

VARIABLES	AVERAGE OF EACH VARIABLE FOR SPECIFIED SIZE OF FARM GROUP (FARM AREA)					
	Small	Medium small	Medium	Medium large	Large	All farms
Profits:						
1. Farm earnings	\$157.37	295.58	551.81	587.66	852.26	458.11
2. Operator's labor earnings	\$ 77.21	112.03	91.66	96.90	168.08	108.45
3. Farm labor earnings	\$ 77.21	171.13	336.96	356.23	548.31	277.52
4. Family earnings	\$207.48	236.85	144.23	147.57	225.55	197.20
5. Family earnings per adult-male unit† . . . . .	...	...	...	...	...	...
6. Labor returns	\$135.45	181.59	193.06	209.38	293.00	198.20
7. Labor returns per man-equivalent §*	\$ 64.80	81.17	69.28	67.91	91.73	75.40
9. Net profits per crop mow	\$ 0.51	1.26	1.89	1.72	2.08	1.45
10. Income from other than farm sources‡ . . . . .	...	...	...	...	...	...
Quality of business:						
11. Farm area	50.2	87.2	154.7	181.5	238.8	133.8
12. Crop area	49.5	86.0	152.8	176.5	236.6	131.7
13. Crop mow	49.5	86.0	152.8	176.5	236.6	131.7
14. Man-work units	242.1	415.7	742.1	850.7	1133.4	635.7
15. Man-equivalent	2.10	2.26	2.85	3.08	3.22	2.64
16. Animal-work units	79.2	131.6	232.8	259.1	357.3	199.3
17. Index of double cropping	100.	100.	100.	100.	100.	100.
18. Size of family‡ (adult-male units)	...	...	...	...	...	...
19. Farm capital	\$1002.49	1556.48	2686.84	2892.91	3799.43	2257.33
20. Farm receipts per mow	\$ 4.61	4.45	4.45	4.14	4.23	4.32
21. Farm expenses per fow	\$ 1.43	1.01	0.84	0.81	0.63	0.84
Labor efficiency:						
22. Man-work units per man-equivalent	116.3	185.8	266.4	275.8	355.0	230.8
23. Crop mow per man-equivalent..	23.8	38.4	54.9	57.2	74.1	47.8
24. Animal-work units per labor animal unit	71.9	83.2	114.2	115.2	114.5	102.5
25. Crop mow per labor animal unit	45.0	54.3	75.0	78.4	75.8	67.8
26. Value of family and hired labor per crop mow	\$ 1.17	0.80	0.66	0.62	0.52	0.66
Quality of business:						
27. Crop index	102.	100.	103.	98.	98.	100.
28. Land value per mow	\$ 15.21	13.91	14.02	12.77	12.96	13.81
Capital efficiency:						
29. Capital per mow in buildings . .	\$ 2.83	2.35	2.08	2.06	1.98	2.15
30. Capital per mow in implements	\$ 0.19	0.14	0.09	0.07	0.06	0.09
31. Interest on capital investment per mow	\$ 1.62	1.45	1.41	1.31	1.28	1.37

*Variable number 8 was purposely deleted after the type was set.
†No information was obtained.
‡Number of persons per family was incompletely reported.

CHINESE FARM ECONOMY

TABLE 10. RELATION OF SIZE OF FARM TO 30 VARIABLES
101 farms, Laian Hsien (1921), Anhwei, China (1921-1922)

VARIABLES	AVERAGE OF EACH VARIABLE FOR SPECIFIED SIZE OF FARM GROUP (FARM AREA)				
	Small	Medium small	Medium large	Large	All farms
Profits:					
1. Farm earnings	\$171.53	\$17.65	417.24	542.49	369.59
2. Operator's labor earnings	\$ 65.07	125.79	159.95	168.16	132.01
3. Farm labor earnings	\$ 83.20	169.04	227.45	271.04	191.49
4. Family earnings	\$274.23	405.77	468.23	597.06	443.09
5. Family earnings per adult-male unit ..	\$ 87.95	96.94	103.10	109.59	101.27
6. Labor returns	\$218.16	352.54	425.20	574.50	399.87
7. Labor returns per man-equivalent .. .	\$ 69.84	87.25	94.98	95.05	87.38
8*					
9. Net profits per crop mow	\$ -0.37	1.07	1.62	1.66	1.05
10. Income from other than farm sources†..	...	...	...	...	...
Size of business:					
11. Farm area	31.8	61.7	80.0	117.3	74.4
12. Crop area.. . . .	30.4	59.6	77.1	113.6	71.8
13. Crop mow.. . . .	44.1	73.3	92.5	124.5	85.2
14. Man-work units	263.7	441.6	557.3	755.4	514.2
15. Man-equivalent	3.14	4.18	4.69	6.42	4.67
16. Animal-work units	70.3	102.5	128.8	178.1	132.4
17. Index of double cropping	146.	123.	120.	110.	124.
18. Size of family (adult-male units) .. .	3.1	4.2	4.5	5.4	4.4
19. Farm capital	\$1104.17	1857.54	2372.35	3393.08	2226.26
20. Farm receipts per mow	\$ 12.39	10.70	10.30	9.60	10.29
21. Farm expenses per mow	\$ 6.75	5.37	4.89	4.82	5.14
Labor efficiency:					
22. Man-work units per man-equivalent ..	85.4	108.7	122.2	121.1	110.1
23. Crop mow per man-equivalent	14.8	18.1	20.4	20.0	18.3
24. Animal-work units per labor animal unit	48.5	49.3	59.5	48.3	51.3
25. Crop mow per labor animal unit	35.7	35.2	42.7	33.8	36.4
26. Value of family and hired labor per crop mow	\$ 3.46	3.09	2.86	3.23	3.13
Quality of business:					
27. Crop index	100.	98.	98.	101.	100.
28. Land value per mow	\$ 22.59	20.70	20.76	20.47	21.06
Capital efficiency:					
29. Capital per mow in buildings	\$ 7.37	4.93	4.90	4.04	4.77
30. Capital per mow in implements	\$ 1.05	0.76	0.72	0.72	0.76
31. Interest on capital investment per mow..	\$ 2.90	2.49	2.46	2.39	2.48

*Variable number 8 was purposely deleted after the type was set.
†No information was obtained.

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TABLE 11. RELATION OF SIZE OF FARM TO 30 VARIABLES
100 farms, Laian Hsien (1922), Anhwei, China (1922-1923)

VARIABLES	AVERAGE OF EACH VARIABLE FOR SPECIFIED SIZE OF FARM GROUP (FARM AREA)			
	Small	Medium	Large	All farms
Profits:				
1. Farm earnings	\$ 59.45	118.06	230.67	133.67
2. Operator's labor earnings	\$ 7.55	-3.49	63.21	19.94
3. Farm labor earnings	\$ 4.77	-4.65	36.49	10.61
4. Family earnings	\$181.07	388.64	488.97	352.44
5. Family earnings per adult-male unit	\$ 53.92	88.32	83.63	78.51
6. Labor returns	\$122.07	195.11	303.98	205.13
7. Labor returns per man-equivalent	\$ 54.79	57.98	73.94	61.78
8*				
9. Net profits per crop mow	-2.98	-1.31	-0.31	-1.53
10. Income from other than farm sources	\$ 24.52	103.74	114.00	82.26
Size of business:				
11. Farm area	16.6	40.6	83.3	46.0
12. Crop area	16.6	40.5	83.1	45.9
13. Crop mow	25.5	54.2	103.8	60.2
14. Man-work units	176.3	313.1	587.9	353.2
15. Man-equivalent	2.28	3.32	4.06	3.22
16. Animal-work units	43.1	73.4	142.5	94.1
17. Index of double cropping	152.	135.	128.	138.
18. Size of family (adult-male units)	3.4	4.3	5.8	4.5
19. Farm capital	\$683.50	1533.33	2427.28	1538.26
20. Farm receipts per mow	\$ 14.23	9.40	6.76	5.51
21. Farm expenses per mow	\$ 10.66	6.49	3.98	5.59
Labor efficiency:				
22. Man-work units per man-equivalent	79.2	96.1	143.0	104.9
23. Crop mow per man-equivalent	10.7	16.6	25.2	17.3
24. Animal-work units per labor animal unit	32.5	41.3	58.2	47.8
25. Crop mow per labor animal unit	24.4	30.5	42.4	35.1
26. Value of family and hired labor per crop mow	\$ 4.41	3.59	2.25	2.99
Quality of business:				
27. Crop index	114.	112.	93.	100.
28. Land value per mow	\$ 22.74	21.72	20.53	21.68
Capital efficiency:				
29. Capital per mow in buildings	\$ 10.47	7.12	4.17	5.89
30. Capital per mow in implements	\$ 1.09	1.04	0.71	0.87
31. Interest on capital investment per mow	\$ 3.29	3.03	2.94	2.68

*Variable number 8 was purposely deleted after the type was set.

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TABLE 12. RELATION OF SIZE OF FARM TO 30 VARIABLES
102 farms, Wuhu Hsien, Anhwei, China (1921-1922)

VARIABLES	AVERAGE OF EACH VARIABLE FOR SPECIFIED SIZE OF FARM GROUP (FARM AREA)				
	Small	Medium small	Medium large	Large	All farms
Profits:					
1. Farm earnings	\$107.19	168.55	266.63	624.05	265.79
2. Operator's labor earnings	\$ 82.17	88.40	15.93	149.85	55.56
3. Farm labor earnings	\$ 23.59	10.32	-11.57	51.66	16.60
4. Family earnings	\$134.21	239.55	345.94	834.02	359.38
5. Family earnings per adult-male unit .. .	\$ 47.57	65.44	82.60	120.96	84.21
6. Labor returns	\$ 71.46	129.95	166.40	517.12	203.92
7. Labor returns per man-equivalent .. .	\$ 48.40	60.10	55.93	91.39	63.98
8*					
9. Net profits per crop mow	\$ -4.55	-2.44	-1.91	-0.24	-2.21
10. Income from other than farm sources†..	...	...	...	...	...
Size of business:					
11. Farm area	7.9	15.9	25.1	59.8	24.9
12. Crop area	7.9	15.8	24.5	59.0	24.6
13. Crop mow	13.0	27.7	43.6	107.6	44.0
14. Man-work units	84.2	169.0	265.5	652.6	268.2
15. Man-equivalent	1.48	2.20	3.01	5.95	2.97
16. Animal-work units	10.2	16.3	24.7	60.3	29.0
17. Index of double cropping	161.	175.	178.	183.	175.
18. Size of family (adult-male units) .. .	2.8	3.7	4.2	6.9	4.3
19. Farm capital	\$1045.14	1977.95	3477.53	7154.93	3114.94
20. Farm receipts per mow	\$ 20.39	18.25	18.70	18.88	18.72
21. Farm expenses per mow	\$ 6.87	7.56	7.82	8.30	7.92
Labor efficiency:					
22. Man-work units per man-equivalent ..	53.1	77.3	89.0	110.8	82.5
23. Crop mow per man-equivalent	8.7	12.7	14.6	18.3	13.5
24. Animal-work units per labor animal unit	13.6	15.6	17.2	22.3	18.9
25. Crop mow per labor animal unit .. .	83.0	85.2	42.2	52.6	43.9
26. Value of family and hired labor per crop mow	\$ 2.93	3.23	3.39	3.35	3.32
Quality of business:					
27. Crop index	100.	102.	103.	102.	100.
28. Land value per mow	\$113.64	111.94	116.00	106.00	111.69
Capital efficiency:					
29. Capital per mow in buildings	\$ 11.53	4.97	13.47	10.13	9.11
30. Capital per mow in implements	\$ 5.13	3.88	4.72	2.77	3.55
31. Interest on capital investment per mow	\$ 10.55	10.08	11.36	9.71	10.12

*Variable number 8 was purposely deleted after the type was set.
†No information was obtained.

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TABLE 14: RELATION OF SIZE OF FARM TO 30 VARIABLES
161 farms, Lienkiang Hsien, Fukien, China (1922-1923)

VARIABLES	AVERAGE OF EACH VARIABLE FOR SPECIFIED SIZE OF FARM GROUP (FARM AREA)			
	Small	Medium	Large	All farms
Profits:				
1. Farm earnings	\$181.91	876.72	896.88	470.33
2. Operator's labor earnings	\$116.21	204.44	478.15	258.75
3. Farm labor earnings	\$120.81	232.17	532.29	286.68
4. Family earnings	\$198.09	368.86	922.67	481.45
5. Family earnings per adult-male unit.. . .	\$ 66.50	92.80	184.31	121.95
6. Labor returns	\$151.57	298.21	680.69	364.28
7. Labor returns per man-equivalent	\$133.88	205.16	282.01	204.23
8*				
9. Net profits per crop mow	\$ 3.85	6.68	7.92	6.08
10. Income from other than farm sources† ..	...	...	...	...
Size of business:				
11. Farm area	7.2	15.3	50.9	23.6
12. Crop area	7.2	15.3	50.9	23.6
13. Crop mow	8.3	18.8	56.0	26.7
14. Man-work units	74.8	170.8	475.0	231.9
15. Man-equivalent	1.14	1.39	2.61	1.68
16. Animal-work units	17.3	33.9	91.9	55.4
17. Index of double cropping	114.	121.	116.	117.
18. Size of family (adult-male units)	3.0	4.0	5.0	3.9
19. Farm capital	\$763.70	1805.64	4550.53	2295.67
20. Farm receipts per mow	\$ 32.49	33.20	22.77	26.13
21. Farm expenses per mow.. . . .	\$ 7.39	8.64	5.17	6.18
Labor efficiency:				
22. Man-work units per man-equivalent	64.1	119.9	180.9	119.4
23. Crop mow per man-equivalent	7.1	13.2	21.3	13.6
24. Animal-work units per labor animal unit..	12.6	29.9	72.9	45.0
25. Crop mow per labor animal unit	7.5	17.6	46.2	28.0
26. Value of family and hired labor per crop mow	\$ 4.18	4.58	3.57	3.87
Quality of business:				
27. Crop index	95.	99.	101.	100.
28. Land value per mow	\$ 64.63	78.32	76.11	72.87
Capital efficiency:				
29. Capital per mow in buildings	\$ 25.24	24.51	10.07	14.91
30. Capital per mow in implements	\$ 4.12	4.73	1.70	2.63
31. Interest on capital investment per mow ..	\$ 8.43	9.42	7.15	7.79

*Variable number 8 was purposely deleted after the type was set.
†No information was obtained.

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TABLE 15. RELATION OF SIZE OF FARM TO 30 VARIABLES
203 farms, Kiangning Hsien (S), Kiangsu, China (1923)

VARIABLES	AVERAGE OF EACH VARIABLE FOR SPECIFIED SIZE OF FARM GROUP (FARM AREA)				
	Small	Medium small	Medium large	Large	All farms
Profits:					
1. Farm earnings	\$266.09	315.56	413.68	668.90	429.97
2. Operator's labor earnings	\$189.84	198.26	242.74	368.01	255.75
3. Farm labor earnings	\$188.17	194.25	240.00	365.90	253.08
4. Family earnings	\$292.37	318.09	454.37	834.37	493.17
5. Family earnings per adult-male unit ..	\$ 88.25	88.59	104.87	154.61	115.51
6. Labor returns	\$209.66	216.63	316.08	547.83	333.82
7. Labor returns per man-equivalent .. .	\$189.32	183.53	181.32	180.75	183.40
8*					
9. Net profits per crop mow	\$ 6.58	3.68	3.35	3.12	4.04
10. Income from other than farm sources ..	\$ 24.46	25.35	45.89	131.48	60.44
Size of business:					
11. Farm area	12.0	19.9	29.6	51.9	29.7
12. Crop area	11.3	18.2	27.9	50.3	28.3
13. Crop mow	21.5	36.3	55.1	99.9	56.0
14. Man-work units	165.4	172.8	263.3	465.0	276.8
15. Man equivalent	1.12	1.20	1.82	3.05	1.86
16. Animal-work units	14.3	24.3	33.9	59.7	38.9
17. Index of double cropping	190.	200.	198.	199.	197.
18. Size of family (adult-male units) .. .	3.5	3.6	4.3	5.4	4.3
19. Farm capital	\$974.04	1516.38	2171.08	3787.52	2211.19
20. Farm receipts per mow	\$ 26.65	19.89	18.89	18.20	19.35
21. Farm expenses per mow	\$ 3.17	2.54	4.09	4.89	4.15
Labor efficiency:					
22. Man-work units per man-equivalent ..	153.0	147.8	153.9	154.2	152.1
23. Crop mow per man-equivalent	21.6	31.3	32.5	33.4	30.2
24. Animal-work units per labor animal unit	14.3	24.3	31.2	35.9	30.8
25. Crop mow per labor animal unit	24.1	38.1	50.7	60.1	50.7
26. Value of family and hired labor per crop mow	\$ 0.92	0.49	1.29	1.76	1.37
Quality of business:					
27. Crop index	100.	99.	98.	101.	100.
28. Land value per mow	\$ 55.84	56.62	54.99	55.14	55.64
Capital efficiency:					
29. Capital per mow in buildings	\$ 22.45	17.47	15.61	15.93	16.67
30. Capital per mow in implements	\$ 2.78	2.88	3.01	2.96	2.93
31. Interest on capital investment per mow..	\$ 6.88	6.67	6.22	6.03	6.25

*Variable number 8 was purposely deleted after the type was set

CHINESE FARM ECONOMY

TABLE 16. RELATION OF SIZE OF FARM TO 30 VARIABLES
217 Farms, Kiangning Hsien (T), Kiangsu, China (1923-1924)

VARIABLES	AVERAGE OF EACH VARIABLE FOR SPECIFIED SIZE OF FARM GROUP (FARM AREA)					
	Small	Medium small	Medium	Medium large	Large	All farms
Profits:						
1. Farm earnings	\$ 79.81	110.96	131.50	184.87	225.95	148.00
2. Operator's labor earnings	\$ 35.07	46.81	41.71	53.93	26.82	41.27
3. Farm labor earnings	\$ 19.60	20.23	17.61	28.65	9.56	19.09
4. Family earnings	\$141.15	176.56	209.92	296.89	444.18	254.70
5. Family earnings per adult-male unit	45.32	46.44	48.14	54.98	62.50	53.23
6. Labor returns	100.91	147.08	165.48	227.42	259.83	182.08
7. Labor returns per man-equivalent 8*	\$ 64.02	61.64	56.73	65.95	56.06	60.59
9. Net profits per crop mow	\$ -1.17	-0.88	-0.83	-0.45	-0.54	-0.76
10. Income from other than farm sources	\$ 25.36	6.60	5.23	18.56	64.09	22.70
Size of business:						
11. Farm area	13.9	24.0	34.3	44.6	62.7	36.5
12. Crop area	13.3	23.2	33.6	43.5	61.4	35.6
13. Crop mow	24.6	38.8	51.9	66.3	91.6	55.4
14. Man-work units	154.1	255.5	356.4	485.4	672.3	390.5
15. Man-equivalent	1.66	2.48	3.00	3.69	4.81	3.17
16. Animal-work units	10.0	11.8	12.6	15.4	20.2	15.9
17. Index of double cropping	186.	168.	155.	153.	149.	161.
18. Size of family (adult-male units)	3.1	3.8	4.4	5.4	7.1	4.8
19. Farm capital	\$752.66	1134.18	1423.60	1953.08	2704.95	1611.38
20. Farm receipts per mow	\$ 13.27	10.98	8.91	9.40	8.45	9.41
21. Farm expenses per mow	\$ 7.29	6.20	5.00	5.15	4.78	5.26
Labor efficiency:						
22. Man-work units per man-equivalent	93.2	109.2	124.0	142.1	144.7	123.7
23. Crop mow per man-equivalent . .	16.7	16.5	18.4	19.9	20.0	18.3
24. Animal-work units per labor animal unit	15.0	19.8	19.7	18.8	15.5	17.4
25. Crop mow per labor animal unit	49.8	70.1	83.9	81.4	71.8	75.5
26. Value of family and hired labor per crop mow	2.62	2.51	2.34	2.56	2.48	2.48
Quality of business:						
27. Crop index	105.	96.	96.	107.	100.	100.
28. Land value per mow	\$ 46.86	40.85	35.49	37.24	35.36	38.62
Capital efficiency:						
29. Capital per mow in buildings . .	\$ 4.73	3.43	2.56	2.70	3.65	3.20
30. Capital per mow in implements	\$ 1.09	1.10	1.08	1.11	0.96	1.05
31. Interest on capital investment per mow	\$ 4.51	3.91	3.39	3.59	3.52	3.62

*Variable number 8 was purposely deleted after the type was set.

APPENDIX I

TABLE 17. RELATION OF SIZE OF FARM TO 30 VARIABLES
300 Farms, Wuchin Hsien, China (1923-1924)

VARIABLES	AVERAGE OF EACH VARIABLE FOR SPECIFIED SIZE OF FARM GROUP (FARM AREA)					
	Small	Medium small	Medium	Medium large	Large	All farms
Profits:						
1. Farm earnings	\$100.80	190.98	268.62	330.19	374.43	207.18
2. Operator's labor earnings	\$ 66.61	92.16	111.42	110.31	104.27	88.61
3. Farm labor earnings'	\$ 57.22	94.47	116.61	113.54	108.10	91.74
4. Family earnings	\$118.37	212.20	347.20	459.71	495.58	256.20
5. Family earnings per adult-male unit	\$ 40.09	59.23	80.18	100.57	94.70	68.66
6. Labor returns	\$ 60.12	126.51	197.53	251.55	273.33	144.64
7. Labor returns per man-equivalent g*	\$145.37	155.66	160.63	148.11	131.06	151.48
9. Net profits per crop mow	\$ 2.49	2.44	2.24	1.65	1.46	2.27
10. Income from other than farm sources	\$ 15.87	21.96	49.29	126.19	106.89	47.08
Size of business:						
11. Farm area	6.6	14.5	23.6	34.4	48.0	18.3
12. Crop area	5.9	13.3	20.8	29.8	36.6	15.9
13. Crop mow	10.5	24.0	37.6	53.1	63.9	28.5
14. Man-work units	56.5	131.9	207.1	296.1	349.7	156.6
15. Man-equivalent	0.43	0.90	1.26	1.81	2.22	1.01
16. Animal-work units	13.6	21.8	32.8	47.5	58.3	32.5
17. Index of double cropping	179.	180.	181.	178.	172.	179.
18. Size of family (adult-male units)	2.8	3.6	4.3	4.6	5.2	3.7
19. Farm capital	\$544.71	1205.01	1900.09	2645.60	3329.14	1442.98
20. Farm receipts per mow	\$ 22.80	24.29	24.83	24.38	24.04	24.27
21. Farm expenses per mow	\$ 5.64	9.94	11.90	13.29	13.82	11.23
Labor efficiency:						
22. Man-work units per man equivalent	139.2	157.9	170.1	169.7	164.6	156.7
23. Crop mow per man equivalent.. . . .	26.0	28.8	31.0	30.2	29.8	28.7
24. Animal-work units per labor animal unit	11.9	17.5	23.7	30.7	35.0	23.6
25. Crop mow per labor animal unit	13.2	19.8	27.2	34.3	38.3	26.7
26. Value of family and hired labor per crop mow.. . . .	\$ 0.24	1.28	2.09	2.42	2.44	1.78
Quality of business:						
27. Crop index	96.	95.	101.	103.	104.	100.
28. Land value per mow	\$ 45.91	47.26	47.00	46.37	40.71	46.32
Capital efficiency:						
29. Capital per mow in buildings	\$ 28.86	22.39	20.50	17.99	18.25	21.03
30. Capital per mow in implements	\$ 1.81	4.35	3.90	3.33	2.99	3.63
31. Interest on capital investment per mow	\$ 7.42	7.25	7.32	7.11	7.27	7.26

*Variable number 8 was purposely deleted after the type was set.

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TABLE 18. RELATION OF SIZE OF FARM TO 30 VARIABLES
2866 farms, 17 localities, seven provinces, China (1921-1925)

VARIABLES	AVERAGE OF EACH VARIABLE FOR SPECIFIED SIZE OF FARM GROUP (FARM AREA)			
	Small	Medium	Large	All farms
Profits:				
1. Farm earnings	\$105.91	214.98	438.63	239.60
2. Operator's labor earnings	\$ 51.48	80.73	139.75	87.42
3. Farm labor earnings	\$ 51.05	92.11	162.44	98.06
4. Family earnings	\$146.26	251.51	483.93	278.48
5. Family earnings per adult-male unit.. . . .	\$ 45.38	59.99	85.85	65.51
6. Labor returns	\$ 91.11	162.88	317.95	181.06
7. Labor returns per man-equivalent	\$ 69.80	85.58	97.43	83.92
8*				
9. Net profits per crop hectare	\$ -2.78	15.19	21.29	11.85
10. Income from other than farm sources	\$ 23.56	29.72	58.00	34.08
Size of business:				
11. Farm area (hectares)	0.96	2.47	5.66	2.84
12. Crop area (hectares)	0.93	2.37	5.41	2.72
13. Crop mow (hectares)	1.35	3.40	7.63	3.86
14. Man-work units.. . . .	111.5	248.7	519.2	275.3
15. Man-equivalent	1.42	2.14	3.55	2.29
16. Animal-work units	29.5	70.4	156.0	90.1
17. Index of double cropping	150.	148.	144.	147.
18. Size of family (adult-male units)	3.0	4.2	5.9	4.3
19. Farm capital	\$685.85	1535.76	3452.40	1769.29
20. Farm receipts per hectare	221.26	196.58	171.66	183.45
21. Farm expenses per hectare	71.12	67.80	65.00	65.15
Labor efficiency:				
22. Man-work units per man-equivalent	84.1	119.8	156.2	119.4
23. Crop hectare per man-equivalent	1.10	1.74	2.33	1.71
24. Animal-work units per labor animal unit.. . . .	36.3	59.1	70.3	62.8
25. Crop hectare per labor animal unit	2.04	3.10	3.66	3.29
26. Value of family and hired labor per crop hectare	28.77	29.08	29.58	28.82
Quality of business:				
27. Crop index	103.	101.	100.	100.
28. Land value per hectare	626.00	623.00	612.00	620.00
Capital efficiency:				
29. Capital per hectare in buildings	181.99	142.25	113.00	127.96
30. Capital per hectare in implements	24.31	27.39	21.00	23.45
31. Interest on capital investment per hectare	73.82	71.06	66.31	68.24

*Variable number 8 was purposely deleted after the type was set.

APPENDIX II

TABLE 1. GROSS CORRELATION COEFFICIENTS CLASSIFIED ACCORDING TO SIZE (FROM TABLES 2-7)

2866 farms, 17 localities, seven provinces, China (1921-1925)

FACTORS	Less than .3		.3 and less than .5		.5 and less than .7		.7 and less than .9		.9 and over		Average of coefficients of the same sign
	Low		Moderate		Marked		High		Very close		
	Plus	Minus	Plus	Minus	Plus	Minus	Plus	Minus	Plus	Minus	
<i>Operator's labor earnings correlated with</i>											
Net profits per crop mow	1	...	6	...	6	...	4	...	...	...	+534
Crop mow	5	1	4	...	3	...	2	1	...	...	+433
Man-work units	4	2	4	...	3	...	2	1	1	...	+469
Man equivalent	5	5	3	...	2	...	1	1	...	...	+374
Index of double cropping	10	5	1	...	...	...	...	...	...	...	+161
Man-work units per man-equivalent	3	...	8	1	4	...	1	...	...	...	+448
Crop mow per man	3	...	10	1	2	...	1	...	...	...	+409
Crop index	3	2	4	...	3	...	...	...	...	...	+317
Land value (farm area)	3	10	3	...	...	1	...	...	...	...	+177
Size of family (adult-male unit)	8	4	2	...	1	1	...	...	...	...	+252
<i>Crop mow correlated with</i>											
Man-equivalent	...	...	...	...	3	...	12	...	2	...	+787
Index of double cropping	9	4	...	3	...	...	...	...	...	...	+158
Man-work units per man-equivalent	1	...	4	...	9	...	2	...	1	...	+587
Crop mow per man-equivalent	2	...	1	...	10	...	4	...	...	...	+602
Crop index	11	3	...	2	...	1	...	...	...	...	+112
Size of family (adult-male units)	1	...	4	...	8	...	3	...	...	...	+541
<i>Labor returns correlated with</i>											
Net profits per crop mow	4	...	7	...	5	...	1	...	...	...	+420
Man-work units	...	...	...	...	6	1	8	...	2	...	+776
Man-work units per man-equivalent	2	...	5	1	9	...	...	...	...	...	+478
Crop mow per man-equivalent	2	...	3	1	10	...	1	...	...	...	+482
<i>Labor returns per man-equivalent correlated with</i>											
Man-work units per man-equivalent	...	1	6	...	7	...	3	...	...	...	+568
Crop mow per man-equivalent	1	1	7	...	5	...	3	...	...	...	+540
Crop index	8	2	4	...	3	...	...	...	...	...	+311
<i>Net profits per crop mow correlated with</i>											
Crop mow	11	2	3	...	...	...	...	...	...	...	+223
Man-work units	12	1	3	...	...	...	1	...	...	...	+227
Man-equivalent	9	6	1	...	...	...	1	...	...	...	+220
Man-work units per man-equivalent	3	...	9	...	4	...	1	...	...	...	+405
Crop mow per man-equivalent	5	1	2	1	4	...	1	...	...	...	+367
Crop index	10	1	4	...	2	...	...	...	...	...	+247
Size of family (adult-male units)	9	4	3	...	...	...	...	...	...	...	+182
<i>Size of family correlated with</i>											
Family earnings	1	...	5	...	6	...	4	...	...	...	+539
Man-equivalent	1	...	2	...	8	...	5	...	...	...	+600
<i>Crop mow per man-equivalent correlated with</i>											
Man-work units per man-equivalent	...	...	1	...	2	...	6	...	8	...	+835
<i>Man equivalent correlated with</i>											
Crop index	9	7	1	...	...	...	...	...	...	...	+147

CHINESE FARM ECONOMY

TABLE 2. GROSS CORRELATION COEFFICIENTS OF CROP MOW, REPRESENTING SIZE OF BUSINESS, AND OTHER VARIABLES PERTAINING TO SIZE OF BUSINESS, LABOR EFFICIENCY AND QUALITY OF BUSINESS*

2866 farms, 17 localities, seven provinces, China (1921-1925)

PROVINCES AND HSIENS IN WHICH STUDIES WERE MADE	CROP MOW CORRELATED WITH		
	Size of business variables		
	Man-equivalent	Index of double cropping	Size of family (adult-male units)
<i>North China</i>			
Anhwei			
Hwaiyuan	+ .837±.018	+ .099±.060	+ .691±.032
Su	+ .734±.018	-.045±.040	+ .512±.029
Chihli			
Pingsiang	+ .701±.028	+ .141±.054	+ .634±.033
Yenshan (1922)	+ .757±.023	-.076±.055	+ .730±.026
Yenshan (1923)	+ .823±.019	+ .139±.057	+ .542±.041
Honan			
Sincheng	+ .620±.035	-.146±.055	+ .492±.043
Kaifeng	+ .890±.011	-.045±.055	+ .611±.035
Shansi			
Wusiang	+ .517±.031	+ .238±.040	+ .388±.036
Wutai	+ .769±.018	...	...
<i>Average by localities</i>	<i>+ .739</i>	<i>+ .154</i>	<i>+ .575</i>
<i>East Central China</i>			
Anhwei			
Laian (1921)	+ .698±.034	-.346±.059	+ .293±.061
Laian (1922)	+ .835±.020	-.319±.061	+ .596±.044
Wuhu	+ .968±.042	+ .277±.062	+ .717±.032
Chekiang			
Chinhai	+ .936±.010	+ .219±.078	+ .300±.075
Fukien			
Lienkiang	+ .838±.016	+ .010±.053	+ .334±.047
Kiangsu			
Kiangning (S)	+ .767±.019	+ .230±.045	+ .504±.035
Kiangning (T)	+ .801±.016	-.301±.042	+ .740±.024
Wuchin	+ .892±.008	+ .072±.039	+ .564±.027
<i>Average by localities</i>	<i>+ .842</i>	<i>+ .162</i>	<i>+ .506</i>
<i>Average by 17 localities</i>	<i>+ .787</i>	<i>+ .158</i>	<i>+ .541</i>

*Average in tables 2-7 are for coefficients of the same sign.

APPENDIX II

TABLE 2.—(Continued)

PROVINCES AND HSIENS IN WHICH STUDIES WERE MADE	CROP MOW CORRELATED WITH		
	Labor efficiency variables		Quality of business variable
	Man-work units per man- equivalent	Crop mow per man- equivalent	Crop index
<i>North China</i>			
Anhwei			
Hwaiyuan	+ .655±.035	+ .718±.029	+ .023±.061
Su	+ .493±.030	+ .719±.019	— .530±.029
Chihli			
Pingsiang	+ .640±.032	+ .587±.036	+ .114±.054
Yenshan (1922)	+ .544±.039	+ .576±.037	— .129±.054
Yenshan (1923)	+ .647±.034	+ .655±.033	+ .241±.055
Honan			
Sincheng	+ .633±.034	+ .642±.033	— .137±.055
Kaifeng	+ .669±.031	+ .559±.038	— .305±.050
Shansi			
Wusiang	+ .394±.036	+ .647±.025	+ .117±.042
Wutai	+ .984±.001	+ .887±.010	— .079±.045
<i>Average by localities</i>	+ .629	+ .666	+ .124
<i>East Central China</i>			
Anhwei			
Laian (1921)	+ .643±.039	+ .580±.045	+ .115±.066
Laian (1922)	+ .776±.027	+ .887±.014	— .355±.059
Wuhu	+ .644±.039	+ .632±.040	+ .143±.065
Chekiang			
Chinhai	+ .463±.065	+ .605±.052	+ .060±.082
Fukien			
Lienkiang	+ .710±.026	+ .692±.028	+ .129±.052
Kiangsu			
Kiangning (S)	+ .051±.047	+ .330±.042	+ .063±.047
Kiangning (T)	+ .421±.038	+ .263±.043	+ .003±.046
Wuchin	+ .613±.024	+ .263±.036	+ .227±.037
<i>Average by localities</i>	+ .540	+ .532	+ .106
<i>Average by 17 localities</i>	+ .587	+ .602	+ .112

CHINESE FARM ECONOMY

TABLE 3. GROSS CORRELATION COEFFICIENTS OF OPERATOR'S LABOR EARNINGS AND VARIABLES PERTAINING TO SIZE OF BUSINESS, LABOR EFFICIENCY, QUALITY OF BUSINESS AND NET PROFITS PER CROP MOW

2866 farms, 17 localities, seven provinces, China (1921-1925)

PROVINCES AND HSIENS IN WHICH STUDIES WERE MADE	OPERATOR'S LABOR EARNINGS CORRELATED WITH			
	Size of business variables			
	Crop mow	Man-equivalent	Man-work units	Index of double cropping
<i>North China</i>				
Anhwei				
Hwaiyuan	+ .117±.060	+ .489±.046	-.224±.058	+ .164±.059
Su	+ .374±.034	-.134±.039	+ .422±.033	-.193±.038
Chihli				
Pingsiang	+ .045±.055	-.071±.054	+ .099±.054	+ .289±.050
Yenshan (1922) ..	+ .441±.044	+ .059±.055	+ .434±.045	+ .134±.054
Yenshan (1923) ..	-.819±.019	-.777±.023	-.829±.018	-.047±.058
Honan				
Sincheng	+ .618±.035	+ .127±.055	+ .627±.034	-.042±.056
Kaifeng	+ .904±.010	+ .719±.027	+ .904±.010	-.032±.055
Shansi				
Wusiang	+ .099±.042	-.017±.043	+ .104±.042	+ .173±.041
Wutai	+ .471±.035	+ .219±.043	+ .438±.036	...
<i>Average by localities</i>	<i>+.384</i>	<i>+.323</i>	<i>+.433</i>	<i>+.190</i>
<i>East Central China</i>				
Anhwei				
Laian (1921) ..	+ .140±.066	-.191±.065	+ .126±.066	+ .010±.067
Laian (1922) ..	+ .540±.053	+ .491±.051	+ .562±.046	-.070±.067
Wuhu	+ .325±.060	+ .194±.064	+ .319±.060	+ .209±.064
Chekiang				
Chinhai	+ .584±.054	+ .404±.069	+ .613±.051	+ .442±.066
Fukien				
Lienkiang	+ .858±.014	+ .625±.032	+ .867±.013	+ .006±.053
Kiangsu				
Kiangning (S) ..	+ .717±.023	+ .695±.024	+ .756±.020	+ .176±.046
Kiangning (T) ..	-.059±.046	-.213±.044	-.053±.046	+ .154±.045
Wuchin	+ .257±.036	+ .094±.039	+ .299±.035	+ .019±.039
<i>Average by localities</i>	<i>+.439</i>	<i>+.417</i>	<i>+.506</i>	<i>+.145</i>
<i>Average by 17 localities</i>	<i>+.433</i>	<i>+.374</i>	<i>+.469</i>	<i>+.161</i>

APPENDIX II

TABLE 3.—(Continued)

PROVINCES AND HSIENS IN WHICH STUDIES WERE MADE	OPERATOR'S LABOR EARNINGS CORRELATED WITH		
	Size of busi- ness variables	Labor efficiency variables	
	Size of family (adult-male units)	Crop mow per man	Man-work units per man- equivalent
<i>North China</i>			
Anhwei			
Hwaiyuan	+ .014±.061	+ .422±.050	+ .412±.050
Su	+ .166±.039	+ .463±.031	+ .438±.032
Chihli			
Pingsiang	— .052±.055	+ .213±.052	+ .364±.047
Yenshan (1922)	+ .056±.055	+ .469±.043	+ .462±.043
Yenshan (1923)	— .539±.042	— .395±.049	— .383±.050
Honan			
Sincheng	— .023±.056	+ .628±.034	+ .643±.033
Kaifeng	+ .596±.036	+ .715±.027	+ .678±.030
Shansi			
Wusiang	+ .191±.041	+ .367±.037	+ .231±.040
Wutai .. .. .	...	+ .496±.034	+ .494±.034
<i>Average by localities</i>	+ .205	+ .472	+ .465
<i>East Central China</i>			
Anhwei			
Laian (1921)	— .013±.067	+ .465±.053	+ .521±.049
Laian (1922)	+ .280±.062	+ .387±.057	+ .416±.056
Wuhu	+ .221±.064	+ .393±.056	+ .346±.059
Chekiang			
Chinhai	+ .185±.080	+ .559±.057	+ .724±.039
Fukien			
Lienkiang	+ .356±.046	+ .423±.044	+ .630±.032
Kiangsu			
Kiangning (S)	+ .412±.039	+ .129±.047	+ .173±.046
Kiangning (T)	— .293±.042	+ .075±.046	+ .226±.043
Wuchin	+ .290±.036	+ .337±.034	+ .415±.032
<i>Average by localities</i>	+ .291	+ .346	+ .431
<i>Average by 17 localities</i>	+ .252	+ .409	+ .448

CHINESE FARM ECONOMY

TABLE 3.—(Continued)

PROVINCES AND HSIENS IN WHICH STUDIES WERE MADE	OPERATOR'S LABOR EARNINGS CORRELATED WITH		
	Quality of business variables		Net profits per crop mow
	Crop index	Land value (farm area)	
<i>North China</i>			
Anhwei			
Hwaiyuan	+ .167±.059	— .029±.061	+ .350±.053
Su	+ .166±.039	— .114±.039	+ .472±.031
Chihli			
Pingsiang	+ .326±.049	+ .325±.049	+ .410±.046
Yenshan (1922)	+ .128±.054	— .052±.055	+ .569±.037
Yenshan (1923)	— .193±.056	— .277±.054	+ .017±.058
Honan			
Sincheng	— .062±.056	— .198±.054	+ .629±.034
Kaifeng	+ .540±.039	— .562±.038	+ .654±.032
Shansi			
Wusiang	+ .164±.041	— .054±.042	+ .568±.029
Wutai	+ .241±.042	— .167±.044	+ .581±.030
<i>Average by localities</i>	+ .247	— .182	+ .472
<i>East Central China</i>			
Anhwei			
Laian (1921)	+ .600±.043	— .020±.067	+ .864±.017
Laian (1922)	+ .095±.067	+ .002±.068	+ .357±.059
Wuhu	+ .230±.063	— .214±.064	+ .535±.048
Chekiang			
Chinhai	+ .408±.069	— .261±.077	+ .807±.029
Fukien			
Lienkiang	+ .294±.049	+ .381±.045	+ .400±.045
Kiangsu			
Kiangning (S)	+ .488±.036	+ .194±.046	+ .315±.043
Kiangning (T)	+ .571±.031	+ .127±.045	+ .772±.019
Wuchin	+ .330±.035	+ .337±.034	+ .783±.015
<i>Average by localities</i>	+ .377	— .165	+ .604
<i>Average by 17 localities</i>	+ .317	— .177	+ .584

APPENDIX II

TABLE 4. GROSS CORRELATION COEFFICIENTS OF LABOR RETURNS AND VARIABLES PERTAINING TO NET PROFITS PER CROP MOW, SIZE OF BUSINESS, AND LABOR EFFICIENCY

2866 farms, 17 localities, seven provinces, China (1921-1925)

PROVINCES AND HSIENS IN WHICH STUDIES WERE MADE	LABOR RETURNS CORRELATED WITH			
	Net profits per crop mow	Size of business variables	Labor efficiency variables	
		Man-work units	Man-work units per man- equivalent	Crop mow per man- equivalent
<i>North China</i>				
<i>Anhwei</i>				
Hwaiyuan	+ .437±.049	+ .824±.019	+ .616±.038	+ .671±.033
Su	+ .396±.034	+ .684±.021	+ .455±.032	+ .528±.029
<i>Chihli</i>				
Pingsiang	+ .026±.055	+ .541±.039	+ .517±.040	+ .328±.049
Yenshan (1922) ..	+ .238±.052	+ .850±.015	+ .490±.042	+ .507±.041
Yenshan (1923) ..	+ .086±.058	+ .591±.038	-.349±.051	-.359±.051
<i>Honan</i>				
Sincheng	+ .518±.041	+ .836±.017	+ .523±.041	+ .525±.041
Kaifeng	+ .358±.048	+ .898±.011	+ .580±.037	+ .556±.038
<i>Shansi</i>				
Wusiang	+ .547±.030	+ .739±.019	+ .368±.037	+ .558±.029
Wuta'	+ .683±.024	+ .679±.024	+ .673±.025	+ .690±.024
<i>Average by localities</i>	+ .365	+ .765	+ .528	+ .545
<i>East Central China</i>				
<i>Anhwei</i>				
Laian (1921) ..	+ .729±.031	+ .658±.038	+ .499±.050	+ .445±.054
Laian (1922) ..	+ .471±.053	+ .825±.022	+ .597±.043	+ .678±.036
Wuhu	+ .445±.054	+ .857±.018	+ .570±.045	+ .582±.044
<i>Chekiang</i>				
Chin'ai	+ .483±.063	+ .914±.014	+ .550±.057	+ .502±.062
<i>Fukien</i>				
Lienkiang	+ .386±.045	+ .901±.010	+ .547±.037	+ .705±.027
<i>Kiangsu</i>				
Kiangning (S) ..	+ .126±.047	+ .899±.009	+ .085±.047	+ .126±.047
Kiangning (T) ..	+ .609±.029	+ .634±.027	+ .193±.044	+ .001±.046
Wuchin	+ .605±.025	+ .683±.021	+ .377±.033	+ .309±.035
<i>Average by localities</i>	+ .482	+ .796	+ .427	+ .419
<i>Average by 17 localities</i>	+ .420	+ .776	+ .478	+ .482

CHINESE FARM ECONOMY

TABLE 5. GROSS CORRELATION COEFFICIENTS OF LABOR RETURNS PER MAN-EQUIVALENT REPRESENTING PROFITS AND OTHER VARIABLES PERTAINING TO LABOR EFFICIENCY AND CROP INDEX

2866 farms, 17 localities, seven provinces, China (1921-1925)

PROVINCES AND HSIENS IN WHICH STUDIES WERE MADE	LABOR RETURNS PER MAN-EQUIVALENT CORRELATED WITH		
	Labor efficiency variables		Quality of business variable
	Man-work units per man- equivalent	Crop mow per man- equivalent	Crop index
<i>North China</i>			
Anhwei			
Hwaiyuan	+ .732±.028	+ .775±.024	+ .251±.057
Su	+ .600±.026	+ .317±.036	+ .300±.036
Chihli			
Pingsiang	+ .701±.028	+ .531±.039	+ .414±.045
Yenshan (1922)	+ .688±.029	+ .685±.029	+ .267±.051
Yenshan (1923)	— .277±.054	— .271±.054	— .027±.053
Honan			
Sincheng	+ .776±.022	+ .764±.023	— .059±.056
Kaifeng	+ .397±.047	+ .726±.026	+ .034±.055
Shansi			
Wusiang	+ .471±.033	+ .671±.023	+ .034±.055
Wutai	+ .334±.040	+ .419±.037	+ .274±.042
<i>Average by localities</i>	+ .587	+ .611	+ .254
<i>East Central China</i>			
Anhwei			
Laiian (1921)	+ .442±.054	+ .488±.051	+ .604±.043
Laiian (1922)	+ .531±.048	+ .490±.051	+ .143±.066
Wuhu	+ .425±.055	+ .490±.051	+ .125±.066
Chekiang			
Chinhai	+ .665±.046	+ .365±.071	+ .179±.080
Fukien			
Lienkiang	+ .678±.029	+ .649±.036	+ .404±.045
Kiangsu			
Kiangning (S)	+ .632±.028	+ .296±.043	+ .576±.032
Kiangning (T)	+ .436±.037	+ .460±.036	+ .539±.032
Wuchin	+ .585±.026	+ .507±.029	+ .325±.035
<i>Average by localities</i>	+ .549	+ .468	+ .362
<i>Average by 17 localities</i>	+ .568	+ .540	+ .311

APPENDIX II

TABLE 6. GROSS CORRELATION COEFFICIENTS OF NET PROFITS PER CROP MOW AND VARIABLES PERTAINING TO SIZE OF BUSINESS, LABOR EFFICIENCY AND QUALITY OF BUSINESS

2866 farms, 17 localities, seven provinces, China (1921-1925)

PROVINCES AND HSIENS IN WHICH STUDIES WERE MADE	NET PROFITS PER CROP MOW CORRELATED WITH			
	Size of business variables			
	Crop mow	Man-work units	Man- equivalent	Size of family (adult-male unit)
<i>North China</i>				
<i>Anhwei</i>				
Hwaiyuan	+ .406±.051	+ .396±.051	+ .257±.057	+ .216±.058
Su	+ .015±.040	+ .070±.040	- .123±.039	+ .034±.040
<i>Chihli</i>				
Pingsiang	+ .237±.052	+ .266±.051	+ .786±.021	+ .262±.051
Yenshan (1922) ..	+ .087±.055	+ .083±.055	- .077±.055	- .031±.055
Yenshan (1923) ..	+ .103±.058	+ .100±.058	+ .019±.058	+ .059±.058
<i>Honan</i>				
Sincheng	+ .147±.055	+ .168±.055	- .100±.056	- .062±.055
Kaifeng	+ .056±.055	+ .039±.055	+ .014±.055	+ .097±.055
<i>Shansi</i>				
Wusiang	+ .336±.038	+ .327±.038	+ .077±.042	+ .371±.037
Wutai	+ .743±.020	+ .732±.021	+ .499±.034	...
<i>Average by localities</i>	+ .237	+ .242	+ .275	+ .173
<i>East Central China</i>				
<i>Anhwei</i>				
Laian (1921) ..	+ .248±.063	+ .228±.064	- .127±.066	+ .088±.067
Laian (1922) ..	+ .428±.055	+ .391±.057	+ .288±.062	+ .362±.059
Wuhu	+ .285±.061	+ .284±.061	+ .219±.064	+ .227±.063
<i>Chekiang</i>				
Chin Hai	+ .093±.082	+ .215±.079	+ .029±.082	+ .064±.082
<i>Fukien</i>				
Lienkiang	+ .137±.052	+ .133±.052	+ .063±.053	+ .324±.048
<i>Kiangsu</i>				
Kiangning (S) ..	- .268±.044	- .074±.047	- .146±.046	- .123±.047
Kiangning (T) ..	+ .017±.046	+ .178±.044	+ .164±.044	- .038±.046
Wuchin	- .033±.039	+ .024±.039	- .144±.038	+ .074±.039
<i>Average by localities</i>	+ .201	+ .208	+ .153	+ .190
<i>Average by 17 localities</i>	+ .223	+ .227	+ .220	+ .182

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TABLE 6.—(Continued)

PROVINCES AND HSIENS IN WHICH STUDIES WERE MADE	NET PROFITS PER CROP MOW CORRELATED WITH		
	Labor efficiency variables		Quality of business variables
	Man-work units per man- equivalent	Crop mow per man- equivalent	Crop index
<i>North China</i>			
Anhwei			
Hwaiyuan	+ .526±.044	+ .575±.041	+ .079±.060
Su	+ .503±.030	+ .218±.038	+ .223±.038
Chihli			
Pingsiang	+ .448±.044	+ .277±.051	+ .154±.053
Yenshan (1922)	+ .330±.049	+ .311±.050	+ .299±.050
Yenshan (1923)	+ .131±.057	+ .142±.057	+ .066±.058
Honan			
Sincheng	+ .326±.050	+ .298±.051	+ .132±.055
Kaifeng	+ .018±.055	+ .197±.053	+ .216±.053
Shansi			
Wusiang	+ .404±.036	+ .584±.028	+ .103±.042
Wutai	+ .789±.017	+ .852±.012	+ .350±.039
<i>Average by localities</i>	<i>+ .386</i>	<i>+ .384</i>	<i>+ .180</i>
<i>East Central China</i>			
Anhwei			
Laiian (1921)	+ .558±.046	+ .539±.048	+ .575±.045
Laiian (1922)	+ .442±.054	+ .517±.049	— .185±.065
Wuhu	+ .460±.053	— .253±.063	+ .082±.066
Chekiang			
Chinhai	+ .694±.053	+ .188±.079	+ .087±.082
Fukien			
Lienkiang	+ .219±.051	+ .205±.051	+ .408±.044
Kiangsu			
Kiangning (S)	+ .336±.042	— .375±.041	+ .329±.042
Kiangning (T)	+ .400±.038	+ .314±.041	+ .529±.033
Wuchin	+ .404±.033	+ .291±.036	+ .322±.035
<i>Average by localities</i>	<i>+ .427</i>	<i>+ .342</i>	<i>+ .333</i>
<i>Average by 17 localities</i>	<i>+ .405</i>	<i>+ .367</i>	<i>+ .247</i>

APPENDIX II

TABLE 7. GROSS CORRELATION COEFFICIENTS OF A
NUMBER OF VARIABLES
2866 farms, 17 localities, seven provinces, China (1921-1925)

PROVINCES AND HSIENS IN WHICH STUDIES WERE MADE	Man-equivalent correlated with	Size of family (adult-male unit correlated with)		Crop mow per man-equivalent correlated with
	Crop index	Family earnings	Man-equivalent	Man-work units per man- equivalent
<i>North China</i>				
<i>Anhwei</i>				
Hwaiyuan	+ .037±.061	+ .706±.030	+ .704±.031	+ .959±.005
Su	- .213±.038	+ .376±.034	+ .578±.027	+ .796±.015
<i>Chihli</i>				
Pingsiang	+ .055±.055	+ .566±.037	+ .642±.032	+ .866±.014
Yenshan (1922) ..	- .211±.053	+ .633±.033	+ .714±.027	+ .990±.001
Yenshan (1923) ..	+ .203±.056	+ .651±.034	+ .527±.042	+ .982±.002
<i>Honan</i>				
Sincheng	- .180±.054	+ .513±.041	+ .817±.019	+ .997±.001
Kaifeng	- .267±.051	+ .794±.020	+ .681±.030	+ .988±.001
<i>Shansi</i>				
Wusiang	+ .162±.041	+ .385±.036	+ .395±.036	+ .610±.027
Wutai	+ .120±.044	...	...	+ .967±.003
<i>Average by localities</i>	+ .115	+ .578	+ .632	+ .906
<i>East Central China</i>				
<i>Anhwei</i>				
Laian (1921) ..	- .219±.064	+ .513±.049	+ .626±.041	+ .748±.030
Laian (1922) ..	- .155±.066	+ .530±.049	+ .538±.048	+ .824±.022
Wuhu	+ .096±.066	+ .813±.023	+ .764±.028	+ .368±.058
<i>Chekiang</i>				
Chinhai	- .037±.082	+ .180±.080	+ .222±.078	+ .835±.025
<i>Fukien</i>				
Lienkiang	+ .190±.051	+ .398±.045	+ .383±.045	+ .987±.001
<i>Kiangsu</i>				
Kiangning (S) ..	+ .125±.047	+ .321±.042	+ .564±.032	+ .527±.034
Kiangning (T) ..	+ .132±.045	+ .743±.021	+ .871±.011	+ .812±.016
Wuchin	+ .346±.034	+ .495±.029	+ .572±.026	+ .949±.004
<i>Average by localities</i>	+ .178	+ .499	+ .568	+ .756
<i>Average by 17 localities</i>	+ .147	+ .539	+ .600	+ .835

APPENDIX III
TABLE 1. TOTAL AMOUNT OF CROP HECTARES DEVOTED TO
VARIOUS CROPS*
2866 farms, 17 localities, seven provinces, China (1921-1925)

PROVINCES AND HSIENS IN WHICH STUDIES WERE MADE	First or second crop harvested from the same piece of ground during one growing season.	SEEDS									
		GRAINS							Le- gumes inter- tilled with grains	LEGUMES	
		Wheat	Rice	Kao- liang	Millet	Barley	Corn	Glutin- ous rice	Corn and soy- beans	Soy- beans	Green beans
<i>North China</i>											
<i>Anhui</i>											
Hwaiyuan .. .	1st	221.87	30.67	93.34	3.21	39.65	...	...	...	...	...
	2nd	...	156.01	...	...	...	...	...	...	19.69	15.92
Su .. .	1st	432.67	...	229.01	31.40	212.85	...	...	...	...	...
	2nd	...	...	...	0.43	...	...	...	...	486.52	159.42
<i>Chihli</i>											
Pingsiang .. .	1st	44.77	...	31.28	10.63	1.97	...	...	...	1.44	...
	2nd	...	...	...	28.72	...	...	...	...	...	...
Yenshan (1922) ..	1st	151.63	...	83.53	37.95	...	...	...	...	...	...
	2nd	...	...	...	...	...	32.86	...	51.75	46.26	2.50
Yenshan (1923) ..	1st	254.02	...	128.60	58.07	...	...	...	...	...	...
	2nd	...	...	...	...	...	48.12	...	40.06	31.65	1.61
<i>Honan</i>											
Sincheng .. .	1st	286.70	...	68.14	11.16	43.41	0.70	...	...	...	...
	2nd	...	...	...	88.22	...	55.02	...	...	11.16	22.25
Kaifeng .. .	1st	301.92	...	65.82	48.96	41.85	...	...	...	...	...
	2nd	...	...	...	...	...	11.00	...	28.44	29.69	110.74
<i>Shansi</i>											
Wusiang .. .	1st	114.82	...	10.80	159.15	8.66	...	...	...	3.06	2.80
	2nd	...	...	...	...	...	...	...	...	...	...
Wutai .. .	1st	157.73	...	316.25	332.20	...	...	...	...	99.56	12.29
	2nd	...	...	...	...	...	...	...	...	...	...
<i>Total</i> .. .	1st	1966.18	30.67	1026.77	692.73	348.39	0.70	...	...	104.06	15.09
	2nd	...	156.01	...	117.37	...	147.00	...	120.25	624.97	312.44
<i>East Central China</i>											
<i>Anhui</i>											
Laian (1921) ..	1st	59.48	218.40	...	...	4.80	3.77	13.02	...	...	...
	2nd	...	31.62	...	...	...	...	...	16.00	11.37	11.31
Laian (1922) ..	1st	125.53	101.20	...	...	7.95	2.04	...	...	...	...
	2nd	...	36.86	...	...	...	...	2.43	...	13.08	25.49
Wuhu .. .	1st	15.65	32.95	...	...	1.89	...	...	...	...	...
	2nd	...	128.53	...	...	...	...	4.72	...	...	...
<i>Chekiang</i>											
Chinhai .. .	1st	1.83	55.87	...	...	...	...	...	...	...	...
	2nd	...	1.77	...	...	...	...	4.09	...	0.69	...
<i>Fukien</i>											
Lienkiang .. .	1st	18.47	82.49	...	...	...	...	...	...	...	...
	2nd	...	16.58	...	...	...	...	...	...	...	...
<i>Kiangsu</i>											
Kiangning (S) ..	1st	375.73	3.13	...	...	3.28	...	...	...	...	...
	2nd	...	360.45	...	...	...	...	10.73	...	33.61	6.19
Kiangning (T) ..	1st	155.67	16.36	...	...	73.71	...	1.22	...	...	...
	2nd	...	161.18	...	...	...	2.62	1.77	25.64	65.76	...
Wuchin .. .	1st	199.63	10.30	...	...	6.50	...	18.47	...	...	...
	2nd	...	266.34	...	...	...	...	...	...	0.49	...
<i>Total</i> .. .	1st	946.99	530.70	...	...	92.13	10.81	32.71	...	...	...
	2nd	...	1009.33	...	...	...	2.62	33.74	41.64	125.00	42.99
<i>Total, 17 localities</i> ..	2nd	2919.17	1159.24	...	117.37	...	149.62	33.74	161.39	749.97	355.43
	1st	...	551.37	1026.77	692.73	446.52	11.51	32.71	...	104.06	15.09

(Continued)

APPENDIX III

APPENDIX III TABLE 1.—(Continued)

PROVINCES AND HSIENS IN WHICH STUDIES WERE MADE	First or second crop harvested from the same pieces of ground during one growing season.	SEEDS				Tubers Sweet potatoes	FIBERS		Vegetables	Fruits	Other Crops	Total crop hect- ares
		LEGUMES		OIL SEEDS			Cot- ton	Hemp				
		Field peas	Soy- beans (black)	Se- same	Rape- seed							
<i>North China</i>												
Anhwei	1st	...	...	...	0.48	1.52	10.37	1.75	1.53	0.32	25.05	—
	2nd	...	...	41.67	...	25.76	...	...	...	...	4.45	693.26
Su...	1st	121.11	...	...	...	...	24.95	8.61	1.42	...	214.87	—
	2nd	...	11.46	56.01	...	59.57	0.32	0.16	0.28	1.66	10.54	2063.26
<i>Chihli</i>												
Pingsiang	1st	...	8.63	...	...	...	...	...	10.18	...	41.27	—
	2nd	...	...	...	...	...	...	4.98	...	...	0.17	184.04
Yenshan (1922)	1st	...	...	...	...	...	...	...	0.44	1.45	1.94	—
	2nd	...	...	...	...	0.16	...	...	...	...	11.22	422.74
Yenshan (1923)	1st	...	...	...	...	...	...	...	1.09	...	2.24	—
	2nd	...	55.55	...	...	...	...	...	...	...	31.85	652.86
<i>Honan</i>												
Sinchen	1st	1.12	...	...	...	...	...	...	0.31	15.69	4.63	—
	2nd	...	58.44	14.23	...	31.84	...	...	...	...	20.79	733.81
Kaifeng	1st	1.04	...	0.12	...	...	10.00	5.11	4.90	...	...	—
	2nd	...	...	21.91	...	41.44	...	...	0.78	2.47	88.27	814.46
<i>Shansi</i>												
Wusiang	1st	...	...	...	4.23	...	0.13	8.66	1.04	2.51	145.14	—
	2nd	...	...	...	...	...	...	...	...	...	13.84	479.84
Wutai	1st	39.48	...	...	...	...	...	9.74	...	...	880.28	—
	2nd	...	...	...	...	...	...	...	...	...	...	1847.53
<i>Total</i>												
	1st	162.75	8.63	0.12	4.71	1.52	45.45	33.87	20.31	19.97	1315.42	—
	2nd	...	126.50	133.32	...	158.77	0.32	5.14	1.06	4.13	186.13	7891.85
<i>East Central China</i>												
<i>Anhwei</i>												
Luian (1921)	1st	...	...	...	1.55	...	8.83	2.65	8.28	0.22	74.33	—
	2nd	...	...	3.20	...	0.55	...	...	...	...	0.33	474.71
Luian (1922)	1st	3.37	...	...	3.92	...	1.05	0.44	7.67	...	...	—
	2nd	...	...	0.77	...	0.17	...	...	...	...	...	331.97
Wuhu	1st	...	...	...	108.83	...	...	...	...	...	10.05	—
	2nd	...	...	...	...	...	...	...	...	...	...	302.62
<i>Chekiang</i>												
Chinhai	1st	0.70	...	...	0.94	...	16.98	...	1.60	3.63	5.73	—
	2nd	...	...	...	...	2.04	...	...	...	...	1.72	97.59
<i>Fukien</i>												
Lienkiang	1st	...	...	...	8.19	61.59	...	0.96	0.17	...	0.66	—
	2nd	...	...	...	...	0.73	...	0.47	3.56	...	0.17	184.04
<i>Kiangsu</i>												
Kiangning (S)	1st	...	...	...	...	...	0.82	...	4.62	...	40.32	—
	2nd	...	...	5.07	...	0.60	...	...	...	0.15	1.79	846.49
Kiangning (T)	1st	21.95	...	...	...	0.99	...	...	1.07	0.32	198.56	—
	2nd	...	...	1.10	...	0.60	0.43	...	0.30	0.24	3.89	733.38
Wuchin	1st	2.46	...	0.68	1.37	...	...	...	...	...	103.99	—
	2nd	...	...	...	...	...	...	...	0.47	...	3.28	613.93
<i>Total</i>												
	1st	28.48	...	0.68	119.80	62.53	27.63	4.05	23.11	4.17	433.64	—
	2nd	...	...	10.14	...	4.69	0.43	0.47	4.33	0.39	11.18	3534.78
<i>Total, 17 localities</i>												
	1st	191.23	8.63	0.80	124.51	64.10	73.13	37.92	44.32	24.14	1749.06	—
	2nd	...	126.50	143.96	...	168.46	0.75	5.61	6.39	4.52	197.31	11476.63

(Continued)

CHINESE FARM ECONOMY

APPENDIX III TABLE 1.—(Continued)

*The following crops are listed separately because they are found only in one or at most a few regions. The numerals in parentheses indicate whether the crop is a first or a second crop. The double dagger indicates that the crop has been omitted from the total crop hectare, area.

In some cases the totals of this table vary slightly from those in table 3, chapter III because of additions or omissions of third decimal figures in both tables.

HWAIYUAN:	Wheat and field peas, 23.29 (1); sesame and small beans, 2.24 (2); sesame and soybeans, 1.84 (2); indigo, 0.96 (1); peanuts, 0.70 (1); carrots, 0.07 (2); tobacco, 0.06 (1); miscellaneous, 0.04 (1); 0.30 (2); trees for shade, lumber, or fuel, 0.01 (1)‡.
SU:	Field peas and wheat, 201.92 (1); peanuts, 3.63 (1), 1.42 (2); carrots, 1.66 (2); others, 0.67 (1), 0.59 (2); Irish potatoes, 0.65 (2); red turnips, 0.28 (1); miscellaneous, 8.37 (1); 6.32 (2); shade, lumber, or fuel, 0.01 (1)‡.
PINGSIANG:	Kaoliang and soybeans (black), 41.24 (1); indigo, 0.16 (2); miscellaneous, 0.03 (1), 0.01 (2).
YENSHAN (1922):	Soybeans and millet, 8.72 (2); kaoliang and millet, 1.94 (1); miscellaneous, 2.50 (2).
YENSHAN (1923):	Proso millet, 9.89 (2); soybeans and millet, 6.54 (2); china jute, 1.57 (1); others, 0.67 (1); carrots, 0.04 (2); miscellaneous, 15.38 (2); fruits, 0.06 (1)‡; shade, lumber, or fuel, 0.01 (1)‡.
SINCHENG:	Buckwheat, 19.53 (2); peanuts, 2.82 (1); sesame and green beans, 1.81 (1); 0.35 (2); miscellaneous, 0.91 (2).
KAIFENG:	Proso millet, 35.43 (2); sesame and green beans, 34.88 (2); red beans, 17.96 (2).
WUSIANG:	Kaoliang and green beans, 110.26 (1); buckwheat, 17.77 (2); squash and potatoes, 13.73 (1); proso millet, 6.54 (1); others, 1.07 (2); Irish potatoes, 0.65 (1); miscellaneous, 13.96 (1).
WUTAI:	Oats, 441.32 (1); Proso millet, 324.07 (1); Irish potatoes, 114.27 (1); miscellaneous, 0.62 (1).
LAIAN (1921):	Field peas and wheat, 73.50 (1); miscellaneous, 0.83 (1), 0.33 (2).
WUHU:	Field peas and wheat, 9.17 (1); miscellaneous, 0.88 (1).
CHINHAI:	Broad beans, 4.45 (1); taro, 1.72 (2); miscellaneous, 1.28 (1).
LIENKIANG:	Taro, 0.51 (1), 0.17 (2); miscellaneous, 0.15 (1).
KIANGNING (S):	Barley hulls, 38.23 (1); red beans, 1.64 (2); miscellaneous, 2.09 (1), 0.15 (2).
KIANGNING (T):	Broad beans, 13.33 (1); sesame and green beans, 1.81 (2); <i>astragalus sinensis</i> , 0.73 (1); turnips, 0.12 (2); taro, 0.01 (1); miscellaneous, 0.37 (1), 2.46 (2); mulberry, 20.18 (1); shade, lumber, or fuel, 159.39 (1); fruits, 4.55 (1).
WUCHIN:	<i>Astragalus sinensis</i> , 27.62 (1); broad beans, 21.27 (1); wheat and field peas, 12.79 (1); melon and soybeans, 2.69 (2); taro, 0.86 (1); arrow-head, 0.59 (2); trees for shade, lumber, or fuel, 0.45 (1); fruits, 0.07 (1); mulberry, 40.86 (1); miscellaneous, 0.07 (1).

APPENDIX IV
A RECORD OF A YEAR'S FARM BUSINESS

This record is used for calculating the annual labor earnings and analyzing the yearly farm business and has been prepared by the Department of Farm Management and Rural Economics, University of Nanking, College of Agriculture and Forestry, Nanking, China.

Farm number () Land tenure; Owner, part owner, tenant, manager
Name of the operator _____ Province _____ Hsien _____ Village _____
Record for the year beginning _____ and ending _____
Name of the investigator _____ Address _____

LAND¹

KIND OF LAND ²	Class of land	Land mortgaged by the operator †			Land owned by the operator			Land rented by the operator		
		Number of mow	Value per mow	Total value	Number of mow	Value per mow	Total value	Number of mow	Mortgaged value per mow	Total value
	Good									
	Medium .. .									
	Poor									
<i>Total</i>										

¹Of the above reported cultivated land how many mow are in graves, _____; dykes, _____; ponds, _____; roads and paths, _____

If trees are too few to record in terms of mow give the number of the following trees: Common trees, _____; bamboos, _____; mulberry, _____; fruits, _____; tea, _____; tung oil, _____; other, _____

²Itemize kind of land in detail as follows or by other local classification:

Cultivated: dry, paddy, low, in trees (other than fruit), etc.
Uncultivated: farmstead, hill, marshland, grave land not included under cultivated, in trees (other than fruit), etc.)

*This schedule, as printed, includes various changes made during the years the studies were made. The items but not the exact arrangement are those used in Chinese for field work.

†Mortgaging is explained in Chapter III in the second paragraph under the topic of distribution of capital.

CAPITAL (SUMMARY)*

ITEMS	Operator's		Landlord's		Operator's and landlord's	
	Beginning of year	End of year	Beginning of year	End of year	Beginning of year	End of year
Land						
Land mortgaged from others .. .						
Deposit on rented land and buildings						
Trees						
Buildings (farm)						
Farm tools						
Feed and seeds						
Other supplies						
Livestock						
Total capital						
Average capital						
Capital increase						
Capital decrease						

*Notes:—

- (1) Land value in the beginning and at the end of year should be the same unless it is improved.
- (2) Trees should include all the total value of the kinds mentioned below the table on land.
- (3) The livestock value must be taken from the table on livestock.
- (4) Care must be taken to distinguish between items of capital belonging to the operator and those belonging to the landlord.

OPERATOR'S CROPS*

KIND OF CROP	Per cent of a normal crop	Total crops grown			Crops sold, given away or to be sold by operator*			Used by the operator's family			Rent to the landlord			Used by animals			Used for seed		
		Mow	Yield per mow	Total value	Amount	Price	Total value	Amount	Value per unit	Total value	Amount	Value per unit	Total value	Amount	Value per unit	Total value	Amount	Value	Total value
1. Rice																			
2. Glutinous																			
3. Buckwheat																			
4. Cotton																			
5. Sugar cane																			
6. Corn and soybeans ..																			
7. Sesame and soybeans ..																			
8. Peanuts																			
9. Kaoliang																			
10. Millet																			
11. Tobacco																			
12. Irish potatoes																			
13. Sweet potatoes																			
14. Hemp																			
15. Vegetables																			
16. Taro																			
17. Watermelons and																			
18. Broad beans																			
19. Rape																			
20. Wheat																			
21. Barley																			
22. _____																			
23. _____																			
24. _____																			
<i>Total</i>																			

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APPENDIX IV

* (1) Crops to be sold should not be counted as used by the operator's family, and the amount of crops for presents or for payment of debts should go to crops sold. (2) When two crops are grown together and the product harvested separately give the yield of each separately. (3) Indicate the unit of weight or measure by D for dan, P for picul, T for tow, and C for catty.

Rotation number used on this farm (obtain from rotation schedule) _____
 What per cent of the important crops raised are sold as soon as they are harvested? _____

WEIGHTS AND MEASURES*

- (a) How many catties make one tow of wheat or rice? _____
- (b) How many ounces make one catty? _____
- (c) One mow equals how many gung? _____
- (d) One gung equals how many feet? _____
- (e) Cut a string or strip of paper the exact length of the foot and attach to this schedule.

OPERATOR'S MISCELLANEOUS RECEIPTS

ITEMS 1	Sold to be sold, or given away by the operator			Used by the operator's family			As rent to landlord			As feed		
	Amount	Value	Total value	Amount	Value	Total value	Amount	Value	Total value	Amount	Value	Total value
Crop stalks:												
1												
2												
Pond products:												
1												
2												
3												
Nut trees:												
1												
2												
Fruits:												
1												
2												
3												
Trees:												
1												
2												
3												
Bamboo 2												
Fuel (Grass)												
Mulberry seedlings												
Tea leaves												
Mulberry leaves 2												
Man 3 (No. of days)												
labor (Rate)												
Animal (No. of days)												
labor (Rate)												
Hire for implements												
Products from home industry 4												
<i>Total</i>												

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CHINESE FARM ECONOMY

¹ Give kinds.
² If a main crop include under crops.
³ Include only work done by members of the household. Do not include work done by absent members of the family. Work done for long periods of a month or more should be entered under income from other than farm sources.
⁴ If the home industry is performed by the persons on the farm or if it has close relation to the farm business, then such income should be entered here, otherwise, it should be entered under the other income of the operator.

APPENDIX IV

OPERATOR'S LIVESTOCK BY-PRODUCTS

KIND	Sold, to be sold, or given away by the operator			Used by the operator's family		
	Amount	Value	Total value	Amount	Value	Total value
Eggs (Chicken)						
(Duck)						
(Goose)						
Manure				x	x	x
Hides and skins						
Feathers						
Bones						
Meat						
Honey						
Raw Silk						
Cocoons						
<i>Total</i>						

INCOME FROM OTHER THAN FARM SOURCES

SOURCE	Place where the work was done	Member of household by whom the work was done	Number of months engaged in the work	Net income from such work
Labor (Kind:)				
Home industry (Kind:)	x			
Rent of land (number of mow)	x	x	x	
Rent of buildings (number of rooms)	x	x		
Investment (Kind:)		x	(Interest rate:)	
Physician				
Trading				
Teaching				
<i>Total net income</i>				

CHINESE FARM ECONOMY

FARM EXPENSES (OPERATOR)

ITEMS	Number of persons	Amount of time spent in farm work (months, days)	Total months boarded during working period	Cost (or value)		Total cost
				Wages	Board	
Family labor(1):						
Operator(2)						
Man						
Woman						
Child						
Hired labor:						
Year						
Day						
Child						

ITEMS	Amount	Total cost	Feed: Kind	Amount	Value per unit	Total cost
Other hired labor costs:			Feed:			
Kind:			Kind			
Hats						
Towels						
Tobacco						
Liquor and wine						
Other:						
Cash rent (No. of mow)			Fertilizer:			
Hire of labor animals (No. of days)			Kind			
Repair of buildings						
Repair of farm equipment						
Silkworm eggs						
Mulberry leaves						
Seeds purchased						
Seedlings						
Land taxes						
Other taxes						
Other expenses			Total expenses		x	

FARM EXPENSES (LANDLORD)

ITEMS	Total cost
Seeds	
Land taxes	
Repair of buildings	
Repair of farm equipment	
Collection of rent	
Others	

Fertilizer: Kind	Amount	Cost per unit	Total cost
Total expenses			

OPERATOR'S HISTORY

B. From the year beginning as operator until present.

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AGE	PLACE	LAND (IN MOW) FOR EACH YEAR OF CHANGE													
		Amount of land acquired by								Amount of land in the farm diminished by					
		Inheritance	Purchase	Renting from others	Land from expired leases to others	Mortgaging land from others	Mortgaged land re-deemed	Land from river deposits	Gifts	Total	Sale	Renting to others	Rented land re-leased	Mortgaging to others	Mortgaged land released

CHINESE FARM ECONOMY

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