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OCT 31 1962

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FARM ECONOMY ANALYSIS REPORT

From The Results of 21 Simplified Farm Records

-Rice Farms in Kohokucho, Shiga Prefecture -



The Research Institute of Farm Accounting
Faculty of Agriculture, Kyoto University

Japan

A systematic analysis of farm records kept by farmers provides much useful information. Farmers use this information in studying and planning their individual farm operation. Farm management workers use the results in teaching farmers and in considering future development of agriculture.

Our Institute each year sponsors a farm accounting project for a group of farmers in The Kinki District. This project has been in progress since 1927. Emphasis has been placed on individual analysis. In addition to this we have a new project "How to use the results of farm bookkeeping". It is sponsored by "The Council on Economic and Cultural Affairs (U.S.A.)". The purpose is to establish a method to make practical use of the results of records kept by farmers.

This report shows the results of rice farm analysis under the new project. In addition to the statistical data we try to give some clue as to farm management improvement to book-keeping farmers and extension workers. We expect that the extension of such methods will contribute to the development of farming in The Kinki District and on a wider, nation-wide scale.

This project was under the supervision of Prof. M. Kuwahara,
Head of this Institute. Closing of the records and analysis of
the results were done by T. Kikuchi - assistant professor of this
Institute, and K. Sahara - assistant professor of Shiga Prefectural
College. Some staff and students at Shiga Prefectural College,
and the extension workers in Kohoku District helped farmers to keep
and close records in cooperation with us.
June 1962

The Research Institute of Farm Accounting Faculty of Agriculture, Kyoto University

Method of Analysis Used

For this analysis, these were 21 farmers who completed Simplified Farm Records devised by our Institute for the year 1961. All of them are rice farmers in Asahi, Kohokucho, Shiga Prefecture. Each farmer's records were summarized and analyzed by our Institute according to the following three steps:

- (1) Analysis of farm family economy....including non-farm and living aspects
- (2) Analysis of farm business....dealing with farm business as a whole and excluding non-farm and living aspects
- (3) Analysis of rice enterprise....dealing with only rice enterprise extracted from farm business

The results of the analysis are shown in three ways.

- (1) Average for all farms....Averages and ranges of selected measures for all farms are shown to be compared with each farmer's own measures.
- (2) Average for groups....Averages of selected measures for each group of farms classified according to an important measure are shown to indicate the interrelation of factoreffect, factor-factor, or effect-effect.
- (3) Dot representation for all farms....Each figure of selected measures for all farms is represented by dot to show weak or strong points of each farm as compared with the others.

Definition of Terms Used

Gross income of farm family

Revenue receipts plus Value products consumed by family plus Appreciation of fixed assets including off-farm income of family members. Revenue receipts does not include sale of large livestock and trees. Appreciation of fixed assets means value of growth of large livestock and trees.

Revenue expense of farm family

Revenue expenditure plus Depreciation of fixed assets. Revenue expenditure does not include purchase of large machinery and livestock.

Net income of farm family

Gross income minus Revenue expense. This means the financial return to owned capital and labor and management of all family members, including non-farm.

Net farm income

Gross farm income minus Farm expense. Farm expense does not include interest paid. Net farm income means the financial return to owned farm assets and family labor and management worked on farm.

Farm labor income

Net farm income minus Interest on owned farm assets

Net return to rice (enterprise)

Gross return to rice minus Expense of rice. Gross return includes the value of the products used by other enterprises, for example, rice straw. Expense includes the value of supplies produced by other enterprises, for example, manure. Net return to rice means the financial return to capital invested and family labor and management used in rice enterprise.

I. ANALYSIS OF FARM FAMILY ECONOMY

Table I - 1 Resources of Farm Family Economy

	Average		7 farms with the		
	21 farms	Lowest net	Highest net		
·		income	income		
Family member					
Number in family	4.7	3.7	5.3		
Male	2.1	1.7	2.7		
Female	2.6	2.0 1.9	2.6 2.2		
Man equiv. of family lavorer Man equiv. of family consume	r 4.0	3.2	4.7		
man equity. Of family consume	1 4.0	5.2	4•7		
Operating land					
Ares of operating land	149.7	130.6	167.0		
Ares of arable land	146.5 127.6		164.0		
	thousand yen (%)	thousand yen (%)	thousand yen (%)		
Capital **					
Value of total assets	5,443(100)		6,157(100)		
Fixed assets	4,942(91)		5,513(89)		
land		3,514(71)	3,890(64)		
building	1,128(21)	963(19)	1,420(23)		
tree	40(1)	53(1)	35(0)		
livestock	38(1)	29(0)	25(0)		
machinery	118(2)	76(2)	143(2)		
Flowing assets	219(4)	156(3)	290(5)		
Cash & Credit assets Liabilities	282(5)	175(4)	354(6)		
Net worth (Total assets-	61	47	94		
Liabilities)	5,382	4,919	6,063		

^{*} Family member who worked more than 240 days for the year is regarded as 1.0. labor days less than 240 are divided by 240 to be man equiv.

^{**} at the beginning of the year

Table I - 2 Financial Summary of Farm Family Economy

21				
farms income income income thousand yen		Average	Average of 7	farms with the
## thousand yen wen wen wen wen wen wen wen wen wen w		21	Lowest net	Highest net
Yen Yen Yen Yen Yen		farms	income	income
Yen Yen Yen Yen Yen	,	. ,		- 1
Gross income of farm family 768 602 967			1	
Revenue reccipts 565		yen	yen	yen
Value products consumed by family 200 167 235	Gross income of farm family	768	602	967
Value products consumed by family 200 167 235	Revenue reccipts	565	445	720
Description of fixed assets Section 200 167 235	-		1 17	•
Appreciation of fixed assets Revenue expense of farm family Revenue expense Revenue R		200	167	235
family 252 252 288 Revenue expense 166 165 190 Depreciation of fixed assets 86 87 98 Net income of farm family 516 350 679 Gross income - Revenue expense 445 406 485 Living expense 245 239 250 Value products consumed by family 200 167 235 Living expense of family 443 405 480 (Living expense - Board for hired labor) 443 405 480 Income surplus over living expense of family 73 -55 199 (Net income - Living expense of family) 271 204 314 Net income per family 24.8 25.4 26.8 Living expense per family 24.8 25.4 26.8 Living expense per family 24.8 25.4 26.8		3	-10	
family 252 252 288 Revenue expense 166 165 190 Depreciation of fixed assets 86 87 98 Net income of farm family 516 350 679 Gross income - Revenue expense) 445 406 485 Living expense 245 239 250 Value products consumed by family 200 167 235 Living expense of family 443 405 480 (Living expense - Board for hired labor) 443 405 480 Income surplus over living expense of family 73 -55 199 (Net income - Living expense of family) 271 204 314 Net income per family 67 58 72 Non - farm index ** 24.8 25.4 26.8 Living expense per family 24.8 25.4 26.8				,
Revenue expense 166				
Depreciation of fixed assets 86 87 98 Net income of farm family (Gross income - Revenue expense) Living expense 445 406 485 Living expenditures 245 239 250 Value products consumed by family 200 167 235 Living expense of family (Living expense - Board for hired labor) Income surplus over 1 iving expense of family (Net income per family laborer (Y1,000) 271 204 314 Net income index * 67 58 72 Non - farm index ** 24.8 25.4 26.8 Living expense per family consumer (Y1,000) 120 143 108	<u>family</u>			1
Net income of farm family (Gross income - Revenue expense) Living expense Living expenditures Value products consumed by family Living expense of family (Living expense - Board for hired labor) Income surplus over Living expense Living expense (Net income - Living expense of family) Net income per family Laborer (M,000) Net income index * Non - farm index ** Living expense per family consumer (M1,000) 120 135 445 406 485 485 239 250 480 480 480 480 481 495 480 480 480 481 480 480 480 480	Revenue expense	1 .	1	1
Ciross income - Revenue expense Living expense Living expense Living expenditures 245 239 250 Value products consumed by family 200 167 235 Living expense of family 243 405 480 (Living expense - Board for hired labor) Living expense 73 -55 199 (Net income - Living expense of family) 271 204 314 Net income index * 67 58 72 Non - farm index ** 24.8 25.4 26.8 Living expense per family consumer (¥1,000) 120 143 108	Depreciation of fixed assets	86	87	98
Ciross income - Revenue expense Living expense Living expense Living expenditures 245 239 250 Value products consumed by family 200 167 235 Living expense of family 243 405 480 (Living expense - Board for hired labor) Living expense 73 -55 199 (Net income - Living expense of family) 271 204 314 Net income index * 67 58 72 Non - farm index ** 24.8 25.4 26.8 Living expense per family consumer (¥1,000) 120 143 108	Net income of farm family	516	350	679
Eiving expense)10),0	
Living expense Living expenditures Value products consumed by family Living expense of family Cliving expense - Board for hired labor) Living expense Living expense - Board for hired labor) Living expense Living expense Living expense Parallel The come surplus over Living expense (Net income - Living expense of family) Net income per family Laborer (¥1,000) Net income index * Non - farm index ** Living expense per family consumer (¥1,000) Luco Living expense per family consumer (¥1,000) Living expense per family consumer (¥1,000) Living expense per family				
Living expenditures Value products consumed by family Living expense of family (Living expense - Board for hired labor) Living expense Living expense Living expense Living expense Living expense 1iving expense (Net income - Living expense of family) Net income per family Laborer (\Pmathbf{I},000) Net income index * Non - farm index ** Living expense per family consumer (\Pmathbf{I},000) 120 167 239 250 248 480 480 480 480 480 481 480 481 480 480	expense)			
Living expenditures Value products consumed by family 200 167 235 Living expense of family (Living expense - Board for hired labor) Income surplus over living expense 1iving expense (Net income - Living expense of family) Net income per family laborer (\Pmathbf{1},000) Net income index * Non - farm index ** Living expense per family consumer (\Pmathbf{1},000) 120 143 250 250 250 250 250 248 480 480 480 480 481 480 481 480 480	Living expense	445	406	485
Value products consumed by family 200 167 235 Living expense of family (Living expense - Board for hired labor) Income surplus over living expense (Net income - Living expense of family) Net income per family laborer (\$1,000) 271 204 314 Net income index * 67 58 72 Non - farm index ** 24.8 25.4 26.8 Living expense per family consumer (\$1,000) 120 143 108		1	239	250
Living expense of family Living expense - Board for hired labor Living expense - Board for hired labor		~~>	~37	
Living expense of family (Living expense - Board for hired labor) Income surplus over living expense living expense (Net income - Living expense of family) Net income per family laborer (Y1,000) Net income index * Non - farm index ** Living expense per family consumer (Y1,000) Ludy 443 405 480 480 480 480 481 493 495 495 496 496 497 498 498 498 498 498 498 499 498		200	1.67	235
(Living expense - Board for hired labor) Income surplus over living expense (Net income - Living expense of family) Net income per family laborer (¥1,000) Net income index * Non - farm index ** Living expense per family consumer (¥1,000) 120 143 108	29 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		,	
(Living expense - Board for hired labor) Income surplus over living expense 73 -55 199 (Net income - Living expense of family) Net income per family laborer (¥1,000) 271 204 314 Net income index * 67 58 72 Non - farm index ** 24.8 25.4 26.8 Living expense per family consumer (¥1,000) 120 143 108	Living expense of family	443	405	480
Income surplus over living expense (Net income - Living expense of family) Net income per family laborer (¥1,000) Net income index * Non - farm index ** Living expense per family consumer (¥1,000) 73 -55 199 271 204 314 67 58 72 24.8 25.4 26.8	(Living expense - Board for			
living expense 73 -55 199 (Net income - Living expense of family) 271 204 314 Net income per family laborer (¥1,000) 271 204 314 Net income index * 67 58 72 Non - farm index ** 24.8 25.4 26.8 Living expense per family consumer (¥1,000) 120 143 108	hired labor)			
living expense 73 -55 199 (Net income - Living expense of family) 271 204 314 Net income per family laborer (¥1,000) 271 204 314 Net income index * 67 58 72 Non - farm index ** 24.8 25.4 26.8 Living expense per family consumer (¥1,000) 120 143 108	T			
(Net income - Living expense of family) Net income per family laborer (¥1,000) Net income index * Non - farm index ** Living expense per family consumer (¥1,000) 120 143 108				* * * *
expense of family) Net income per family laborer (¥1,000) Net income index * 67 58 72 Non - farm index ** 24.8 25.4 26.8 Living expense per family consumer (¥1,000) 120 143 108	C	73	-55	199
Net income per family laborer (¥1,000)	· · · · · · · · · · · · · · · · · · ·			
laborer (¥1,000) 271 204 314 Net income index * 67 58 72 Non - farm index ** 24.8 25.4 26.8 Living expense per family consumer (¥1,000) 120 143 108	•			
Net income index * 67 58 72 Non - farm index ** 24.8 25.4 26.8 Living expense per family consumer (¥1,000) 120 143 108				
Non - farm index ** 24.8 25.4 26.8 Living expense per family consumer (¥1,000) 120 143 108				1
Living expense per family consumer (¥1,000) 120 143 108	· · · · · · · · · · · · · · · · · · ·	1	-	
consumer (¥1,000) 120 143 108		24.8	25.4	26.8
Engells Coefficient 38 36 39		1		1
* Percent net income was of total gross income	Engel's Coefficient	38	36	39

^{*} Percent net income was of total gross income
** Percent gross non-farm income was of total gross income

Table I - 3 Classification of Total Revenue* by Item

Item	Average 21 farms	Average of 7 Lowest net income	farms with the Highest net income
	thousand yen (%)	thousand yen (%)	thousand yen (%)
Rice	480.6(63)	373.7(61)	579.6(61)
Other grain	6.3(1)	2.3(0)	10.5(1)
Vegetable	11.8(1)	12.9(2)	14.3(1)
Fruit	1.1(0)	1.4(0)	1.0(0)
Other crop	4.9(1)	4.1(1)	7.3(1)
Subtotal of crop	504.7(66)	394.4(64)	612.7(64)
Livestock **	46.2(6)	43.2(7)	57.5(6)
Forest ***	2.4(0)	2.8(0)	3.3(1)
Property use	107.5(14)	103.0(17)	138.3(14)
Wage	68,9(9)	39.8(6)	105.0(11)
Subsidy and gift	11.8(2)	7.8(2)	12.5(1)
Miscellaneous	23.9(3)	21.5(4)	26.3(3)
Total revenue *	765.4(100)	612.5(100)	955.6(100)

^{*} Revenue receipts + Value products consumed by family

^{**} does not include sale of large livestock

^{***} does not include sale of tree

Table I - 4 Classification of Revenue Expenditure by Item

Item	Average 21 farms	Average of 7 Lowest net income	farms with the Highest net income
	thousand yen (%)	thousand yen (%)	thousand yen (%)
Seed	1.1(1)	0.7(0)	0.9(0)
Fertilizer	41.5(25)	40.1(24)	49.9(26)
Chemical	6.2(4)	7.1(4)	6.3(4)
Feed	18.9(11)	12.6(8)	22.2(12)
Other supplies	7.2(4)	8.5(5)	5.0(3)
Livestock *	6.1(4)	4.7(3)	11.2(6)
Machinery **	5.4(3)	5.4(3)	4.5(2)
Building ***	7.9(5)	17.0(10)	2.7(1)
Fuel and light	6.1(4)	4.8(3)	8.3(5)
Hired labor	8.7(5)	12.5(8)	10.0(-6)
Rent and fee	8.1(5)	7.9(5)	9.5(5)
Interest on dept	3.3(2)	3.8(2)	3.8(2)
Insurance	4.9(3)	3.5(2)	4.5(2)
Tax	23.7(14)	20.7(12)	25.4(13)
Miscellaneous	17.4(10)	16.1(11)	25.4(13)
Total	166.5(100)	165.4(100)	189.6(100)

^{*} does not include purchase of large livestock

^{**} does not include purchase of large machinery

^{***} repair for maintenance

Table I - 5 Classification of Living Expense by Item

Item	Average 21 farms	Average of 7 Lowest net income	farms with the Highest net income	
	thousand yen (%)	thousand yen (%)	thousand yen (%)	
Rice	85.4(19)	62.3(15)	94.1(19)	
Other cereals	2.6(1)	1.5(0)	4.1(1)	
Subsidiary food	39.1(9)	32.9(8)	43.3(9)	
Other food and drink *	39.1(9)	35.7(9)	48.9(9)	
Subtotal(Food & drink)	166.2(38)	132.4(32)	190.4(38)	
Clothing	28.8(6)	24.1(6)	32.7(7)	
Housing and furnitures	120.4(28)	99.5(25)	150.0(31)	
Light, heat, water	19.3(4)	16.1(4)	21.1(4)	
Sanitation	17.6(4)	18.1(4)	17.7(4)	
Education	14.6(3)	5.0(1)	27.5(6)	
Recreation ***	37.3(8)	42.3(10)	27.8(6)	
Miscellaneous	41.4(9)	68.9(18)	18.5(4)	
Total	445.6(100)	406.4(100)	485.7(100)	

^{*} includes liquors and tobacco

^{**} includes estimated rent value of residence

Figure. I-1

Lal	nily porer	Land	rating	Tot Ass			ilities	Gros	m ө	Non-			ome	Livi	nse
man	QQUIV•	a	1.0	- * 1	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	差]	,000	- 差 1	,000	l	\$	- 差	,000		,000
3.2	•	229		744		461		1,168	•	65		916	•	843	
2.9		209		694	•	361		1,068	•	55	•	816		743	•
2.6	• • •	189	•	644	•	261	:	968	•	45		716	•	643	• 1
2.3		169		594	•	161	6	868		35	0 0	616	9	543	•
2.0	• •	149	• • •	544	•	61	٠	768	0	25		516	8 .	443	•:•
1.7	• •	129	•	494	6 0	0	- 21910	668		15	9 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	416	•••	343	
1.4	• •	109	. •	444	• • •			568	•	5		316	•	243	· ·
1.1	• • •	89		394	•			468	•	0		216	•	143	•
0.8		69		344	•			368				116		43	

. O

II. ANALYSIS OF FARM BUSINESS

Table II - 1 Size of Farm

	Average	Rang	
	21 farms	High	Low
Man equiv. of family members			
working on farm	1.6	2.7	1.0
Are of farm operating land	149.7	224.5	100.8
Arable land	146.5	221.0	100.0
paddy field	134.0	215.0	85.0
upland field	12.5	45.0	2.0
Other	3.2	8.5	0.8
	%		
Farm Capital (¥1,000)	4,138(100)	6,010	3,066
Fixed assets	3,921(95)	5,792	2,887
land	3,388(82)	5,326	2,227
building	352(8)	740	88
tree	25(1)	133	0
livestock	38(1)	215	0
machinery	118(3)	358	21
Flowing assets	217(5)	525	52

Table II - 2 Financial Summary of Farm Business

	Average	Ran	ge
	21 farms	High	Low
	¥	¥	¥
Gross farm income	574,186	895,716	372,437
Farm revenue	571,002	876,554	392,437
Appreciation of farm fixed assets	3,184	49,000	-42,400
Farm expense	184,151	365,424	97,451
Farm expenditure	135,012	295,375	68,688
Depreciation of farm fixed assets	49,139	152,843	16,618
Net farm income (Gross farm income - farm expense)	390,035	558,185	216,630
Net farm return to family labor (Net farm income - Interest on farm capital)	138,630	317,491	13,419
Net farm income per 10 ares of arable land	26,531	34,142	17,917
Net farm income per man equiv.	253,180	437,568	103,157
Net farm income per capital 10,000 yen	946	1,429	629
Net farm return to family labor per day	364	772	37

Table II - 3 Crop Production

	No. of farms	Are of rice harvested Yiel Average Largest Smallest Aver							
Rice	21	133.6	215.0	85.0	523.7	626.0		42	20.0
					Average 21 farm		Hig		nge Low
Gross crop income per 10 ares (yen) Value fertilizer purchased per 10 ares				33,365 2,766		-		5,295 1,355	

Table II - 4 Land Use

	Average	Range	
	21 farms	High	Low
% of operating land in arable land	97.8	99.4	93.2
% of arable land in paddy field	90.9	98.4	66.7
% of paddy field in double cropping	0.3	7.1	0

Table II - 5 Labor Use

	Average	Ran	ge
	21 farms	High	Low
Are of arable land per man equiv.	95.9	187.1	48.0
Farm capital per man equiv. (\{\forall 1,000\)	2,740	5,008	1,460
Gross farm income per man equiv.	371	659	177
(¥l,000)		,	
Days worked on farm per man equiv.*	243	329	174
Total days worked on farm by family*	389	569	252
Days worked on 10 ares of arable land*	27.0	41.4	14.0
* days converted by ability		· · · · · · · · · · · · · · · · · · ·	

Table II - 6 Capital Use

Average	Ran	ge
21 farms	High	Low
0.14	0.22	0.09
		·
7,754	19,674	1,444
_	21 farms 0.14	21 farms High 0.14 0.22 7,754 19,674

* Gross farm income divided by farm capital

Table II - 7 Combination of Enterprises

•	Average	Range	of %
	21 farms	High	Low
% of gross farm income in rice	84.6	94.6	55.8
% of gross farm income in total crop	88.9	98.7	60.7
% of gross farm income in livestock	6.2	35.6	_

Table II - 8 Average of Farms Grouped According to Net Farm Income and Net Farm Return to Family Labor per Day

	7			_		
		e of 7			e of 7	
		d accor			d accord	
	net fa	rm inco	ne		turn to	labor
			·	per day		
			Highest	Lowest	Middle	Highest
_		(¥1,000)		(꽃)	(₹)	(¥)
Range	217~	357~	434~	37~	309~	531~
To a control of the c	329	425	558	207	491	772
Effects:						
Gross farm income	445	550	726	460	542	719
(¥1,000)						
Net farm income	272	392	506	279	392	497
(¥1,000)						
Net farm income per						
10 ares (¥1,000)	21	28	30	20	28	30
Net farm income per						_
man equiv. $(1,000)$	170	230	316	174	218	311
Net farm income per			-	• •		
¥10.000 of capital						
invested (Y)	737	981	1,122	691	1,029	1,119
Net farm return to		·.			, ,	
family labor	47	138	229	35	154	225
(¥1,000)		_	7.5			
Net farm return to						
family labor per						
day (¥)	127	359	607	92	378	622
•			•	لـــــــا	[2]	[3:32]
Factors:						
Man equiv. of						
family laborer	1.6	1.7	1.6	1.6	1.8	1.6
Are of arable land	127	141	170	136	137	165
Are of rice	113	129	157	123	122	
Farm capital(¥1,000)	3,733	4,076	4,604		3,818	154
Kg. of rice yield	79177	4,010	4,004	4,070	010	4,536
per 10 ares	477	555	540	478	548	EIE
Total days worked on	411		740	470	740	545
farm by family	380	405	382	205	1.177	265
Days worked on	ا	40)	٥٥٨	385	- 417	365
10 ares	30	28	23	28	30	22
Farm Capital turnover		0.13	0.16		· ·	
% of gross farm	0.12	0.15	0.10	0.11	0.14	0.16
income in rice	85	фo	01	Ġ1	do	0/
THOOMS IN 1106	ره	83	84	84	83	86

Table II - 9 Average of Farms Crouped According to Area of Arable Land and Rice Crop

	Averag	ge of 7	farms		ge of 7		
		ed acco		grouped according to ares of rice			
	to are	s of a	rable		s of r	ice	
	land			crop			
		Middle			t Middle Most		
	(are)	, ,		(are)	(are)	(are)	
Range	100~		155~	85~	125~	144~	
	135	149	221	118	142	215	
Effects:							
Gross farm income(¥1,000)	568	479	674	508	539	674	
Net farm income (¥1,000)	369	317	482	322	364	482	
Net farm income per		7-1	45.2	J		, -	
10 ares (¥1,000)	25	26	27	25	15	27	
Net farm income per man	~/						
equiv. (¥1,000)	205	211	301	179	243	301	
Net farm income per	~0)	. ~11	701	-1/			
¥10,000 of capital (¥)	935	883	1,021	921	897	1,021	
Net farm return to family	155		190~1	/~_	- J.1		
labor (¥1,000)	131	92	191	114	109	191	
Net farm return to family	عرب	72	171	1 114	10)		
	339	274	479	260	354	479	
labor per day (¥))))7	~14	417	200))) 4	417	
Factors:							
Man equiv. of family							
laborer	1.8	1.5	1.6	1.8	1.5	1.6	
Are of arable land	121	143	175	125	138	175	
Are of rice	123	110	166	107	132	166	
Farm capital (¥1,000)	3,968	3,608	4,837		4,112	4,837	
Kg. of rice yield per),,,,,),,,,,	1,17		'		
10 ares	532	503	536	498	536	536	
Total days on farm	/ //~		, ,,,,,	,			
by family	419	349	398	435	334	398	
Days worked on 10 ares	29	29	23	34		23	
Farm capital turnover	0.14	1	0.14	0.14	1	0.14	
% of gross farm income	0.14	ريد• ت	0.14	0.14			
% of gross larm income in rice	80	82	91	72	90	91	
TIL LICE	30	02	71	1~	/5		

Table II - 10 Average of Farms Grouped According to Days
Worked on Farm and Kg. of Rice Yield per 10 Ares

	_	e of 7		Average of 7 farms			
		d accor		grouped according to			
		s worke	ed on	Kg. of rice yield			
	farm			per 10			
		Middle				Highest	
	(day)		(day)	(kg)	(kg)	(kg)	
Range	- 1	362~	424 ~	420~	527 ~	542 ~	
	358	423	569	517	540	626	
Effects:							
Gross farm income	621	471	628	505	548	669	
(¥1,000)	0.21	712	0.70	, , ,	J. (12	,	
Net farm income(\(\frac{1}{2}\),000)	421	313	435	328	380	460	
Net farm income per 10	.,	<i>J</i> - <i>J</i>	1,22				
ares (¥1,000)	27	23	29	. 22	27	30	
Net farm income per man	,		,		,		
eguiv. (¥1,000)	324	196	217	205	253	242	
Net farm income per			-				
¥10,000 of capital (¥)	931	809	1,099	776	991	1,072	
Net farm return to							
family labor (≨1,000)	139	79	196	78	144	193	
Net farm return to							
family labor per day(\)	467	204	421	215	406	471	
Factors:							
Man equiv. of family							
laborer	1.3	1.6	2.0	1.6	1.5	1.9	
Ares of arable land	155	134	149	145	142	151	
Ares of rice	149	117	134	132	133	134	
Farm capital (¥1,000)	4,569	3,899	3,944	4,174	3,935	4,303	
Kg. of rice yield per			-				
10 ares	526	500	543	460	534	578	
Total days worked on farm							
by family	300		482	375	373	418	
Days worked on 10 ares	19	29	32	27	26	27	
Farm capital turnover	0.13	0.12	0.15	0.12	0.14	0.15	
% of gross farm income							
in rice	92	83	78	83	88	81	
	1	1	1	1	1	1	

<u> </u>							· 11 –	•			
Wor on	orer king Farm	Ara Lan	able nd	Are Ric	of e	Fa.	rm p i tal	Wor	al Days ked Farm		Yield 10 Ares
man	equiv.	а	are	а	ıre	¥1	0,000		day		Кд.
2.4		226 206	•	214	¢	573 533	•	5 49 509	•	603 583	•
2.0	• • •	186	•	174	•••	493		469	•	563 543	
1.6	• • •	146		134	•	413	• •	389	• •	523	• ^
1.4	•	126		114	0	373	• • •	349	• •	5 03	
1.2	0 p e 'a	106	•	94	• •	333	. •	309	•	483	•
1.0	•	86		74		293	• -	269	6	463	•
0.8	777	66	.*	54		253		229		443	• •

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Figure. I - 2

*

0 r	088	Net Farm Income								Net	Return
Fa	rm	ma	tal	ре	r	per	Farm	per	¥10,000	to Family	
In	come	1 10	, uai	10	Ares	Lab	or er	Farm	Capital	Labo	r per day
¥	1,000	¥	1,000	X	1,000	¥	1,000	, Y	1,000		¥
774	•.	550		34	•	373		1.3		764	•
724		510	•	32	• •	343	••	1.2	• ,	664	•
674	•	470	• ,	30	• •	3 13	•	1.1	• • •	564	
624	•	430	•	28	•••	283	• •	1.0		464	• •
574		390	• •	26	•	253		0.9		364	
524	•••	350	•	24	•	223	•	0.8	•	264	
474	•	310	•	22	•	1 93	•	0.7	• ,	164	• _
424		270	•••	20	•••	163	•	0,6	•	64 0	
374	•	230	• •	18	. •	133	•	0.5			

III. Analysis of Rice EnterpriseTable III - 1 Size of Rice Enterprise

	Average	Ra	nge
	21 farms	High	Low
Are of rice crop	135	215	85 -
Days worked in rice	238	370	131
family labor	225	341	115
hired labor	13	79	0
Capital invested in rice (¥1,000)	3,552	5,568	2,483

Table III - 2 Financial Summary of Rice Enterprise

	Arromogo	Par	\
	Average 21 farms	Rar	Low
		High	
Gross return to rice rice by-products Expense of rice purchased *	(¥) 522,328 480,070 42,258 152,117 131,050	(¥) 824,399 775,579 66,638 292,027 278,527	(¥) 294,232 263,482 29,265 90,235 77,620
self-supplied Net return to rice	21,067 370,211	68,852 532,372	7,035 165,456
Gross return to rice per 10 ares	39,254	49,365	29,423
Net return to rice per 10 ares Net return to rice per	27,869	35,432	16,546
day worked Net return to rice per	1,763	3,405	605
¥ 10,000 of capital Net return to labor	1,055	1,606	633
per day Interest rate of capital	746	1,641	41
invested	0.061	0.108	-0.005

^{*} includes depreciation of fixed assets

Table III - 3 Other Indicators of Rice Enterprise

	Average	Rang	e .
	21 farms	High	Low
Kg. of rice produced	6,930	9,800	3,780
Kg. of rice yield per 10 ares	524	626	420
% of expense of rice in fertilizer	31	40	18
Capital invested per 10 ares	266	319	193
Days worked in rice per 10 ares	18	31	8
% of fertilizer cost in purchased	23	38	12
% of fertilizer bought is of rice sold	7.6	13.7	4.4

Table III - 4 Cost Control

		Average	Ran	ge
		21 farms	High	Low
	Expense	(¥) % 11,385(29)	(¥) 17 , 487	(¥) 7,804
of	Cost of family labor	11,130(29)	18,784	2,985
ares	Interest on capital	16,111(42)	19,184	11,622
10 g	Total cost	38,626(100)	49,487	30,053
per	Value of by-products	3,215	4,475	2,120
	Kg. of rice produced	524	626	420
Produc	tion cost of rice per Kg.	68.4	98.9	51.7
Averag	e price of rice per Kg.	69.1	80.3	55.0
% cost of rice is of price		99•7	160.3	74.3
% fert	ilizer bought is of rice sold	7.6	13.7	4.4

Table III - 5 Average of Farms Grouped According to Net Return to Rice Enterprise and Production Cost of Rice

	-					
		Average	e of 7	Average		
	Average		grouped	,	grouped	
	0.7	accord		according to production cost of rice		
	21	net re				
	farms		nterprise			
	1011112		Highest	(X)	Highest (¥)	
Range		165~	(¥1,000) 396 ~		74.0 ~	
20022-80		316	532	60.6	98.9	
Effects:						
Gross return to rice	522	384	668	546	443	
(¥1,000)						
Net return to rice	370	252	479	411	282	
(¥1,000)						
Net return to rice						
per 10 ares(¥1,000)	27	24	31	30	24	
per 10 ares(11,000)	~	~4) <u>.</u>		24	
Net return to labor						
per day (¥)	746	364	1,080	1,093	380	
Interest rate of capital						
invested	0.06	0.03	0.08	0.08	0.03	
Cost of rice per Kg.(¥)	68.4	82.6	61.0	56 1	83.7	
cost of fice per ng.(*)	00.4	02.0	01.0	56.4	[0]•[]	
Factors :						
Ares of rice crop	134	103	156	135	113	
Days worked in rice	1 1/4	10)	1)0	<u>1</u>))	117	
crop	238	252	249	205	270	
Capital invested in	~,00	~/~	~4/	~0)	~,0	
rice crop(¥1,000)	3,552	2,820	3,962	3,367	3,166	
Kg. of rice yield						
per 10 ares	524	492	553	545	500	
Days worked per 10					·	
ares of rice crop	18	. 23	16	15	23	
% of fertilizer cost	00	01	00	22	10	
in purchased % fertilizer bought	23	21	23	23	19	
is of rice sold	7.6	8.7	7.9	6.7	8.6	
T2 OI 1106 2014	1.0	0.1	1 • 7	U• (

Table III - 6 Average of Farms Grouped According to Are of Rice Crop and Rice Yield per 10 Ares

Range	Average 21 farms	Averag 7 farm groupe accord are of crop Least (are) 85~ 118	s d ing to rice Most (are)	accordi rice yi	grouped ng to	
		110	<u> </u>	<u> </u>	UžU	
Effects:			//-			
Gross return to rice (¥1,000)	522	383	660	467	574	
Net return to rice (\(\frac{\f	370	259	467	316	413	
Net return to rice per 10 ares (¥1,000)	27	25	29	23	31	
Net return to labor per day (¥) Interest rate of	746	553	812	528	955	
capital	0.061	0.044	0.069	0.045	0.069	
Cost of rice per Kg. (¥)	68.4	78.5	65.1	76.6	63.2	
Factors :						
Ares of rice crop Days worked in rice crop	134 238	101 226	166 273	132 223	135 234	
Capital invested in rice crop(¥1,000) Kg. of rice yield per	3 , 552	1,295	4,358	3,661	3,678	
10 ares	524	498	536	460	578	
Days worked per 10 ares of rice crop % of fertilizer cost in	18	21	17	18	17	
purchased % fertilizer bought is	23	19	25	20	24	
of rice crop	7.6	7•9	7.6	9.1	6.1	

Figure. ∏ - 1

A.r.	2 0 f			F	Rer 10	A	res				
Are of		Days Worked		Capital				Gross Return		Net Return	
Ricə		in Rice		Invested in		Rice Yield		to Rice		to Rice	
0.70		dow		Rice		Va ·		371 000		37.1 0.00	
are		day		¥1,000		Kg		¥1,000		¥1,000	
214	•	30	•	346		603	•	47	•	35	•
194		27		326	•	583	•	45	• •	33	
174	. • •	24	•	306	• •	563		43		31	
154		21	• • •	286		543	• •	41	• • • · · · · · · · · · · · · · · · · ·	29	
134		18		266		523	-	39		27	٥
114	•	15		246		503	•	37		25	
94	•	12		226	•	483		35	•	23	•
74		9	•	206	•	463		33	•	21	
54		6		186	•	443	•••	31		19	

Net	Return	Net Return		Per 10 Ares						% Fertiliger		Cost of	
to Labor		to Rice per		Expense		Total cost				Bought is		Rice per	
per Day		¥10,000 Capitol		of Rice		of Rice		By-products		of Rice Sold		Кд.	
¥		¥1,000		¥1,000		¥1,000		¥1,000		\$		¥	
1,146	•	1.4		15		47	•	4.0	•	11.6		89	•
1,046		1.3		14		45	•	3.8		10.6	•	8 4	٠.
946	•	1.2	• •	13	•	43	•	3.6	•	9.6	•	79	•
846	•	1.1		1.2	•	41	• , •	3.4	•	8.6	•	74	• •
746	•	1.0		_		39		3.2		7.6	• •	69	
646		0.9	•	10	•••	37	•	3.0	••	6.6		64	•••
546	. •	0.8	•	9	•	35	• •	2.8	• •	5.6	••	59	• •
446	•	0.7	•	8	• •	33		2.6		4.6	•	5 4	•••
346	••	0.6	•	7		31	•	2.4	•	3.6		49	

