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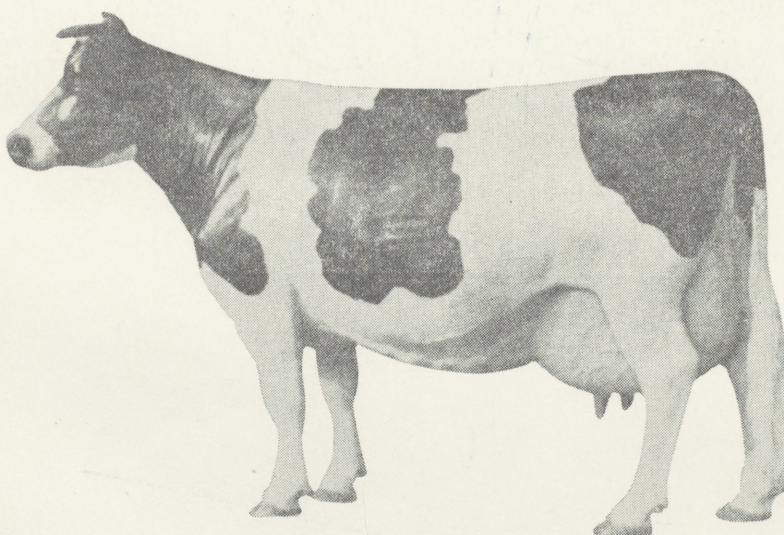
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1963

FARM ECONOMY ANALYSIS REPORT

From The Results of 25 Simplified Farm Records

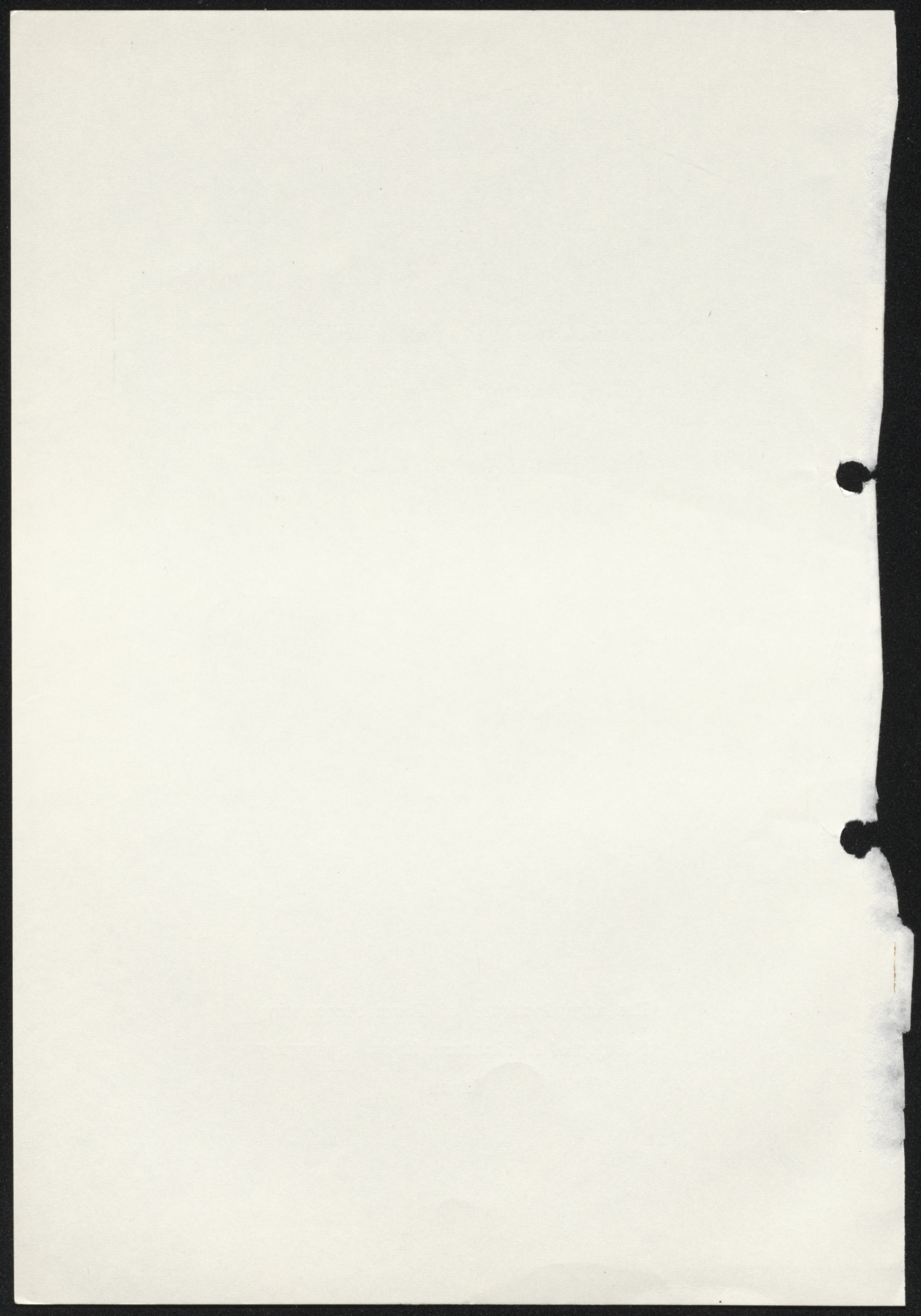
—Dairy Farms in Yagicho, Kyoto Prefecture—



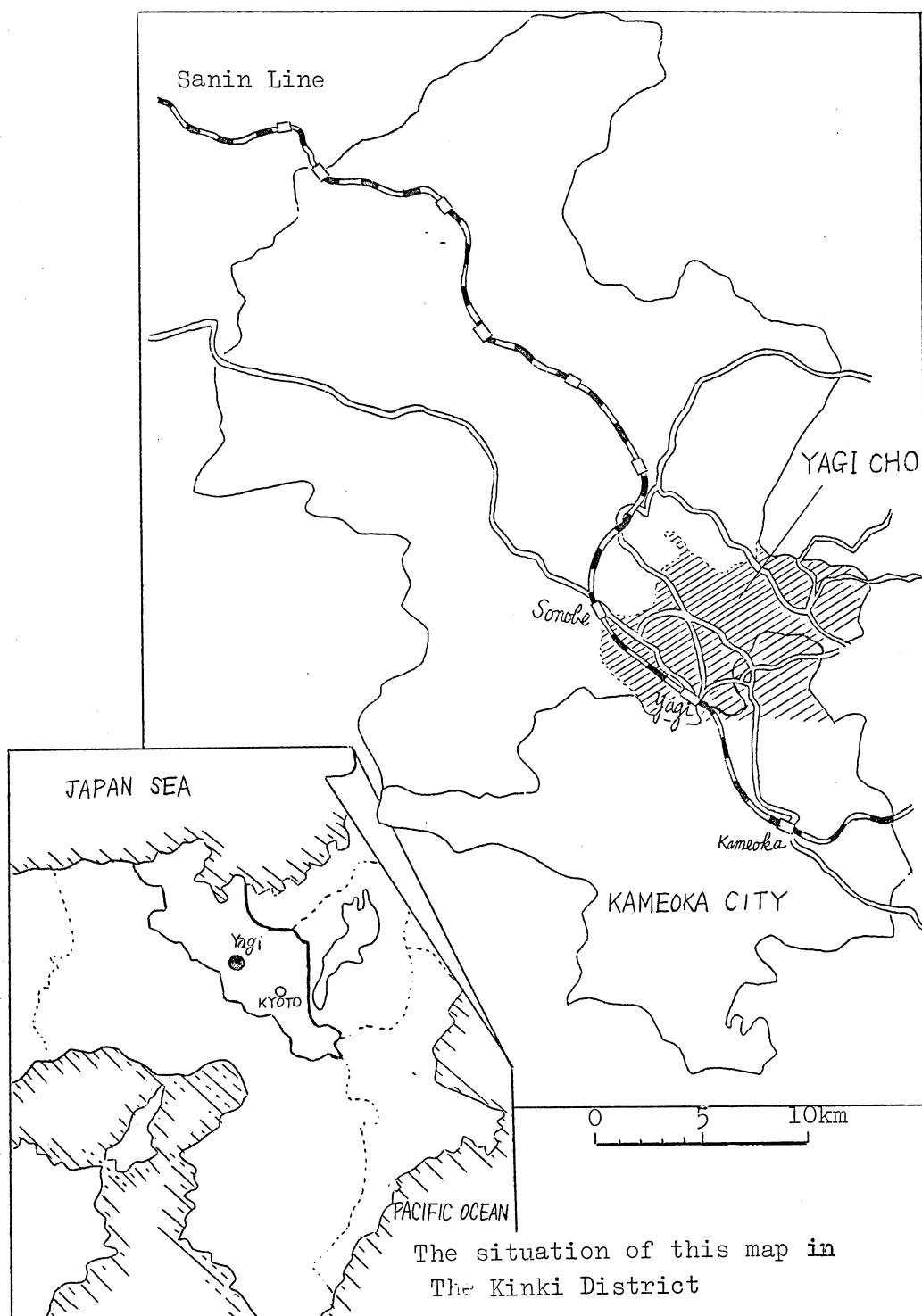
Research Institute of Farm Accounting

Faculty of Agriculture, Kyoto University

Japan



ROUGH SKETCH OF THE AREA INVESTIGATED



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 book-keeping". It is sponsored by "The Agricultural Development Council, Inc. (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 dairy 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 the Institute staff, T. Kikuchi, R. Abe, A. Fujibayashi and the graduate student Y. Ikuta. Some extension workers in Yagi District helped farmers to keep and close records in cooperation with us.

June 1964

Research Institute of Farm Accounting
Faculty of Agriculture, Kyoto University

Method of Analysis Used

For this analysis, these were 25 farmers who completed Simplified Farm Records devised by our Institute for the year 1963. All of them are dairy farmers in Yagicho, Kyoto Prefecture. Each farmer's record was summarized and analyzed by our Institute according to the following three steps:

- (1) Analysis of farm family economy....including non-farm aspect
- (2) Analysis of farm business....dealing with farm business
as a whole and excluding non-
farm and living aspects
- (3) Analysis of dairy enterprise....dealing with only dairy
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 groupe of farms classified
according to an important measure are
shown to indicate the interrelation
of factor-effect, 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 point
of each farm as compared
with the others.

Definition of Terms Used

Gross income of farm family

Revenue receipt plus Value products consumed by family plus Appreciation of fixed assets including off-farm income of family members. Revenue receipt 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 dairy (enterprise)

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

I ANALYSIS OF FARM FAMILY ECONOMY

Table I - 1. Resources of Farm Family Economy

	Average 25 farms	Average of 5 farms with the			
		highest net income	lowest net income		
<u>Family member</u>					
Number in family	5.8	7.0	4.4		
Male	3.2	4.2	2.8		
Female	2.6	2.8	1.6		
Man equiv. of family consumer*	5.0	5.8	3.9		
<u>Operating land**</u>					
Ares of operating land	123.2	126.7	116.1		
Ares of arable land	118.7	120.7	113.4		
<u>Property***</u>					
	thousand yen	thousand yen	thousand yen		
Value of total assets	(%)	(%)	(%)		
Fixed assets	6,511 (100)	7,713 (100)	5,547 (100)		
land	5,746 (89)	6,917 (89)	4,913 (89)		
building	2,778 (43)	3,124 (40)	2,473 (45)		
tree	1,979 (30)	2,809 (36)	1,552 (28)		
livestock	184 (3)	229 (3)	128 (2)		
machinery	568 (9)	521 (7)	529 (10)		
Flowing assets	235 (4)	233 (3)	229 (4)		
Cash & Credit assets	281 (4)	305 (4)	232 (4)		
Liabilities	483 (7)	490 (5)	400 (7)		
Net worth (total assets minus liabilities)	241	158	323		
	6,270	7,555	5,223		
* years	0~7	8~14	15~60	61~70	71~
male	0.4	0.8	1.0	0.9	0.8
female	0.4	0.8	0.9	0.7	0.6

** includes rented land

*** farmer's own property at the beginning of the year

Table I - 2 Financial Summary of Farm Family Economy

	Average 25 farms	Average of 5 farms with the	
		highest net income	lowest net income
	thousand yen	thousand yen	thousand yen
<u>Gross income of farm family</u>	1,764.4	2,184.4	1,469.1
Total revenue	1,620.4	2,028.6	1,336.3
(Revenue receipts + Value products consumed by family)			
Appreciation of fixed assets	144.0	155.8	132.8
<u>Revenue expense of farm family</u>	887.4	862.6	973.0
Revenue expenditures	654.4	586.5	725.9
Depreciation of fixed assets	233.0	276.1	247.1
<u>Net income of farm family</u>	877.0	1,321.8	496.0
(Gross income-Revenue expense)			
Farm index* (%)	74.8	56.4	82.2
Net income of family farm per family consumer	178.8	241.6	133.0

* Percent gross non-farm income is of total gross income.

Table I - 3 Classification of Total Revenue* by Item.

Item	Average 25 farms	Average of 5 farms with the	
		highest net income	lowest net income
	thousand yen (%)	thousand yen (%)	thousand yen (%)
Rice	355.5(22)	372.5(18)	327.1(24)
Other grain	19.9(1)	9.0(0)	25.0(2)
Vegetable	68.1(4)	31.8(2)	42.1(4)
Fruits	0 (-)	0 (-)	0 (-)
Other crop	18.9(1)	0.6(0)	60.5(5)
<u>Subtotal of crop</u>	(462.4)(28)	(413.9)(20)	(454.7)(35)
Dairy	631.6(39)	604.6(30)	625.7(47)
Poultry	30.9(2)	10.4(1)	21.2(2)
Other livestock*	34.2(2)	41.2(2)	0 (-)
Forestry**	34.8(2)	153.9(8)	1.0(0)
Property use***	168.5(10)	267.4(13)	111.2(8)
Wage	224.9(14)	442.6(22)	116.5(8)
Subsidy & Gift	7.9(1)	28.2(1)	2.0(0)
Miscellaneous	25.2(2)	66.4(3)	4.0(0)
Total revenue****	1,620.4(100)	2,028.6(100)	1,336.3(100)

* does not include sale of large livestock

** does not include sale of tree

*** includes estimated dwelling rent for land & building

**** Revenue receipts + Value products consumed by family

Table I - 4 Classification of Revenue Expenditure by Item

Item	Average 25 farms	Average of 5 farms with the	
		highest net income	lowest net income
	thousand yen (%)	thousand yen (%)	thousand yen (%)
Seed	11.4(2)	7.6(2)	9.2(1)
Fertilizer	36.9(6)	27.7(5)	44.7(6)
Chemical	7.5(1)	6.3(1)	7.5(1)
Feed	407.8(62)	376.4(64)	423.5(58)
Other supplies	10.0(1)	4.2(0)	24.9(3)
Livestock*	30.5(5)	41.2(7)	25.6(4)
Hired labor	19.5(3)	1.2(0)	31.9(4)
Machinery**	20.2(3)	16.4(3)	11.5(2)
Building***	16.6(3)	17.6(3)	31.9(4)
Fuel and light	11.5(2)	11.6(2)	11.9(2)
Interest on debt	16.2(3)	6.5(1)	29.8(4)
Rent & Fee	7.7(1)	3.0(0)	13.7(3)
Irrigation charge	3.2(0)	3.1(0)	3.8(0)
Insurance	7.8(1)	5.6(1)	8.4(1)
Tax	30.1(5)	37.1(7)	28.3(4)
Miscellaneous	17.5(2)	21.0(4)	19.3(3)
<u>Total</u>	654.4(100)	586.5(100)	725.9(100)

* does not include purchase of large livestock

** does not include purchase of large machinery

*** repair for maintenance

Figure I - 1

Man equiv. of family consumer	Total assets	Liabilities	Gross income	Revenue expense	Net income	Farm index	Net income of family farm per family consumer
Man equiv.	¥10,000	¥1,000	¥10,000	¥10,000	¥10,000	%	¥1,000
7.0	1,051	441	256	129	127	95	258
6.5	951	391	236	119	117	90	238
6.0	851	341	216	109	107	85	218
5.5	751	291	196	99	97	80	198
5.0	651	241	176	89	87	75	178
4.5	551	191	156	79	77	70	158
4.0	451	141	136	69	67	65	138
3.5	351	91	116	59	57	60	118
3.0	251	41	96	49	47	55	98

▲ , ● & x represents high, middle & low groups based on Net Income respectively.

☆ represents average of each group.

II ANALYSIS OF FARM BUSINESS

Table II - 1 Size of Farm

Item	Average 25 farms	Range	
		High	Low
Man equiv. of family members working on farm*	2.2	3.2	1.1
Ares of farm operating land	123.1	179.9	72.1
Arable land	118.6	164.3	64.6
paddy field	110.6	151.8	56.9
upland field	8.0	17.7	0
Other	4.5	15.6	1.1
Number of milk cow	4.1	7.5	1.6
Farm capital (¥1,000)	4,197	6,011	2,268
Fixed assets	3,916	5,725	1,982
land	2,521	4,400	1,677
building	593	1,422	103
livestock	569	950	190
machinery	233	510	75
Flowing assets	281	445	139
Farm equipment** (¥1,000)	1,676	2,782	1,001

* Family member who worked on farm 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.

** Farm capital minus Land

Table II - 2 Financial Summary of Farm Business

	Average 25 farms Yen	Range	
		High	Low
Gross farm income	1,311.1	1,959.9	~ 608.6
Farm revenue	1,173.3	1,855.6	~ 507.6
Appreciation of farm fixed assets	137.8	339.5	~ 48.8
Farm expense	791.9	1,208.7	~ 394.9
Farm expenditure	601.5	1,149.0	~ 278.0
Depreciation of farm fixed assets	190.4	391.0	~ 39.1
Net farm income	519.2	1,022.3	~ 163.1
(Gross farm income minus Farm expense)			
Net farm income			
per 10 ares of arable land	44.9	86.2	~ 12.0
per man equiv. of family laborer (¥)	237.8	506.0	~ 77.4
per ¥10,000 of farm equipment (¥)	3,429	8,047	~ 1,120
per ¥10,000 of farm capital (¥)	1,281	2,454	~ 466
Net farm return to family labor per day (¥)	525	1,844	~ ①138
Interest rate of farm capital	0.036	0.175	~ ②0.021
Net farm income index*	40.1	59.0	~ 21.8

* percent net farm income is of gross farm income.

Table II - 3 Crop Production

Item	Ares of crops harvested		Number of farms	Yield per 10 ares (kg)	
	Average	Largest~Smallest		Average	Largest~Lowest
Rice	100.5	154.4 ~ 46.7	25	439	533 ~ 358
Wheat & barley	24.1	78.0 ~ 0	22	197	400 ~ 102
Feed crop	77.9	176.1 ~ 27.0	25	-	- -
Others	26.5	95.0 ~ 1.0	25	-	- -
Total crops	229.0	321.0 ~ 119.2	-	-	- -

	Average 25 farms	Range
		High ~ Low
Gross crop income per 10 ares (Yen)	38,766	63,893 ~ 27,358
Value fertilizer purchased per 10 ares	3,163	7,139 ~ 1,589

Table II - 4 Livestock Production

	No. of Livestock kept		No. of farms	Product per head (kg)	
	Average	Largest ~ Smallest		Average	Highest ~ Lowest
Milk cow	4.1	7.5 ~ 1.6	25	4,483	5,810 ~ 2,334
Heifer & calf	1.7	3.7 ~ 0.2	25	-	- -

Table II - 5 Land Use

	Average 25 farms	Range
		High ~ Low
% of operating land in arable land	96.3 %	99.1% ~ 42.7%
% of arable land in paddy field	93.4	100.0 ~ 72.4
% of paddy field in double cropping	89.4	100.0 ~ 65.4
Cropping ratio*	192.4	260.3 ~ 134.5

* Total area of crops harvested divided by total area of arable land.

Table II - 6 Labor Use

	Average 25 farms	Range	
		High ~	Low
Ares of operating land per man equip.	58.2	84.0 ~	32.9
Ares of arable land per man equiv.	56.1	81.9 ~	32.2
Farm capital per man equiv.(¥1,000)	1,970	2,936 ~	1,101
Gross farm income per man equiv.(¥1,000)	601	875 ~	338
Days worked on farm per man equiv.	240	310 ~	173
Total days worked on farm by family	534	799 ~	228
Days worked on 10 ares of arable land	47.8	72.8 ~	22.0

Table II - 7 Capital Use

	Average 25 farms	Range	
		High ~	Low
Farm capital turnover*	0.32	0.46 ~	0.18
Machinery investment per 10 ares of arable land (yen)	19,565	44,765 ~	8,117

* Gross farm income divided by farm capital.

Table II - 8 Combination of Enterprises

Item	Average of 25 farms		Range of %	
	Gross income yen	%	High ~	Low
Rice	355,499	27.1	31.8 ~	17.2
Wheat & barley	19,935	1.5	9.1 ~	0.0
Vegetables	68,075	5.2	20.1 ~	0.4
Other Crops	18,945	1.4	19.5 ~	0
Subtotal (Crop)	(462,454)	(35.2)	54.9 ~	18.8
Dairy	762,838	58.2	80.8 ~	31.7
Poultry	32,134	2.5	6.5 ~	0
Other livestock	39,620	3.0	24.4 ~	0
Other	14,070	1.1	5.4 ~	0
Total	1,311,116	(100.0)	-	-

Table II - 9 Average of 8 to 9 Farms Grouped According to Size

Range	Average of farms					
	Man equiv. of family laborer			Area of arable land		
	8 farms Largest	9 farms Middle	8 farms Smallest	8 farms Largest	9 farms Middle	8 farms Smallest
	3.2~2.5	2.5~2.0	2.0~1.1	164.3 ~133.8	132.4 ~108.0	107.5 ~64.5
<u>Average</u>	2.8	2.1	1.7	146.6	119.6	89.6
<u>Size of farm</u>						
Man equiv. of family members	2.8	2.1	1.7	2.4	2.1	2.1
Area of arable land	127.6	123.0	104.8	146.6	119.6	89.6
No. of milk cow (head)	3.9	5.0	3.2	4.6	4.1	3.6
Farm equipment (¥1,000)	1,597	1,989	1,404	1,974	1,692	1,360
Farm capital (¥1,000)	4,328	4,609	3,603	5,156	4,260	3,160
<u>Financial summary</u>						
Gross farm income (¥1,000)	1,502	1,410	1,008	1,676	1,197	1,073
Farm expense (¥1,000)	821	927	611	1,065	707	614
Net farm income (¥1,000)	681	483	397	611	490	459
Net farm income per 10 ares of arable land (¥)	53.9	41.5	39.9	41.9	40.9	52.4
Net farm income per man equiv. (¥1,000)	240.5	226.1	248.1	247.3	230.9	236.0
Net farm income per farm equipment (¥)	4,573	2,656	3,154	3,445	3,131	3,748
Net farm income per farm capital (¥)	1,612	1,103	1,150	1,201	1,173	1,481
Net farm return to family labor per day (¥)	691	362	543	493	495	592
Interest rate of farm capital	0.052	0.020	0.038	0.035	0.038	0.035
Net farm income ratio (%)	46.2	34.9	39.7	35.6	41.9	42.5
<u>Other indicators</u>						
Kg. of milk produced per cow	4,644	4,338	4,486	4,909	4,037	4,560
Cropping ratio	202.5	193.9	180.5	186.6	188.2	202.9
Total days worked on farm by family (day)	641	569	306	611	476	521
Days worked on 10 ares of arable land (day)	54.1	49.3	39.8	44.9	40.8	50.5
Farm capital turnover	0.35	0.31	0.28	0.33	0.28	0.34
% of gross farm income in dairy cow	61.0	63.2	56.8	53.5	56.1	63.4

Important Measures

grouped according to

Net farm income			Net return to family labor per day			Number of milk cow		
8 farms Highest	9 farms Middle	8 farms Lowest	8 farms Highest	9 farms Middle	8 farms Lowest	8 farms Largest	9 farms Middle	8 farms Smallest
1,022.3 ~572.4	564.3 ~436.8	422.6 ~163.1	1,844 ~669	621 ~365	307 ~138	7.5 ~5.0	4.8 ~3.6	3.0 ~1.6
	507	331	939	477	166	5.8	4.0	2.4
2.5	2.3	2.2	2.1	2.6	2.0	2.3	2.3	2.0
125.9	113.5	117.2	112.3	120.5	123.0	126.6	124.1	104.5
4.9	3.7	3.8	4.2	3.8	4.4	5.8	4.0	2.4
1,729	1,589	1,755	1,466	1,605	1,966	2,144	1,621	1,270
4,558	3,991	4,068	4,025	4,080	4,501	4,935	4,164	3,497
1,644	1,240	1,057	1,381	1,348	1,199	1,592	1,353	983
924	733	726	725	804	845	996	839	534
720	507	331	656	544	354	596	514	449
58.1	47.4	28.9	60.4	45.3	29.1	47.9	41.6	45.7
288.6	237.6	187.2	322.1	214.4	179.7	256.6	215.9	243.6
4,524	3,744	1,980	4,920	3,500	1,858	3,044	3,324	3,933
1,630	1,363	840	1,698	1,338	800	1,254	1,238	1,357
	564	229	939	477	166	559	418	612
0.067	0.034	0.007	0.085	0.023	0.005	0.045	0.020	0.012
44.3	42.5	33.1	48.3	42.3	30.5	37.9	37.3	42.4
4,945	4,441	4,070	4,888	4,423	4,147	4,549	4,641	4,240
209.9	196.4	170.3	207.1	203.2	165.5	193.3	190.7	193.3
593	571	434	470	630	490	556	594	444
51.8	51.7	39.4	44.8	55.4	42.1	46.6	51.9	44.3
0.37	0.32	0.26	0.35	0.33	0.27	0.33	0.33	0.29
61.3	53.4	58.6	60.0	52.7	60.8	69.5	55.7	47.8

Figure II - 1

Family La- bored Work- ing on Farm	Ares of Arable Land	Number of Milk Cows	Farm Capital Invested	Total Days Worked on Farm per 10 Ares	Rice Yield per 10 Ares	Milk Production per Cow	Cropping Ratio
man equiv.	are	head	¥10,000	day	kg	1,000kg	%
3.0	158	6.1	619	67	519	6.4	232
2.8	148	5.6	569	62	499	5.9	222
2.6	138	5.1	519	57	479	5.4	212
2.4	128	4.6	469	52	459	4.9	202
2.2	118	4.1	419	47	439	4.4	192
2.0	108	3.6	369	42	419	3.9	182
1.8	98	3.1	319	37	399	3.4	172
1.6	88	2.6	269	32	379	2.9	162
1.4	78	2.1	219	27	359	2.4	152

The farm number circled is determined on the basis of Net Farm Return.

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Gross Farm Return	Net Farm Return	Net Farm Return			Net Return to Labor per Day	Interest Rate of Farm Capital	Farm Capital Turnover
		per 10 Ares	per Farm Laborer	per ¥10,000 Farm Capital			
¥10,000	¥10,000	¥1,000	¥1,000	¥1,000	¥		%
211	92	85	438	2.0	1,325	0.077	43
191	82	75	388	1.8	1,125	0.067	40
171	72	65	338	1.6	925	0.057	37
151	62	55	288	1.4	725	0.047	34
131	52	45	238	1.2	525	0.037	31
111	42	35	188	1.0	325	0.027	28
91	32	25	138	0.8	125	0.017	25
71	22	15	88	0.6	0	0.007	22
51	12	5	38	0.4		0	19

Table III - 1 Size of Dairy Enterprise

	Average 25 farms	Range	
		High ~	Low
No. of milk cow* (head)	4.1	7.5 ~	1.6
No. of heifer & calf (head)	1.7	3.7 ~	0.2
Days worked in dairy (day)	184	297 ~	74
family labor	184	292 ~	74
hired labor	0	5 ~	0
Capital invested in dairy (¥)	1,017.7	1,954.0 ~	326.2
Capital equipment in dairy (¥)**	997.4	1,921.0 ~	304.7

* Average of the number of each month

** Capital invested minus Land capital

Table III - 2 Financial Summary of Dairy Enterprise

	Average 25 farms	Range	
		High ~	Low
	¥	¥	¥
Gross return to dairy	803.0	1,409.5 ~	300.4
milk product	642.7	1,001.9 ~	228.3
by-product*	160.3	407.6 ~	36.3
Expense of dairy	651.7	1,133.8 ~	230.9
purchased	423.4	922.4 ~	150.8
self-supplied	102.9	170.6 ~	38.4
depreciation	125.4	313.3 ~	32.8
Net return to dairy	151.3	511.5 ~	104.8
Gross return	196.1	245.7 ~	113.6
Expense	160.7	247.9 ~	113.5
Net return	35.4	97.1 ~	⊖ 28.3
per milk cow			
Gross return	928	3,440 ~	⊖ 529
Expense	1,677	6,376 ~	⊖ 1,077
Net return	1,631	5,956 ~	⊖ 1,064
Net return to dairy enterprise	38,292	253,776 ~	⊖ 302,665
Net return ratio** (%)	16.8	39.5 ~	⊖ 15.4
Net return to family labor per day	439	2,239 ~	⊖ 829
Interest rate of capital invested	0.018	0.338 ~	⊖ 0.247
Net profit of dairy enterprise	38,292	253,776 ~	⊖ 302,665
Net return ratio** (%)	16.8	39.5 ~	⊖ 15.4

* includes increase of milk cow & heifer inventory

** % net return is of gross return

Table III - 3 Other Factors of Dairy Enterprise

	Average 25 farms	Range	
		High ~	Low
Kg. of milk produced	18,503	30,989 ~	7,003
kg. of milk produced (kg)	4,483	5,810 ~	2,334
Days worked in dairy (day)	48	80 ~	24
Capital equipment			
(¥)	247.9	400.4 ~	152.3
Capital invested			
(¥)	253.5	410.3 ~	163.1
Expense of dairy	(¥)		
Feed	160,685	247,891 ~	113,590
Livestock	116,965	164,025 ~	83,195
Small machine	7,148	17,135 ~	4,107
Insurance	1,425	3,244 ~	532
Tax	1,217	3,345 ~	0
	846	1,152 ~	602
Depreciation for fixed assets			
Other	32,052	69,052 ~	8,199
	1,032	2,321 ~	192
% feed cost is of milk sold	22.5	37.1 ~	7.7
Commercial index	96.3	100.0 ~	84.7

Table III - 4 Cost Control

	Average 25 farms	Range	
		High ~	Low
	Yen	Yen	Yen
Total cost of dairy (¥)	209.4	276.4 ~	155.1
Expense of dairy (¥)	160.7	247.9 ~	113.6
Cost of family labor (¥)	33.5	56.2 ~	17.0
Interest on capital (¥)	15.2	20.4 ~	9.8
Value of by-product in dairy (¥)	39.9	75.8 ~	18.2
Kg. of milk produced	4,483	5,810 ~	2,334
Production cost of milk per kg. (¥)	38.7	55.6 ~	25.6
Average price of milk per kg. (¥)	35.1	36.2 ~	33.2
Total cost of dairy is of milk price (%)	110.4	158.8 ~	72.4
% purchased cost of dairy is of milk sold	68.0	94.7 ~	53.9
% purchased feed cost of dairy is of milk sold	60.3	88.1 ~	41.6

Table III - 5 Average of Farms Grouped According to Some Important

Range	No. of cows			Milk production per cow		
	Most	Middle	Least	Highest	Middle	Smallest
	7.5~5.0	4.8~3.6	3.0~1.6	5,810 ~4,860	4,802 ~4,248	4,238 ~2,334
Average	5.8	4.0	2.4	5,334	4,524	3,587
No. of milk cows (head)	5.8	4.0	2.4	4.2	4.2	3.8
Total milk production (kg)	26,578	18,659	10,252	22,417	19,235	13,765
Days worked on dairy (day)	35	54	53	46	53	44
Milk production (kg)	4,548	4,641	4,240	5,334	4,524	3,587
Per milk cow						
Capital equipment on dairy	230.4	248.1	15.2	225.6	271.6	243.6
Capital invested on dairy	234.2	253.4	272.9	231.0	277.4	249.0
Gross return to dairy	200.6	188.7	200.0	219.3	199.0	189.8
Expense of dairy	150.6	170.2	160.1	175.8	164.9	140.8
Net return to dairy	50.0	18.5	39.9	43.4	34.1	29.0
Net return to labor per day	968	16	386	645	313	374
Interest rate of capital	0.079	0.067	0.051	0.049	0.004	0.012
Net profit of dairy enterprise	62.3	135.0	30.1	65.3	59.1	46.7
% of net return to dairy	23.0	10.3	17.9	19.8	15.5	15.2
Per milk cow						
Total cost of dairy	189.7	223.1	213.6	222.2	218.4	186.5
Expense of dairy	150.5	170.2	160.1	175.8	164.9	140.8
Cost of family labor	25.2	37.7	37.4	32.5	37.1	30.8
Interest on capital	14.0	15.2	16.1	13.9	16.4	14.9
Total cost per kg. of milk	33.5	42.4	39.8	34.9	40.0	41.1
Average price per kg. of milk	35.2	35.0	35.2	34.8	35.2	35.4
Total cost is of milk sold	95.7	121.0	113.2	100.2	113.4	117.2
% feed cost in purchased	16.4	26.7	23.8	22.9	24.1	20.3
% feed bought is of milk sold	62.7	57.8	60.8	57.0	58.1	66.1

Measures in Dairy Enterprise

Net return to dairy per cow			Net return to labor per day			Total cost of milk		
Highest	Middle	Lowest	Highest	Middle	Lowest	Highest	Middle	Lowest
97,158 ~ 50,197	41,062 ~ 22,721	18,024 ~ 28,348	2,239 ~ 664	660 ~ 72	⊖ 29 ~ ⊖ 829	55.6 ~ 42.6	40.6 ~ 35.2	34.0 ~ 25.6
74,644	33,311	⊖ 1,308	1,347	429	⊖ 457	49.1	38.0	29.1
4.3	4.4	3.5	4.7	4.1	3.4	3.1	4.8	4.3
20,816	19,907	14,736	21,905	19,505	13,974	12,992	20,898	21,320
48	46	49	43	52	47	54	45	45
4,863	4,454	4,136	4,728	4,591	4,118	4,140	4,339	4,989
226.8	241.2	276.5	214.8	228.8	302.5	295.9	242.5	206.0
232.7	246.0	282.7	220.0	233.7	309.3	302.8	247.2	211.3
221.4	186.5	181.7	217.2	188.6	183.5	181.8	185.9	222.0
146.8	153.2	183.0	144.5	154.1	184.2	181.2	153.3	148.5
74.6	33.3	⊖ 1.3	72.8	34.5	⊖ 0.7	0.6	32.6	73.5
1,312	448	⊖ 445	1,347	429	⊖ 457	⊖ 410	389	1,345
0.162	0.015	⊖ 0.123	0.169	⊖ 0.006	⊖ 0.107	⊖ 0.126	0.012	0.168
111.6	⊖ 49.3	⊖ 175.8	121.9	⊖ 66.1	⊖ 167.1	⊖ 172.5	⊖ 61.1	121.7
33.5	17.0	⊖ 0.06	45.4	17.2	0.2	0.9	16.6	32.9
197.4	200.5	234.5	187.5	205.1	236.0	237.5	199.5	192.4
149.1	153.2	183.0	144.5	154.1	184.2	181.2	153.3	148.5
34.4	32.5	34.5	30.1	37.0	33.2	38.1	31.4	31.5
13.9	14.8	16.9	12.9	14.0	18.5	18.2	14.8	12.4
30.3	38.0	48.3	29.2	38.9	48.0	49.1	38.0	29.1
36.0	35.2	34.8	35.3	35.1	34.9	34.9	35.3	35.2
85.6	108.7	138.5	83.3	110.5	137.4	140.3	108.5	82.7
21.7	21.3	24.6	18.0	24.7	24.4	26.1	21.6	19.9
55.2	62.2	64.2	58.9	57.7	64.7	64.0	62.6	54.1

Figure III - 1

No. of Milk Cows	Heifers & Calves	per milk cow					
		Total Days Worked in Dairy	Capital invested in Dairy	Total of Milk Produced	Gross Return to Dairy	Expense to Dairy	Net Return to Dairy
head	head	day	¥10,000	1,000kg	¥1,000	¥1,000	¥1,000
6.1	3.3	68	373	6.2	256	221	75
5.6	2.9	63	343	5.6	241	206	65
5.1	2.5	58	313	5.2	226	191	55
4.6	2.1	53	283	4.8	211	176	45
4.1	1.7	48	253	4.4	196	161	35
3.6	1.3	43	223	4.0	181	146	25
3.1	0.9	38	193	3.6	166	131	15
2.6	0.5	33	163	3.2	151	116	5
2.1	0.1	28	133	2.8	136	101	0

The farm number circled is determined on the basis of number of milk cow.

Figure III -2

Gross Milk Return per Milk Cow	Net Return to Labor per Day	% of Feed Cost in Purchased	Net Return to Dairy Entep. per ¥10,000 of Capital	Total Cost of Dairy is of Milk Price	Expense Purchased is of Milk Sold	Cost of Milk per kg	% Feed. Bought is of Milk Sold
¥1,000	¥	%	¥1,000	%	%	¥	%
196	1,239	30	5.6	150	81	50	80
186	1,039	28	4.6	140	77	47	75
176	839	26	3.6	130	74	44	70
166	639	24	2.6	120	71	41	65
156	439	22	1.6	110	68	38	60
146	239	20	0.6	100	65	35	55
136	39	18	0	90	62	32	50
126		16		80	59	29	45
116		14		70	56	26	40

