THE USE OF INCORA SUPERVISED CREDIT IN COLOMBIA IN 1969

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A Supplement to
"The INCORA Supervised Credit Program"
by James Schwinden and Gerald Feaster

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I. INTRODUCTION

This short report contains statistical information on the use of credit by 2,900 farmers in Colombia who received supervised credit from INCORA in 1969. It is intended to serve as a supplement to the Colombia Country Program paper prepared earlier by James Schwinden and Gerald Feaster.

The data are taken from a general economic analysis of a sample of INCORA farmers, which in turn is part of a more general agriculture sector analysis of Colombia being sponsored by the Sector Analysis and Strategy Staff of the Bureau for Latin America. Calculation of the credit data was not complete at the time Schwinden and Feaster prepared their paper.

The information cited here was taken from two wholly statistical reports compiled for the Spring Review by James T. Riordan and Thomas Walker. One of the reports in turn summarized some earlier studies by myself and others. This paper represents but the tip of an iceberg of data to be found in these documents. It has merely been my objective to sort out data on some aspects of loan utilization which may be of more general interest.

The basic working documents are listed in the last section of this report. Those with a thirst for more numbers are urged to consult them.

II. COMPARISON OF TOTAL CREDIT USE

The total amount of credit utilized by a farm can, of course, be influenced by many factors. Three macro measures have been isolated for presentation here: (1) farm size, (2) firm size, and (3) family net income.

They are defined as follows. Farm size is simply the total area in the farm. Firm size is defined as being equal to total investments in durable goods + total sales value of farm production + total variable costs (operating expenses). Family net income is value of production sold and consumed + off farm income - operating expenses.

The amount of credit utilized decreased as each of the three measures increased (Figures 1-3). The amount of credit utilized per hectare dropped most sharply as farm size increased (Figure 1). Since, however, the larger farms are more apt to practice an extensive form of agriculture (WD 17G, pp. 9, 17), it may be more meaningful to look at firm size as measured in economic terms. When this is done, the decline persists but is more gradual for the intermediate size groups (Figure 2). The extent to which the credit is reaching the lower income groups is indicated the ratio between pesos of credit and pesos of income (Figure 3). Clearly the credit ratio is highest for families with incomes under 6,000 pesos; above 6,000 pesos the relative amount of credit was comparatively minor.

Further documentation on the amount of credit utilized per unit of area is available on a type of farming breakdown (Table 1).[1/] It is evident that the largest amount on either a farm or per hectare basis was utilized on mechanized farms. Andean (minifundio) farmers utilized the smallest amount on a per farm basis, while extensive livestock and colonization farms utilized the least on a per hectare basis.

[1/] The breakdown was made by zone rather than by individual farm. Hence a few farms of one category may be lumped in with farms of another type which made up the majority of the farms in the zones.

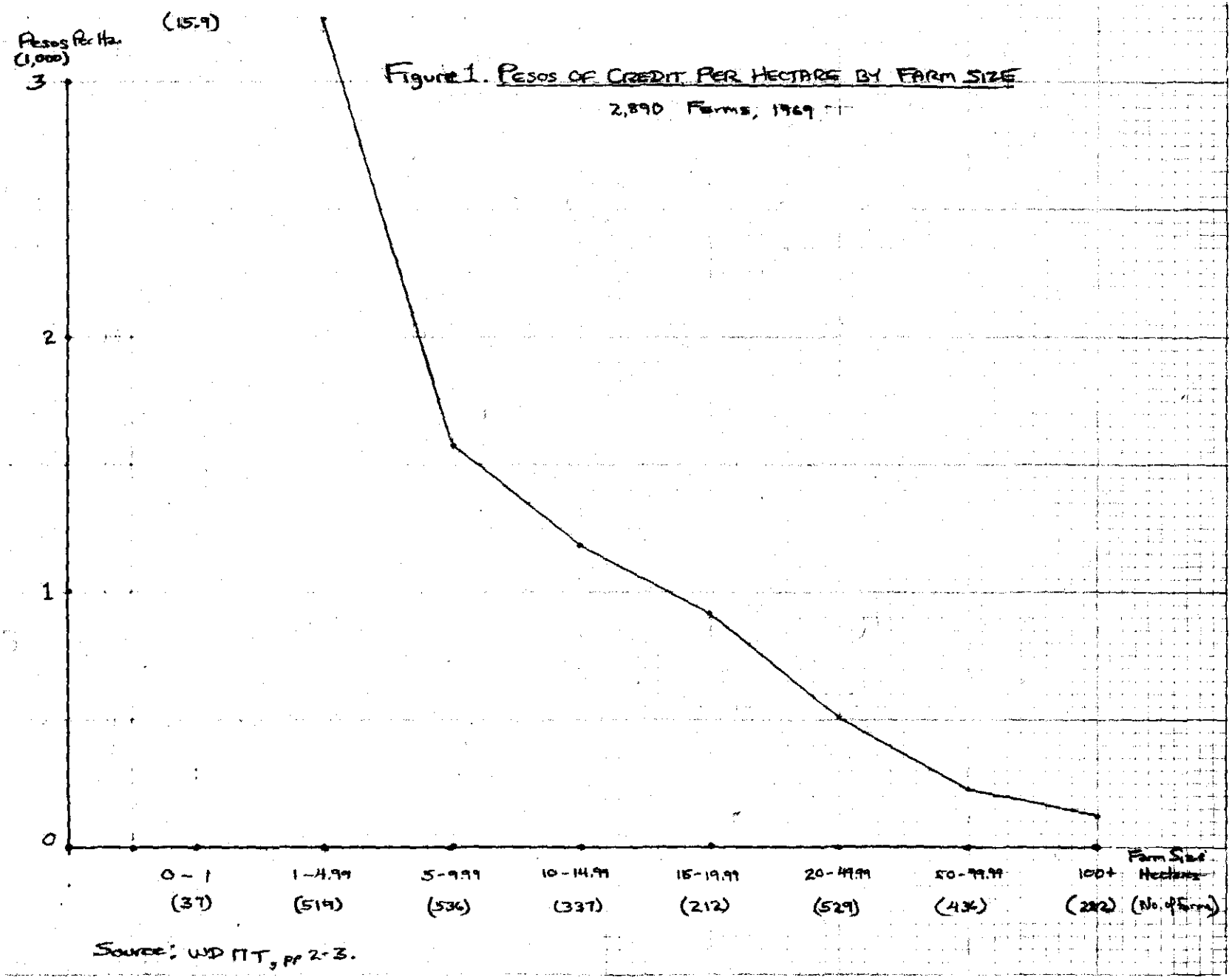


Figure 1. Pesos of Credit Per Hectare by Farm Size

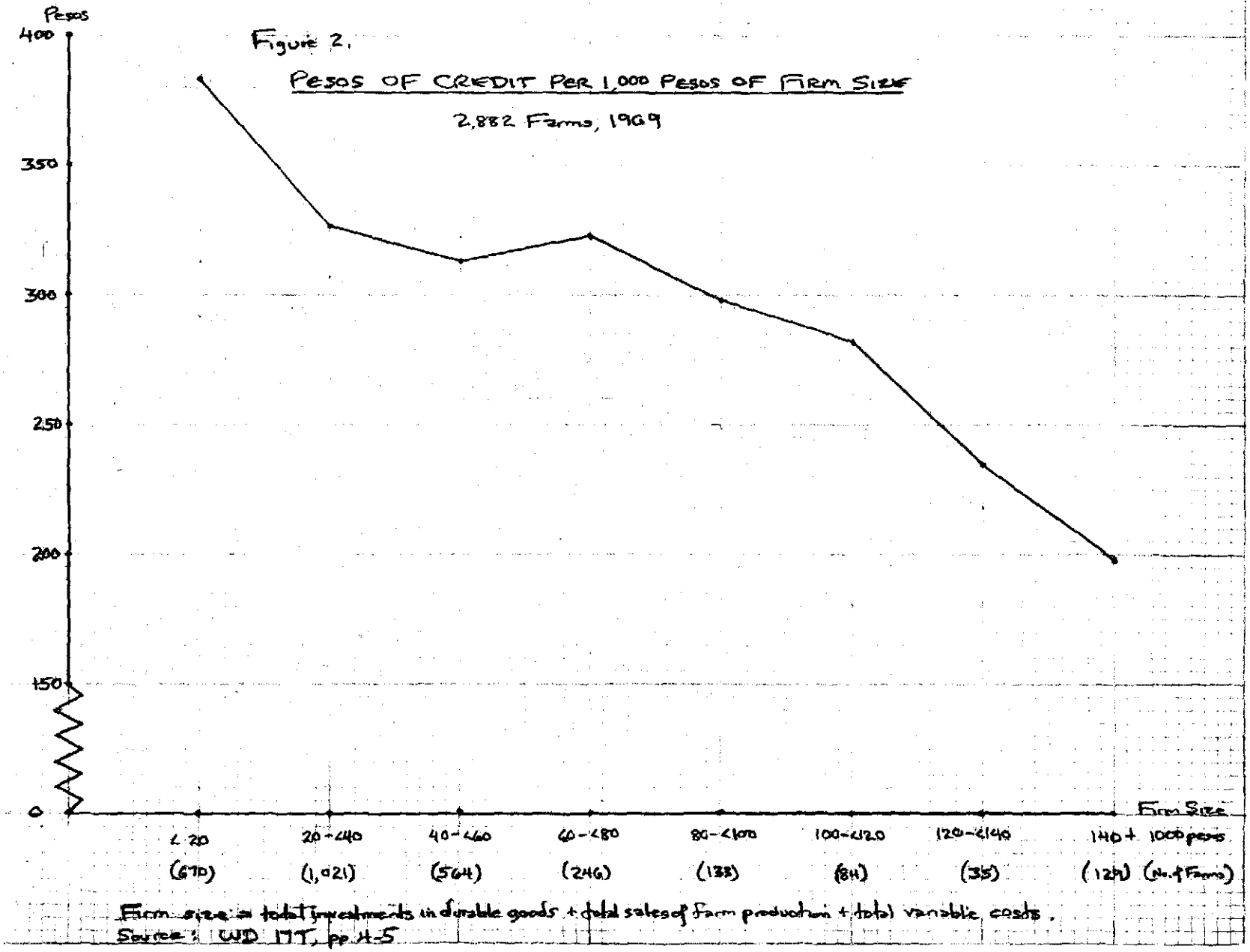
2,890 Farms, 1969

Source: WD ITT, pp 2-3.

Figure 2.

PESOS OF CREDIT PER 1,000 PESOS OF FIRM SIZE

2,882 Farms, 1969



Firm size = total investments in durable goods + total sales of farm production + total variable costs.

Source: WD IIT, pp 4-5

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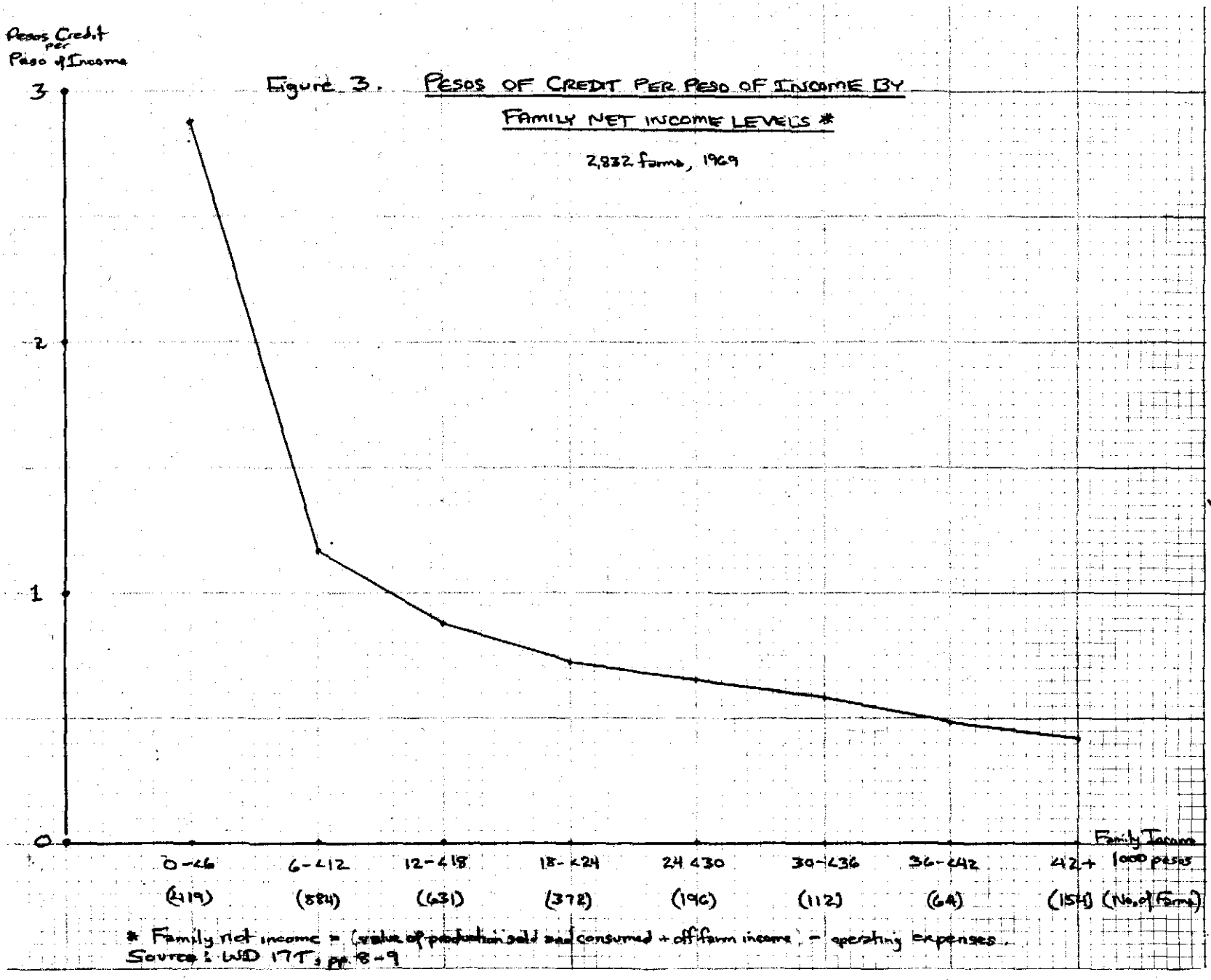

Figure 3. PESOS OF CREDIT PER PESO OF INCOME BY FAMILY NET INCOME LEVELS *

2,832 farms, 1969

* Family net income = (value of production sold and consumed + off farm income) - operating expenses.

Source: WD 17T, pp. 8-9

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Table 1. USE AND AMOUNT OF INCORA CREDIT BY FARM TYPE

2,897 Farms, 1969

Zonal Farm Type	Number of Farms	Credit per		Use		
		Farm	Hectare	Durable Goods	Variable Costs	Home Consumption
		- pesos -		-percent-		
Mechanized	315	22,544	1,453	16.8	83.2	0.06
Andean(minifundio)	1,052	10,062	891	41.6	58.1	0.26
Extensive Livestock	884	14,183	361	67.7	32.1	0.14
Colonization	646	14,795	186	70.4	28.7	0.92
Total or Average	2,897	13,732	387	52.3	47.3	0.35

Source: WD 17T, pp. 6-7.

III. MAJOR TYPES OF USE

Credit provided by INCORA was utilized for three general purposes: (1) purchase of durable goods, (2) variable costs of farm operation, and (3) home use. As may be seen in Table 1, durable goods accounted for about 52% of the total INCORA loan for the sample farms; variable costs accounted for 47%; and home consumption was less than 1%.[2/] Compared with the actual total amount spent for each category (Table 2), loans covered about all of the cost of durable goods, half the variable costs, and but a fraction of home consumption.

The pattern of utilization between durable and variable costs varied with farm size and number of years in the program. The proportion of the loan used for durable goods grew with increasing farm size (Figure 4) but decreased by years in the program (Figure 5). Conversly, the proportion used for variable costs decreased with larger farm size but increased with years in the program.

Why might the proportion of the loan used for durable goods grow with farm size? It has been noted elsewhere (WD 17G, pp. 9, 17) that with increases in farm size, the proportion of cultivated area decreased and the proportion of investment in livestock (a "durable" good) increased. Further, the breakdown by type of farming enterprise cited in Table 1 revealed that the proportion of the loan spent for durable goods on livestock farms was about four times the proportion on mechanized (crop) farms. Hence the answer appears to be tied to type of farming enterprise.

But then why did the proportion of the loan used for durable goods decrease with years in the program? One might hypothesize that farmers simply focus on building up their stock of durable goods in the first years and then as these are acquired they involve variable or operating costs. Other data revealed that as average age of the head of the household increased from 20 to 60, the proportion spent on durable goods decreased (WD 17T, pp. 14-15).[3/]

[2/] It should be realized that these proportions were based on what farmers reported to their credit supervisor. Actual use patterns for some borrowers may have been different. Also the figures do not include loans from other sources which may have been utilized in a different way. Some of the variable costs for labor (Table 3) may have represented consumption expenses.

[3/] The proportion spent for durable goods was, as might be expected, considerably higher on privately held land than on rented land (53.1% vs. 23.1 to 38.4%) (WD 17T, pp. 14-15).

Table 2. PROPOSED USE OF INCORA LOAN

2,900 farms, 1969

Category	Proposed INCORA Loan - percent -	Loan as Proportion of Actual Expenditures
Durable goods	57.2**	102.9
Variable costs*	42.5**	50.1
Home consumption	0.3	0.7
Total	100.0	

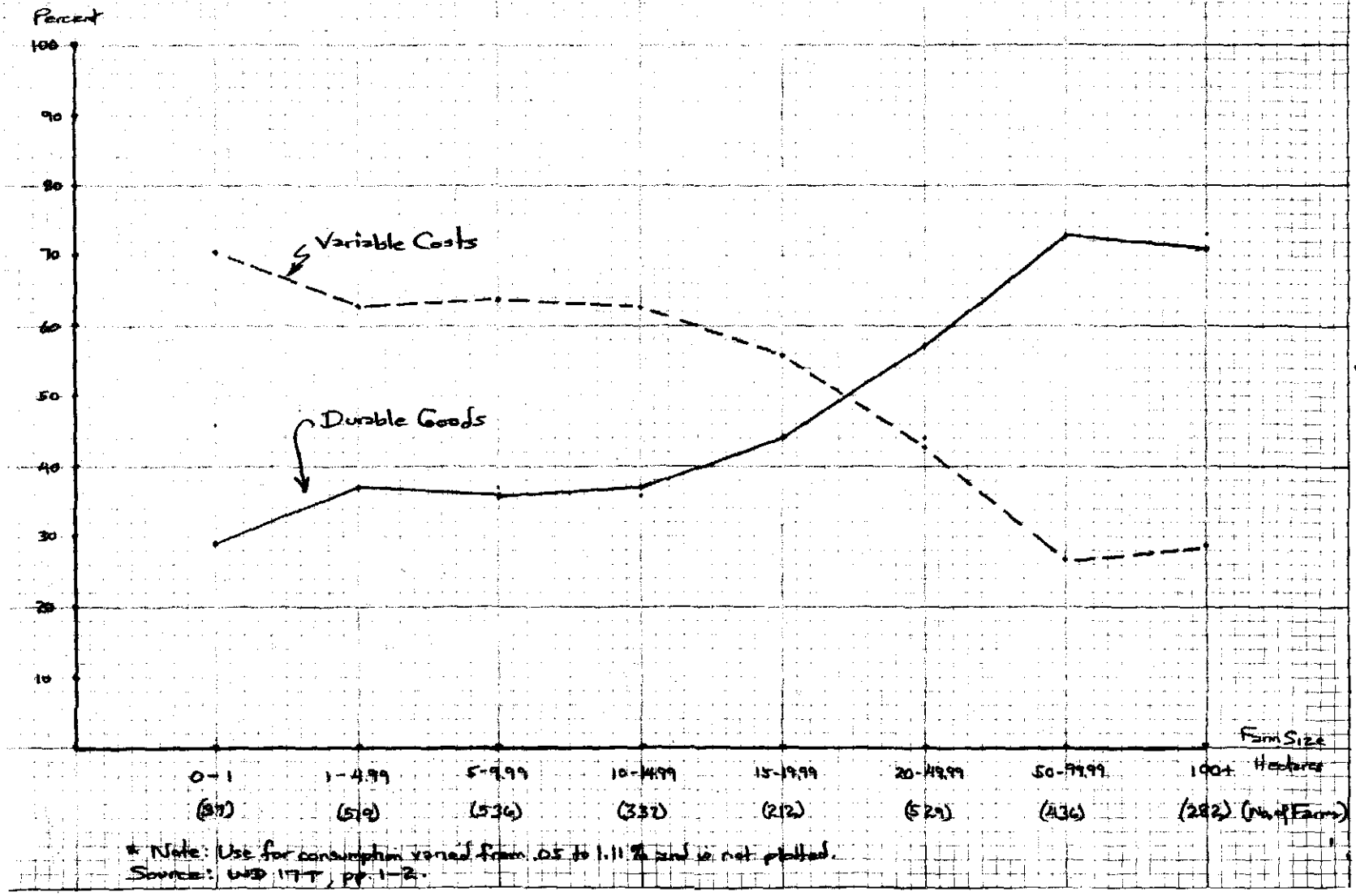
* Operating costs of the farm including labor.

** These proportions vary by about 5% from those reported in Table 1. The figures in Table 1 are felt to be more representative of actual loan use.

Source: WD 17G, p. 16 (cited in WD 17Y, p. 105).

Figure 4. UTILIZATION OF INCORA LOANS BY FARM SIZE *

2,890 Farms, 1969



* Note: Use for consumption varied from .05 to 1.11 % and is not plotted.

Source: WSP 1717, pp. 1-2.

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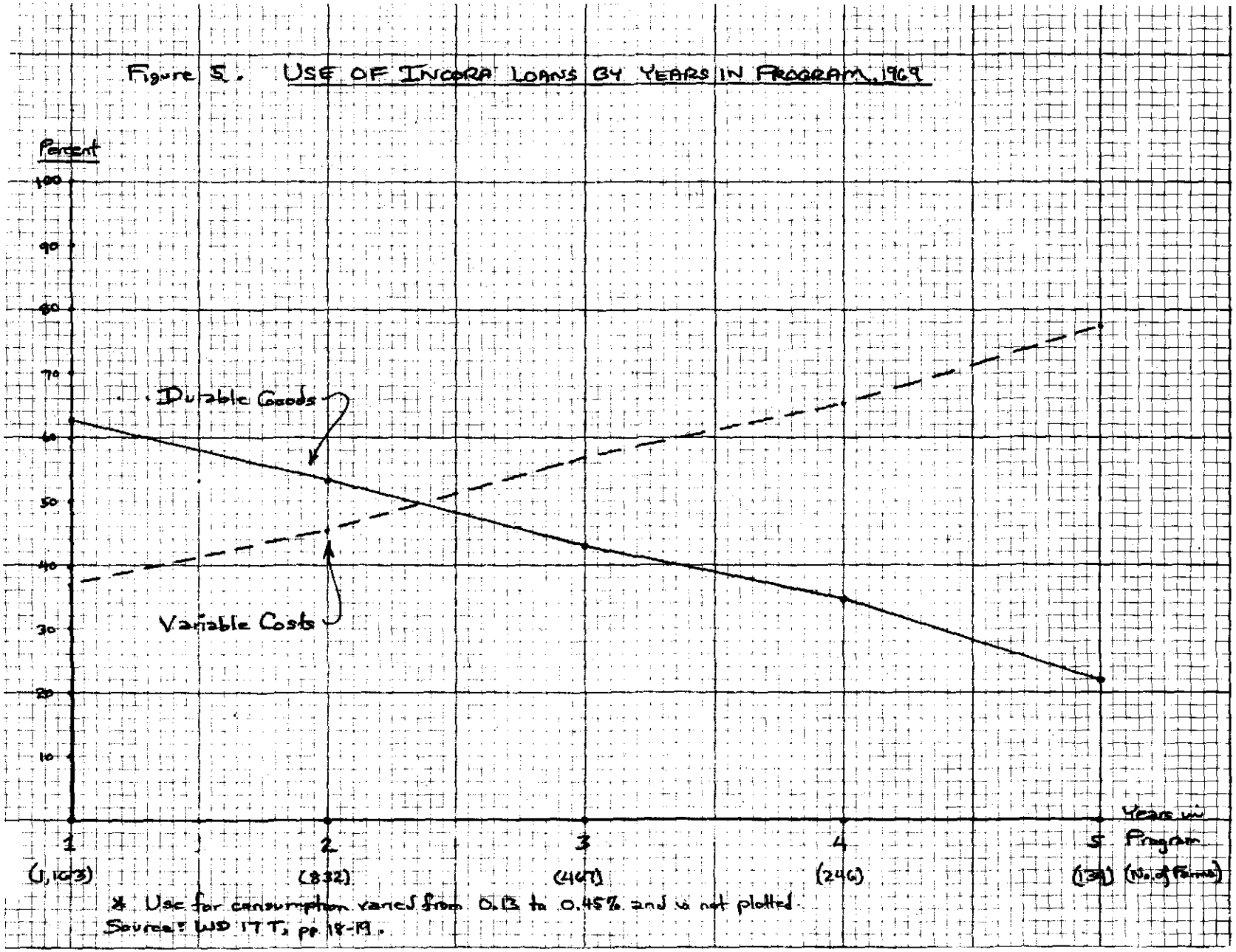
Figure 5. USE OF INCORA LOANS BY YEARS IN PROGRAM, 1969



* Use for consumption varied from 0.13 to 0.45% and is not plotted.

Source: WD 17 T, pp 18-19.

Given these trends how is the use of the loans broken down within each of the major categories? Unfortunately it has not yet been possible to do this for durable goods, but we do have a detailed list for variable or operating costs (Table 3). Clearly the major use, accounting for about 1/3 of the total, was for labor. It was followed in decreasing order by fertilizer, seed, machinery rental, and pesticides. Together, the fire categories represented about 90% of total variable costs. The proportion the proposed INCORA loan represented of total expenses varied widely by individual category.

Table 3. PROPOSED USE OF INCORA LOAN FOR VARIABLE COSTS*

2,900 farms, 1969

Category	Proposed INCORA Loan	Loan as Proportion of Total Variable Cost
	- percent -	
Labor	33.1	66.3
Fertilizer	20.1	94.4
Seed	17.6	82.4
Machinery rental	10.1	150.2
Pesticides	9.0	77.2
Packaging	3.5	49.9
Petroleum	1.8	276.5
Transportation	1.2	17.5
Feed and drugs	0.6	155.6
Irrigation	0.5	20.6
Family labor	0.4	2.1
Other	2.1	72.5
Total	100	

* Built up from individual crop and livestock enterprises.

Source: WD 17J, p. 66 (cited in WD 17Y, p. 104).

IV. REFERENCES

The data cited in this report, as noted in the Introduction, were taken from two statistical documents prepared for the Spring Review by James. T. Riordan and Thomas Walker. They were issued as part of the General Working Document series issued by the Sector Analysis and Strategy Staff of the Bureau for Latin America, AID. The two documents carried the same title: Data for Spring Review Analysis of Small Farmer Credit: The Case of INCORA in Colombia. Document 17Y was dated October 1972; it pulled together relevant statistical material from previous documents: 5A, 17D, 17G, 17I, 17J, and 17 O. Document 17T represented additional analysis.

Authors and titles of the previous Working Documents cited in Document 17Y are listed below:

5A. Don Bostwick, Analysis of INCORA Supervised Credit Sample Data, August 1972.

17D. Dana Dalrymple, Samuel Daines, and Beverly Lowenstein, Utilization of INCORA Loan and Farm Production, December 1971.

17G. Samuel Daines, Dana Dalrymple, Cathy Gleason, and Beverly Lowenstein, Small Farm Economics .2901 Farm Sample. Preliminary Results: Land Use, Profitability, Farm Consumption, Capital Structure, August 1972.

17I. Dana Dalrymple, Cathy Gleason, Beverly Lowenstein, Small Farm Credit. 2901 Farm Sample. Income and Credit Ratios by Income Level, August 1972.

17J. Dana Dalrymple, Samuel Daines, Cathy Gleason, Beverly Lowenstein, Small Farm Economics. 2901 Farm Sample. Statistical Results for Crop Specific Analysis, August 1972.

17O. James Riordan, Small Farm Analysis: Consumption Patterns, October 1972.

Analysis is continuing on the small farm data, and additional reports will be issued in the future.

Background on the basic data gathering procedures is presented in WD 17F by Samuel Daines, Cathy Gleason, Dwight Steen and Thomas Walker: Data Gathering Procedures and Format.

Copies of these Working Documents may be obtained by contacting Rita McKenna, AID-LA/DR/DSA, Room 3247B New State.