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A PRELIMINARY STUDY OF THE COSTS OF SCHOOL FEEDING PROGRAMS
CANAS REGION, COSTA RICA, 1987

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Costs of School Feeding

A Preliminary Study of the Costs of School Feeding Programs Cañas Region, Costa Rica, 1987

by
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1. Background

The PROPAG Project of the Nutrition Institute of Central America and Panama (INCAP) is a six year, AID funded project that is attempting to improve feeding programs throughout Central America and Panama. One of the major sub-projects within PROPAG is a collaborative study with the Government of Costa Rica aimed at finding ways to improve the efficiency and effectiveness of Costa Rica's school feeding programs and maternal/child feeding programs. For PROPAG, a second objective of the Costa Rica study is the development of study methodologies that can be applied in other countries.

PROPAG and its Costa Rican collaborators completed an extensive survey of 400 school feeding programs in Guanacaste Province, and a second survey of feeding programs in nearly 400 maternal/child centers throughout the country. This data was collected in the summer of 1987, cleaned and compiled during September and October, and presented in a workshop of Costa Rican officials during the last week of October, 1987.

As part of the Community Systems Foundation contract with AID/ROCAP to provide technical assistance to PROPAG, the author undertook a brief field study of the costs of school feeding programs in Costa Rica. The field study was carried out during the third week of October in the Cañas region of Guanacaste Province in collaboration with Mr. Pedro Garcia, Director of School Feeding, Ministry of Health, Costa Rica, who accompanied the author in the field. Data was collected on 158 schools in the Cañas region from the regional Ministry of Education office, and additional data was obtained on eleven of these schools by visiting them. Mr. Garcia presented some of the key findings of this study to the workshop of Costa Rican officials.

2. Methodology

This study was limited to the Cañas Region of Guanacaste Province, Costa Rica, one of four administrative regions (of the Ministry of Education) in Guanacaste Province. Two different samples of schools were obtained from the region. First is a sample of all 158 public schools (kindergarten through sixth grade) registered in the Cañas Region as of December, 1986. (Four additional schools have opened since then.) The second sample consists of eleven schools selected from the 158 which were

visited during the third week of October, 1987.

2.1. The 158 School Sample

(1) The Sample. The sample includes all public schools registered in the Cañas Region as of December, 1986.

(2) Data at the Regional Office. At the Cañas regional office two types of records were reviewed: "Cuadros de Personal" as of December, 1986, and "Datos Personales Servidores Domesticas" as of March, 1987. The former yielded the number of enrolled students and number of teachers per school, and the latter yielded the number of government paid cooks in each school. Annex B lists the 158 schools and the data.

(3) Comparison to PROPAG Sample. The PROPAG sample of 400 schools noted above contained 134 schools in the Cañas Region. 130 of the 134 are included in our sample of 158. The four schools included in the PROPAG sample but not in ours were opened after December, 1986, the date of our data. Annex C lists the 134 Cañas schools in the PROPAG sample.

2.2 The 11 School Sample

(1) The Sample. The Cañas regional office helped us select a sample of eight schools that operated feeding programs and represented a range of sizes and conditions. These eight were visited, along with three others selected while in the field. Annex A lists the eleven schools.

(2) The Interviews. At each school the school director was interviewed if present, the kitchen was visited, and the cook interviewed if present. In the several cases when the director was absent, the interview was held with the acting director (a teacher), and/or a member of the school committee, and in one case with a student and a member of the cook's family. In most cases data was obtained from a recent "Cupon Factura" regarding food contributions by the government to that school. Written records of community contributions in kind or in cash were usually available only in the larger schools. The visits lasted from 30 to 90 minutes.

(3) Estimating Number of Participants and Students. During the regular school year (March through November) both students (kindergarten through sixth grade) and pre-schoolers usually participate in the school feeding program. Thus the number of participants is usually larger than the number of students. Note that participants refers to the enrolled participants, not the actual number who showed up to eat.

The number of participants in a feeding program varies according to the time of year. There are three distinct periods: the regular school year (8-1/2 months), vacation from December through February (3 months), and summer vacation in July (two

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weeks). Some schools close the feeding program entirely during vacations, while others stay open for part or all of the vacation periods. The attendance at vacation feeding programs that stay open varies among schools, but seems to generally run less than half the participants during the regular school year.

Three different sources of data on number of students and participants were obtained for each of the eleven schools in the sample: (1) number of students who were reported to the regional office as of December, 1986 on the "Cuadros de Personal", (2) the number of participants as noted on a recent "Cupon Factura", and (3) the number of students and number of participants as told to the author during the site interviews. This data is shown in Table 1.

Note that the numbers from the three sources often do not agree. This discrepancy is due only in part to the difference between students and participants. In some cases the number of participants on the "Cupon Factura" is much higher or lower than the other estimates. This is significant because the number on the Cupon is used to calculate the amount of food that the school receives from the government.

For each school a best estimate was made of the current number of participants during the school year and during the 3-month vacation. This "best estimate" was used to calculate an average number of participants in the program throughout the year. (Some of the tables use the term participant-months to refer to the number of enrolled participants each month summed over all 12 months, or in other words, the average number of participants multiplied by 12.) Even though the number of participants is usually larger than the number of students during the regular school year, the average number of participants over the entire year is usually less than the number of students during the regular school year because there are fewer participants during vacations.

(4) Program Costs. Feeding program costs for each of the eleven schools are presented in Table 2. There are four types of costs: personnel, food, operations, and capital items. Regional and national costs were not considered.

(a) Personnel Costs. This cost category includes government paid cooks, cooks and cook helpers paid by the local community, and donated time (usually mothers during vacation periods). The cost of a government paid cook is assumed to be 150,000 Colones per year (about U.S. \$2,300), including all salary and fringe. The value of a mother who donates her time as a cook is assumed to be 1000 Colones per month.

(b) Food Costs. This includes all government contributed food, food purchased or donated by the local community, food grown in the school garden that is consumed by the school, and outside donations. The cost of transporting food from the government warehouse to the school is also considered part of the cost of

food.

(c) Operations Costs. This includes items such as firewood, water, electricity, gas, supplies, equipment maintenance, and general overhead. These items are paid by the *Patronato* in smaller schools and by the school board and *Patronato* in larger schools. School boards receive tax money that can be spent on operations and physical plant. The amount received per student varies from one area to another. For example, schools in the town of Cañas receive 210 Colones per student per year while schools in the town of Tilaran receive only 62 Colones per student per year. We assumed 62 Colones per student per year everywhere but Cañas. Then we assumed that 20% of those funds were used to pay operational costs of the feeding program.

(d) Capital Costs. This includes capital equipment (e.g., freezers, refrigerators, stoves, mixers) and space used by the feeding program. Our efforts to estimate the rent charged for comparable space in the same area produced figures ranging from 500 to 6,000 Colones per month. However, these estimates may not be reliable. Original costs of construction were not available. Similarly, original costs of equipment were only available in a few cases. Because of the unavailability of reliable data, we have not included capital costs in our estimate. However, it is a real cost and efforts should be made to include it in future analyses.

(5) Source of Resources. Resources came almost entirely from two sources: the government and the community. Government resources include government paid cooks, the value of the food received from the "Cupon Facturas", and the allocation of tax monies for operational costs. Community resources include locally paid cooks and cook helpers, value of donated time, donated food and money for food, transport costs, and operation costs paid by the *Patronato*. The value of food from the school garden is not classified as either government nor community.

3. Findings

3.1. Results from 158 School Sample

Data on the 158 schools is given in Table 5 and Annex B. The 158 schools contain 13,330 students and 86 government paid cooks, or 155.4 students per cook. About half of the students (6,619 of 13,330) are in the 16 largest schools of 125 students or more.

While government paid cooks are in schools of all sizes, they are most likely to be found in larger schools than in smaller ones. Thus, the number of cooks per school progresses from 0.24 in small schools (20-59 students) to 1.13 in large schools (over 125 students). However, on average, the smaller schools have more cooks per student than larger schools. Thus, the number of cooks per 100 students drops from 6.3 in small schools to 0.24 in large

schools. These two relationships are diagrammed in Graph 5.

3.2. Results from the 11 School Sample

Data on the eleven schools visited is given in Tables 1-4 and Annex A. While the sample includes small, medium and large schools, the large schools are overrepresented and the others underrepresented in the sample. No very small schools (1-19 students) are in the sample. All eleven operate feeding programs, although some(8) have government paid cooks and others(3) do not, and some of the schools close their feeding programs during vacations. After adjusting for reduced participation during vacations, the average number of participants per school throughout the year ranges from 19.8 to 1140.1. See Table 1.

(1) Total costs are divided among personnel, food and operations as follows:

Food - 52.0 %
 Personnel - 42.2 %
 Operations - 5.6 %

See Graph 6.

(2) The source of the resources for the feeding programs are:

Government - 81.6 %
 Community - 17.4 %

See Graph 7.

(3) The average annual cost per participant is 1,542 Colones. This cost varies widely across schools, ranging from 1.120 to 7,443 Colones. See Graph 8.

(4) Variation in personnel costs accounts for the majority of the variation in total costs per participant from one school to the next, averaging 634 Colones per participant per year, but ranging from 302 to 5,730 Colones per participant in different schools. The presence or absence of a government paid cook (with an average annual cost estimated at 150,000 Colones) is the major cause of the variation, especially in small schools. See Table 3.

(5) Food costs per participant also vary, averaging 802 Colones per participant per year, and ranging from 625 to 1,926 Colones per year. Much of this variation is caused by government food contributions that are based on incorrect participant counts, as shown below:

SCHOOL	A	B	C	D	E	F	G	H	I	J	K
GOVT COUNT	44	70	60	100	100	172	226	250	498	695	1486
PARTICIPANT (Best Est.)	28	31	48	64	102	140	255	280	480	742	1486

This problem is also reflected in the per participant government

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food contribution. The average annual government food contribution is 612 Colones, but the amount among the schools ranges from 516 to 1,363 Colones per participant. Community food contributions per participant also vary. See Table 3 and Graph 8.

(6) Overall, including food, personnel and operating costs, the annual government contribution per participant averages 1,259 Colones, and varies widely across schools, ranging from 770 to 7,078 Colones per participant per year. See Graph 8.

(7) Costs per participant are inversely related to school size (as measured by average number of participants). That is, costs per participant are higher on average in smaller schools. Interestingly, this same inverse relationship holds (to varying degrees) for all the elements of cost (i.e., food, personnel, operations). For example, food costs per participant have a -0.84 correlation with school size. (See Table 4 and Graph 2.) Similarly, the same inverse relationship holds for both sources of resources, with both the government and the community contributing more per participant in smaller schools than in larger ones. See Table 3 and Graphs 1-4.

(8) Do communities that receive lower government contributions compensate by contributing more themselves? This is not the case in this sample of schools, where little correlation exists between community and government contributions. See Table 4.

(9) In this sample, the eight schools with government paid cooks also operate vacation feeding programs, while none of the three schools without government paid cooks operate vacation feeding programs. This data suggests that vacation feeding programs may be jeopardized if the number of government paid cooks decreases. See Graph 9.

Table 1

Numero de Estudiantes y Beneficiarios, Programa de Alimentos Escolar, Region Cañas, Costa Rica, 1987

Fuente de Datos	Definición	Escuela											Total
		A	B	C	D	E	F	G	H	I	J	K	
Cupon Factura:	Beneficiarios, Año Normal	44	70	60	100	100	172	226	250	498	695	1486	3701
	Beneficiarios, Vacaciones	0	?	0	?	?	0	?	?	300	240	300	/
Oficina Regional "Cuadros de Personal"	Estudiantes, Año Normal	24	25	53	64	102	120	265	243	480	753	1372	3501
Visita:	Estudiantes, Año Normal	25	26	48	-70	102	110	255	-200	465	742	-1400	3523
	Pre-escolares Estudiantes, Año Normal	3	5	0	-35	20	20	0	0	?	?	?	/
	Beneficiarias, Año Normal	28	31	48	-105	122	130	255	-280	?	?	1486	/
	Beneficiarios, Vacaciones	0	15	0	^{2 meses} 40	60	0	150	?	300	?	300	/
La Mejor Estimación:	Beneficiarios, Año Normal	28	31	48	64	102	140	255	280	480	742	1486	3656
	Beneficiarias, Vacaciones	0	15	0	25	60	0	150	-100	300	240	300	1190
	Mes / Beneficiarias	238	316	408	631	1077	1190	2692	2730	5130	7,147	13681	35240
	Año / Beneficiarias	19.8	26.3	34.0	52.6	89.7	99.2	224.3	227.5	427.5	595.6	1140.1	2936.0

Table 2

Estimación de Gastos Anual en Colones
Programa de Alimentación Escolar, Región Cañas, Costa Rica, 1987

Definición	Fuente	Escuela											Total (%)
		A	B	C	D	E	F	G	H	I	J	K	
Cocineras	Gobierno	0	150,000	0	150,000	150,000	0	150,000	150,000	150,000	450,000	450,000	1,800,000
Cocineras/Ayudantes	Comunidad	0	0	10,800	0	0	30,000	27,000	12,750	25,500	0	0	106,050
Cocineras/Ayudantes Voluntarios	Comunidad	9,000	0	0	0	3,000	0	1,000	0	0	0	0	13,000
Total de Personal		9,000	150,000	10,800	150,000	153,000	30,000	178,000	162,750	175,500	450,000	450,000	1,919,050 (22.7%)
Cupón - Facturas	Gobierno	19,142	35,840	26,112	48,640	52,756	74,851	115,710	131,300	260,380	339,324	692,780	1,796,835
Donaciones de Dinero para Alimentos	Comunidad	16,650	3,600	9,000	6,300	18,000	18,000	117,000	45,000	0	100,000	46,800	380,350
Donaciones de Alimentos	Comunidad	500	0	0	8,100	4,500	2,700	31,050	7,400	4,500	5,000	41,652	105,402
Transporte de Alimentos	Comunidad	1,350	2,400	3,150	1,100	12,000	1,800	1,800	0	2,400	0	1,200	27,200
Huertos Escolar		500	0	1,500	0	6,000	1,080	18,000	500	0	4,000	0	31,580
Otras Donaciones de Alimentos		0	0	0	0	0	0	12,000	0	0	0	0	12,000
Total de Alimentos		38,142	41,840	39,762	64,140	93,256	98,431	295,560	184,200	267,280	448,324	782,432	2,353,367 (52.0%)
Operaciones Pagado por Patronato	Comunidad	0	3,600	3,825	3,800	3,000	7,700	6,700	5,000	16,000	100,000	5,000	154,625
Cuota para Operaciones (20%)	Gobierno	1,008	310	657	794	1,265	1,488	3,286	3,013	20,160	9,337	57,624	98,942
		1,008	3,910	4,482	4,594	4,265	9,188	9,986	8,013	36,160	109,337	62,624	253,567 (5.6)
Gastos Total (excepto capital)		48,150	195,750	55,044	218,734	250,521	137,619	483,546	354,963	478,940	1,007,661	1,295,056	4,525,984 (100%)
Total de Gobierno		20,150	186,150	26,769	199,434	204,021	76,339	268,996	284,313	430,540	798,661	1,200,404	3,695,777 (81.6)
Total de Comunidad		27,500	9,600	26,775	19,300	40,500	60,200	184,550	70,150	48,400	205,000	94,652	786,627 (17.4)
Huertos y Otra		500	0	1,500	0	6,000	1,080	30,000	500	0	4,000	0	43,580 (1.0)

See accompanying notes.

Notes for Table 2:

1. Government-paid cooks assumed to cost 150,000 Colones per year.
(Salario = 8,500/month; fringes = 4,000/mes)
2. Government-paid operating costs. By law schools in Costa Rica receive a local tax that they use to pay operating and construction costs. The following assumptions have been made in order to allocate that tax income to the feeding programs.
 - (a) 20% is devoted to feeding programs
 - (b) In the town of Cañas, the tax income received by the school is \$210 per student per year. (Schools in Cañas town include A, D, I, K) All other schools are assumed to receive \$62 per student per year.
 - (c) To calculate amount received, the number of students listed in the Cañas regional office records as of December 1986 (see Table 1) is used.
3. Community contributions of money for food. The monthly budget obtained during the visit is assumed to hold for 9 months. No contributions are assumed during the 3 months of vacation.
4. Direct food contributions by Community. The monthly contribution estimated during the visit is multiplied by 9 to obtain annual contribution. No contributions are assumed during vacations.
5. Donated time by Mother to Cook. This volunteer time is valued at \$1000 per month. Generally only time donated when a paid cook was not present was used to estimate this cost.
6. Community contributions to Operations. Monthly costs were multiplied by 10 to estimate annual costs, except where no vacation program was operated, where 9 times monthly contributions was used.

Table 3

Gastos por Año/Beneficiarios en Colones
Programa de Alimentación Escolar, Región Cañas, Costa Rica, 1987

Definición	Escuela											Total (A media)
	A	B	C	D	E	F	G	H	I	J	K	
Año/Beneficiarios	19.8	26.3	34.0	52.6	89.7	99.2	224.3	227.5	427.5	595.6	1,140.1	2,936.0
Alimentos Pagado por Gobierno	967	1,363	768	925	588	755	516	577	609	570	607	612
Alimentos de Comunidad	934	228	357	295	351	227	668	230	16	176	79	175
Huertos Escolar	25	0	44	0	67	11	80	2	0	7	0	11
Otras Donaciones de Alimentos	0	0	0	0	0	0	54	0	0	0	0	4
Total de Alimentos	1,926	1,591	1,169	1,219	1,040	992	1,318	810	625	753	686	802
Total de Personal	455	5,730	317	2,852	1,706	302	794	715	411	756	395	654
Total de Operaciones	51	149	132	87	48	93	45	35	85	184	55	86
Gastos Total (excepto capital)	2,432	7,443	1,619	4,158	2,793	1,387	2,156	1,560	1,120	1,692	1,136	1,542
Total de Gobierno	1,088	7,078	787	3,792	2,274	770	1,199	1,250	1,007	1,341	1,053	1,259
Total de Comunidad	1,389	365	788	367	452	607	823	308	113	344	83	268
Huertos y Otras	25	0	44	0	67	11	134	2	0	7	0	15

Table 4

Correlaciones de Algunas Variables
Programa de Alimentación Escolar, Región Cañas, Costa Rica, 1987

Variables			Coefficiente de Correlación
Alimentos de Gobierno por Año/Beneficiario	Y	Año/Beneficiarios	- .39
Alimentos de Comunidad por Año/Beneficiario	Y	"	- .56
Gastos Total de Alimentos por Año/Beneficiario	Y	"	- .84
Gastos Total de Personal por Año/Beneficiario	Y	"	- .42
Gastos Total de Operaciones por Año/Beneficiario	Y	"	- .08
Gastos Total del Programa por Año/Beneficiario	Y	Año/Beneficiarios	- .58
Contribución Total de Gobierno por Año/Beneficiario	Y	"	- .43
Contribución Total de Comunidad por Año/Beneficiario	Y	"	- .65
Alimentos de Gobierno por Año/Beneficiario	Y	Alimentos de Comunidad por Año/Beneficiario	- .21
Contribución Total de Gobierno por Año/Beneficiario	Y	Contribución Total de Comunidad por Año/Beneficiario	.16

Table 5

Number of Students and Government-Paid Cooks in 158 Schools
Cañas Region, Costa Rica, 1987

Number of Students (Range)	Number of Schools	Total Students in Range	Number of Government Paid Cooks	Number of Schools with This Many Cooks				Average Cooks Per School
				0	1	2	3	
0-9	1	6	0	1				0
10-19	16	262	4	12	4			.25
20-29	36	864	16	20	16			.44
30-39	21	686	9	12	9			.43
40-49	4	170	1	3	1			.25
50-59	22	1,218	10	12	10			.45
60-69	13	836	10	3	10			.77
70-79	12	881	8	4	8			.67
80-89	3	245	1	2	1			.33
90-99	0	0	0					
100-124	14	1,543	9	5	9			.64
125-149	2	274	2	1		1		1.00
150-199	4	680	4		4			1.00
200-299	3	785	3		3			1.00
300+	7	4,880	9	2	2	2	1	1.29
TOTAL	158	13,330	86	77	77	3	1	.54
0-19	17	2,68	4	13	4	0	0	.24
20-59	83	2,938	36	47	36	0	0	.43
60-124	42	3,505	28	14	28	0	0	.67
125+	16	6,619	18	3	9	3	1	1.13
Total Students	13,330	—	—	4,271	6,256	2,050	753	—
Average Students Per School	84.4	—	—	55.5	81.2	683.3	753	—
Std. Dev. Students	12.2	—	—	10.5	11.0	295.2	—	—
Ave. Cooks Per School	155	—	—	NO COOKS	—	—	—	—

Grafico 1

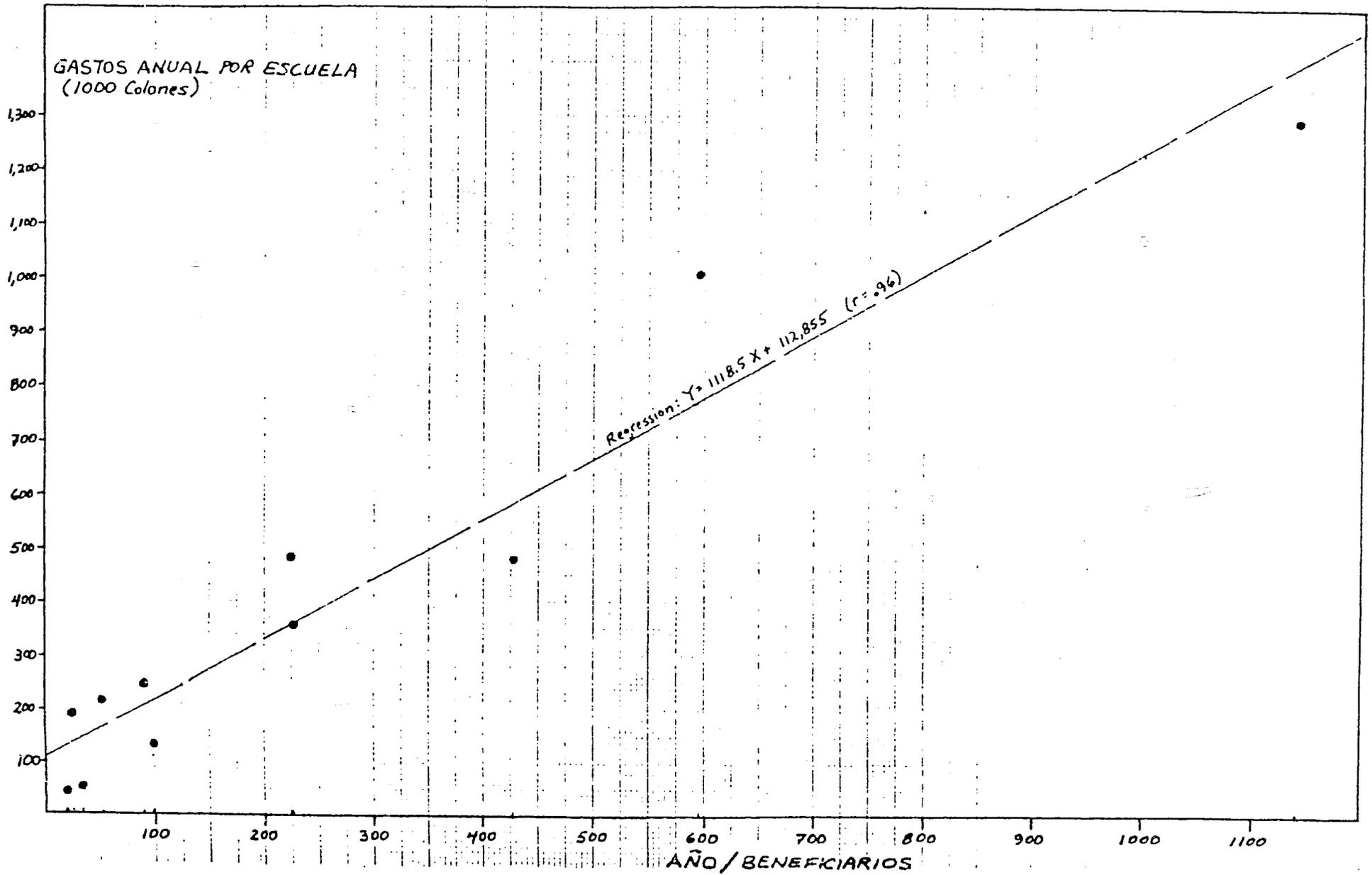


Grafico 2

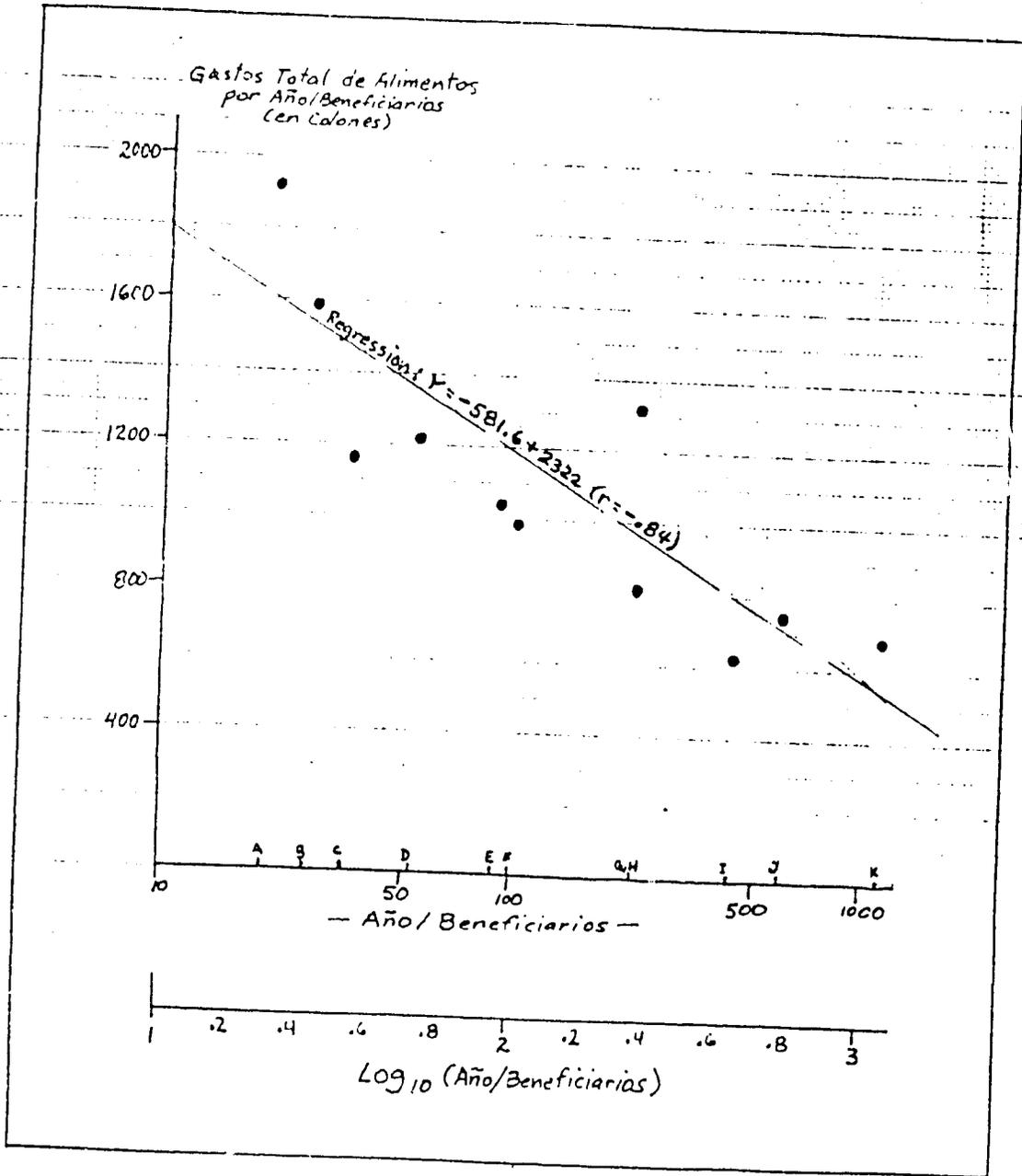


Grafico 3

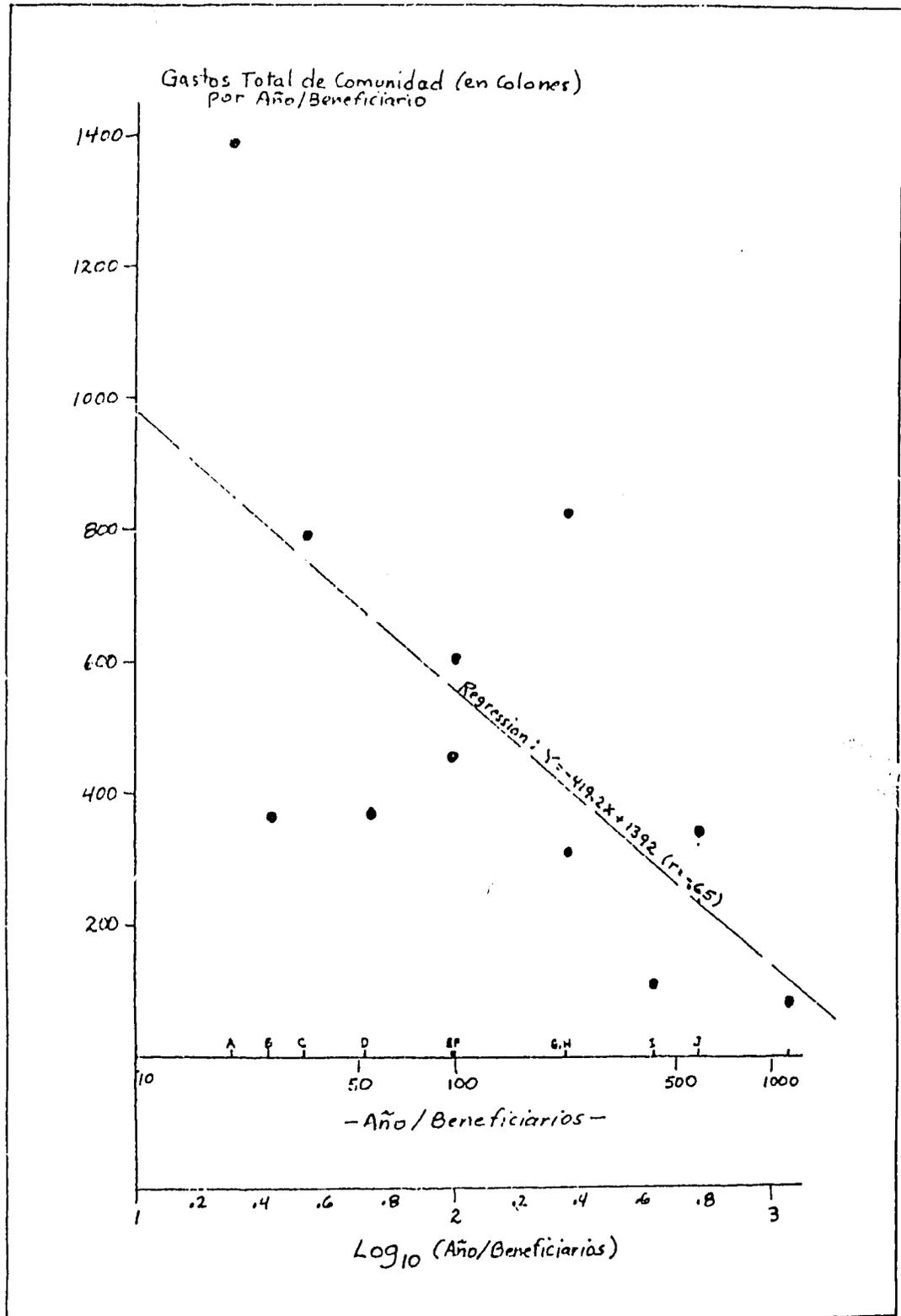
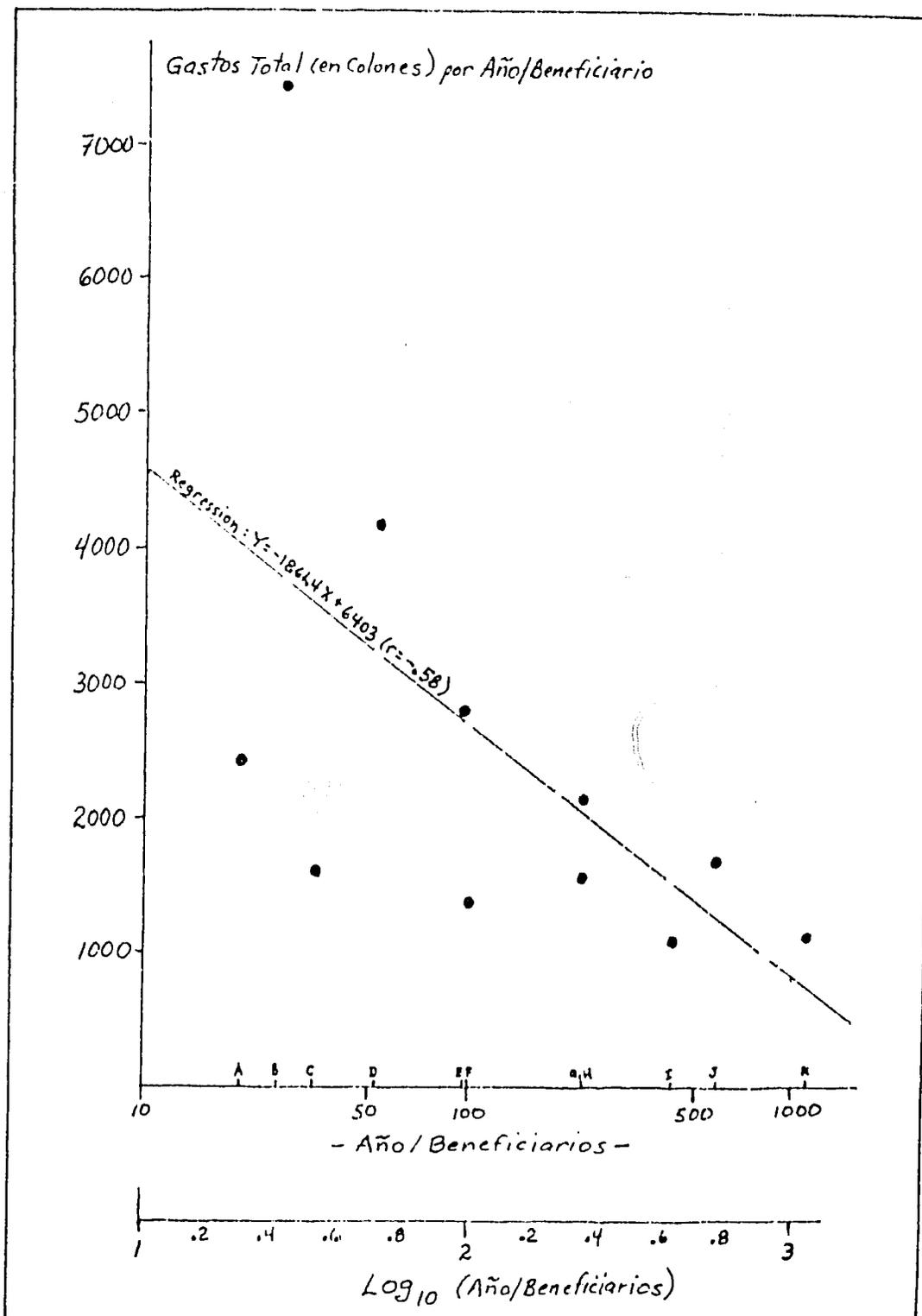


Grafico 4



TASA de COCINERAS PAGADO-POR-GOBIERNO
 por ESCUELA y ESTUDIANTES
 (158 Escuelas de Niños)

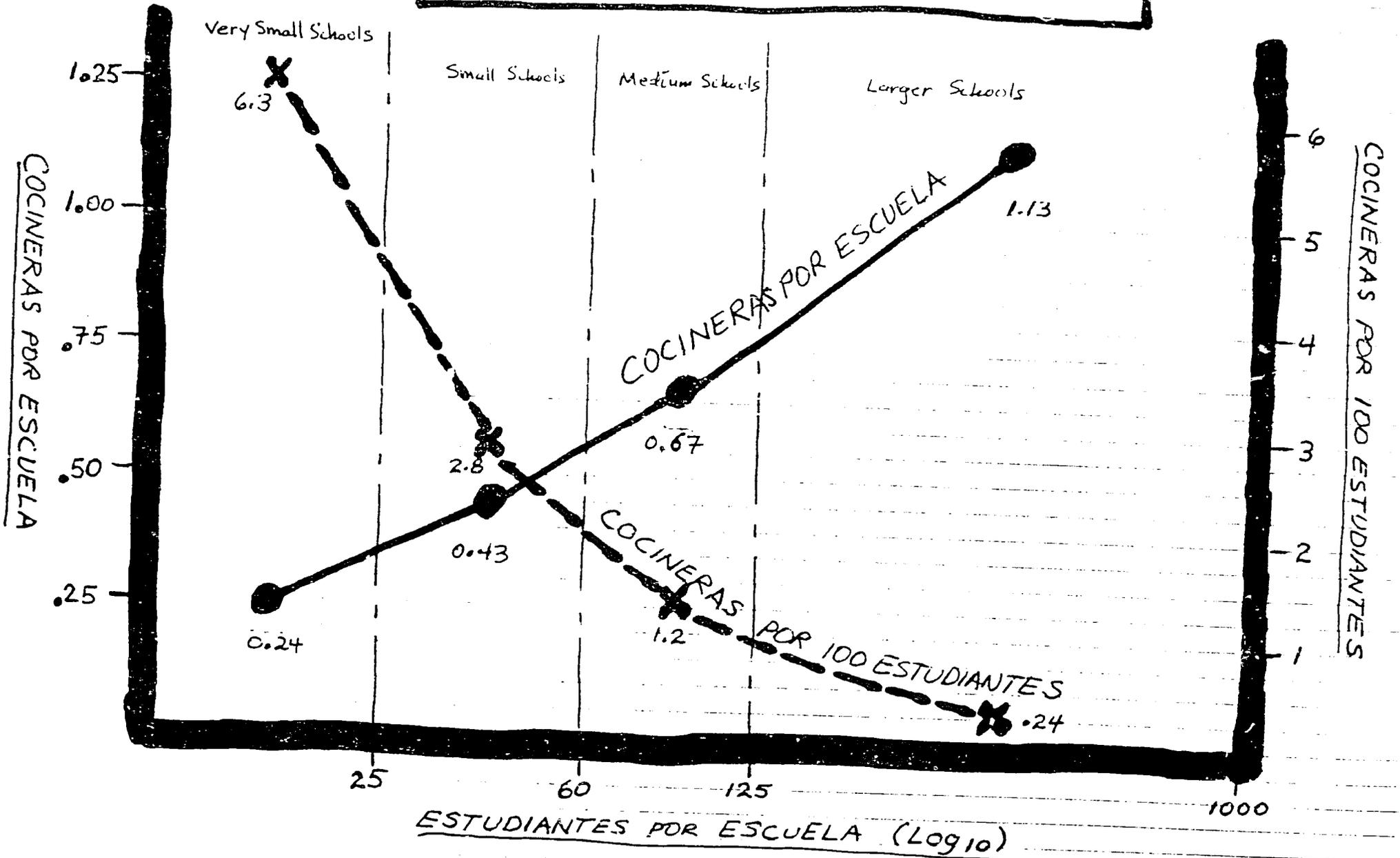
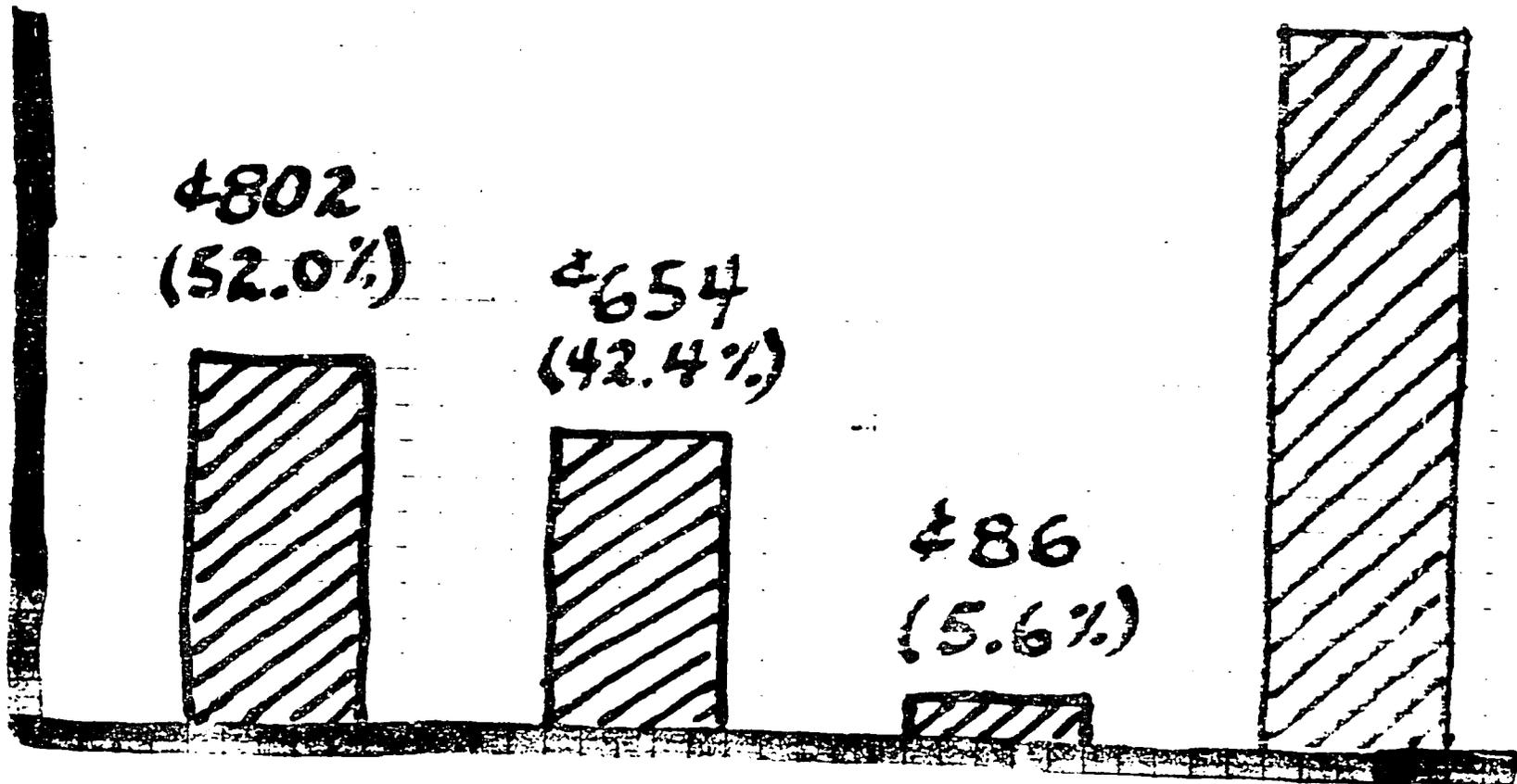


Gráfico 6

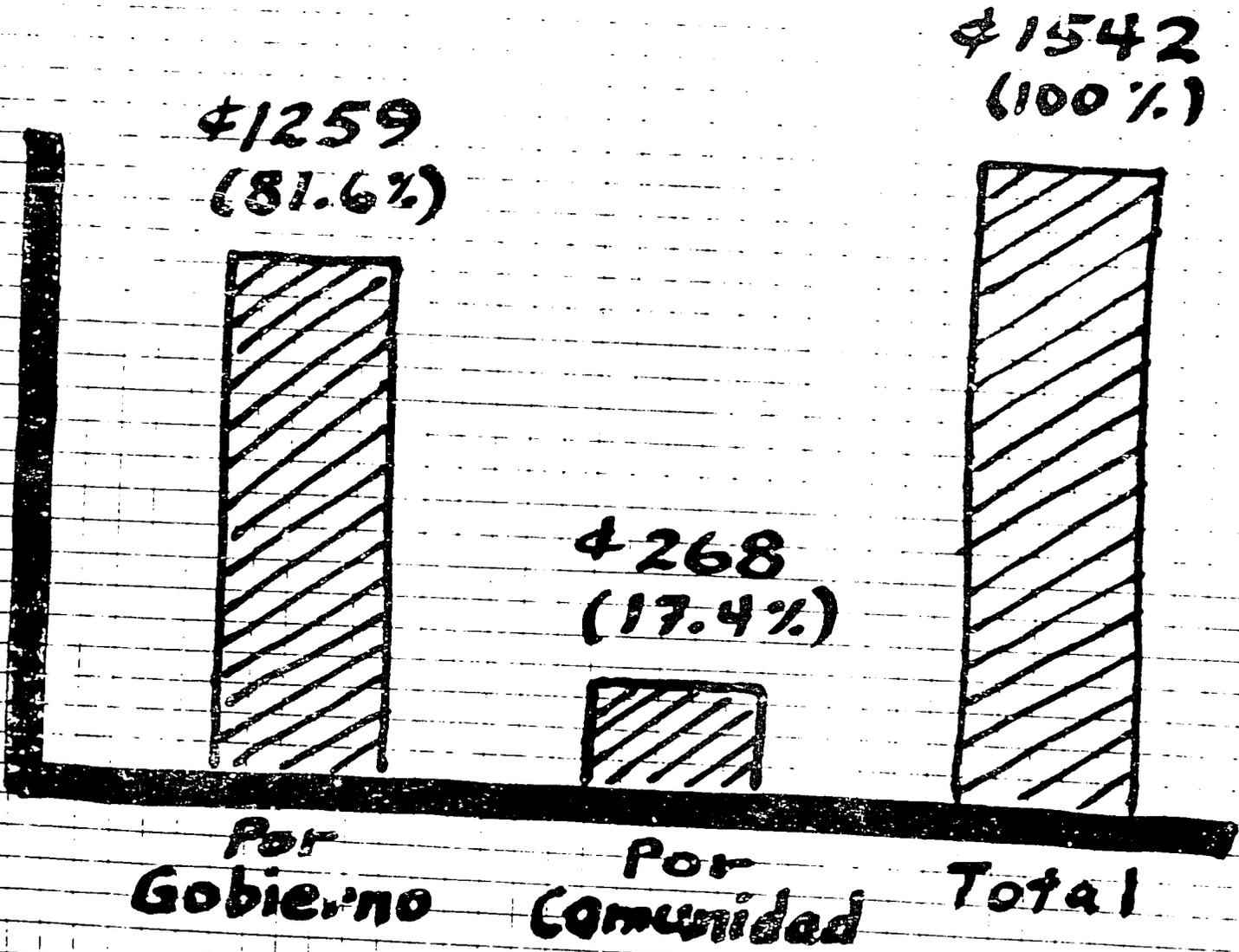
**GASTOS ANUALES
POR BENEFICIARIO
(11 Escuelas en Cañas)**

\$ 1542
(100%)



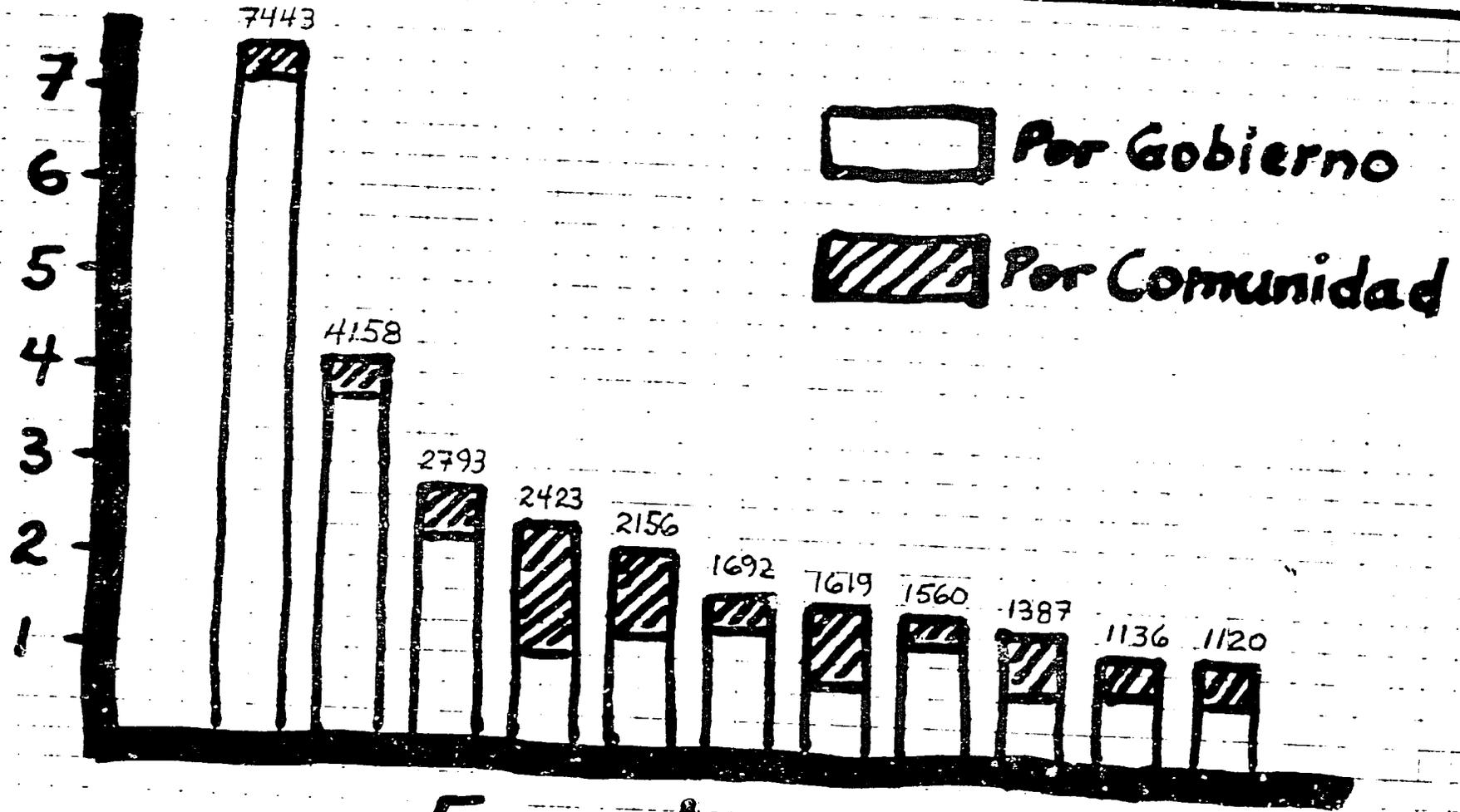
Alimentos Cocineras Operaciones Total

GASTOS ANUALES POR BENEFICIARIO (11 Escuelas en Cañas)



VARIACION EN GASTOS ANUALES POR BENEFICIARIO (11 Escuelas en Cañas)

Colones (En 1000)



Escuelas

Gráfico 9

ESCUELAS CON PROGRAMAS DE ALIMENTACION EN VACACIONES (11 Escuelas en Cañas)

	CON PROGRAMA EN VACACIONES	SIN PROGRAMA EN VACACIONES
CON COCINERA PAGADA POR GOB.	8	0
SIN COCINERA PAGADA POR GOB.	0	3

Anexo A

Escuelas en la Muestra

	Escuela	Circuito	Codigo
A	San Dial	4	7168
B	Lourdes	5	4222
C	Barrio Jesús	5	1608
D	San Antonio	4	6296
E	Río Naranjón	3	6020
F	Los Angeles	6	4464
G	El Carmen	6	0495
H	Biagua	3	0572
I	Antonio Obando E.	4	0490
J	José María Calderón	6	7776
K	Mons. Luis Leipold	4	0746

Date on 158 Schools in Cañas Region

Number of Students and Teachers obtained from Cuadros de Anos as of December 1986. Number of Gov't Costs obtained from Planes Personales Servidores Municipales

0 = No Gov't Costs
1 = Gov't Costs

0 = No Gov't Costs
1 = Gov't Costs

0 = No Gov't Costs
1 = Gov't Costs

School	Gov't Costs	Students	Teachers
CIRCUIT 1			
1. Cinamate	1	163	4
2. El Progreso	-	56	2
3. Chiquierria	-	65	2
4. El Ingeniero	-	117	3
5. El Carmen #1	1	54	2
6. El Rosario	1	51	2
7. Buena Vista	-	71	2
8. El Rosario	1	66	2
9. La Esperanza	1	52	2
10. La Verdad	-	50	1
11. Los Abilpas	-	55	2
12. Miramar	1	54	2
13. Nazareth	1	72	2
14. El Carmen #2	1	66	2
15. Quebrada Grande	1	27	1
16. San Isidro	-	67	2
17. San Antonio	1	101	3
18. Teodoro Picado	2	530	14
19. Villano Azul	-	101	3
20. San Fernando	1	30	1
21. Santa Cecilia	-	31	1

School	Gov't Costs	Students	Teachers
CIRCUIT 2			
1. Caño Blanco	-	30	1
2. El Delirio	-	55	2
3. Futuro	-	59	2
4. Jesus de Popocate	1	75	2
5. La Perla	1	27	1
6. La Victoria	1	174	4
7. Dolicias	1	61	2
8. Rafaela Santiz Arrieta	1	126	3
9. Dr. Ricardo Morico	1	167	4
10. Las Perlas	-	81	2
11. Quehualón	1	63	2
12. San José	1	124	3
13. Colonia San José	-	36	1
14. Colonia Parícks de París	-	56	2
15. Escuela San Raimundo	1	70	3
16. Santa Clara	1	122	2
17. Suampita	-	71	3
18. Santa Lucia	-	40	2
19. Villa Hermosa	1	90	1
20. Villa Nueva	1	69	2
21. Pizotillo	-	57	2
22. Colonia Jesús María	1	19	1
23. La Unión	1	100	3
24. San Basilio	1	27	1

School	Gov't Costs	Students	Teachers
(CIR 6 cont)			
27. San Pedro	-	18	1
28. Solania	-	18	1
29. Jaime Gutierrez	1	58	2
30. Tronadora	2	148	3
31. Escuela Turin	1	22	1
32. La Maravilla	1	13	1
33. Centro de Refugio	-	767	8

School	Gov't Costs	Students	Teachers
CIRCUIT 3			
1. Ojiguan	1	243	7
2. Santa Rosa de la Patria	1	28	1
3. Caña Reta	-	36	1
4. Los Garzas	1	37	1
5. Colonia Puntarenas	1	60	2
6. Rio Chiguito	-	31	1
7. El Solito	-	42	1
8. Las Flores	-	56	2
9. Cuatro Cruces	1	101	3
10. Puerto Nuevo	-	25	1
11. Campo Verde	1	37	1
12. Rio Naranjo	-	102	3
13. El Pilon	-	6	1
14. San Cristóbal	1	31	1
15. San Jorge	1	122	3
16. San Miguel	1	26	1
17. Santa Rosa	1	105	3
18. Santo Domingo	1	30	1
19. Papote	1	55	2
20. San Luis	-	26	1
21. San Gabriel	-	55	2
22. Escuela L. Vignani	-	22	1

School	Gov't Costs	Students	Teachers
CIRCUIT 4			
1. Agua Caliente	-	21	1
2. Antonio Ojando Espinal	1	430	12
3. Escuela Babadero	-	330	8
4. Mons. Luis Luján	2	1372	40
5. El Nispero	1	31	1
6. Colonia San Luis	-	76	2
7. Carobia	-	84	2
8. Lajas	-	59	2
9. Benigno Fernandez	-	55	2
10. El Vergel	-	27	1
11. Guapinol	1	18	1
12. Hacienda Taboga	-	41	1
13. Hacienda Tenorio	-	25	1
14. Higuerón	1	20	1
15. Las Figueras	1	11	1
16. Escuela San Luis	-	112	3
17. Ponso Ronde	-	30	1
18. Parozul	1	21	1
19. San Antonio	1	64	2
20. San Isidro	-	19	1
21. San Juan	-	31	1
22. San Miguel	-	72	2
23. Escuela Sordal	-	24	1
24. Santa Lucia	1	37	1
25. Nueva Guatemala	-	32	1
26. Buenos Aires	-	27	1

School	Gov't Costs	Students	Teachers
(CIR 6 cont)			
27. Linda Vista	1	62	2
28. Sibilito	-	27	1
29. Las Parcelas	-	25	1
30. José María Calles M.	1	752	7

School	Gov't Costs	Students	Teachers
CIRCUIT 5			
1. Matapalo	1	78	2
2. San Antonio de Cebedilla	-	10	1
3. Tortugal	-	19	1
4. Santa Lucia	-	36	1
5. Arizona	1	60	2
6. Candelaria	-	21	1
7. Peñas Blancas	1	74	2
8. Campos de Oro	-	30	1
9. Escuela de Calucelo	1	176	4
10. Concepción de Calucelo	-	30	1
11. Concepción de San José	1	24	1
12. Coyolito	-	23	1
13. Barrio Jesús	-	53	2
14. Los Angeles	-	21	1
15. El Dos	-	13	1
16. San Joaquín	1	47	1
17. Joaquín Arroyo	1	109	3
18. Escuela La Sierra	1	25	1
19. Tres Amigos	1	26	1
20. Las Justas	1	648	20
21. Lourdes	1	25	1
22. de Limonal	1	54	2
23. Pozo Azul	1	74	2
24. Pueblo Nuevo	1	75	2
25. Altos de Cebedilla	-	13	1
26. San Buenaventura	1	107	3
27. Caritas	-	19	1
28. San Juan	1	52	2
29. Higuerillas	-	22	1
30. Tres Hermanos	-	13	1

School	Gov't Costs	Students	Teachers
CIRCUIT 6			
1. Arenal	1	277	8
2. El Carmen	1	265	8
3. Viejo Arenal	-	32	1
4. Los Tornos	-	22	1
5. Labecera de Caña	1	56	2
6. Campos de Oro	1	18	1
7. La Palma	-	23	1
8. Paraíso	-	20	1
9. San Luis	1	66	2
10. El Aguacate	1	38	1
11. Cerro San José	1	26	1
12. El Dos	1	23	1
13. Rosita Ch. de Cabezas	1	73	2
14. El Silencio	-	21	1
15. La Cruz T.	-	18	1
16. La Unión	-	25	1
17. Las Nubes	-	18	1
18. Los Angeles	-	120	3
19. Los Patios	1	22	1
20. Mata de Caña	1	28	1
21. Quebrada Grande	1	67	2
22. Rio Chiguito	1	30	1
23. Escuela La Esperanza	-	20	1

Four schools in INCAP sample, but not included here:
CIRCUIT 5: San Luis, San Rafael, Tierras Coloradas
CIRCUIT 6: San Miguel

ANNEX C

Cañas Region Schools in PROPAG
Sample of 400

NO. ESCUELA	CODIGO	NOMBRE	COD. TRES DISTRITO	NOMBRE
300	21301	301 CANALETE	0900	CANALETE
301	21301	301 EL PROGRESO	1089	EL PROGRESO
302	21301	301 EL HIGUERON	2279	HIGUERON
303	21301	301 EL ROSARIO	2600	EL ROSARIO
304	21301	301 BUENA VISTA	2681	BUENA VISTA
305	21301	301 EL FOSFORO	2842	FOSFORO
306	21301	301 MIRAMAR	4838	MIRAMAR
307	21301	301 EL CARIEN	5090	EL CARIEN
308	21301	301 TEODORO FIGADO NICOLAI SBY	7736	UPALA
309	21301	301 LLANO AZUL	8267	LLANO AZUL
310	21301	301 SAN FERNANDO	8268	SAN FERNANDO
311	21301	301 SANTA CECILIA	8302	SANTA CECILIA
312	21301	301 COLONIA PUNTARENAS	1264	COLONIAS PUNTARENAS
313	21301	303 CUATRO CRUCES	4787	CUATRO CRUCES
314	21301	303 SANTA ROSA	7318	SANTA ROSA
315	21301	303 SAN LUIS	8270	SAN LUIS
316	21301	303 SAN GABRIEL	8300	SAN GABRIEL
317	21301	303 BIZAGUA	0572	BIZAGUA
318	21301	303 EL DEL IRIO	0906	EL DEL IRIO
319	21301	302 JESUS DE FOYDAPA	3186	JESUS DE FOYDAPA
320	21301	302 LA COLONIA DE SAN JOSE	6398	LA COLONIA
321	21301	302 SAN JOSE	6636	SAN JOSE
322	21301	302 SANTA LUCIA	7612	SANTA LUCIA
323	21301	302 VILLA HERMOSA	7980	VILLA HERMOSA
324	21301	302 VILLA NUEVA	7992	VILLA NUEVA
325	21301	302 PIZOTILLO	8225	PIZOTILLO
326	21301	302 COLOIA JESUS MARIA	8272	JESUS MARIA
327	21301	302 LA UNION	8520	LA UNION
328	21301	302 SAN BOSCO	0906	SAN BOSCO
329	21301	303 SANTA ROSA DE LA PALMERA	0650	PALMERA
330	21301	303 EL SALTO	2610	SALTO
331	21301	303 LAS FLORES DE BIZAGUA	4210	FLORES
332	21301	303 PUEBLO NUEVO	5640	FUERLO NUEVO
333	21301	303 EL PILON	6025	PILON
334	21301	303 SAN CRISTOBAL	6386	SAN CRISTOBAL
335	21301	303 SAN MIGUEL	6879	SAN MIGUEL
336	21301	303 SANTO DOMINGO	7394	SANTO DOMINGO
337	21301	303 ZAPOTE	8096	ZAPOTE
338	21305	302 LA FERLA	3884	LA FERLA
339	21305	302 LA VICTORIA	4085	LA VICTORIA
340	21305	302 DELICIAS	4204	DELICIAS
341	21305	302 RAFAEL ANGEL SAUCHEZ	4788	MEXICO
342	21305	302 DR. RICARDO MORENO CAYAS	4952	MORENO CAYAS
343	21305	302 LAS PAVAS	5336	LAS PAVAS
344	21305	302 QUEBRADON	5792	QUEBRADON
345	21305	302 SAN RAMON	7096	SAN RAMON
346	21305	302 SANTA CLARA	7192	SANTA CLARA
347	21307	301 CHIHURRIA	1144	CHIHURRIA
348	21307	301 EL CARIEN = 1	2340	EL SOCORRO
349	21307	301 LA ESPERANZA	3564	ESPERANZA
350	21307	301 NAZARETH	?	?

24

110	213071301	QUEBRADA GRANDE	5752	QUEBRADA GRANDE
119	213071301	SAN ISIDRO	6544	SAN ISIDRO
120	213071301	SAN ANTONIO	7460	SAN ANTONIO
125	213071301	LAS CAJAS	1172	SAN MARTIN
127	50101303	RIO CHICUITO	1976	CHICUITO
128	50101303	RIO NARANJO		
129	50601304	AGUA CALIENTE	0064	AGUA CALIENTE
130	50601304	ANTONIO DEBANDO ESPINOZA	0490	SAN MARTIN
131	50601304	DEBEDERO	0508	DEBEDERO
132	50601304	MONS. LUIS LEIPOLU	0746	CAJAS
133	50601304	EL NISPERO	1070	NISPERO
134	50601304	COLONIA SAN LUIS	1254	LIBERTAD
135	50601304	CURUBICI	1136	FALMIRA
136	50601304	LAJAS	1824	LAJAS
137	50601304	GERONIMO FERNANDEZ RUJAS	2476	HOTEL
138	50601304	GUAPIROL	3008	GUAPIROL
139	50601304	HACIENDA TABOGA	3038	TABOGA
140	50601304	LAS TIQUIRUSAS	4284	LAS TIQUIRUSAS
141	50601304	PURUSAL	5540	POROZAL
142	50601304	SAN ANTONIO	6276	SN ANTONIO
143	50601304	SAN JUAN	6716	JAYILLOS
144	50601304	SAN MIGUEL	8856	SAN MIGUEL
145	50601304	SANDIAL	7168	SANDIAL
146	50601304	SANTA LUCIA	7272	SANTA LUCIA
147	50601304	BUENOS AIRES	8496	BUENOS AIRES
148	50601304	HIGUERON	3084	HIGUERON
149	50601304	HATAPALO	0098	HATAPALO
150	50601304	ARIZONA	0288	ARIZONA
151	50601304	SAN LUIS	0796	SAN LUIS
152	50601304	CONCEPCION	1336	CONCEPCION
153	50601304	CHICUITO	1608	CHICUITO
154	50601304	LAS JUNTAS	4208	LAS JUNTAS
155	50601304	LIMONAL	4336	LIMONAL
156	50601304	ALTOS DE CEBADILLA	0156	ALTOS DE CEBADILLA
157	50601304	TRES AMIGOS	3830	TRES AMIGOS
158	50601304	LA SIERRA	3948	SIERRA
159	50601304	SAN RAFAEL	7000	SAN RAFAEL
160	50601304	TRES HERMANOS	7825	TRES HERMANOS
161	50601304	CAJITAS	8234	CAJITAS
162	50601304	LOS ANGELES	1840	LOS ANGELES
163	50601304	LOURDES	4222	LOURDES
164	50601304	POZO AZUL	5568	POZO AZUL
165	50601304	SAN JUAN	6664	SAN JUAN
166	50601304	TIERRA COLORADA	7764	TIERRAS COLORADAS
167	50601304	FE/AS BLANCAS	0738	FE/AS BLANCAS
168	50601304	COLORADO	1304	COLORADO
169	50601304	CONCEPCION DE COLORADO	1348	CONCEPCION
170	50601304	SAN JOAQUIN	2512	SAN JOAQUIN
171	50601304	PUEBLO NUEVO	5580	PUEBLO NUEVO
172	50601304	SAN BUENAVENTURA	6356	SAN BUENAVENTURA
173	50601304	HIGUERILLAS	8498	HIGUERILLAS
174	50801306	EL CARMEN	0495	EL CARMEN
175	50801306	SAN LUIS	2012	SAN LUIS
176	50801306	EL SILENCIO	2624	EL SILENCIO
177	50801306	JOSE MARIA CALDERON	7276	TILARAN
178	50802306	LOS TORNOS	0710	LOS TORNOS
179	50802306	CABECERA DE CAJAS	0792	CABECERA DE CAJAS
180	50802306	EL COS	2412	SAN RAMON
181	50802306	LAS NUBES	4258	LAS NUBES
182	50802306	LOS PATIOS	4548	LA FLORIDA
183	50802306	QUEBRADA GRANDE	5744	QUEBRADA GRANDE
184	50802306	LA ESPERANZA	6007	LA ESPERANZA
185	50802306	SAN MIGUEL	6860	SAN MIGUEL
186	50802306	CAMPO DE ORO	0884	CAMPO DE ORO

417 50802 306 LA CRUZ TILARAN
 418 50802 306 RIO CHIQUITO
 419 50804 306 EL AGUACATE
 420 50804 306 LOS ANGELES
 421 50804 306 LINDA VISTA
 422 50805 306 CERRO SAN JOSE
 423 50805 306 ROSITA CR. DE CABEZAS
 424 50805 306 SOLANIA
 425 50805 306 LA MARAVILLA
 426 50806 305 PARAISO
 427 50806 306 RIO PIEDRAS
 428 50806 306 SABALITO
 429 50806 306 JAINE GUTIERREZ ERAUN
 430 50807 306 ARENAL
 431 50807 306 LA UNION
 432 50807 306 HATA DE CAZA
 433 50807 306 LAS PARCELAS
 434 50807 306 TURIN

3500
 5980
 2272
 4464
 6050
 2376
 2476
 7580
 8502
 1916
 6032
 6152
 7772
 0280
 4020
 4740
 6507
 7856

LA CRUZ
 RIO CHIQUITO
 EL AGUACATE
 LOS ANGELES
 CUERADA AZUL
 CERRO SAN JOSE
 LIBANO
 SOLANIA
 MARAVILLA
 PARAISO
 RIO PIEDRAS
 SABALITO
 TIERRAS MORENAS
 ARENAL
 UNION
 HATA DE CAZA
 LAS PARCELAS
 TURIN