

AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON, D. C. 20523
BIBLIOGRAPHIC INPUT SHEET

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BATCH #20

1. SUBJECT CLASSIFICATION	A. PRIMARY Agriculture	AL72-0000-G302
	B. SECONDARY Pests of animals--Latin America	

2. TITLE AND SUBTITLE
Vampire bat control programs in Latin America: quarterly news report, July, 1974

3. AUTHOR(S)
Mitchell, G.C.

4. DOCUMENT DATE 1974	5. NUMBER OF PAGES 13p.	6. ARC NUMBER ARC
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7. REFERENCE ORGANIZATION NAME AND ADDRESS
Interior

8. SUPPLEMENTARY NOTES (Sponsoring Organization, Publisher, Availability)
(First number)

9. ABSTRACT

10. CONTROL NUMBER PN-RAB-191	11. PRICE OF DOCUMENT
12. DESCRIPTORS Bats, vampire Latin America Pest control	13. PROJECT NUMBER
	14. CONTRACT NUMBER PASA RA (ID01-67 Res.)
	15. TYPE OF DOCUMENT

VAMPIRE BAT CONTROL PROGRAMS IN LATIN AMERICA
QUARTERLY NEWS REPORT
July 1974

By: G. Clay Mitchell

U.S. Agency for International Development

Denver Wildlife Research Center

QUARTERLY NEWS REPORT ON VAMPIRE BAT CONTROL
PROGRAMS IN LATIN AMERICA

This is the first of a series of quarterly reports that will keep you abreast with vampire bat control work in Latin America.

Brazil

The national rabies control program is under the direction of Dr. Carlos Eduardo Autran de Freitas. Presently, a pilot vampire bat research and control program is being incorporated into the national campaign against rabies. Vampire bat control and research was initiated in the Northeast and more recently in the South. In the Northeast, Dr. Rogerio Piccinini is coordinator for seven states and Dr. Nilson Freire is coordinator for the states of Bahia and Sergipe. In the South, Dr. Pedro Ferreira is coordinator for the state of Santa Catarina, and Dr. Homero Arruda is coordinator for the state of Parana. Beginning in July, there will be 15 field teams operating in the Northeast in the states of Maranhao, Piaui, Ceara, Pernambuco, Alagoas, Sergipe, and Bahia. About 400,000 cruzeiros (\$65,000) has been allotted by the Ministry of Agriculture for this program until the end of 1974. The 15 control teams consist of Federal and State personnel, most of whom attended AID-sponsored workshops.

Follow-up continues at two ranches treated in January 1972 (Table 1). Twenty-seven months later the biting incidence was 80.8% less than pretreatment counts at Engenho Santo Estavo and 92.5% at Engenho Velho.

Campaign Coordinator

Dr. Carlos Eduardo Autran de Freitas
SQS 404 - Bloco A - Apt. 307
Brasilia, D. F., Brazil

Table 1. Continuing results from ranches near Cabo, Pernambuco, where vampires were topically treated with Diphenadione

	Engenho Santo Estavo					Engenho Velho				
	Before treatment	After treatment				Before treatment	After treatment			
		Jan 72 14 days	Jan 73 1 yr	Agu 73 19 mo	Apr 74 27 mo		Jan 72 14 days	Jan 73 1 yr	Aug 73 19 mo	Apr 74 27 mo
No. cattle checked for fresh bites	44	44	45	45	42	60	60	60	60	67
No. fresh bites	73	0	4	4	14	67	3	6	6	5
No. vampires treated	33	-	-	-	-	54	-	-	-	-
Reduction of fresh bites after control (%)	-	100	94.5	94.5	80.8	-	95.5	91.0	91.0	92.5

British Honduras (Belize)

British Honduras has a regional program.

Campaign Coordinator

Dr. George Calderbank
Head, Livestock Division
Department of Agriculture
P. O. Box 181
Belize City, British Honduras

Central America

Ministry of Agriculture personnel from Honduras, Guatemala, and El Salvador have been briefed on the control methods. In each country they plan to evaluate the vampire bat-rabies problem prior to requesting technical assistance and initiating control programs.

Colombia

Colombia is developing a regional control program in the states of Guajira, Sucre, and Antioquia. The program has been approved by the Ministry of Agriculture and AID/Colombia.

In August or September a buffer zone will be created at the front of a rabies outbreak zone in the Guajira. In 1971 a rabies outbreak commenced near Fonseca, Guajira. The outbreak has move southwardly toward San Jaun del Cesar and 648 cattle have died from rabies. Value for these losses has been set at \$140,000.

The intent of the buffer zone is to stop rabies from infecting free zone. The virus is moving southwardly and possibly by reducing vampire bats in a free zone will contain the virus.

Veterinarians from Sucre, Antioquia, and Guajira will participate in creating the buffer zone. Later these veterinarians will be the nucleus of developing control programs in the three states.

Campaign Coordinator

Dr. Jaime Barrera
Director Otras Campanas
Instituto Colombiano Agropecuario
Bogota, Colombia

Ecuador

Field demonstrations of the control methods were given for Ministry of Agriculture, Ecuador, personnel in June. The Ministry plans to evaluate the problem in Ecuador, state by state, prior to beginning a control program.

A study to evaluate the effect of vampire bat control on health and production of lactating dairy cattle was initiated near Quito. Hematological parameters and milk production are being investigated to determine how controlling vampire bat populations will affect the economics of raising dairy cattle.

Probable Campaign Coordinator

Dr. Anibel Narvaez, Jefe
Sanidad Animal
Ministerio de Agricultura y Ganaderia
Quito, Ecuador

Guyana

Ministry of Agriculture and World Bank Guyana personnel have a great interest in the vampire bat rabies problem and would like to conduct a training session. The training is tentatively scheduled from September 30 to October 12 and will include the following:

A. Classroom Session

- Summary of rabies problem in Guyana
- Summary of rabies problem in Latin America
- Summary of control methods - lectures, movies, slides
- Identification of vampires and other species
- Safety precautions in handling bats
- Can present a movie, slide program to local cattlemen

B. Field Session

Pretreatment evaluation - count bites on cattle, location of roosts if known.

Demonstration of capturing and chemically treating the vampires--includes method of capturing vampires with mist-nets, identification of vampires and other bat species, proper handling of the bats, treating the vampires with the anticoagulant, Diphenadione.

Demonstration of chemically treating the cattle--includes instruction in use of injection equipment.

Posttreatment evaluation--count the bites on cattle about 10 days after control to determine percent control.

Program Coordinator

Dr. Peter Fernandez
Chief Veterinary Officer
Ministry of Agriculture
Georgetown, Guyana

Mexico

The Animal Health Division of the Ministry of Agriculture are developing a regional campaign. Thus far bats have been controlled in the states of Colima, Morelos and Yucatan.

Campaign Coordinator

Dr. Luis Manriquez
Sanidad Animal
Ministerio de Agricultura
Mexico, D.F., Mexico

Nicaragua

The National Campaign began in March, 1974. Nicaragua has appropriated \$570,000 for a 5-year effort (\$170,000 for the first year and \$100,000 for each year thereafter). Twenty technicians have been assigned to the campaign and are working in teams of two men to a vehicle.

In March and April personnel from the campaign reduced biting on 15,524 cattle by 71.36% (Table 2). Though these are not spectacular results, one must consider the workers were just learning to use the control methods and results will improve with experience.

Table 2. General report on the national campaign in the Departments of Granada, Boaco, and Managua

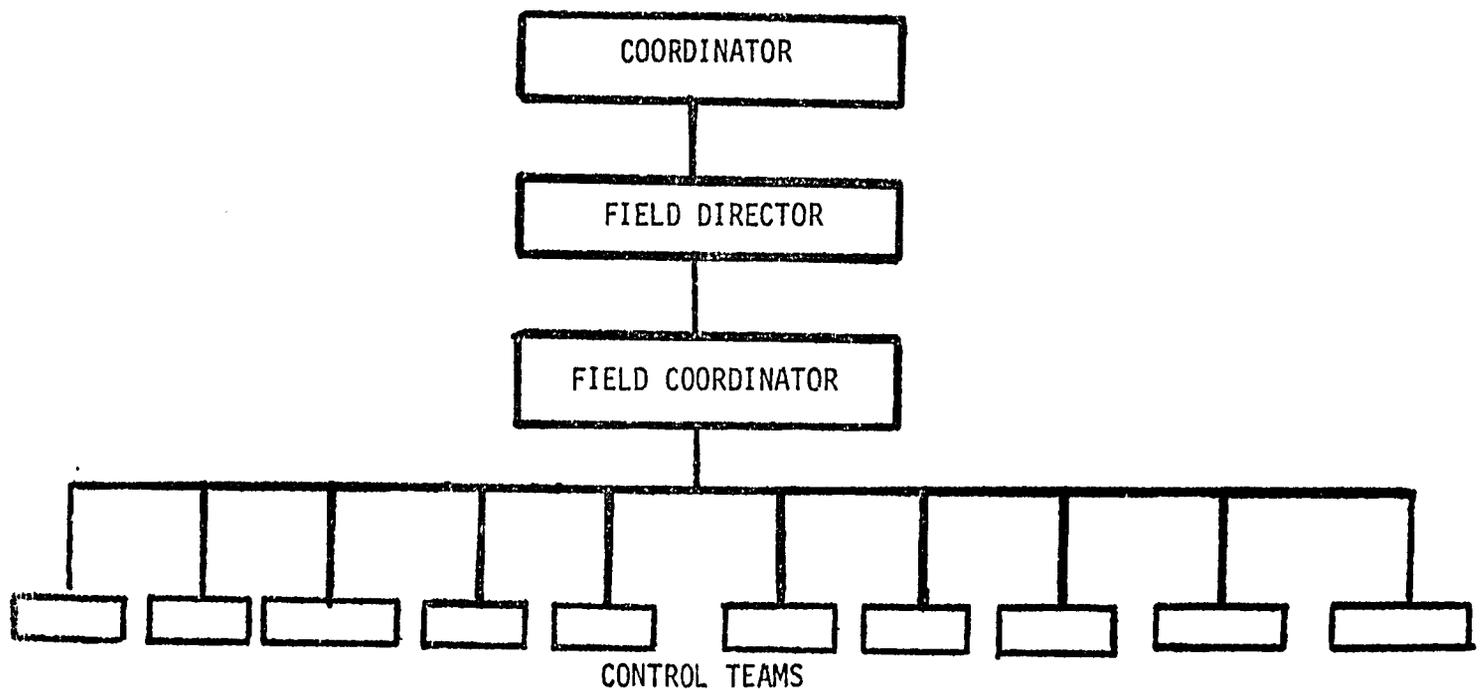
March and April 1974

Ranches Visited	Animals Examined	Fresh Bites	No. Vampires Captured	No. Cattle Treated
175	15,524	12,815	353	5,868

A reduction in fresh bites of 71.36% on the cattle was observed after treatment.

In May, 136 ranches were treated (Appendix A). Evaluation of control efforts was made in June and are not available at this time, but should be excellent. It should be noted all ranches are being treated regardless of size. Cattle on ranches treated in May numbered from 6 to 554.

Nicaragua's campaign can serve as the model for other Latin American countries.



Working in teams of two, the ten control teams submit weekly reports to the field coordinator. These reports include ranches worked and follow-up data. The field director submits a monthly report to the coordinator for tabulation and statistical analysis.

Campaign Coordinator

Dr. Rodrigo Gonzalez
Director General de Ganaderia
Ministerio de Agricultura
Managua, Nicaragua

Panama

The Ministry of Agriculture, Panama, is mounting a national campaign. Seven teams are being trained to apply the control methods. Initial control efforts begin in July near Capira.

Campaign Coordinator

Dr. Gerardino Medina
Ministerio de Desarrollo Agropecuario
Panama, Panama

Surinam and French Guyana

Both countries have requested information on the control methods. It was recommended they participate in the Guyana training session.

Venezuela

Venezuela has a regional campaign in the western part of the country.

Campaign Coordinator

Dr. Horacio Delgado
Ministerio de Agricultura y Cria
Centro de Investigaciones Veterinarias
Apartado 70
Maracay, Venezuela

Appendix A: Nicaraguan ranches where vampire bat control methods were applied in May 1974.

DEPARTMENT OF BOACO
MAY 1974

DATE	RANCHES	CATTLE EXAMINED	FRESH BITES	NO. VAMPIRES TREATED	NO. CATTLE TREATED
29/4/74	STA. ISABEL	159	103	3	159
30/4/74	SN. BARTOLO	77	78	-	77
2/5/74	LA CONCHA	40	28	14	-
2/5/74	LA PALMERA	20	90	-	25
6/5/74	CRISTO ROBARIO	100	25	3	-
6/5/74	EL PALMAR	27	26	-	27
7/5/74	POTRERILLOS	22	7	-	22
7/5/74	POTRERILLOS	9	20	-	9
7/5/74	SAN GREGORIO	30	8	-	22
8/5/74	SAN EMILIO	19	21	-	13
9/5/74	STA. JUANA	29	6	-	29
9/5/74	SAN ANTONIO	33	18	-	33
9/5/74	AGUAS CALIENTES	13	11	-	13
9/3/74	LA FLOR	40	30	-	17
9/5/74	SAN ANTONIO	50	23	-	38
13/5/74	EL MANGO	40	21	-	40
13/5/74	LAS LIMAS	70	22	-	60
13/5/74	SANTA ELENA	60	7	2	60
14/5/74	SAN AGAPITO	25	14	-	22
14/5/74	EL SOCORRO	53	49	-	53
14/5/74	LA CALERA	45	9	-	45
14/5/74	SAN AGAPITO	25	14	-	22
14/5/74	LA CALERA	45	9	-	45
14/5/74	EL SOCORRO	53	49	-	53
15/5/74	EL PEDERNAL	53	35	-	43
15/5/74	PIEDRA PINTADA	13	13	-	10
15/5/74	LAS MESAS	11	50	-	11
15/5/74	EL CONSUELO	40	12	-	40
15/5/74	EL PEDERNAL	53	35	-	43
15/5/74	PIEDRA PINTADA	13	13	-	10
15/5/74	LAS MESAS	11	50	-	11
15/5/74	EL CONSUELO	40	12	-	40
16/5/74	CATARINA	38	24	-	35
16/5/74	EL GUAPINOL	39	49	-	39
16/5/74	CATARINA	38	24	-	35
16/5/74	EL GUAPINOL	39	49	-	39
17/5/74	EL RODEO	66	65	-	64
17/5/74	LOS DOS CAMINOS	16	25	-	11
17/5/74	EL RODEO	66	65	-	64
17/5/74	LOS DOS CAMINOS	16	25	-	11
20/5/74	EL BESO	65	4	-	65
20/5/74	LA FORTUNA	63	5	-	43
21/5/74	BUENOS AIRES	200	425	-	200

DATE	RANCHES	CATTLE EXAMINED	FRESH BITES	NO. VAMPIRES TREATED	NO. CATTLE TREATED
21/5/74	SAN JORGE	38	13	-	38
21/5/74	SANTA JUANA	15	5	-	15
22/5/74	SAN ANTONIO	30	62	-	21
22/5/74	LA COCA	70	48	5	
23/5/74	GUANABANA	20	43	-	15
23/5/74	SAN BARTOLO	106	42	4	
24/5/74	EL COCO	41	89	-	41
28/5/74	CASA	9	5	-	6
29/5/74	SANTA ISABEL	159	103	3	159
29/5/74	SAN VICENTE	530	79	3	-
29/5/74	AGUAS CALIENTES	80	40	2	-
	54	3,089	2,189	39	2,002

DEPARTMENT OF GRANADA
MAY 1974

DATE	RANCHES	CATTLE EXAMINED	FRESH BITES	NO. VAMPIRES TREATED	NO. CATTLE TREATED
	AGUA ABRIA	69	152	5	-
22/4/74	EL CHARCO	18	137	25	-
22/4/74	MATIAS	66	10	6	-
25/4/74	STA. ELISA	150	40	5	-
25/4/74	EL DIAMANTE	140	45	-	-
25/4/74	Q. VADIRA	8	5	-	8
26/4/74	LOS RANCHONES	12	74	-	12
26/4/74	LA CHUSCADA	21	93	-	21
26/4/74	QUINTA ENA	38	52	8	-
29/4/74	SN. CARLOS	103	60	2	-
29/4/74	EL CARMEN	21	41	-	21
30/4/74	SN. CARLOS	10	6	-	10
30/4/74	STA. ISABEL	23	37	-	23
30/4/74	LAS PAZUELAS	71	40	-	71
2/5/74	SN. MONCHO	8	24	-	-
2/5/74	LA ORILLA	23	48	-	23
2/5/74	STA. INES	43	106	-	43
2/5/74	STA. ROSA	19	46	-	19
3/5/74	EL SOCORRO	28	55	-	28
3/5/74	SN. DIEGO	82	98	-	82
6/5/74	BETEL	28	68	-	28
6/5/74	SN. NICOLAS	23	13	-	23
6/5/74	STA. JUANA	16	18	-	16
6/5/74	MINERVA	50	71	-	50
7/5/74	SN. JOAQUIN	31	161	-	31
7/5/74	EL PICACHO	40	25	-	40
8/5/74	SN. AGUSTIN	200	1	-	-
9/5/74	VILLA AMPARO	32	12	-	32
9/5/74	EL TEPEVAC	30	30	-	30
9/5/74	SN. CARALAMPPIO	378	587	-	359
9/5/74	JUAN MOMBACHO	554	459	12	-
10/5/74	BUENA VISTA	65	141	-	65
10/5/74	LOS GUASIMOS	34	59	-	34
10/5/74	PILA VOLTEADA	37	25	-	37
13/5/74	SN. VALENTIN	9	18	-	-
13/5/74	STA. JUANA	22	52	-	22
13/5/74	CHARCO MUERTO	80	285	-	80
14/5/74	S. LOS DIRONES	91	162	-	91
15/5/74	SAN BLAS	18	42	-	18
15/5/74	CEACO DE PIEDRA	21	32	-	-
15/5/74	SN. ANTONIO	20	16	-	20
15/5/74	LA JOVA	15	11	-	15
15/5/74	SN. MATIAS	6	30	-	6

DATE

15/5/74	STA. ROSA	6	9	-	6
15/5/74	MES DE MAYO	23	8	-	23
16/5/74	MES DE MAYO	15	17	-	15
16/5/74	VICTOR MANUEL	9	28	-	9
16/5/74	LOS ANGELES	11	13	-	11
16/5/74	JOSE D. MOMBACHO	-	-	-	-
16/5/74	LA ZOPILOTA	7	12	-	7
16/5/74	SANTA JULIA	31	57	-	31
16/5/74	SAN LUIS	330	27	-	57
17/5/74	CASA DE TEJAS	122	244	-	70
17/5/74	PUNTA DE PLANCHA	56	67	-	56
17/5/74	SN. FRANCISCO	30	52	-	30
17/5/74	VERACRUZ	120	92	4	-
20/5/74	PENJAMO	121	171	-	121
20/5/74	LA FLOR	21	8	-	15
21/5/74	LA OMIVA	16	13	-	14
21/5/74	DIRIA	12	10	-	12
21/5/74	EL MANZANO	11	9	-	11
21/5/74	M. AUXILIADORA	17	15	-	13
21/5/74	EL ZAPOTE	15	3	-	15
21/5/74	EL PAJARILLO	5	2	-	5
21/5/74	LA CALERA	115	235	25	-
22/5/74	STA. LUCIA	12	3	-	12
22/5/74	DIRIA	18	17	-	18
22/5/74	DIRIA	20	25	-	20
23/5/74	DIRIA	22	32	-	22
24/5/74	SAN FELIPE	78	110	-	78
24/5/74	EL CAPULIN	193	255	-	193
24/5/74	EL PITAL	120	111	-	102
28/5/74	LA JOYA	53	21	-	49
28/5/74	LA ESPERANZA	12	17	-	12
29/5/74	LAS PUERTAS	91	47	-	91
29/5/74	SN. ROBERTO	145	65	3	-
29/5/74	LA PROVIDENCIA	70	81	-	70
30/5/74	LA ESPERANZA	282	70	-	54
30/5/74	LAS PAMPAS	96	89	-	86
30/5/74	SANTA ISABEL	48	408	-	48
30/5/74	EL TENDAL	6	17	-	6
30/5/74	QUINTA MELANIA	47	85	-	47

82

4,804

5,490

95

2,451