

October 2, 1967

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NATIONAL
COMMUNICABLE DISEASE

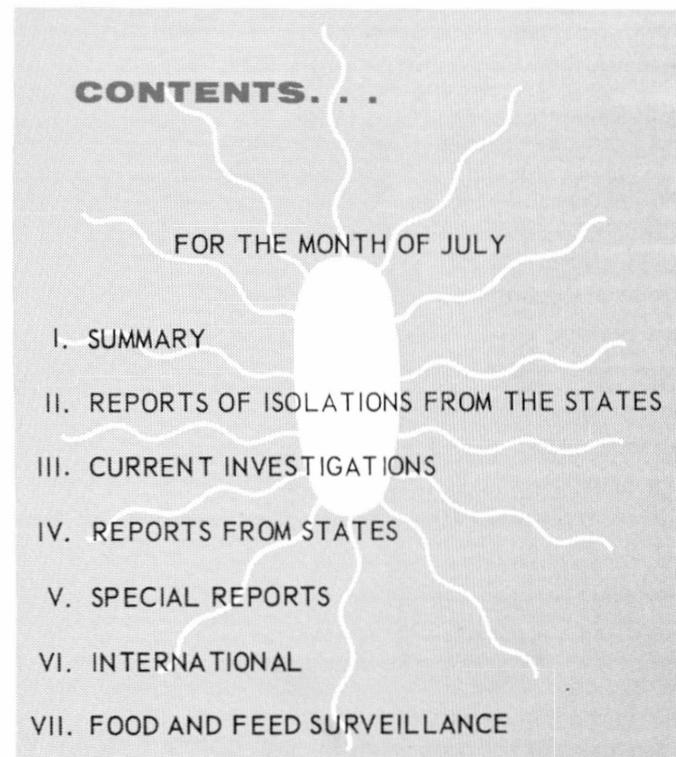
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SALMONELLA

SURVEILLANCE



PREFACE

Summarized in this report is information received from State and City Health Departments, university and hospital laboratories, the National Animal Disease Laboratory (USDA, ARS), Ames, Iowa, and other pertinent sources, domestic and foreign. Much of the information is preliminary. It is intended primarily for the use of those with responsibility for disease control activities. Anyone desiring to quote this report should contact the original investigator for confirmation and interpretation.

Contributions to the Surveillance Report are most welcome. Please address
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October 2, 1967

TABLE OF CONTENTS

	<u>Page</u>
I. SUMMARY	1
II. REPORTS OF ISOLATIONS FROM THE STATES	1
A. Human	
B. Nonhuman	
III. CURRENT INVESTIGATIONS	2
NONE	
IV. REPORTS FROM THE STATES	2
NONE	
V. SPECIAL REPORTS	2
NONE	
VI. INTERNATIONAL	2
NONE	
VII. FOOD AND FEED SURVEILLANCE	2
Progress Report on Food and Feed Surveillance Project	

I. SUMMARY

In July 1967, 1,875 isolations of salmonellae were reported from humans, an average of 469 isolations per week (Tables I and II). This number represents an increase of 101 (27.4 percent) over the weekly average of June 1967 and an increase of 61 (15.0 percent) over the weekly average of July 1966.

Reports of 605 nonhuman isolations of salmonellae were received during July, an increase of 55 (10.0 percent) from June 1967 (Tables IV, V, and VI).

II. REPORTS OF ISOLATIONS FROM THE STATES

A. HUMAN

The seven most frequently reported serotypes during July were:

<u>Rank</u>	<u>Serotype</u>	<u>Number</u>	<u>Percent</u>	<u>Rank Last Month</u>
1	<u>S. typhi-murium</u> and <u>S. typhi-murium var.</u> <u>copenhagen</u>	477	25.4	1
2	<u>S. heidelberg</u>	251	13.4	2
3	<u>S. enteritidis</u>	126	6.7	3
4	<u>S. newport</u>	108	5.8	4
5	<u>S. infantis</u>	91	4.9	7
6	<u>S. saint-paul</u>	78	4.2	5
7	<u>S. typhi</u>	67	3.6	6
Total		1198	63.9	
Total (all serotypes)		1875		

Salmonella heidelberg was more frequently reported than usual in July due to 115 isolations from an epidemic in St. Louis, Missouri. A summary of this outbreak will be included in next month's report.

The age and sex distribution is shown in Table III.

B. NONHUMAN

Thirty centers reported nonhuman isolations of salmonellae, in which 66 different serotypes were represented.

The seven most frequently reported serotypes during July were:

<u>Rank</u>	<u>Serotype</u>	<u>Predominant Source and Number</u>	<u>Number</u>	<u>Percent</u>	<u>Rank Last Month</u>
1	<u>S. typhi-murium</u> and <u>S. typhi-murium var.</u> <u>copenhagen</u>	cattle(17) and turkeys(15)	68	11.2	1
2	<u>S. tennessee</u>	dry milk(27)	61	10.1	2
3	<u>S. anatum</u>	dry milk(12)	58	9.6	5
4	<u>S. eimsbuettel</u>	animal feed(14) and glandular material(11)	42	6.9	Not listed
5	<u>S. heidelberg</u>	turkeys(27)	39	6.4	Not listed
6	<u>S. saint-paul</u>	turkeys(14)	25	4.1	4
7	<u>S. cubana</u>	vitamins(8)	24	4.0	Not listed
	Total		317	52.4	
	Total (all serotypes)		605		

The most prominent nonhuman sources of salmonellae reported during July were turkeys, 100 (16.5 percent); dry milk, 57 (9.4 percent); animal feed, 56 (9.3 percent); bone meal/meat scraps, 50 (8.3 percent); and cattle, 40 (6.6 percent).

III. CURRENT INVESTIGATIONS

NONE

IV. REPORTS FROM THE STATES

NONE

V. SPECIAL REPORTS

NONE

VI. INTERNATIONAL

NONE

VII. FOOD AND FEED SURVEILLANCE

Progress Report on Food and Feed Surveillance Project

One hundred twenty-seven frozen dessert pies, representing 28 brands, were received from North Carolina, New York City, Washington, Louisiana, Florida, Illinois, and New Mexico. They were examined for the presence of salmonellae and Escherichia coli. Twenty-one samples were positive for E. coli; whereas, all samples were negative for salmonellae. In addition, 21 samples of mixed feeds and 4 samples of wheat flour were examined for salmonellae; all were found negative.

TABLE I
COMMON SALMONELLA SEROTYPES ISOLATED FROM HUMANS IN THE UNITED STATES DURING ** JULY, 1967

SEROTYPE	GEOGRAPHIC DIVISION AND REPORTING CENTER																													SEROTYPE																		
	NEW ENGLAND						MIDDLE ATLANTIC						EAST NORTH CENTRAL						WEST NORTH CENTRAL						SOUTH ATLANTIC																							
	ME	NH	VT	MASS	RI	CONN	TOT	NY-A	NY-BI	NY-C	NJ	PA	TOT	OHIO	IND	ILL	MICH	WIS	TOT	MINN	IOWA	MO	ND	SD	NEBR	KAN	TOT	DEL	MD	DC	VA	WV	NC	SC	GA	FLA	TOT											
anatum							1								1					1													1	2	anatum													
bareilly																																		1	1	bareilly												
bertha																																		2	3	bertha												
blockley							7		2	9					3	2	2	7		2													10	3	blockley													
braenderup							1		1	2					2	2																		2	2	braenderup												
bredeney																1	1																			bredeney												
chester																																					1	1	chester									
cholerae-suis v.k.																																					1	1	cholerae-suis v.k.									
cubana							2			2																												cubana										
derby							1			1																												7	2	derby								
enteritidis							8		5	13						9	2	4	15	5	3	37	7	2	54											31	enteritidis											
give																																					3	3	give									
heidelberg							2	4		6						5	3	4	12	11	1	4	7	1	24											40	heidelberg											
indiana																																					1	1	indiana									
infantis							1	3	1	5						4	1	4	9	5	9	4	4	22											8	infantis												
java							11			11						1		5	6	1	5	3	3													5	java											
javiana																																					16	17	javiana									
kentucky																																					1	1	kentucky									
litchfield																																					2	2	litchfield									
livingstone																																							livingstone									
manhattan							3			3						1																					2	2	manhattan									
meleagridis																1	1																					9	10	meleagridis								
miami																																							2	2	miami							
mississippi																																							7	2	mississippi							
montevideo							1	1	2	1					8	1	10	1																	2	2	montevideo											
muenchen							1			1																												6	6	muenchen								
newington							2	2							1	3	2	6	1	8	2	11	2	1	1											28	newington											
newport																1	1	2	2	1	1	4	5	1	1												6	6	newport									
oranienburg																																							1	1	oranienburg							
panama							1	1							1		1	1	2																				1	1	panama							
paratyphi B							1									1																						1	1	paratyphi B								
poona																1																						2	2	poona								
saint-paul							6	1	7						3	2	2	7	4	15	5	1	25	2	2	1									16	16	saint-paul											
san-diego																																							5	5	san-diego							
schwarzengrund							3			3																												2	2	schwarzengrund								
senftenberg																																							1	1	senftenberg							
tennessee																																							7	7	tennessee							
thompson							5		5						1																									4	4	thompson						
typhi																																							30	30	typhi							
typhi-murium							2	1	28	2	15	48	2		31	23	23	79	16	9	30	17	10	82	7	3	11	1	1	8	32	17	8	2	11	19	23	80	typhi-murium									
typhi murium v.c							2		6	10					1	10	11																					1	1	typhi murium v.c								
urbana																																													urbana			
weltevreden																																													weltevreden			
worthington																																													worthington			
untyp., group B							1	4							5		1	1	2																							9	9	untyp., group B				
untyp., group C1							1								3																													1	1	untyp., group C1		
untyp., group C2															3																													6	6	untyp., group C2		
untyp., group D							1																																						6	6	untyp., group D	
untyp., group E																																														6	6	untyp., group E
untyp., or unk.															1		1																												1	2	untyp., or unk.	
Total Common	6	6	3	89	6	37	147	3	-0-	74	42	66	185	51	17	136	61	26	291	22	16	200	7	2	1	20	268	-0-	60	17	20	5	57	-0-	62	132	353	Total Common										
Total Other	-0-	-0-	-0-	2	-0-	2	1	-0-	1	3	6	11	2	2	2	2	10	-0-	-0-	6	-0-	0-	-0-	-0-	6	-0-	1	-0-	0-	-0-	-0-	4	5	10	Total Other													
Grand Total	6	6	3	91	6	37	149	4	-0-	75	45	72	196	53	19	138	63	28	301	22	16	206	7	2	1	20	274	-0-	61	17	20	5	57	-0-	66	137	363	Grand Total										

(New York, A-Albany, BI- Beth Israel, C-City)

**Includes June late report.

TABLE I (Continued)

SEROTYPE	GEOGRAPHIC DIVISION AND REPORTING CENTER																				JAN-JULY 1967 TOTAL	% OF JAN-JULY 1967 TOTAL	JAN-JULY 1966 TOTAL	% OF JAN-JULY 1966 TOTAL	SEROTYPE							
	EAST SOUTH CENTRAL					WEST SOUTH CENTRAL					MOUNTAIN					PACIFIC					OTHER											
	KY	TENN	ALA	MISS	TOT	ARK	LA	OKLA	TEX	TOT	MONT	IDA	WYO	COLO	NM	ARI	UTAH	NEV	TOT	WASH	ORE	CAL	ALAS	HAI	TOT	VI						
anatum						5	1		1	6						1	1		2		5	3	8			20	1.1	169	1.6	173	1.6	
bareilly						1	1		1	3											6	0.3	33	0.3	22	0.2						
bertha																					4	0.2	22	0.2	21	0.2						
blockley																					43	2.3	319	3.1	357	3.4						
braenderup						1	1		1	4											7	0.4	45	0.4	52	0.5						
bredeney																																
chester																																
cholerae-suis v.k.						1	1																									
cubana						1	1																									
derby																																
enteritidis						2	1	1		2											2	4	126	6.7	608	5.8	689	6.6				
give																					2	2	4	0.2	34	0.3	45	0.4				
heidelberg						3	1	4	1	1		7	9								32	1	38	13.4	251	9.6	886	8.4				
indiana																					2	0.1	25	0.2	50	0.5						
infantis						1	2	1	4	1		7	9								11	8	23	9.1	91	4.9	512	4.9				
java																																
javiana																																
kentucky																																
litchfield																																
livingstone																																
manhattan						1					1	2	3																			
meleagridis																																
miami																																
mississippi																																
montevideo																																
muENCHEN						1		1		5	5																					
newington							1																									
newport						2	2	4	5	30	41																					
oranienburg						1		3	2	3		8																				
panama																																
paratyphi B						1		1		1																						
poona							1		1	2																						
saint-paul						1		3		3																						
san-diego																																
schwarzengrund																																
senftenberg																																
tennessee						1		2	1	1	4	1																				
thompson							1																									
typhi						1	1	1	3	2	6	1																				
typhi-murium						9	9	18	2	9	2	23	36																			
typhi-murium v.c.																																
urbana																																
weltevreden																																
worthington																																
untyp., group B						7	7	4		1	5						12	1	13		2	5	2		9		83	4.4	227	2.2	194	1.8
untyp., group Cl						1	2		1	3							3			1		1			10	0.5	106	1.0	59	0.6		
untyp., group C2							1	1	2	5							7			7		36	1.9	56	0.5	22	0.2					
untyp., group D								1	3								3	1		4		14	0.7	36	0.3	25	0.2					
untyp., group E								1	1								2			2		4	0.2	13	0.1	7	0.1	41	0.4			
untyp., or unk.																	11	11														
Total Common	6	24	16	9	55	24	44	17	122	207	2	-0-	-0-	16	28	7	3	1	57	27	18	168	3	41	257		1,820	97.1	10,105	97.0	10,165	96.7
Total Other	-0-	-0-	-0-	-0-	1	2	2	4	9	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	1	-0-	2	-0-	4	7	55	2.9	317	3.0	342	3.3		
Grand Total	6	24	16	9	55	25	46	19	126	216	2	-0-	-0-	16	28	7	3	1	57	28	18	170	3	45	264		1,875		10,422		10,507	

TABLE II
OTHER SALMONELLA SEROTYPES ISOLATED FROM HUMANS DURING JULY, 1967

SEROTYPE	REPORTING CENTER																			SEROTYPE				
	ARK	CAL	FLA	GA	HAI	ILL	IND	LA	MD	MASS	MICH	MO	NJ	NYA	NYC	OHIO	OKLA	PA	TEX	WASH	WISC	TOTAL	7 MO TOTAL	
adelaide																			1			1	3	adelaide
amager																						1	2	amager
atlanta																						2	7	atlanta
berlin																						5	9	berlin
binza																						1	5	binza
california																						2	6	california
cerro																						2	6	cerro
cholerae-suis																						1	1	cholerae-suis
dublin																						1	3	dublin
eimsbuettel																						1	15	eimsbuettel
eppendorf																						1	1	eppendorf
gaminara																						2	5	gaminara
gatuni																						1	1	gatuni
georgia																						2	3	georgia
hartford																						1	13	hartford
irumu																						3	10	irumu
johannesburg																						1	10	johannesburg
loma-linda																						1	3	loma-linda
manchester																						1	2	manchester
minnesota																						6	14	minnesota
mission																						3	13	mission
muenster																						2	16	muenster
nottingham																						1	10	nottingham
orion																						1	2	orion
oslo																						2	10	oslo
paratyphi-A																						1	5	paratyphi-A
pensacola																						1	3	pensacola
reading																						1	27	reading
rubislaw																						3	16	rubislaw
saphra																						1	4	saphra
siegburg																						1	4	siegburg
untypable group H	1																					1	3	untypable group H
untypable group M			1																			1	1	untypable group M
Total	1	2	5	4	4	2	2	2	1	2	2	6	3	1	1	2	2	6	4	1	2	55	317	Total

NY-A = Albany, NY-C = City

TABLE III

Age and Sex Distribution of Individuals Reported as Harboring Salmonellae
During July 1967

<u>Age (Years)</u>	<u>Male</u>	<u>Female</u>	<u>Unknown</u>	<u>Total</u>	<u>Percent</u>	<u>Cumulative Percent</u>
< 1	115	115	2	232	17.5	17.5
1 - 4	179	155	3	337	25.5	43.0
5 - 9	75	68	1	144	10.9	53.9
10 - 19	63	133		196	14.8	68.7
20 - 29	46	80		126	9.5	78.2
30 - 39	36	52	1	89	6.7	84.9
40 - 49	27	24	1	52	3.9	88.8
50 - 59	25	34		59	4.5	93.3
60 - 69	16	28		44	3.3	96.6
70 - 79	6	19		25	1.9	98.5
80 +	<u>7</u>	<u>11</u>	—	<u>18</u>	1.4	99.9
Subtotal	595	719	8	1322		
Child (Unspec.)	9	5		14		
Adult (Unspec.)	6	7	1	14		
Unknown	<u>200</u>	<u>278</u>	<u>47</u>	<u>525</u>		
Total	810	1009	56	1875		
Percent of Total	44.5	55.5				

SEROTYPE	SEROTYPE
alachua	chicken
alabamy	turkey
anatum	pigeon
bareilly	pheasant
berita	spoonbill
bizta	avian
blockley	equine
bredey	bovine
california	ovine
cangreja	porcine
cerro	canine
champign	lab mouse
charter	lab rat
choke-a-suis	guinea pig
cubana	monkey
darby	lab animal, unknown
dublin	squirrel
elambeth	tapir
enteritidis	himitung
gastarena	zoo animal, unknown
give	fox
halsted	animal, unknown
hidelberg	egg
illinois	frozen egg yolk
indiana	powdered egg
infantis	frozen egg
java	hamburger
jervase	frosting mix
johannesburg	frozen pie
kentucky	cocoa powder
livington	candy
madelia	dry milk
manchester	evaporated milk
manhattan	ice cream
minneapolis	creamed potatoes
minnesota	egg noodles
montevideo	yeast
muenchien	gelatin
nass-a-polis	vitamins
newington	poultry feed, unknown
newport	pet food, unknown
oranzenburg	feather meal
orion	avian feed, unknown
oregon	bone meal/ meat scraps
phil-ly-phi-l-b	animal feed, unknown
philippines	fish meal
reading	tankage
ribis-a-sav	animal protein
saint-paul	turtle
san-diego	snake
schwartzengrund	lizard
sentemberg	river water
sindwall	water
tennessee	bay water
thompson	milk plant
typical-murium	environment
typical-murium v-cop	rendering plant
typical-murium	environment
untypable, group B	stock culture
untypable, group C2	cochineal
untypable, group E	glandular material
untypable, group K	gum
unknown	unknown
TOTAL	17,100
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TABLE V
REPORTED NONHUMAN ISOLATES BY SEROTYPE AND STATE, *JULY, 1967

SEROTYPE	ARIZ	CAL	CONN	DC	FLA	HAI	ILL	IND	IOWA	KAN	LA	NE	MD	MASS	MICH	MINN	MO	NJ	NY-A	NC	OHIO	OKLA	ORE	PA	SD	TENN	TEX	VA	WASH	WISC	TOTAL	7 MOS. TOTAL	SEROTYPE
alachua																																	
albany	5																													16	103	alachua	
anatum	8	16																												2	23	albany	
bareilly																														58	308	anatum	
berita	6																													1	24	bareilly	
																													6	12	berita		
binza																																	
blockley																														2	103	binza	
braenderup																														10	62	blockley	
bredeney																														2	43	braenderup	
california																														5	94	bredeney	
																													2	9	california		
canoga																																	
cerro																														1	2	canoga	
champaign																														6	44	cerro	
chester																														2	3	champaign	
cholerae-suis																														6	36	chester	
																													3	7	cholerae-suis		
cholerae-suis v kun	1																													1	26	cholerae-suis v kun	
cubana	1																													24	181	cubana	
derby	3																													15	366	derby	
drypool																														1	19	drypool	
dublin	1																													1	6	dublin	
eimbuettel																														42	148	eimbuettel	
enteritidis	2																													9	38	enteritidis	
gaminara	1																													3	6	gaminara	
give																														4	32	give	
halstad	2	1																												2	5	halstad	
heidelberg	6																													39	301	heidelberg	
illinois																														1	2	illinois	
indiana																														4	13	indiana	
infantis	2	3																												12	211	infantis	
java																														4	16	java	
javiana	1	1																												2	12	javiana	
johannesburg																														1	5	johannesburg	
kentucky																														5	45	kentucky	
livingstone																														6	52	livingstone	
madelia																														1	1	madelia	
manchester																														1	1	manchester	
manhattan																														1	16	manhattan	
minneapolis																														3	32	minneapolis	
minnesota																														1	30	minnesota	
montevideo																														18	180	montevideo	
muenchen																														6	68	muenchen	
ness-zoila																														2	2	ness-zoila	
newington	2	2																												9	129	newington	
newport																														5	90	newport	
oranienburg																														17	118	oranienburg	
orion																														4	18	orion	
panama																														2	44	panama	
paratyphi-B																														3	3	paratyphi B	
pullorum																														1	27	pullorum	
reading	1	1																												4	65	reading	
rubislaw	3																													1	15	rubislaw	
saint-paul	1																													25	244	saint-paul	
san-diego	5																													12	56	san-diego	
schwarzengrund	3																													8	85	schwarzengrund	
senftenberg																														11	138	senftenberg	
sundsvall	2																													2	2	sundsvall	
tennessee																														61	216	tennessee	
thompson	1																													9	94	thompson	
typhi	1																													1	1	typhi	
typhi-murium	2	16	1	1																									1	53	typhi-murium		
typhi-murium v cop	6		2																											15	103	typhi-murium v cop	
typhi-suis																														1	8	typhi-suis	
urbana																														2	10	urbana	
westhampton																														5	19	westhampton	
worthington																														8	88	worthington	
zanzibar																														2	3	zanzibar	
untypable, group B																														6	11	untypable, group B	
untypable, group C2																														1	1	untypable, group C2	
untypable, group E																														1	5	untypable, group E	
untypable, group K																														5	12	untypable, group K	
unknown																														1	9	unknown	
TOTAL	30	81	3	16	2	8	67	44	1	23	4	1	29	11	59	97	28	6	9	7	32	2	12	2	3	3	8	3	4	10	605	4,999	TOTAL

Source: National Animal Disease Laboratory, Ames, Iowa, weekly Salmonella Reports from individual states and US-FDA-Div. of Microbiology, Washington, D.C.

(NY-A -- New York - Albany)

*Includes June late reports

TABLE VI
OTHER SEROTYPES REPORTED DURING 1967
FROM NONHUMAN SOURCES

SEROTYPE	MONTH(S)	REPORTING CENTER(S)	NUMBER OF ISOLATIONS
adelaide	Jun	I11	1
amager	Mar	I11	4
arkansas	Mar	La	1
berlin	May	Pa	1
carrau	Jan	La	1
corvallis	Jan-Feb	La	3
duesseldorf	Mar	Ohio(8)	
	Apr	Mich(1)	9
duisburg	Jun	Ohio	1
eastbourne	Jan	Minn	1
gallinarum	Jan	Ark(2)	
	May-Jun	Pa(5)	7
gatow	Apr	Wash(4)	
	May	Kan(1)	5
grumpe...s	Jan	La(2)	
	Jun	Mich(1)	3
habana	Apr	Fla	2
hartford	Jan	Hai	1
hato	Jun	La	1
irumu	Apr	Hai	1
kottbus	Jun	Cal	1
lexington	Jan-Mar-Apr	I11(6)	
	Jan-Feb	La(2)	
	Jan	Ohio(1)	
litchfield	Mar-Jun	Cal(2)	
meleagridis	May	Ariz(1)	12
	Feb-Mar-May	Va	3
	Jan-Mar	Ind(2)	
	Jan-Feb-Mar	La(3)	
	Feb	Hai(1)	
	Feb-Mar-Apr	Mo(4)	
	Mar	Cal(1)	
	Mar	DC(3)	
	Apr	Ark(1)	
	Apr	I11(1)	
	Apr	Minn(1)	17
miami	Apr	Fla	1
mission	May	Ohio	1
mississippi	Feb	La	2
mokola	Feb	La	1
muenster	Jan	Ark(2)	
	Jan-Feb	La(4)	6

TABLE VI
OTHER SEROTYPES REPORTED DURING 1967
FROM NONHUMAN SOURCES CONTINUED

SEROTYPE	MONTH(S)	REPORTING CENTER(S)	NUMBER OF ISOLATIONS
new-haw	Feb Apr	Iowa(1) Ill(1)	2
okerara	Feb	La	1
oslo	Feb	Fla	2
pomona	Jan	La	1
poona	Jan Jan Jan-Apr Feb Apr	Fla(4) Ill(1) Neb(7) Mo(1) Mich(1)	14
putten	Jun	Cal	1
redlands	Feb	La	1
saphra	Jun	Tex	1
shubra	Feb	La	1
siegburg	Jan-Apr Jan Jan Feb-Apr Feb Feb Feb-Mar Mar	Ill(7) Minn(1) Ohio(5) Ind(2) La(1) Mo(1) Utah(4) Mich(1)	22
simsbury	Mar	Mo(1)	
stanley	Apr	Kan(2)	3
taksony	Apr	La	1
thomasville	Jan-Feb Jan-Mar-May Jan Mar-May Jun Feb	Utah Iowa(4) La(1) Ill(2) Minn(1) Cal	2
tucson			8
			1
tuindorp	Feb	Ill(1)	
vejle	Apr	Cal(1)	2
wichita	Feb	La	1
	Feb	Utah	1
TOTAL			151

Figure 1.

REPORTED HUMAN ISOLATIONS OF SALMONELLAЕ
IN THE UNITED STATES

