MEDICAL AND VETERINARY
(Holbrook, cont'd.)

Adulticide Treatment	# tests	x̄ slope	% Concentration LD50 x̄	LD50 Range	LD95 x̄	LD95 Range
Bendiocarb	5	4.58	0.062	0.037-0.073	0.147	0.071-0.104
Fenvalerate	4	2.71	0.021	0.018-0.024	0.082	0.067-0.096
Propoxur	4	5.21	0.042	0.033-0.053	0.090	0.062-0.125
Temephos	5	2.89	0.581	0.487-0.649	2.254	1.950-3.057
Chlorfenvinphis	4	2.85	0.207	0.133-0.295	0.861	0.510-1.537
Chlorpyrifos	5	4.52	0.012	0.009-0.016	0.028	0.022-0.038
Crotoxyphos	5	2.21	0.567	0.413-0.723	3.587	2.595-6.305
Dichlorvos	5	2.29	0.052	0.044-0.075	0.366	0.134-0.704
Dioxathion	5	2.55	0.374	0.320-0.426	1.696	1.174-2.287
Fenthion	5	2.66	0.099	0.029-0.180	0.420	0.247-0.684
GCP-3937	5	1.4	0.331	0.264-0.464	3.883	2.658-5.832
Malathion	5	3.72	0.154	0.111-0.191	0.435	0.381-0.514
Methoxychlor	4	3.09	0.055	0.049-0.069	0.190	0.145-0.217
Naled	5	4.97	0.053	0.037-0.065	0.115	0.083-0.156
Permethrin	5	3.33	0.016	0.010-0.025	0.054	0.034-0.085
Resmethrin	4	3.27	0.013	0.008-0.018	0.043	0.025-0.059
Toxaphene	5	2.15	0.414	0.315-0.590	2.646	1.649-3.939

LABORATORY TESTING
Imported fire ant: Solenopsis invicta Buren

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EVALUATION OF INSECTICIDES AS BAITS FOR IMPORTED FIRE ANTS IN LABORATORY SREENING TESTS, 1979: Insecticides that show promise in preliminary screening tests by causing delayed toxicity are further tested against entire laboratory colonies of imported fire ants. The chemicals are formulated in a bait and fed to colonies that have been starved for 5 days just prior to the test. The toxic bait (5 g/colony) is placed in a tray containing the colony for 24-96 h after which it is replaced with the standard laboratory diet. Observations on colony activity and mortality are recorded weekly. The test is continued until the queen, brood (larvae and pupae) and an estimated 90% or more of the workers are dead or the colony recovers and returns to normal.

AC-217,300 (American Cyanamid Company) was a very effective toxicant but formulations of corncob grits gave slower kill (20-24 wks) than those made with pre-gel defatted corn grits, pre-gel degermed corn grits and puffed corn (4-8 wks). These results correlate with the amount of oil, and thus toxicant, available to the ants on corncob grits (15% compared to 30%). The chemical M-8174 (Montedison, USA, Inc.) gave poor control, with only 1 colony being killed. Both ferriamicide and mirex gave excellent control.

Toxicant and formulation	# of colonies	Bait Composition (%) SBO[5]	Carrier	Avg % mortality after indicated number of weeks[6] 1	4	8	12	16	20	24
AC-217,300 0.375% on CCG[1]	2	15	85	50	50	60	80	90	D	
AC-217,300 0.75% on CCG	6	15	85	42	60	70	82	90	99	D
AC-217,300 0.75% on PDFCG[2]	2	30	70	68	99	D				
AC-217,300 0.75% on PDGCG[3]	2	30	70	48	85	D				
AC-217, 300 0.75% on PC[4]	2	30	70	45	99	D				
M-8174 0.015% on CCG	2	15	85	18	25	28	40	52	60	DR
M-8174 0.03% on PC	2	30	70	43	58	R				
M-8174 0.3% on PC	2	30	70	6	9	R				
Ferriamicide 0.3% on CCG	1	15	85	2	50	99	D			
Mirex 0.1% on CCG	2	15	85	63	93	D				
Untreated check	7	--	--	1	1	3	4	4	4	4

1/ CCG = corncob grits.
2/ PDGCG = pre-gel defatted corn grits.
3/ PDGCG = pre-gel degermed corn grits.
4/ PC = puffed corn.
5/ SBO = soybean oil.
6/ Fate of colonies indicated at end of each column by D = dried, R = recovered, and DR = one colony died and one colony recovered.