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Federally Registered Pesticides for Vertebrate Control

R.W. Matheny

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Federally Registered Pesticides
for Vertebrate Control
December, 1979

by

R. W. Matheny

(For more specific information call William Miller
or Dan Peacock of EPS's Office of Pesticide Programs/
Insecticide Rodenticide Branch @ (202) 426-9458)

Table 1. Federal Registrations for Sodium Cyanide Capsules in the
M-44 Ejector Device to Control Predation to Livestock

	<u>Registrant</u>	<u>Pest Species</u>
(1)	U.S. Dept of the Int. Fish and Wildlife Service	Coyotes, red fox gray fox, wild dogs
(2)	Wyoming Dept. Agric.	" "
(3)	Montana Dept. Livestock	" "
(4)	Oregon Dept. Agric.	" "
(5)	Calif. Dept. Food & Agric.	coyotes
(6)	So. Dak. Dept. Game, Fish and Parks	coyotes, red fox gray fox, wild dogs
(7)	Colorado Dept. Agric.	" "
(8)	M-44 Safety Pred. Control Co.	" "
(9)	Nevada Dept. Agric.	" "
(10)	New Mexico Dept. Agric.	coyotes and wild dogs
(11)	Texas Dept. Agric.	Coyotes, red fox gray fox, wild dogs
(12)	Navajo Nation*	" "
(13)	Wash. Dept. of Game	Coyotes, wild dogs

* Fish and Wildlife Department

Table 2. Federally Registered Commercial Rodenticides For Use In and Around Buildings
Total Products 514

<u>Chemical</u>	<u>Number of Products</u>	<u>Type Product</u>	<u>Homeowner Restrictions</u>
I. <u>Multiple-dose chemicals</u>	(438 products)		
1. Chlorophacinone	20	baits	no restrictions
	2	tracking powder	PCO* or Certified Applicator only
2. Diphacinone	75	baits	no restrictions
	1	tracking powder	PCO
3. Fumarin	40	baits	no restrictions
4. Pival	40	baits	no restrictions
5. PMP	5	baits and tracking powders	PCO
6. Talon	4	bait and place packs	no restrictions
7. Warfarin	250	baits	no restrictions
	1	tracking powder	PCO

Table 2, (cont.)

II. Single-dose chemicals (77 products)A. **Baits & tracking powder** (55 products)

<u>Chemical</u>	<u>Number of Products</u>	<u>Type Product</u>	<u>Homeowner Restrictions</u>
1. ANTU (Norway rat only)	9	bait & tracking powder	PCO
2. Arsenic trioxide	1	bait 1.5% active or less	no restrictions
3. Compound 108Q	1	bait	may not be used in home by anyone
4. Phosphorus	2	bait	no restrictions
	1	bait	may not be used in home by anyone
5. Red Squill (rat only)	15	bait	no restrictions
6. Strychnine (mouse only)	8	bait	Certified applicator
7. Zinc Phosphide	18	1-2% bait >2% concentrates for dilution	no restrictions PCO

B. Fumigants (22 products)

<u>Chemical</u>	<u>Number of Products</u>	<u>Type Product</u>	<u>Homeowner Restrictions</u>
1. Calcium Cyanide **	2	powder	certified applicator
2. Hydrocyanic Acid	1	solid disk	certified applicator
3. Chloropicrin	6	liquid	PCO
4. Sodium Chlorate + Sodium Cyanide	1	solid	certified -applicator
5. Gas Cartridge (rats only)	1	solid (2 parts)	no restrictions
6. Carbon Tetrachloride + Ethylene Dichloride + Paradichlorobenzene	1	liquid	no restrictions
7. Methyl Bromide	10	liquid	certified applicator

*PCO = Pest Control Operator

**may be temporarily unavailable

Table 2-A

Federal Registration of Mammal Control
Pesticides Exclusive of Commensal Rodenticides

Pesticide

Mammal	Arsenous oxide	Biomet-12	Calcium cyanide	Carbon disulfide	Carbon tetrachloride	Endrin	Ethylene dichloride	Gas cartridge	Gophacide	Napthalene	Paradichlorobenzene	R-55	Sodium cyanide	Strychnine	Thiram	Zinc phosphide	Ziram
Cotton rats											X		X		X		
Coyote												X					
Ground squirrels			X	X		X	X			X			X				
Harvest mice					X											X	
Kangaroo rats													X				
Meadow Voles					X								X			X	
Moles	X	X	X		X	X				X			X				
Muskrat																X	
Nutria																X	
Pine vole					X								X			X	
Pocket gophers	X		X			X	X	X					X				
-Northern "								X		X			X				
-Plains "								X		X			X	X			
Pocket mice					X												
Porcupine													X				
Prairie dogs							X						X				
-Black tailed"													X			X	
-White tailed"																X	
Rabbits									X						X		X
-Jackrabbit									X				X				
Skunks							X										
White-footed mice Peromyscus spp.					X								X			X	
Woodchuck			X				X						X				
Woodrats	X									X				X			

FEDERALLY REGISTERED AVIAN PESTICIDES

Table 3. Avian Repellents

A. Tactile Repellents

	<u>Chemical</u>	<u>Percent Active</u>	<u>Product Name</u>	<u>Pest Species</u>	<u>Site</u>	<u>Method of Application</u>
1.	mineral oil 94.45 diakyl dimethyl 5.25 and alkyl benzyl dimethyl ammonium bentonite	99.7	Repel-O-Film	birds	outdoors ledges	hand
2.	polybutenes hydrogenated castor oil	48.5 1.5	Bird Tanglefoot pressurized	birds	outdoors buildings	"
3.	polybutenes hydrogenated castor oil	97 3	Bird Tanglefoot	birds	"	"
4.	polybutenes polyethylene	95	Excelcide Bird Repellent	sparrows pigeon starlings	"	"
5.	polybutenes hydrogenated castor oil	97 3	Hub States Bird Repellent	birds	"	"
6.	polybutenes paloja resins petroleum solvents petrolatum	10 20 20 20 30	Guardian Ava-TAc	sparrows pigeon starlings	"	"
7.	polybutenes mineral oil lithium sterate soap diphenylamine	100	Grosley's Original "No- Roost" Bird Repellent	pigeons starlings	"	"

Table 3. Avian Repellents (Cont .)

A. Tactile Repellents

	<u>Chemical</u>	<u>Percent Active</u>	<u>Product Name</u>	<u>Pest Species</u>	<u>Site</u>	<u>Method of Application</u>
8.	polisobutylene	95.5	Bird Stop	pigeons starlings	outdoors buildings	hand "
9.	polisobulylene water kerosene	so.34 42.56 7.10	Roost No More Bird Repellent liquid	birds	outdoors buildings small trees indoors	
10.	polybutenes and related alkenes	76	Roost No More Bird Repellent	pigeons starlings sparrows	outdoors buildings	"
11.	polybutenes and related alkenes	96	Roost No More	pigeons starlings	"	"
12.	mineral oil calcium soap polyisobutylene zinc oxide	73 12 5	Bird-Ban	pigeons, sparrows starlings	"	"
13.	polybutene	80	4 the Birds	pigeons sparrows		"
14..	polybutene mineral oil lithium sterate soap d i p h e n y l a m i n e	100	Tower Grezall NP-4 Bird Repellent	birds		"

Table 3. Avian Repellents(cont.)

B. Taste Repellents

	<u>Chemical</u>	Percent <u>Active</u>	Product Name	<u>Pest Species</u>	<u>Site</u>	<u>Method of Application</u>
1.	lindane	75	Ortho Isotox Seed Treater (75)	pheasant	outside	seed treatment
2.	lindane captan	25 12.5	Ortho Isotox Seed Treater (F)	"	"	"
3.	coal tar creosote oil	62.67 31.33	Stanley's Crow Repellent	crow	"	"
4.	copper oxate	4	Crow-Chex Repellent	crow	"	"
5.	thiram	42	Arasan 42-5	birds	"	"
6.	endrin [*]	50	Red-top Endrin 50	birds	"	"
7.	mesurol	50	Mesurol 50% Hopper-Box Treater	blackbirds	corn	"
8.	mesurol	75	Mesurol 75% Wettable Powder	robins, starlings, finches, grackles, sparrows, bluejays, cedar waxwings	cherries	sprayer
9.	mesurol*	50	Hopkins Mesrepel	blackbirds	outdoor (corn)	seed treatment
10.	mesurol*	50	Bonide Cro-x	"	"	"
11.	mesurol*	18.75	Borderland Black	"	"	"

*restricted

C. Repellents

1.	naphthalene	100	Wil-Kil	pigeons sparrows	indoors	hand
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Table 4. Avian Toxicants

(A)	<u>Chemical</u>	<u>Percent Active</u>	<u>Product Name</u>	<u>Pest Species</u>	<u>Site</u>	<u>Method of Application</u>
1.	4-Aminopyridine (Avitrol)	0.5	Avitrol Bird Trip	house sparrows pigeons blackbirds cowbirds	"inside/ outside structures	hand spot treatment
2.	"	0.5	Avitrol Wheat	sparrows blackbirds co-#birds	outside feedlots	"
3.	"	1.0	Avitrol Pelletized Feed.	starlings	inside/ outside structures	
4.	"	0.5	Avitrol Sorghum	sparrows blackbirds cowbirds	"	
5.	"	0.5	Avitrol Mixed Grain	"	"	
6.	"	1.0	Avitrol Double Strength Corn Chops	blackbirds cowbirds starlfngs	"	
7.	"	0.5	Avitrol Corn Chops	sparrows -blackbirds cowbirds	"	

Table 4. Avian Toxicants (Cont.)

	<u>Chemical</u>	<u>Percent Active</u>	<u>Product Name</u>	<u>Pest Species</u>	<u>Site</u>	<u>Method of Application</u>
	4-Aminopyridine (Cont.)					
8.	"	0.5	Avitrol Whole Corn	pigeons	inside/ outside structures	hand spot treatment
9.	"	1.0	Double Strength Whole Corn	crows	outdoors feeding areas	"
10.	"	0.8	Avitrol Corn Chops peanut butter	Starlings	outdoors feedlots	"
11.	"	25	Avitrol Concentrate	gulls	outdoors feeding areas	"
12.	"	50	Avitrol Powder Mix	starlings	outdoors cattle feed lots	"
13.	"	0.3	, Avitrol corn Chops-99	starlings blackbirds cowbirds	outdoors ripening sweet and feed corn	air or ground
14.	"	0.3	Avitrol F C Corn Chops 1-10 Concentrate	reformulation repacking	n/a	n/a
15.	"	0.3	Avitrol F C Corn Chops -99s	red-winged blackbird yellow-head blackbird common grackle starlings	sunflowers	broadcast air high clearance

Table 4. Avian Toxicants (Cont.)

	<u>Chemical</u>	<u>Percent Active</u>	<u>Product Name</u>	<u>Pest Species</u>	<u>Site</u>	<u>Method of Application</u>
(5)	Endr in* *restricted	91.4	Rid-A-Bird Control. Liquid	starling english sparrow pigeon	outdoors/ indoors buildings pipeyards loading docks bridges	hand use only in special perches
(C)	Fenthion (entex)	"	Rid-A-Bird 1100	If	"	"
(D)	1. Starlicide	1	Purina Starlicide	starlings blackbirds	outdoors (livestock and poultry operations)	h a n d not to exceed 20 lb per acre for large lots or 50 for small
	2. "	97	Purina Starlicide Technical	(technical)	n/a	n/a
	3. "	0.1	Purina Starlicide complete . . .	starlings blackbirds	outdoors (livestock & poultry operations)	hand/mot to exceed 20 lb/acre large lots 50 lb/acre small, lot
	4. "	98	Compound DRC-1339	starlings blackbirds	"	(concentrate for reformulating use only)**
	5. " (restricted use)	98	1339 Gull Toxicant 98% Concentrate	herrings, great black-backed gulls	coastal area of northeastern U.S. near breeding area of colonial nesting birds**	

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**for use by U.S. Fish & Wildlife Service personnel
trained in bird control or persons under their
direct supervision

Table 4. Avian Toxicants (cont.1

	<u>Chemical</u>	<u>Percent Active</u>	<u>Product Name</u>	<u>Pest Species</u>	<u>Site</u>	<u>Method of Application</u>
(E)	Strychnine*					
1.	"	0.6	Ehrlich's Pigeon Bait Poison Grain	pigeon	Outdoors (buildings)	hand
2.	"	0.6	Ehrich's English Sparrow Bait Poison Grain	house Sparrows	"	"
3.	"	0.6	Poisoned Grain	pigeon	"	"
4.	"	0.6	Guardian Strychnine Whole Grain Poisoned Grain	pigeon	"	"
5.	"	0.6	Sparrow-Cracks	house sparrow	"	"
6.	"	0.6	Pigeon-9	pigeon	"	"

* restricted

(F)	Compound PA-14 **	99.5	Compound PA-14 Stressing Agent	blackbirds starlings cowbirds	outdoor roost	by air
	**government personnel only					

Table 5. Avian Chemosterilants

1.20,25	diazacholestenol dihydrochloride	0.112	Ornitrol	pigeons	out&or ground	hand
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Table 5. Federally Registered Tracking Powders

Chemical Multiple	Dose	Rodenticides	Company Name, Address	For Control Of			Indoor Use Only	Method of Application		PC3 Use Only
				Norway Rat	Roof Rat	House Mouse		Tracking Patches	Foot/Power Duster	
1.	0.2%	Chlorophacinone	Chempar Chemical co., Inc. 260 Madison Ave. N.Y. N.Y. 10016	YES	YES	YES	Yes	?	?	Yes
2.	0.2%	Diphacinone	Velsicol Chemical co., 341 E. Ohio St. Chicago, IL 60611	YES	YES	YES	?	Yes	No	Yes
3.	2.18%	PMP	American Fluoride Corp. 17 Hunting- ton Place, New Rochelle, N.Y. 10801	YES	YES	YES	?	?	Yes	Yes
4.	2.18%	PMP	Motomco, Inc. Clark, N.J. 07066	YES	YES	YES	?	Yes	No	No
5.	2.18%	PMP	Clarence Board and Sons, Inc. 105 E. Commercial Leon, Iowa 50144	YES	YES	YES	Yes	No	Yes	
6.	1.0%	Warfarin	Prentiss Drug and Chemical Co. 3637 7th Ave. N.Y. N.Y. 10001	YES	YES	YES	Yes	Yes	No	*es
7.	0.2%	Chlorophacinone*	Chempar Chemical Co., Inc. Madison Ave. N.Y. N.Y. 10016	YES	YES	YES	Yes	Yes	NO	Yes

*restricted

Table 5. Federally Registered Tracking Powders (Cont.1

Chemical Single - Dose Rodenticides	Company Name, Address	For Control Of			Indoor Use Only	Method of Application		PC3 USC Only
		Norway. Rat	Roof Rat	House Mouse		Tracking Patches	Foot/Power Duster	
8. 20% ANTU	American Fluoride	YES	NO	NO	No	Yes	Yes	NO
9. 92% ANTU	American Fluoride	YES	NO	NO	No	Yes	Yes	NO
10. 25% ANTU	Master Laboratory Beaver Falls, Pa 15010	YES	NO	NO	No	Yes	Yes	NO
11. 92% ANTU	Fine Organics, Inc. 205 Main St. Lodi, NJ 37644	YES	NO	NO	No	?	?	NO
12. 20% ANTU	Insect Control Sales and Service 341 E. Fulton St. Ephrata, PA 17522	YES	NO	NO	No	Yes	Yes	No
13. 20% ANTU	Stephenson Chemical Co. Inc.. Box 87188 College Park, GA 30337	YES	NO	NO	No	?	Yes	Yes
14. 92% ANTU	Hub States Chemical & Equipment Corp Indianapolis, IN 46202	YES	NO	NO	No	Yes	Yes	No
15. 0.2% Scilliroside	MGK 8810 10th Ave.. N., Minn. MN 55427	NO	NO	YES	Yes	Yes	No	No
14. 10% Zinc Phosphide *	Bell Laboratories Madison, WI 53705	NO	NO	YES	Yes	Yes	No	Yes

*restricted

Table 6. Registered Pesticides for Vertebrate Control/Use GroupingsANTICOAGULANTS

Chlorophacinone
 Diphacinone
 Fumarin
 Pival
 PMP
 Prolin
 Talon
 Warfarin

BIRD TOXICANTS

Aminopyridine
 Endrin
 Fenthion
 Starlicide
 Strychnine

DOG AND CAT REPELLENTSBAT TOXICANT **
DDTBAT REPELLENT

NAPHTHALENE

BIRD CHEMOSTERILANT

Ornitrol

BIRD REPELLENT (ODOR)

Naphthalene

BIRD REPELLENTS (TACTILE)

Aromatic petroleum solvents
 Castor oil
 Diphenylamine
 Mineral oil
 Petrolatum
 Polybutane
 Polyethylene
 Resins
 Zinc oxide

Allyl isothiocyanate
 Amyl acetate
 Anethole
 Bittrex*
 Blood*
 Bone oil
 Capsaicin
 Citral
 Citronella
 Citrus oil
 Cresylic acid*
 Essential oils
 Eucalyptus
 Geranium oil
 Lavender oil
 Lemongrass oil
 Menthol
 Methyl nonyl ketone
 Methyl salicylate
 Naphthalene
 Nicotine
 Paradichlorobenzene
 Pentanethiol*
 Pyridine
 Thiram
 Thymol
 Ziram

**For use where rabies has been documented through Center for Disease Control, Atlanta, Ga.

* Dog repellent claims only

(Cont.)

Table 6. Registered Pesticides for Vertebrate Control/Use GroupingsBIRD REPELLENTS (TASTE)

Captan
 Coal tar
 Copper oxalate
 Endrin
 Lindane
Mesuro1
 Thiram

DOG ATTACK REPELLENTS

Allyl isothiocyanate
 Capsaicin
 Diethanolamide condensate
 of coconut oil
 Triethanolamine salt of
 lauryl sulfate
Methylene choride

DEER REPELLENTS

Bone oil
 Putrescent whole egg solids
 Thiram
 ZIP

RABBIT REPELLENTS

Blood
 Naphthalene
 Nicotine
 Thiram
 ZIP

FISH & LAMPREY TOXICANTS

Antimycin A
 Bayluscide
Rotenone
 TFM

RABBIT TOXICANTS

Strychnine

FUMIGANTS

Calcium cyanide*
 Carbon disulfide
 Carbon tetrachloride
 Chloropicrin
 Ethyl dichloride
 Gas cartridges
 Hydrocyanic acid
 Methyl bromide
 Paradichlorobenzene
 Sodium cyanide

RODENT REPELLENTS

Biomet-12
 Endrin
 Naphthalene
 Polybutenes
 R-55
 Thiram

MOLE REPELLENTS

Paradichlorobenzene
 Thiram

RODENT ACUTE TOXICANTS

Antu
 Arsenic trioxide
 Endrin
 Fluoroacetamide
 Gophacide
 Phosphorus
 -Red squill
 Sodium fluoroacetate
 Strychnine
 Zinc phosphide

MOLE TOXICANTS

Arsenic trioxide
 Strychnine
 Zinc phosphide

*may be temporarily unavailable

Table 7, Vertebrate Pesticides - Intrastate Products (783)*

<u>Chemical</u>		<u>Number of Products</u>
I. CBEMOSTERILANTS	<u>0</u>	
II. MULTIPLE-DOSE TOXICANTS	297	
1. Chlorophacinone		27
2. Diphacinone		104
3. Pival		47
4. PMP		0
5. Fumarin		39
6. Warfarin		58
7. Warfarin+ Sulfaquinoxaline		22
III. SINGLE-DOSE TOXICANTS	465	
A. <u>Mammal, Bird and, Reptile Toxicants</u>	463	
1. 4-aminopyridine		9
2. Arsenious oxide		5
3. Compound 1080		50
4. Endrin		2
5. Fumigants		24
6. Gophacide		1
7. Red Squill		4
8. Sodium fluoride		1
9. Starlicide		6
10. Strychnine		277
11. Sulfur		0
12. Toxaphene		1
13. Zinc phosphide		83
B. <u>Fish Toxicants</u>	2	
1. Rotenone		2
IV. REPELLENTS	21	
A. Dog and Cat Repellents		7
B. Dog Attack Repellents		1
C. Mammal and Bird Repellents	13	
1. Polybutenes		3
2. Misc. taste		10

*Does not include 211-c registrations

Federally Registered Pesticides
for Vertebrate Control
December, 1979

by

R. W. Matheny

(For more specific information call William Miller
or Dan Peacock of EPS's Office of Pesticide Programs/
Insecticide Rodenticide Branch @ (202) 426-9458)

Table 1. Federal Registrations for Sodium Cyanide Capsules in the
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(4)	Oregon Dept. Agric.	" "
(5)	Calif. Dept. Food & Agric.	coyotes
(6)	So. Dak. Dept. Game, Fish and Parks	coyotes, red fox gray fox, wild dogs
(7)	Colorado Dept. Agric.	" "
(8)	M-44 Safety Pred. Control Co.	" "
(9)	Nevada Dept. Agric.	" "
(10)	New Mexico Dept. Agric.	Coyotes and wild dog
(11)	Texas Dept. Agric.	Coyotes, red fox gray fox, wild dogs
(12)	Navajo Nation*	" "
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Total Products 514

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Table 2. (cont.)

II. Single-dose chemicals (77 products)

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Table 2. (cont.)

B. Fumigants (22 products)

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2. Hydrocyanic Acid	1	solid disk	certified applicator
3. Chloropicrin	6	liquid	PCO
4. Sodium Chlorate + sodium cyanide	1	solid	certified applicator
5. Gas Cartridge (rats only)	1	solid (2 parts)	no restrictions
6. Carbon Tetrachloride + Ethylene Dichloride + Paradichlorobenzene	1	liquid	no restrictions
7. Methyl Bromide	10	liquid	certified applicator

*PCO = Pest Control Operator
**may be temporarily unavailable

Table 2-A

**Federal Registration of Mammal Control
Pesticides Exclusive of Commensal Rodenticides**

Mammal	Pesticide																
	Arsenous oxide	Bismet-12	Calcium cyanide	Carbon disulfide	Carbon tetrachloride	Endrin	Ethylene dichloride	Gas cartridge	Gophacide	Napthalene	Paradichlorobenzene	R-55	Sodium cyanide	s-trychnine	Thiram	Zinc phosphide	Ziram
Cotton rats											X		X			X	
Coyote												X					
Ground squirrels			X	X		X	X			X			X				
Harvest mice					X												X
Kangaroo rats					X								X				X
Meadow Voles					X								X				
Moles	X	X	X		X	X			X			X					
Muskrat																	X
Nutria																	X
Pine vole			X		X	X	X						X				X
Pocket gophers	X		X		X	X	X					X					
-Northern "								X		X		X					
-Plains "								X		X		X	X				
Pocket mice					X												
Porcupine													X				
Prairie dogs							X						X				
-Black tailed"													X				
-White tailed"																X	
Rabbits									X						X		X
-Jackrabbit									X				X				
Skunks							X						X				
White-footed mice					X								X				X
Peromyscus spp.													X				
Woodchuck		X				X						X			X		
Woodrats	X									X				X			

FEDERALLY REGISTERED AVIAN PESTICIDESTable 3. Avian Repellents

A. <u>Tactile Repellents</u>						
<u>Chemical</u>	<u>Percent Active</u>	<u>Product Name</u>	<u>Pest Species</u>	<u>Site</u>	<u>Method of Application</u>	
1. mineral oil 94.45 di-alkyl dimethyl 5.25 and alkyl benzyl dimethyl ammonium bentonite	99.7	Repel-O-Film	birds	outdoors ledges	hand	
2. polybutenes hydrogenated castor oil	40.5 1.5	Bird Tanglefoot pressurized	birds	outdoors buildings	"	
3. polybutenes hydrogenated castor oil	97 3	Bird Tanglefoot	birds	"	"	
4. polybutenes polyethylene	95 5	Excelcide Bird Repellent	sparrows pigeon starlings	"	"	
5. polybutenes hydrogenated castor oil	97 3	Hub States Bird Repellent	birds	"	"	
6. polybutenes paloja resins petroleum solvents petrolatum	10 20 20 20 30	Guardian Ava-Tac	sparrows pigeon starlings	"	"	
7. polybutenes mineral oil lithium stearate soap diphenylamine	100	Groslev's Original "So- Roost" Bird Repellent	pigeons starlings	"	"	
8. polyisobutylene	95.5	Bird Stop	pigeons starlings	outdoors buildings	hand "	
9. polyisobutylene water kerosene	50.34 42.56 7.10	Roost No More Bird Repellent liquid	birds	outdoors buildings small trees indoors	"	
10. polybutenes and related alkenes	76	Roost No More Bird Repellent	pigeons starlings sparrows	outdoors buildings	"	
11. polybutenes and related alkenes	96	Roost No More	pigeons starlings	"	"	
12. mineral oil calcium soap polyisobutylene zinc oxide	73 12 5	Bird-Ban	pigeons, sparrows starlings	"	"	
13. polybutene	80	4 the Birds	pigeons sparrows	"	"	
14. polybutene mineral oil lithium stearate soap diphenylamine	100	Tower Grezall NP-4 Bird Repellent	birds	"	"	

Table 3. Avian Repellents(cont.)

B. Taste Repellents

Chemical	Percent Active	Product Name	Pest Species	Site	Method of Application
1. lindane	75	Ortho Isotox Seed Treater (75)	pheasant	outside	seed treatment
2. lindane captan	25 12.5	Ortho Isotm Seed Treater (F)	.	.	"
3. coal tar creosote oil	62.61 31.33	Stanley's Repellent	crow	.	"
4. copper oxate	4	Crow-Chex Repellent	crow	.	"
5. thiram	42	Arasan 42-5	birds	"	"
6. endrin *	50	Red-top Endrin 50	birds	"	"
7. mesurol	50	Mesurol 50% Hopper-Box Treater	blackbirds	corn	"
8. mesurol	75	Mesurol 75% Wettable Powder	robins, starlings, finches, grackles, sparrows, bluejays, cedar waxwings	cherries	sprayer
9. mesurol*	50	Hopkins Mesrepel	blackbirds	outdoor (corn)	seed treatment
10. mesurol*	50	Bonide Cro-x	.	.	"
11. mesurol*	10.75	Borderland Black	"	"	"

*restricted

C. Odor Repellents

1.	100	Wil-Kil	pigeons sparrows	indoors	hand
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Table 4. Avian Toxicants

(A)	<u>Chemical</u>	<u>Percent Active</u>	<u>Product Name</u>	<u>Pest Species</u>	<u>Sits</u>	<u>Method of Application</u>
1.	4-Aminopyridine (Avitrol)	0.5	Avitrol Bird Trip	ho-se sparrows pigeons blackbirds cowbirds	inside/ outside structures	hand spot treatment
2.	"	0.5	Avitrol Wheat	sparrows blackbirds cowbirds	outside feedlots	"
3.	"	1.0	Avitrol Pelletized Feed	starlings	inside/ outside structures	"
4.	"	0.5	Avitrol Sorghum	sparrows blackbirds cowbirds	"	"
5.	"	0.5	Avitrol Mixed Grain	"	"	"
6.	"	1.0	Avitrol Double Strength Corn Chops	blackbirds cowbirds starlings	"	"
7.	"	0.5	Avitrol Corn Chops	sparrows blackbirds cowbirds	"	"
8.	"	0.5	Avitrol Whole Corn	pigeons	inside/ outside structure3	Land spot treatment
9.	"	1.0	Double Strength Whole Corn	CROWS	outdoors feeding areas	"
10.	"	0.8	Avitrol Corn Chops peanut butter'	Starlings	outdoors feedlots	"
11.	"	25	Avitrol Concentrate	gulls	outdoors feeding area6	"
12.	"	50	Avitrol Powder Mix	starlings	outdoors cattle feed lots	"
13.	"	0.3	Avitrol corn chops -99	starlings blackbirds cowbirds	Outdoors ripening sweet and feed corn	air OR ground
14.	"	0.3	Avitrol F C Corn Chops 1-10 Concentrate	reformulation repacking	n/a	n/a
15.	"	.03	Avitrol F C Corn Chops -99g	red-winged blackbird yellow-head blackbird common grackle starlings	sunflowers	broadcast air high clearance

Table 4. Avian Toxicants (Cont.)

	<u>Chemical</u>	Percent Active	Product Name	<u>Pest Species</u>	site	<u>Method of Application</u>
(B)	Endrin* *restricted	91.4'	Rid-A-Bird Control Liquid	starling english sparrow pigeon	outdoors/ indoors buildings pipoyards loading docks bridges	hand use only in special perches
(C)	Fenthion (entax)	"	Rid-A-Bird 1100	"	"	"
(D)	1. Starlicide	1	Purina Starlicide	starlings blackbirds	outdoors (livestock and poultry operations)	hand not to exceed 20 lb per acre for large lots or 50 for small
	2. "	97	Purina Starlicide Technical	(technical)	n/a	n/a
	3. "	0.1	Purina Starlicide complete	starlings blackbirds	outdoors (livestock & poultry operations)	hand/ not to exceed 20 lb/acre large lots 50 lb/acre small, lot
	4. "	98	Compound DRC-1339	starlings blackbirds	"	(concentrate for reformulating use only)**
	5. " (restricted use)	98	1339 Gull Toxicant 98% Concentrate	herrings, great black-backed gulls	coastal area of northeastern U.S. near breeding area of colonial nesting birds**	

**for use by U.S. Fish & Wildlife Service personnel
trained in bird control Or persons under their
direct supervision

(E)

	strychnine*					
1.	"	0.6	Ehrlich's Pigeon Bait Poison Grain	pigeon	Outdoors (buildings)	hand
2.	"	0.6	Ehrlich's English Sparrow Bait Poison Grain	house sparrows	"	"
3.	"	0.6	Poisoned Grain	pigeon	"	"
4.	"	0.6	Guardian Strychnine Whole Grain Poisoned Grain	pigeon	"	"
5.	"	0.6	Sparrow-Cracks	'house sparrow	"	"
6.	"	0.6	Pigeon-9	pigeon	"	"

* restricted

(F)

Compound PA-14 **	49.5	Compound PA-14 Stressing Agent	blackbirds starlings cowbirds	outdoor roost	by air
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**government personnel
onlyTable 5. Avian Chemosterilants

1-20,25 diazacholesterol dihydrochloride	0.112	Ornitrol	pigeons	outdoor ground	hand
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Table 5. Federally Registered Tracking Powders

Chemical Multiple * Dose	company Rodenticides, Name? Address	For Control Of Norway Rat	Roof Mouse	House	Indoor Use Only	Method of Tracking Patches	Application Foot/Power Duster	PC3 Use Only
1. 0.25 Chlorophacinone	Chempar Chemical co., Inc. 260 Madison Ave. N.Y. N.Y. 10016	YES	YES	YES	Yes	?	?	Yes
3. 0.2% Diphacinone	Velsicol Chemical co., 341 E. Ohio St. Chicago, IL 60611	YES	YES	YES	?	Yes	NO	Yes
3. 2.18% PMP	American Fluoride Corp. 17 Hunting- ton Place, New Rochelle, N.Y. 10801	YES	YES	YES	?	?	Yes	Yes
4. 2.18% PMP	Motomco, Inc. Clark, N.J. 07066	YES	YES	YES	?	Yes	No	No
5. 2.18% PMP	Clarence Board and Sons, Inc. 105 E. Commercial Leon, Iowa 50144	YES	YES	YES	Yes	NO	Yes	
6. 1.0% Warfarin	Prentiss Drug and Chemical Co. 3637 7th Ave. N.Y. N.Y. 10001	YES	YES	YES	Yes	Yes	No	Yes
7. 0.2% Chlorophacinone*	Chempar Chemical co., Inc. Madison Ave. N.Y. N.Y. 10016	YES	YES	YES	Yes	Yes	SC	Yes
8. 23% ANTU	American Fluoride	YES	NO	NO	No	Yes	Yes	so
9. 921 ANTU	American Fluoride	YES	NO	NO	No	Yes	Yes	so
10. 25% ANTU	Master Laboratory Beaver Falls, Pa 15010	YES	NO	NO	No	Yes	Yes	so
11. 92% ANTU	Fine Organics, Inc. 205 Main St. Lodi, NJ 07644	YES	NO	HO	No	?	?	SO
12. 20% ANTU	Insect Control Sales and Service 341 E. Fulton St. Ephrata, Pa 17522	YES	NO	NO	NO	Yes	Yes	NO
13. 201 ANTU	Stephenson Chemical co. Inc. Box 07133 College Park, GA 30337	YES	NO	NO	NO	?	Yes	Yes
14. 92% ANTU	Hub States Chemical & Equipment Corp Indianapolis, IN 46202	YES	NO	NO	NO	Yes	Yes	so
15. 0.2% Scilliroside	MSK 8910 10th Ave. N., Minn. MN 55427	NO	NO	YES	Yes	Yes	No	so
16. 10% Zinc Phosphide	Bell Laboratories Madison, WY 83705	NO	NO	YES	YQS	Yes	No	Yes

Table- 6. Registered pesticides for Vertebrate Control/Use Groupings

ANTICOAGULANTS

Chlorophacinone
Diphacinone
Fumarin
Pival
PMP
Prolin
Talon
Warfarin

BIRD TOXICAKTS

Aminopyridine
Endrin
Fenthion
Stnrlicide
Strychnine

DOG AND CAT REPELLENTS

Allyl isothiocyanate
Amyl acetate
Anethole
Bittrex*
Blood*
Bone oil
Capsaicin
Citral
Citronella
Citrus oil
Crcsylic acid*
Essential oils
Eucalyptus
Geranium oil
Lavender oil
Lemongrass oil
Menthol
Methyl nonyl ketone
Methyl salicylate
Naphthalcnc
Nicotine
Paradichlorobentene
Pentanethiol*
Pridine
Thiram
Thymol
Ziram

* Dog repellent claims only

BAT TOXICANT **
DDT

BAT REPELLENT

NAPHTHALENE

BIRD CHEMOSTERILANT

Ornitrol

BIRD REPELLENT (oDOR)

Naphthalene

BIRD REPELLENTS (TACTILE)

Aromatic petroleum solvents
Castor oil
Diphenylamine
Mineral Oil
Petrolatum
Polybutane
Polyethylene
Resins
Zinc oxide

**For use where rabies has been documented through Center for Disease Control, Atlanta, Ga.

Table 6. Registered Pesticides for Vertebrate Control/Use Groupings

(Cont.)

BIRD REPELLENTS (TASTE)

Captan
Coal tar
Copper oxalate
Endrin
Lindsne
Mesurol
Thiram

DEER REPELLENTS

Bone oil
Putrescent whole egg solids
Thi ram
ZIP

FISH & AMPREY TOXICANTS

Antimycin A
Bayluscide
Rotenone
TFM

FUMIGANIS

Calcium cyanide+
Carbon disulfide
Carbon tetrachloride
Chloropicrin
Ethyl dichloride
Gas cartridges
Hydrocyanic acid
Methyl bromide
Farndichlorobcnzene
Sodium cyanide

MOLE REPELLENTS

Paradichlorobcnrene
Thi ram

MOLE TOXICANTS

Arsenic trioxide
Strychnine
Zinc phosphide

*may be temporarily unavailable

DOG ATTACK REPELLENTS

Allyl isothiocyanate
Capsaicin
Diethanolamide condensate
of coconut oil
Triethanolamine salt of
lauryl sulfate
Methylene choride

RABBIT REPELLENTS

Blood
Naphthalene
Nicotine
Thiram
ZIP

RABBIT TOXICANTS

Strychnine

RODENT REPELLENTS

Biomet-12
Endrin
Naphthalene
Polybutencs
R-55
Thiram

RODENT ACUTE TOXICAYTS

Antu
Arsenic trioxide
Endrin
Fluoroacetamide
Gophncide
Phosphorus
Red squill
Sodium fluoroacctate
Strychnine
Zinc phosphide

Table 7. Vertebrate Pesticides - Intrastate Products (783)*

<u>Chemical</u>	<u>Number of Products</u>
I. CHEMOSTERILANTS	<u>0</u>
II. MULTIPLE-DOSE TOXICANTS	<u>297</u>
1. Chlorophacinone	27
2. Diphacinone	104
3. Pival	47
4. PMP	0
5. Fumarin	39
6. Warfarin	58
7. Warfarin+ Sulfaquinoxaline	22
III. SINGLE-DOSE TOXICANTS	<u>465</u>
A. <u>Mammal, Bird and</u>	<u>463</u>
1. KeptiToxicants 4-aminopyridine	9
2. Arsenious oxide	5
3. Compound 1080	50
4. Endrin	2
5. Fumigants	24
6. Gophacids	1
7. Red Squill	4
8. Sodium fluoride	1
9. Starlicide	6
10. Strychnine	277
11. Sulfur	0
12. Toxaphene	1
13. Zinc phosphide	83
B. <u>Fish Toxicants</u>	2
1. Rotenone	2
IV. REPELLENTS	<u>21</u>
A. Dog and Cat Repellents	7
B. Dog Attack Repellents	1
C. <u>Mammal and Bird</u>	<u>13</u>
1. <u>Repellents</u>	3
1. Polybutenes	3
2. Misc. taste	10

*Does not include 24-c registrations