



Pesticides Registered for Mosquito Control in South Dakota

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Pesticides alone will not eliminate all mosquitoes. The use of pesticides to control mosquitoes around the home and yard must be part of a multifaceted approach that includes the following non-chemical tactics:

- Eliminate standing water.
- Fix broken window screens.
- Use outdoor bug lights.
- Installing carbon dioxide-baited traps.

Some mosquitoes will always “get through.” If you will be outdoors, it is recommended that you wear a mosquito repellent of your choice, avoid being outdoors around sunset and sunrise, and cover as much skin as possible with appropriate clothing. For more information on selection and use of insect repellents, refer to FS 920 Personal Mosquito Repellents available at your local Extension office or online at <http://sdces.sdstate.edu/westnile/publications.htm>.

This publication lists the most common insecticides that are registered in South Dakota for use around the house and yard. The products are arranged by the active ingredient. The active ingredient is usually listed prominently in the first section of the label. This section will list the chemical name and/or the common name of the pesticide and also the concentration.

This list was current as of June 2004, but label uses and registrations change. Before using any pesticide, be sure to read the entire label to ensure that the product can

be used for mosquitoes, can be applied around the home and yard, and to be sure all safety restrictions are followed. For more information, refer to FS 923 Controlling Mosquitoes Around the Home and Yard.

The product label contains information about how to properly, safely, and legally use the pesticide. Every label has information regarding what protective clothing should be worn when using the product. Chemical resistant rubber gloves, long-sleeved shirt and long pants are almost always recommended. Also consider using protective eyewear and waterproof foot wear. If chemical soaks into leather shoes, it will stay there and will re-expose your feet to the chemical every time they get wet or sweaty. Always change clothing and shower after making pesticide applications to remove any residue with which you may have come in contact.

Pay particular attention to the label restrictions. Many pesticides registered for mosquito control will say “do not re-enter treated areas until sprays have dried.” Common sense would say to avoid contact with treated areas as long as feasible to reduce exposure to the chemical. Most of the mosquito pesticides are not registered for use on food crops, so be sure to avoid the garden when treating with those products. Use no more chemical than is required, and store it in a safe location away from children. Although most pesticides for mosquito control are not very toxic, to be applied safely, they still must be used with strict accordance to the label directions.

Mosquito Larvicides

The immature forms of mosquitoes live in water. Pesticides applied on bodies of water to kill mosquito “wigglers” or larvae are called larvicides. The different active ingredients of mosquito larvicides available for use in South Dakota are listed in Table 1. Monomolecular films and aliphatic petroleum hydrocarbons leave a film on the water surface to suffocate the wigglers. Crystal

proteins derived from *Bacillus thuringiensis* subspecies *israelensis* (Bti) or *Bacillus sphaericus* (Bs) bacteria kill mosquito wigglers by paralyzing their gut upon ingestion of the active substance. Methoprene and pyriproxyfen disrupt the metamorphosis or molting of the wigglers. Pyrethrins, temephos, and malathion kill wigglers on contact with the treated water.

Table 1. Mosquito larvicides containing various active ingredients.

Product Name	Percent	Active Ingredient
BCA 2 Mosquito Larvicide Oil	97.00	Aliphatic petroleum hydrocarbons
BVA Chrysalin Mosquito Larvicide	22.94	Aliphatic petroleum hydrocarbons
Mosquito Larvicide GB-1111	98.70	Aliphatic petroleum hydrocarbons
Dionne Larvae Halt II Mosquito Control	7.50	Bacillus sphaericus (Bs) crystal protein
Dionne Larvae Halt II WSP Mosquito Control	7.50	Bacillus sphaericus (Bs) crystal protein
VectoLex CG Biological Larvicide	7.50	Bacillus sphaericus (Bs) crystal protein
VectoLex WDG Biological Larvicide	51.20	Bacillus sphaericus (Bs) crystal protein
Vectolex WSP Biological Larvicide	7.50	Bacillus sphaericus (Bs) crystal protein
Aquabac 200G	2.86	Bacillus thuringiensis israelensis (Bti) crystal protein
Bactimos Wettable Powder	50.00	Bacillus thuringiensis israelensis (Bti) crystal protein
Bayer Advanced Garden Mosquito Preventer Ready-To-Use Granules	2.86	Bacillus thuringiensis israelensis (Bti) crystal protein
Bonide Mosquito Beater ""Plunks"" Water Soluble Pouches	1.70	Bacillus thuringiensis israelensis (Bti) crystal protein
Dexol Mosquito Free Granules	2.86	Bacillus thuringiensis israelensis (Bti) crystal protein
Gnatrol Biological Larvicide	6.38	Bacillus thuringiensis israelensis (Bti) crystal protein
Green Thumb Ready-To-Use Mosquito Free Granules	2.86	Bacillus thuringiensis israelensis (Bti) crystal protein
Healthy Ponds Mosquito Control	2.86	Bacillus thuringiensis israelensis (Bti) crystal protein
Mosquito Bits	2.86	Bacillus thuringiensis israelensis (Bti) crystal protein
Mosquito Dunks	10.31	Bacillus thuringiensis israelensis (Bti) crystal protein
Spectracide Mosquito Stop Mosquito Larvae Killer	4.95	Bacillus thuringiensis israelensis (Bti) crystal protein
Summit B.t.i. Briquets	10.31	Bacillus thuringiensis israelensis (Bti) crystal protein
VectoBac 12AS Biological Larvicide	11.61	Bacillus thuringiensis israelensis (Bti) crystal protein
VectoBac CG Biological Larvicide Granules	4.95	Bacillus thuringiensis israelensis (Bti) crystal protein
VectoBac G Biological Larvicide Granules	0.28	Bacillus thuringiensis israelensis (Bti) crystal protein
Douglas Malathion 57-WE	57.00	Malathion
Fyfanon	56.44	Malathion
Malathion 5	56.8	Malathion
Malathion 5 EC	56.00	Malathion
Malathion-5 Emulsifiable Concentrate	57.00	Malathion
Prentox 5 LB Malathion Spray	57.00	Malathion
Pre-Strike	1.50	Methoprene
STRIKE Pellets	4.25	Methoprene
Strike Professional Midge Control	20.00	Methoprene
Vet Kem Mosquito Larvicide Granules Siphotrol	1.50	Methoprene
Zodiac Preventative Mosquito Control	1.50	Methoprene
Zoecon Altosid Liquid Larvicide Concentrate	20.00	Methoprene
Zoecon Altosid Liquid Larvicide Mosquito Growth Regulator	5.00	Methoprene

Zoecon Altosid Pellets	4.25	Methoprene
Zoecon Altosid SBG Single Brood Granule	0.20	Methoprene
Zoecon Altosid XR Extended Residual Briquets	2.10	Methoprene
Zoecon Altosid XR-G	1.50	Methoprene
Agnique MMF Mosquito Larvicide & Pupicide	100.00	Monomolecular film
AROSURF MSF	100.00	Monomolecular film
First-Watch Mosquito Larvicide & Pupicide	100.00	Monomolecular film
Mosquito Stopper	100.00	Monomolecular film
Synerol Insecticide	2.50	Pyethrins
Albertsons Garden Insect Bug Killer	0.02	Pyrethrins
Bonide Rose Rx Insect Control RTU	0.02	Pyrethrins
Bonide Tomato & Vegetable Ready-To-Use	0.02	Pyrethrins
Dragon Easy Garden for Vegetables	0.02	Pyrethrins
Gordons Liquid Garden Guard	0.02	Pyrethrins
Green Thumb Rose & Flower Insect Killer II	0.02	Pyrethrins
Maxide Ready To Use Rose & Flower Insect Killer	0.02	Pyrethrins
Prentox Emulsifiable Spray concentrate #96	0.96	Pyrethrins
Prentox Pyronyl Oil concentrate OR-3610A	3.00	Pyrethrins
Prentox Pyronyl UL-100 Concentrate	1.00	Pyrethrins
Pyrenone 100	1.00	Pyrethrins
Pyrenone 25-5 Public Health Insecticide	5.00	Pyrethrins
Pyrenone Crop Spray Insecticide	6.00	Pyrethrins
MGK Nylar 10EC	10.00	Pyriproxyfen
Nyguard IGR Concentrate	10.00	Pyriproxyfen
Abate 4-E Insecticide	44.60	Temephos
Clarke 5% Skeeter Abate	5.00	Temephos

Mosquito Adulticides

Pesticides designed to kill adult mosquitoes are called adulticides. Adulticides that last for several days are also called residual or barrier adulticides. Residual adulticides usually are applied on surfaces or vegetations where mosquitoes may rest during the day. Adult mosquitoes are killed upon contact with the treated surfaces.

Examples of residual adulticides are those containing synthetic pyrethroids (bifenthrin, cyfluthrin, cypermethrin, deltamethrin, esfenvalerate, lambda-cyhalothrin, permethrin, phenothrin, and resmethrin), carbaryl, malathion, and naled (Tables 2–10).

Residual insecticides usually are applied as coarse sprays using ordinary sprayers. Mist blowers, like the ones used in cattle feedlots for fly control, can also be used.

Also available to homeowners are adulticides designed mainly to quickly kill or knockdown adult mosquitoes without leaving a lot of residues in the sprayed areas.

Examples of quick knockdown, non-residual insecticides are those containing natural pyrethrins. Pyrethrins are purified extracts from flowers of a certain species of chrysanthemum.

Some residual insecticides mentioned above like resmethrin, permethrin, and malathion, if applied as a “hot” fog using thermal foggers or as a “cold” fog using ultra low volume (ULV) machines, also will mainly be quick knock-down, non-residual treatments. Such applications will remain suspended in air and slowly dissipate within hours of application.

Table 2. Mosquito adulticides containing bifenthrin.

Product Name	% bifenthrin
Bifenthrin Pro Insecticide/Miticide	7.90
Bifenthrin Pro Multi-Insecticide	7.90
Bifenthrin Pro Termiticide-Insecticide	7.90
Biflex SFR Termiticide/Insecticide	23.40
Biflex TC Termiticide/Insecticide	25.10
KGRO Ready To Use Home Pest Insect Control	0.03
Lesco CrossCheck PMP Termiticide/Insecticide	7.90
Onyx Insecticide	23.40
Ortho Home Defense Perimeter & Indoor Insect Killer RTU	0.05
Ortho HomeDefense Indoor & Outdoor Insect Killer3	0.05
Ortho HomeDefense Indoor & Outdoor Insect Killer4	0.05
Ortho Ortho Klor Termite & Carpenter Ant Killer Concentrate	2.40
Ortho Ready-To-Use HomeDefense Indoor & Outdoor Insect Killer 5	0.05
Ortho Termite & Carpenter Ant Killer Concentrate	2.40
Talstar F Insecticide/Miticide	7.90
Talstar Flowable Insecticide/Miticide	7.90
Talstar GC Flowable Insecticide/Miticide	7.90
Talstar Lawn & Tree Flowable Insecticide/Miticide	7.90

Table 3. Mosquito adulticides containing carbaryl.

Product Name	% carbaryl
7 Carbaryl Insecticide	41.20
Bonide Bug Beater Granules	4.60
Chipco Sevin 80 WSP Carbaryl Insecticide	80.00
Chipco Sevin SL	43.00
Dragon Easy Garden Liquid Concentrate	21.30
Eliminator Lawn Insect Killer Granules With Sevin Carbaryl Insecticide	2.00
Ferti-Lome Liquid Carbaryl Garden Spray	23.70
Garden Tech Sevin Lawn Insect Granules	2.00
GardenTech Sevin Concentrate Bug Killer	22.50
GardenTech Sevin Ready-to-Spray Bug Killer	22.50
KGro Sevin Brand Carbaryl Insecticide Liquid	21.30
Sevin 4F Carbaryl Insecticide	43.00
Sevin 80 WSP Carbaryl Insecticide	80.00
Sevin 80 WSP Carbaryl Insecticide	80.00
Sevin 80S	80.00
Sevin Brand RP4 Carbaryl Insecticide	43.00
Sevin SL Carbaryl Insecticide	43.00
Sevin XLR Plus Carbaryl Insecticide	44.10

Table 4. Mosquito adulticides containing cyfluthrin.

Product Name	% cyfluthrin	% other active ingredients
Bayer Advanced Garden Power Force Kills Bugs Fast Mosquito Killer Concentrate	0.75	-----
Bayer Advanced Garden Power Force Kills Bugs Fast Mosquito Killer II Ready-To-Spray	0.75	-----
Bayer Advanced Garden PowerForce Kills Bugs Fast Multi-Insect Killer Concentrate	0.75	-----
Bayer Advanced Garden Powerforce Kills Bugs Fast Multi-Insect Killer Ready-To-Spray	0.75	-----
Bayer Advanced Garden Powerforce Kills Multi-Insect Killer Ready-To-use	0.003	-----
Bayer Advanced Garden Rose & Flower Insect Killer Concentrate	0.72	-----
Bayer Advanced Garden Rose & Flower Insect Killer Ready-To-Spray	0.36	0.36 imidacloprid
Bayer Advanced Garden Rose & Flower Insect Killer Ready-To-Spray	0.36	0.36 imidacloprid
Bayer Advanced Garden Rose & Flower Insect Killer Ready-To-Use	0.003	0.012 imidacloprid
Bayer Advanced Home Home Pest Control Indoor & Outdoor Insect Killer Ready -To-Use	0.10	-----
Bayer Advanced Home PowerForce Kills Bugs Fast Carpenter Ant and Termite Killer Plus	2.50	-----
Bayer Advanced Lawn Complete Insect Killer for Soil & Turf Ready-To-Spray	0.36	0.72 imidacloprid
Bayer Advanced Lawn Complete Insect Killer for Soil & Turf Ready-To-Spread Granules	0.05	0.15 imidacloprid
Bayer Advanced Lawn PowerForce Kills Bugs Fast Multi-Insect Killer Ready-To-Spread Granules	0.10	-----
CB Intruder HPX Residual with Cyfluthrin	0.10	0.05 pyrethrins
Countdown WP Premise Insecticide	20.00	-----
OPTISHIELD CS Controlled Release Premise Insecticide	6.00	-----
Prescription Treatment brand CY-KICK CS	6.00	-----
Prescription Treatment Brand Cy-Kick CS Pressurized	0.10	-----
Prescription Treatment Brand Optashield CS	6.00	-----
Prescription Treatment Brand Optem Cyfluthrin Capsule Suspension Formula 1	6.00	-----
Prescription Treatment Brand Optem Pressurized Capsule Suspension	0.10	-----
Prescription Treatment Brand Pro-Control Plus Total Release Aerosol Insect Formula 1	0.10	0.5 pyrethrins
Raid Max Fogger II	0.10	0.5 pyrethrins
Raid Yard Guard Ant & Roach Home Barrier Nozzle	12.00	-----
Raid Yard Guard Flower Nozzle	12.00	-----
Raid Yard Guard Lawn Insect Nozzle	12.00	-----
Raid Yard Guard Mosquito Nozzle	12.00	-----
Real-Kill Home Insect Control Indoor & Outdoor Insect Killer	0.10	-----
Schultz Lawn & Garden Insect Killer Concentrate	0.75	-----
Tempo 0.1% Dust Insecticide	0.10	-----
Tempo 1% Dust Insecticide	1.00	-----
Tempo 1% Dust Insecticide Ready To Use	1.00	-----
Tempo 20 WP Power Pak	20.00	-----
Tempo SC Ultra Premise Spray	11.80	-----

Table 5. Mosquito adulticides containing cypermethrin.

Product name	% cypermethrin	% other active ingredients
Bite Free Biting Fly Repellent	0.150	0.20% pyrethrins + 5.00% butoxypolypropylene glycol
Bonide Cyper Eight Insect Control	26.000	-----
CB Air-Devil Residual Insecticide	0.100	-----
Cynoff EC Insecticide	24.800	-----
Cynoff Power Spray Insecticide	40.000	-----
Cynoff WP Insecticide	40.000	-----
Cynoff WSB Insecticide in Water Soluble Bags	35.600	-----
Demon EC Insecticide	25.300	-----
Demon TC Insecticide	25.300	-----
Demon WP Insecticide	40.000	-----
Demon WP Insecticide in Water Soluble Packets	40.000	-----

Enforcer Carpenter Ant Killer Concentrate	26.000	-----
Enforcer Over Nite Pest Control Concentrate	26.000	-----
Martins Viper Insecticide Concentrate	25.400	-----
Prevail FT Insecticide	24.800	-----
Prevail TC Termiticide	30.600	-----
Raid Concentrated Deep Reach Fogger	1.716	-----
Raid Max Concentrated Deep Reach Fogger	1.716	-----
Zep Pest Pest Control Concentrate	26.000	-----

Table 6. Mosquito adulticides containing deltamethrin.

Product Name	% deltamethrin
Annihilator Insecticide Premise Spray	0.02
Annihilator WP	5.00
Bonide Termite & Carpenter Ant Killer Ready-To-Use	0.02
Deep 6 Home Insect Killer	0.02
Deep 6 Roach & Ant Killer Country Fresh	0.02
Deep 6 Roach & Ant Killer Unscented	0.02
D-Force HPX	0.06
Enforcer Ant Kill Home Pest Control	0.02
Enforcer BugMax365 One Year Home Pest Control	0.03
Enforcer Home Pest Control XII	0.02
Hi-Yield Kill-A-Bug II Indoor/Outdoor Spray	0.02
Home Exterminator Pantry Pest & Ant Killer	0.02
Suspend SC Insecticide	4.75
Terro Termite & Carpenter Ant Killer Ready-to-Use Spray	0.02
Walgreens Ant & Roach Killer Country Spring Scent Formula 3	0.02
Walgreens Ant & Roach Killer Formula 3	0.02

Table 7. Mosquito adulticides containing esfenvalerate.

Product Name	% esfenvalerate	% other active ingredient
20 Second Roach Killer	0.05	0.03 prallethrin
Ant & Roach Spray II	0.05	0.03 prallethrin
Bengal Insecticide Concentrate	3.48	-----
CB Total Release PCO Fogger with Esfenvalerate	0.10	0.05 pyrethrins
Champion SprayOn Ant & Roach Killer Formula 2	0.05	0.06 allethrin
Conquer Residual Insecticide Concentrate	3.48	-----
Deep 6 Power Jet Stream Liquid Ant & Roach Killer	0.05	0.065 allethrin
Monogram Ant and Roach Killer	0.05	0.06 allethrin
Ortho ProSelect Roach, Ant & Spider Killer	0.05	0.03 prallethrin
Ortho Roach, Ant & Spider Killer	0.05	0.03 prallethrin
Sect-B-Gone	3.48	-----
Speckoz Evercide Esfenvalerate EC	3.48	-----
Speckoz Evercide Residual Aerosol	0.10	-----
Speckoz Evercide Total Release Aerosol	0.10	0.05 pyrethrins
TAT Fogger Kills Cockroaches, Fleas & Brown Dog Ticks	0.10	0.20 tetramethrin
TAT Liquid Power Jet Stream With Residual Action	0.05	0.06 allethrin
Vikor XL Pro Pest Control Concentrate	3.48	-----
Zep Commercial 20 Second Roach Killer	0.05	0.03 prallethrin

Table 8. Mosquito adulticides containing lambda-cyhalothrin.

Product Name	% lambda-cyhalothrin
Commodore WP Insecticide	10.00
Commodore WP Insecticide in Water-Soluble Packets	10.00
Demand CS Insecticide	9.70
DEMAND Pestab Insecticide	10.00
Hot Shot Home Insect Control Clear Formula 2	0.03
Spectracide Bug Stop Home Insect Killer	0.03
Spectracide Triazicide Brand Lawn & Garden Insect Killer	0.00

Table 9. Mosquito adulticides containing permethrin.

Product Name	% permethrin	% other ingredients
Absorbine Ultra-Shield Brand Residual Insecticide & Repellent	0.500	0.1 pyrethrins
Ace Dilutable Concentrate Garden Insect Killer	2.500	-----
Ace Multi-Purpose Insect Control Concentrate	2.500	-----
Ace Soil & Turf Insect Control Concentrate	2.500	-----
Adams Fly Repellent Concentrate	1.000	-----
Adams Fly Spray and Repellent	0.200	0.2 pyrethrins + 1.0 isocinchomeric acid
Adams Room Fogger w/Sykillstop	0.400	0.05 pyrethrins + 0.1 pyriproxyfen
AgriSolutions Arctic 3.2 EC	36.800	-----
All Purpose Insect Spray - RTU (Indoor/Outdoor Use)	0.200	0.2 tetramethrin
Allstar Blitz Aqueous Residual	0.500	-----
Allstar Blitz Residual Crack & Crevice Spray	0.200	0.1 pyrethrins
Allstar Blitz Room Fogger	0.300	0.15 pyrethrins
Aqua Reslin	20.000	-----
Astro Insecticide	36.800	-----
Atroban 11% EC Emulsifiable Concentrate	11.000	-----
Atroban 42.5% EC Emulsifiable Concentrate	42.500	-----
Ball Jitter Bug Contact & Residual Insecticide	0.200	0.1 pyrethrins
Ball Lights Out Roach & Ant Spray	0.150	0.25 allethrin
Ball Stop Sign Dry Fog Insecticide	0.200	0.1 pyrethrins
Basic Solutions Lawn & Garden Insect Killer Concentrate	2.500	-----
Basic Solutions Lawn & Garden Insect Killer Ready-To-Spray	2.500	-----
Bayer Advanced Garden Power Force Kills Bugs Fast Mosquito Killer Plus Outdoor Fogger	0.150	0.15 tetramethrin
Bengal Gold Roach Spray	2.000	0.05 pyriproxyfen
Bengal Roach Spray II	2.000	-----
Bengal Yard & Patio Fogger	3.000	1.00 prallethrin
Bengal Yard & Patio Outdoor Fogger 24	2.000	0.05 prallethrin
Biomist 1.5 + 7.5 ULV	1.500	-----
Biomist 3+15 ULV	3.000	-----
Biomist 30+30 ULV	30.000	-----
Bio-Sentry Bedding Spray	0.500	-----
Black Flag Gold Roach Barrier & Killer	3.500	-----
Black Flag Kills Ants Roaches Spiders Unscented	0.150	0.15 tetramethrin
Black Flag Kills Mosquitos Flies Gnats	0.200	0.20 tetramethrin
Black Leaf Home Insect Fogger	0.400	0.05 pyrethrins
Black Leaf Roach, Ant & Spider Killer II	0.220	0.05 pyrethrins
Bonide Concentrate Bug Beater II Yard & Garden Insect Control	2.500	-----
Bonide Eight Insect Control Garden & Home Ready to Use	0.020	-----
Bonide Eight Insect Control Garden Dust	0.125	-----
Bonide Eight Insect Control Vegetable, Fruit & Flower Concentrate	2.500	-----

Bonide Home Garden & Pest Dust	0.250	-----
Bonide Mite Beater Ready To Use	0.500	-----
Bonide Total Release Flea Fogger Ready to Use	0.400	0.05 pyrethrins + 0.10 pyriproxyfen
Bonide Wasp & Hornet Killer	0.250	0.10 tetramethrin
Bronco Water-Base Equine Fly Spray Plus Citronella Scent	0.100	0.05 pyrethrins
BugOut Yard Fogger	0.200	0.20 tetramethrin
Catron IV	0.500	-----
Champion SprayOn Indoor Insect Fogger	0.400	0.05 pyrethrins
Champion SprayOn Multi-Purpose Insect & Lice Killer	0.400	0.20 pyrethrins
Conquest Insecticide Concentrate	2.500	-----
CR-2 Premium Crawling Insect Killer	0.200	0.05 pyrethrins
Crack-Shot Multipurpose insecticide Spray	0.500	-----
CRC Flying & Crawling Insect Killer	0.150	0.15 tetramethrin
Cutter Bug Free Backyard Brand Spray Concentrate	2.500	-----
Cutter Bug Free Backyard One-Step Fogger	0.050	0.227 tetramethrin
Cutter Bug Free Backyard Outdoor Fogger	0.050	0.227 tetramethrin
Cutter Deck & Patio Area Repellent Unscented	0.050	0.227 tetramethrin
Cutter Outdoorsman Camp Fogger	0.050	0.227 tetramethrin
Cutter Outdoorsman Gear Guard Insect Repellent Unscented	0.500	-----
Daltek QK Total release Fogger w/Insect Growth Regulator	0.400	0.05 pyrethrins + 0.10 pyriproxyfen
DeLice-S	1.000	-----
Demize Nylar Insect Fogger	0.500	0.10 pyriproxyfen + 1.00 linalool
Dionne 10% Permethrin LPS	10.000	-----
Do It Best Multi-Purpose Garden Insect Killer Dilutable Concentrate	2.500	-----
Do It Best Soil & Turf Insect Control	2.500	-----
Double Action Crack & Crevice Residual Insecticide	0.200	0.10 pyrethrins
Dragnet FT Termiticide	36.800	-----
Dragnet SFR Termiticide/Insecticide	36.800	-----
Dragon House & Garden Bug Killer	0.150	0.15 tetramethrin
Drop Dead II	0.200	0.10 pyrethrins
Drug Emporium Bedding Spray	0.500	-----
Durvet Ectiban EC Insecticide Emulsifiable Concentrate	5.700	-----
Ecolab Aero-Max Synergized Permethrin	1.000	-----
Ectiban EC Insecticide	5.700	-----
EctoKyl IGR Total Release Fogger	0.400	0.05 pyrethrins + 0.10 pyriproxyfen
Eliminator Ant, Flea, Tick & Mosquito Killer Concentrate	2.500	-----
Eliminator Ant, Flea, Tick & Mosquito Killer Ready-To-Spray	2.500	-----
Eliminator Ant, Roach & Spider Killer	0.250	-----
Eliminator Flower & Garden Insect Killer Ready-To-Spray	2.500	-----
Eliminator Flower & Garden Insect Killer Spray Concentrate	2.500	-----
Eliminator Home Pest Insect Control	0.250	-----
Eliminator Outdoor Insect Killer	2.500	-----
Eliminator Termite & Carpenter Ant Killer Concentrate	2.500	-----
Enforcer Ant & Roach Killer III	0.220	0.05 pyrethrins
Enforcer Ant Kill & Barrier Treatment	0.220	0.05 pyrethrins
Enforcer Flea Fogger XX	0.435	0.05 pyrethrins + 0.10 pyriproxyfen
Enforcer Flea Spray for Yards Concentrate V	2.500	-----
Enforcer Mosquito & Flying Insect Killer II	2.500	-----
Enforcer Outdoor Insect Killer Concentrate	2.500	-----
Equate Bedding Spray	0.500	-----
Erupt	0.500	-----

Family Pharmacy Bedding Spray	0.500	----
Farmgard Horse, Bard & Stable Ready To Use Fly Spray	0.500	----
Farnam Repel-X Stable Shield	0.100	0.0333 prallethrin
Ferti-lome Indoor/Outdoor Multi-Purpose Insect Spray	0.250	----
Flit 10 E.C. Broad Spectrum Multi-Use Insecticide	10.000	----
Fly Rid Plus	0.500	----
Fog-A-Cide	0.300	0.15 pyrethrins
Gold Nugget Paddock & Pasture	0.150	0.075 pyrethrins
Goldline Bedding Spray	0.500	----
Gordons Bug-No-More Yard & Garden Insect Spray	2.500	----
Gordons Home Pest Killer	0.250	----
Gordons Horse & Stable Spray	0.500	----
Gordons Indoor Fogger	0.500	0.20 tetramethrin
Gordons Permethrin 10 Horse, Livestock & Premise Spray	10.000	----
Gordons Synergized Lice-No-More Insecticide	1.000	----
Grant's Kills Ants Ant, Spider & Flea Killer	0.200	0.05 pyrethrins
Green Thumb Flying Insect Killer	0.150	0.25 allethrin
Green Thumb Home & Garden Bug Killer	0.150	0.25 allethrin
Green Thumb Home Insect Fogger	0.400	0.05 pyrethrins
Green Thumb Mosquito Free Insect Killer	2.500	----
Green Thumb Multi-Purpose Insect Killer Concentrate	2.500	----
Green Thumb Roach, Ant & Spider Killer	0.220	0.05 pyrethrins
Green Thumb Roach, Ant & Spider Killer (Water Based)	0.200	0.054 allethrin
Hard Hitter RTU	0.500	----
Hartz Advanced Care 3 in 1 Home Fogger	0.580	0.09 methoprene
Hartz Control Pet Care System Home Fogger	0.580	0.09 methoprene
Health Care America Bedding Spray Lice Treatment	0.500	----
Hi-Yield 38 Plus Turf, Termite & Ornamental Insection Control Containing 38% Permethrin	38.000	----
Hi-Yield Garden, Pet & Livestock Spray	10.000	----
Hi-Yield Kill-A-Bug II	2.500	----
Hi-Yield Permethrin Concentrate Lawn, Garden, Pet & Livestock Insect Control	10.000	----
Home Exterminator Mosquito & Flying Insect Area Repellent	0.200	0.20 tetramethrin
Hot Shot Ant Killer Plus 2	0.200	----
Hot Shot Flying Insect Killer	0.150	0.25 allethrin
Hot Shot Fogger 3	0.400	0.20 tetramethrin
Hot Shot House & Garden Bug Killer	0.150	0.25 allethrin
Hot Shot Multi-Bug Killer	0.150	0.25 allethrin
Hot Shot No-Mess Fogger	0.500	0.20 tetramethrin
Hot Shot Yard Fogger 2	0.050	0.227 tetramethrin
HyVee Bedding Spray	0.500	----
KattleGuard II	1.000	----
KGRO HOME Flying Insect Killer	0.150	0.25 allethrin
KGRO HOME House & Garden Bug Killer	0.150	0.25 allethrin
KGRO Indoor Insect Fogger 2	0.400	0.20 tetramethrin
KGRO Multi-Purpose Insect Killer Concentrate	2.500	----
KGRO Multi-Purpose Insect Killer Ready-To-Spray	2.500	----
Kill Zone Indoor Insect Fogger	0.400	0.05 pyrethrins
Lassie Flea & Tick Fogger	0.500	0.10 pyriproxyfen + 1.00 linalool
Lassie IGR Full Season Flea & Tick Fogger	0.400	0.05 pyrethrins + 0.10 pyriproxyfen
Leader Bedding Spray Lice Treatment	0.500	----
Marc Bombs Away	0.400	0.05 pyrethrins

Marc Bug-Off Roach & Insect Killer (M-31)	0.500	-----
Marquee Lice Control Spray	0.500	-----
Martins Horse & Stable Multi-Use Insecticide Ready To Use	0.500	-----
Martins Horse & Stable Spray	0.500	-----
Martins Permethrin 10% Multi-Purpose Insecticide	10.000	-----
Martins Viper RTU	0.250	-----
Masterline Aqua-Kontrol Concentrate for Mosquitoes, Flies & Gnats	20.000	-----
Masterline Kontrol 4-4 for Mosquitoes, Flies & Gnats	4.000	-----
Maxcide Concentrate Yard, Garden & Perimeter Insect Killer	2.500	-----
Maxcide Ready-To-Spray Multi Purpose Yard & Garden Insect Killer	2.500	-----
Maxide Ready-To-Use Ant, Roach & Spider Killer II	0.250	-----
Maxide Ready-To-Use Home Pest Insect Killer	0.250	-----
Mycodex Environmental Control	0.500	0.10 pyriproxyfen + 1.00 linalool
OFF! Yard & Deck Area Repellent I	0.225	0.1425 allethrin + 0.5 hydroxyethyl octyl sulfide
OFF! Yard & Deck Area Repellent II	0.225	0.143 allethrin
Ortho Ant B Gon	0.200	0.05 pyrethrins
Ortho Ant Killer	0.200	0.05 pyrethrins
Ortho Ant, Flea & Tick Killer For Lawns Ready-Spray	2.500	-----
Ortho Bug-B-Gon Garden & Landscape Ready-Spray Insect Killer	2.500	-----
Ortho Bug-B-Gon Multi-Purpose Insect Killer Ready Spray	2.500	-----
Ortho HomeDefense Hi-Power Brand Indoor Insect Fogger	0.400	0.05 pyrethrins
Ortho Indoor Insect Fogger	0.400	0.05 pyrethrins
Ortho Mosquito B Gon Area Repellent	0.200	0.20 tetramethrin
Ortho Mosquito B Gon Tree Shrub and Lawn Spray Concentrate	2.500	-----
Ortho Mosquito B Gon Tree, Shrub and Lawn Spray Ready-Spray	2.500	-----
Ortho Ready Spray Bug B Gon Multi Purpose Insect Killer 2	2.500	-----
Osco Bedding Spray	0.500	-----
Permadoc Concentrate	2.500	-----
Permanone Ready-To-use Insecticide	3.980	-----
Permethrin II	10.000	-----
Permethrin 3.2 EC Insecticide	38.400	-----
Permethrin Pro Termite-Turf-Ornamental	36.800	-----
Pounce 3.2 EC Insecticide	38.400	-----
Precor 2000 Premise Spray II	0.500	0.09 methoprene
Precor Plus Fogger	0.580	0.09 methoprene
Prelude Insecticide	25.600	-----
Pre-Strike Yard & Garden Spray	2.500	-----
PreTect Indoor Flea & Tick Fogger	0.500	0.10 pyriproxyfen + 1.00 linalool
ProsAll KillPro Flying & Crawling Insect Killer	0.400	0.20 pyrethrins
Prozap Insectrin X Concentrate	10.000	-----
Pyranha Space Spray 1-10 HP Concentrate	1.100	0.55 pyrethrins
Pyranha Space Spray 1-10 HPS Concentrate	0.600	0.30 pyrethrins
Quality Choice Bedding Spray Lice Treatment	0.500	-----
Quick & Clean Crawling Insect Killer	0.200	0.10 pyrethrins
Raid Flea Killer Plus Fogger IV Nebulizador para Pulgas	0.400	0.05 pyrethrins + 0.10 pyriproxyfen
Raid Flying Insect Killer Formula 6	0.100	0.35 tetramethrin + 0.10 allethrin
Raid Fogger III	0.400	0.05 pyrethrins
Raid Fumigator Fumigating Fogger	12.600	-----
Raid Plug-In Fogger I	12.600	-----
Raid Roach & Flea Fogger II	0.400	0.05 pyrethrins
Raid Yard Guard Outdoor Fogger Formula VII	0.225	0.143 allethrin

Raid Yard Guard Outdoor Fogger V	0.225	0.1425 allethrin + 0.5 hydroxyethyl octyl sulfide
Real Kill Ant & Grub Lawn & Garden Insect Killer Concentrate	2.500	-----
Real-Kill Indoor Flea Fogger	0.400	0.05 pyrethrins + 0.10 pyriproxyfen
Real-Kill Multi-Purpose Concentrate Lawn & Garden Insect Killer	2.500	-----
Real-Kill Multi-Purpose Insect Killer Concentrate	2.500	-----
Real-Kill Multi-Purpose Insect Killer Ready-To-Spray Concentrate	2.500	-----
Real-Kill Multi-Purpose Ready-To-Spray Concentrate Lawn & Garden Insect Killer	2.500	-----
Repel Outdoor Fogger Camp Fogger	0.050	0.227 tetramethrin
Repel Permanone	0.500	-----
Repel Permanone Permethrin Trigger Spray	0.500	-----
Repulse	0.200	0.10 pyrethrins
Rescue Ant & Roach Killer	0.200	0.054 allethrin
RID Home Lice Control Spray	0.500	-----
Rid-a-Bug Flying Insect Killer	0.150	0.25 allethrin
Rid-a-Bug House & Garden Bug Killer	0.150	0.25 allethrin
Rite Aid Pediculicide lice Control Spray	0.500	-----
Safer Brand Mosquito Patrol Insect Killer Ready to Spray	2.500	-----
Sav-On Bedding Spray	0.500	-----
Sav-On Osco By Albertsons Bedding Spray Lice Treatment	0.500	-----
Sav-On Osco By Albertsons Flying Insect Killer	0.150	0.25 allethrin
Scent Shield No Stinkin Ticks	0.500	-----
Schultz Flying Insect Killer	0.150	0.25 allethrin
Schultz Houseplant & Garden Bug Spray - Whitefly & MealyBug	0.200	0.20 tetramethrin
Schultz Houseplant & Garden Insect Killer	0.150	0.25 allethrin
Schultz Houseplant & Gardens Bug Spray (Whitefly & Mealybug)	0.200	0.20 tetramethrin
Schultz Ready-To_Spray Mosquito Control Concentrate	2.500	-----
Sergeants X-Term Indoor Flea & Tick Fogger	0.500	0.10 pyriproxyfen + 1.00 linalool
Snyder Bedding Spray	0.500	-----
Speckoz Permethrin TC	36.800	-----
Spectracide 3X Permethrin Insect Control Multi-Purpose Concentrate	2.500	-----
Spectracide Ant Shield Home Barrier Insect Killer	2.500	-----
Spectracide Bug Stop 1	0.200	0.10 pyrethrins
Spectracide Bug Stop Garden & Lawn Insect Control Concentrate	2.500	-----
Spectracide Bug Stop Indoor & Outdoor Home Insect Control	0.200	-----
Spectracide Bug Stop Indoor & Outdoor Home Insect Control Concentrate	2.500	-----
Spectracide Bug Stop Insect Killer	0.200	0.10 pyrethrins
Spectracide Bug Stop Multi-Purpose Insect Control Concentrate	2.500	-----
Spectracide Carpenter Ant Killer Insect Spray	0.200	-----
Spectracide Flying Insect Killer	0.200	0.10 pyrethrins
Spectracide Indoor Fogger 2	0.400	0.20 tetramethrin
Spectracide Mosquito Stop Concentrate	2.500	-----
Spectracide Terminate Supplemental Spot Treatment Concentrate	2.500	-----
Spectracide Terminate Termite & Carpenter Ant Killer	0.200	-----
Spectracide Yard & Patio Mosquito Spray	2.500	-----
SprayPak Flying & Crawling Insect Killer	0.400	0.20 pyrethrins
Sprectracide Ant Shield Home Barrier Insect Killer	2.500	-----
Strike Ant, Roach & Spider Killer	0.250	-----
Strike Home Pest Insect Killer	0.250	-----
Strike Yard Garden & Perimeter Insect Killer Concentrate	2.500	-----
Strike Yard Garden & Perimeter Insect Killer Ready To Spray	2.500	-----
Sunmark Bedding Spray - Spray Lice Treatment	0.500	-----

TARGET Lice Control Spray	0.500	-----
TAT Roach & Ant Killer with Residual Action III	0.220	0.05 pyrethrins
Tenkoz Permethrin 3.2EC Insecticide	38.400	-----
Terro Ant Killer Spray 1	0.200	0.10 pyrethrins
Terro Mosquito Killer Yard & Patio Protection	2.500	-----
Terro Mosquito Killer Yard and Patio Fogger	0.200	0.20 tetramethrin
Terro Termite & Carpenter Ant Killer Concentrate	9.000	-----
The End. Crawling Insect Killer	0.200	0.10 pyrethrins
The End. Flying Insect Killer	0.200	0.10 pyrethrins
Top Care Bedding Spray Lice Treatment	0.500	-----
Tuttle's Brute Insecticide for Horses	10.000	-----
UltraStop Ant & Roach Killer Ready to Use	0.220	0.05 pyrethrins
UltraStop Home Insect Killer	0.250	-----
UltraStop Indoor Fogger Ready to Use	0.400	0.05 pyrethrins
UltraStop Mosquito Free Yard Spray	2.500	-----
Valu-Rite Bedding Spray	0.500	-----
Vet Kem Siphotrol Plus Area Treatment for Homes	0.500	-----
Vet Kem Siphotrol Plus Fogger	0.580	0.09 methoprene
Vet Kem Siphotrol Yard Spray	2.500	-----
Virbac KnockOut E.S. Area Treatment	0.400	0.05 pyrethrins + 0.10 pyriproxyfen
Virbac Knockout Room & Area Fogger	0.400	0.05 pyrethrins + 0.10 pyriproxyfen
Walgreen Lice Control Spray For Bedding & Furniture	0.500	-----
Walgreens Ant & Roach Killer Country Spring Scent Formula 2	0.250	-----
Walgreens Ant & Roach Killer Formula 2 Regular Scent	0.250	-----
Walgreens Roach & Flea Fogger	0.400	0.05 pyrethrins
Western Family Lice Bedding Spray	0.500	-----
X-O-Trol Flea & Tick Fogger	0.400	0.05 pyrethrins + 0.10 pyriproxyfen
Y-TEX GardStar 40% EC Livestock and Premise Insecticide	40.000	-----
Zodiac FleaTrol Carpet & Upholstery Aerosol Spray	0.500	0.09 methoprene
Zodiac Fleatrol Fogger	0.580	0.09 methoprene
Zodiac Fleatrol Premise Spray II	0.500	0.09 methoprene
Zodiac Yard & Garden Spray	2.500	-----

Table 10. Mosquito adulticides containing phenothrin.

Product Name	% phenothrin	% other active ingredients
Ace Flying Insect Killer	0.150	0.25 allethrin
Ace House & Garden Bug Killer	0.200	0.2 tetramethrin
Ball Marksman Wasp & Hornet Killer (Super Blast)	0.125	0.2 tetramethrin
Basic Solutions Wasp & Hornet Killer	0.200	0.2 tetramethrin
Bengal Non-Flammable Dry Fogger	2.000	-----
Bengal Wasp & Hornet Killer	0.125	0.2 tetramethrin
Black Flag Kills Wasps Hornets Yellow Jackets Scorpions	0.200	0.2 tetramethrin
Black Leaf Flying & Crawling Insect Killer	0.150	0.25 tetramethrin
Black Leaf House & Garden Pest Killer	0.191	0.2 tetramethrin
BugOut Ant & Roach Spray	0.150	0.25 tetramethrin
BugOut Ant Killer Spray	0.150	0.25 tetramethrin
BugOut Flying Insect Spray	0.150	0.25 tetramethrin
BugOut Housefly Spray	0.150	0.25 tetramethrin
BugOut Roach Killer Plus	2.000	-----
BugOut Yard Fogger	0.150	0.25 tetramethrin
Claire Down & Out II Flying Insect Killer	0.200	0.2 tetramethrin

Deep 6 Flying Insect Killer	0.150	0.25 tetramethrin
Deep 6 Home Insect Fogger	0.400	0.2 tetramethrin
Deep 6 House & Garden Insect Killer Water Based	0.200	0.2 tetramethrin
Do It Best Flying Insect Killer	0.150	0.25 tetramethrin
Do It Best Rose & Garden Insect Killer	0.200	0.2 tetramethrin
Enforcer Flying Insect Killer III	0.200	0.2 tetramethrin
Enforcer Four Hour Fogger XX	0.400	0.2 tetramethrin
Enforcer Mosquito Killer Indoor & Outdoor Fogger	0.200	0.2 tetramethrin
Enforcer Wasp & Yellow Jacket Foam V	0.200	0.2 tetramethrin
F-6 Flying Insect Killer	0.150	0.25 tetramethrin
Green Thumb Flying Insect Killer	0.150	0.25 tetramethrin
Green Thumb Home & Garden Insect Killer II	0.191	0.2 tetramethrin
Insecticide for Household Use Only	0.200	0.2 tetramethrin
Institutional Size Raid Flying Insect Killer Outdoor Fresh Scent	0.143	0.143 allethrin
KGRO Hornet & Wasp Killer 1	0.200	0.2 tetramethrin
Marc Bouquet Insect Killer	0.200	0.2 tetramethrin
Monogram Flying Insect Killer	0.200	0.2 tetramethrin
Ortho Ant-Stop Ant Killer Spray	0.200	0.2 tetramethrin
Ortho Flying Insect Killer	0.200	0.3 allethrin
Ortho Flying Insect Killer 1	0.200	0.2 tetramethrin
Ortho Home Defense Flying Insect Killer	0.200	0.3 allethrin
Ortho HomeDefense Flying & Crawling Insect Killer	0.200	0.3 allethrin
Ortho HomeDefense Home & Garden Insect Killer	0.200	0.2 tetramethrin
Ortho Hornet & Wasp Killer 5	0.100	0.1 tetramethrin
Ortho ProSelect Flying Insect Killer	0.200	0.2 tetramethrin
Ortho ProSelect Hornet & Wasp Killer	0.200	0.2 tetramethrin
Ortho ProSelect Hornet & Wasp Killer 5	0.100	0.1 tetramethrin
Pic Inside/Outside House & Garden Bug Killer	0.191	0.2 tetramethrin
PowerHouse Flying Insect Killer	0.150	0.25 tetramethrin
PowerHouse House & Garden Bug Killer	0.200	0.2 tetramethrin
Raid Flying Insect Killer Formula 5	0.143	0.143 allethrin
Raid Flying Insect Killer Formula 5 Outdoor Fresh Scent	0.143	0.143 allethrin
Raid House & Garden Bug Killer Formula 7	0.096	0.239 allethrin
Raid Roach & Flea Fogger Outdoor Fresh Scent	0.405	0.54 tetramethrin + 0.05 pyrethrin
Repel Bug Zapper	0.200	0.2 tetramethrin
Stanley Enda-Bug Insecticide IV	0.200	0.2 tetramethrin
TAT Flying Insect Killer	0.200	0.2 tetramethrin
Tat House & Garden Insect Killer Indoor&OutdoorIII	0.200	0.2 tetramethrin
UltraStop Flying & Crawling Insect Killer Ready to Use	0.150	0.25 tetramethrin

Table 11. Mosquito adulticides containing resmethrin.

Product Name	% resmethrin	% other active ingredients
Amway Quick Killing Bug Spray	0.200	0.125 allethrin
Betco Insecticide Indoor Outdoor	0.250	-----
Black Flag Fogging Insecticide	0.200	-----
Black Leaf Yard & Patio Fogger Outdoor Fogger	0.250	-----
Bonide Mosquito Beater Flying Insect Fog	0.200	-----
BugOut Foaming Wasp & Hornet Spray	0.250	-----
Burgess Bug Killer Insect Fog	0.200	-----
Champion SprayOn Flying Insect Killer	0.200	0.10 allethrin

Claire Bug Buster Insect Killer with SBP-1382	0.200	0.125 allethrin
Flying Insect Killer	0.200	0.15 allethrin
Flying Insect Killer FI 710	0.250	-----
Green Thumb Yard and Patio Fogger	0.250	-----
Hudson Fog Mosquito & Flying Insect Killer	0.200	-----
IND/COM Flying Insect Killer	0.200	0.10 allethrin
Kay Dumpster Odor Counteractant Insecticide	0.250	-----
Kill Zone Flying Insect Killer Formula 2	0.200	0.125 allethrin
Kill Zone House & Garden Insect Killer Formula 3	0.200	0.15 allethrin
Kill Zone House & Garden Insect Killer Formula 4	0.200	0.125 allethrin
Marc Rid Insecticide	0.200	-----
Marc Vanish Insect Killer	0.200	0.15 allethrin
Marc Vanish Insect Killer M-112C	0.250	-----
Ortho Outdoor Insect Fogger	0.250	-----
Prescription Treatment Brand R-300 Resmethrin Concentrate	3.000	-----
Pur-Osol Insect Eliminator with SBP-1382	0.200	0.10 allethrin
Raid Houseplant & Garden Bug Spray	0.100	0.30 allethrin
Scourge Insect Formula II	18.000	-----
Scourge Insect Formula II 4%+12%MFFII	4.140	-----
Seligs Du-Kil SP	0.200	-----
Skidoo Food Plant Insect Spray	0.568	-----
Skidoo Institutional Insecticide	0.200	0.40 allethrin
UltraStop Yard & Patio Insect Killer	0.250	-----
Walgreens Flying Insect Killer	0.200	0.125 allethrin
X-Pire Insecticide Spray with SBP-1382 (United 446)	0.500	-----

This publication is intended for use by the citizens of South Dakota. Listing of brand names is for informational purposes only and does not imply endorsement of one product over another or discrimination against a similar unmentioned product.

Information is current as of June 2004.

Always read and follow label directions and precautions.

In case of accidental poisoning call: 1-800-222-1222 (Sioux Valley Poison Control)

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