

ACCEPTED
APR 9 1975
Under the Federal Insecticide, Fungicide, and Rodenticide Act, this product has been found to comply with the requirements of the Act and is hereby registered under the Act.
EPA Reg. No. 464-386-AA

RECEIVED
APR 7 1975
REGISTRATION DIVISION
PESTICIDES, EPA



SPECIMEN LABEL
REDUCED TO 78%



RUELENE 35D

INSECTICIDE DIP FOR CATTLE

Kills Grubs, Lice and Hornflies on Cattle

Active Ingredient:
Crufomate (4-tert-butyl-2-chlorophenyl
methyl methylphosphoramidate) 35.7%
Inert Ingredients (total) 64.3%
(Isopropyl alcohol) 14.0%
E.P.A. Registration No. 464-386-AA
E.P.A. Est. 464-MI-1

AGRICULTURAL CHEMICAL
Do Not Ship or Store with Food, Feeds, or Clothing

PRECAUCION AL USUARIO: Si usted no lee ingles, no use este producto hasta que la etiqueta le haya sido explicada ampliamente.

TRANSLATION (TO THE USER): If you cannot read English, do not use this product until the label has been fully explained to you.

WARNING

**KEEP OUT OF REACH OF CHILDREN
INJURIOUS TO THE EYES, ABSORBED THROUGH SKIN,
HARMFUL IF SWALLOWED**

DO NOT GET IN EYES, ON MUCOUS MEMBRANES, ON SKIN, OR ON CLOTHING. Clean contaminated clothes before re-use. Wash thoroughly with soap and water after handling. Avoid contamination of food, feedstuffs, and water supplies. Keep container closed. Use with adequate ventilation. Keep material properly labeled. In case of eye contact, flush eyes with plenty of water for at least 15 min. Call a physician.

Note To Physician and Veterinarian: Active ingredient is a cholinesterase inhibitor. Treat symptomatically. Atropine is an antidote.

WARNING - FLAMMABLE!
KEEP AWAY FROM HEAT OR OPEN FLAME.

5 GAL / 18.9 L

86-1235 PRINTED IN U.S.A. IN MARCH, 1975.

REPLACES SPECIMEN LABEL 86-1235 PRINTED IN OCTOBER, 1974.

DISCARD PREVIOUS SPECIMEN LABELS.

REVISIONS INCLUDE: (1) FISH AND WILDLIFE CAUTIONS



RUELENE* 35D

INSECTICIDE *Kills Grubs, Lice and Hornflies on Cattle* DIP FOR CATTLE

Active Ingredient

Crufomate (4-tert-butyl-2-chlorophenyl methyl methylphosphoramidate)

35.7%

Inert Ingredients (total)

(Isopropyl alcohol) 14.0%

64.3%

EPA Registration No. 464-386-AA

EPA Est. 464-MI 1

FOLLOW DIRECTIONS CAREFULLY

Livestock Remedy . . . **Not for Human Use**

A single treatment with RUELENE 35D is effective for the control of grubs, lice, and hornflies on cattle. If reinfestation occurs, re-treat as necessary. Based on life cycles of the insects, re-treatment every 21-28 days is recommended.

DIRECTIONS

For Use in Dipping Vats: Clean vat thoroughly before filling with water. Measure water into vat, or measure vat before filling in order to calculate correct amount of water that the vat holds. After filling vat with water, add RUELENE 35D at the rate of 1 gal for each 150 gal of water to make dip solution containing 0.25% crufomate. Stir thoroughly before dipping cattle.

REPLENISHMENT RATE: For short-haired cattle: Add 1 gal of RUELENE 35D for each 100 gal of water added to the vat. After dipping is finished, record depth of solution remaining in vat. If rainwater flows into vat, add 1 gal RUELENE 35D for each 100 gal of excess water added to the vat.

For long-haired cattle: Add 1 gal of RUELENE 35D for each 75 gal of water added to the vat. After dipping is finished, record depth of solution remaining in vat. If rainwater flows into vat, add 1 gal RUELENE 35D for each 75 gal of excess water added to the vat.

NOTE: The dipping solution should never be allowed to drop more than 10% from the full mark before being replenished. Best control of the dip concentration can be maintained if the vat is replenished following dipping of 150-300 cattle, depending on size of vat. For information concerning analyses of vat samples, a Dow service consultant your Dow distributor or write to Dow Chemical U.S.A., Ag Organics Department, P. O. Box 1706, Midland, Michigan 48640.

STIR THOROUGHLY BEFORE DIPPING. Walk in foot paths help keep the vat clean.

When to Dip To Control Grubs

Treat cattle with RUELENE 35D as soon as possible after activity of the heel fly ceases and **early** in the grub cycle, prior to the time the grubs are in the esophagus (gullet) and/or spinal canal. Consult your extension entomologist or veterinarian to confirm the best time for treatment in your area.

Cattle treated when large numbers of grubs are present in the esophagus (gullet) or spinal canal may show complications referred to as the host parasite reaction syndrome (HPR). The syndrome is caused by substances released from the killed grubs, and is usually reversible. When the common grub (*Hypoderma lineatum*) is involved, the syndrome is evidenced by swelling of the left side of the neck. Because of the difficulty in swallowing and eructation (ability to belch), there may be drooling of saliva and bloating. When the northern grub (*Hypoderma bovis*) is involved, the syn-

drome is evidenced by stiffness in the hindquarters, an imbalance (ataxia) or the inability to completely lift the hind feet. At the first sign of adverse reaction, encourage the animal to exercise and consult a veterinarian.

Treatment either **before** or **after** the period during which grubs are in the esophagus or spinal canal will not cause the HPR syndrome, however, treatment as soon as possible after the activity of the heel fly ceases is recommended.

Note: Calves and yearlings are more prone to show the HPR syndrome because of heavier infestations.

Note to Veterinarian: The HPR syndrome is not due to a toxic effect of RUELENE 35D and cannot be treated with atropine. The latter is contraindicated in such cases and can cause atropine poisoning. Antihistamines or corticosteroids are indicated.

To Control Hornflies and Lice

Cattle that **have been treated** for grubs according to the above schedule **may be re-treated** for lice and hornflies at any time during the year. Based on the life cycle of hornflies, re-treatment every 21-28 days is recommended. Re-treat for lice only if reinfestation occurs.

Cattle that have not been treated for grubs may be treated for lice or hornfly at any time during the year. Refer to the statement above concerning treating cattle when grubs are in the tissues of the esophagus and spinal canal.

Note withdrawal times prior to slaughter and milking listed under USE PRECAUTIONS.

USE PRECAUTIONS

Do not apply within 7 days of slaughter.

Do not apply to dry dairy cows within 3 days of freshening or to cows producing milk for human consumption. If cows freshen during treatment, or if treatment has not been withdrawn the required 3 days prior to freshening, milk must not be used for human consumption for 3 days after the last treatment.

Warning: Active ingredient is a cholinesterase inhibitor. Do not use this product on animals simultaneously or within a few days before or after treatment with or exposure to cholinesterase-inhibiting drugs, pesticides, or chemicals.

Do not treat sick animals. Do not treat animals under stress from castration, dehorning, over-exercising, or excitement, or within 10 days after shipping, weaning, or exposure to diseases. Some animals, especially those that are sick or under stress, may suffer side reactions such as bloat, salivation and/or stiffening of hindquarters.

Consult a veterinarian before treating animals that are severely weakened or underweight from lice or internal parasites.

Cattle should have free access to water and feed before and after treatment. Consult a veterinarian at the first sign of adverse reaction.

Note to Veterinarian: Do not use stomach tube for relieving bloat because swollen gullet is easily damaged. The use of a trocar and cannula is preferred.

FLAMMABLE
LIQUID
N.O.S.



SPECIMEN LABEL
(BACK)
REDUCED TO 80%

WARNING

For Humans Handling Undiluted RUELENE 35D
KEEP OUT OF REACH OF CHILDREN • INJURIOUS TO THE EYES,
ABSORBED THROUGH SKIN, • HARMFUL IF SWALLOWED

DO NOT GET IN EYES, ON MUCOUS MEMBRANES, ON SKIN, OR ON CLOTHING. Clean contaminated clothes before reuse. Wash thoroughly with soap and water after handling. Avoid contamination of food, feedstuffs, and water supplies. Keep container closed. Use with adequate ventilation. Keep material properly labeled. In case of eye contact, flush eyes with plenty of water for at least 15 min. Call a physician.

Note To Physician and Veterinarian: Active ingredient is a cholinesterase inhibitor. Treat symptomatically. Atropine is antidote.

WARNING—FLAMMABLE!
KEEP AWAY FROM HEAT OR OPEN FLAME.

Wash contaminated equipment thoroughly with water. Dispose of used, diluted dip solution by burying it in a deep, sandy area away from water, or apply for non-hazardous disposal to a body of water after flushing it and bury it.

This product is toxic to fish. Keep out of lakes, streams, or ponds. Do not apply when runoff is likely. Do not use to contaminate water by cleaning of equipment or disposal of wastes. Apply this product only as specified on this label.

NOTE: Store at temperatures above freezing.

NOTICE: This warning label is required by Federal Hazardous Substances Act, 15 CFR 162.101-162.104. The active ingredient is a cholinesterase inhibitor. It is a pesticide. It is a flammable liquid. It is a hazardous material. It is a toxic substance. It is a corrosive material. It is a reactive material. It is a health hazard. It is an environmental hazard. It is a fire hazard. It is an explosion hazard. It is a gas hazard. It is a liquid hazard. It is a solid hazard. It is a dust hazard. It is a fume hazard. It is a smoke hazard. It is a vapor hazard. It is a gas hazard. It is a liquid hazard. It is a solid hazard. It is a dust hazard. It is a fume hazard. It is a smoke hazard. It is a vapor hazard.

DOW PATENT NO. 2,947,672

THE DOW CHEMICAL COMPANY

AND SUBSIDIARIES

MIDLAND, MICHIGAN 48640 USA ZÜRICH, SWITZERLAND HONG KONG, CHINA

CORAL GABLES, FLORIDA 33134 USA SARNIA, ONTARIO, CANADA

*Trademark of THE DOW CHEMICAL COMPANY

ACCEPTED
APR 2 1975
Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the purpose registered under EPA Reg. No. 464-386-AA

RECEIVED
APR 7 1975
REGISTRATION DIVISION
PERMITS, SA



SPECIMEN LABEL
REDUCED TO 78%



RUELENE 35D

INSECTICIDE

DIP FOR CATTLE

Kills Grubs, Lice and Hornflies on Cattle

Active Ingredient:

Crufomate (4-tert-butyl-2-chlorophenyl methyl methylphosphoramidate)..... 35.7%
Inert Ingredients (total)..... 64.3%
(Isopropyl alcohol..... 14.0%)

E.P.A. Registration No. 464-386-AA

E.P.A. Est. 464-MI-1

AGRICULTURAL CHEMICAL

Do Not Ship or Store with Food, Feeds, or Clothing

PRECAUCION AL USUARIO. Si usted no lee ingles, no use este producto hasta que la etiqueta le haya sido explicada ampliamente.

TRANSLATION: (TO THE USER:) If you cannot read English, do not use this product until the label has been fully explained to you.)

WARNING

**KEEP OUT OF REACH OF CHILDREN
INJURIOUS TO THE EYES, ABSORBED THROUGH SKIN,
HARMFUL IF SWALLOWED**

DO NOT GET IN EYES, ON MUCOUS MEMBRANES, ON SKIN, OR ON CLOTHING. Clean contaminated clothes before re use. Wash thoroughly with soap and water after handling. Avoid contamination of food, feedstuffs, and water supplies. Keep container closed. Use with adequate ventilation. Keep material properly labeled. In case of eye contact, flush eyes with plenty of water for at least 15 min. Call a physician.

Note To Physician and Veterinarian: Active ingredient is a cholinesterase inhibitor. Treat symptomatically. Atropine is an antidote.

WARNING - FLAMMABLE!
KEEP AWAY FROM HEAT OR OPEN FLAME.

5 GAL / 18.9 L

86-1235 PRINTED IN U.S.A. IN MARCH, 1975.

REPLACES SPECIMEN LABEL 86-1235 PRINTED IN OCTOBER, 1974.

DISCARD PREVIOUS SPECIMEN LABELS.

REVISIONS INCLUDE: (1) FISH AND WILDLIFE CAUTIONS



RUELENE* 35D

INSECTICIDE *Kills Grubs, Lice and Hornflies on Cattle* DIP FOR CATTLE

Active Ingredient:

Cruformate (4-tert-butyl-2-chlorophenyl methyl methylphosphoramidate)	35.7%
Inert Ingredients (total)	64.3%
(Isopropyl alcohol	14.0%)

E.P.A. Registration No. 464-386-AA
E.P.A. Est. 464-MI-1

FOLLOW DIRECTIONS CAREFULLY
Livestock Remedy . . . Not for Human Use

A single treatment with RUELENE 35D is effective for the control of grubs, lice, and hornflies on cattle. If reinfestation occurs, re-treat as necessary. Based on life cycles of the insects, re-treatment every 21-28 days is recommended.

DIRECTIONS

For Use In Dipping Vats: Clean vat thoroughly before filling with water. Measure water into vat, or measure vat before filling in order to calculate correct amount of water that the vat holds. After filling vat with water, add RUELENE 35D at the rate of 1 gal for each 150 gal of water to make dip solution containing 0.25% cruformate. Stir thoroughly before dipping cattle.

REPLENISHMENT RATE: For short-haired cattle: Add 1 gal of RUELENE 35D for each 100 gal of water added to the vat. After dipping is finished, record depth of solution remaining in vat. If rainwater flows into vat, add 1 gal RUELENE 35D for each 100 gal of excess water added to the vat.

For long-haired cattle: Add 1 gal of RUELENE 35D for each 75 gal of water added to the vat. After dipping is finished, record depth of solution remaining in vat. If rainwater flows into vat, add 1 gal RUELENE 35D for each 75 gal of excess water added to the vat.

NOTE: The dipping solution should never be allowed to drop more than 10% from the full mark before being replenished. Best control of the dip concentration can be maintained if the vat is replenished following dipping of 150-300 cattle, depending on size of vat.

For information concerning analyses of vat samples, a Dow service, consult your Dow distributor or write to Dow Chemical U.S.A., Ag Organics Department, P. O. Box 1706, Midland, Michigan 48640.

STIR THOROUGHLY BEFORE DIPPING. Walk in foot baths help keep the vat clean.

When to Dip: To Control Grubs

Treat cattle with RUELENE 35D as soon as possible after activity of the heel fly ceases and early in the grub cycle, prior to the time the grubs are in the esophagus (gullet) and/or spinal canal. Consult your extension entomologist or veterinarian to confirm the best time for treatment in your area.

Cattle treated when large numbers of grubs are present in the esophagus (gullet) or spinal canal may show complications referred to as the host-parasite reaction syndrome (HPR). The syndrome is caused by substances released from the killed grubs, and is usually reversible. When the common grub (*Hypoderma lineatum*) is involved, the syndrome is evidenced by swelling of the left side of the neck. Because of the difficulty in swallowing and eructation (ability to belch), there may be drooling of saliva and bloating. When the northern grub (*Hypoderma bovis*) is involved, the syn-

drome is evidenced by stiffness in the hindquarters, imbalance (ataxia), or the inability to completely lift the hind feet. At the first sign of adverse reaction, encourage the animal to exercise and consult a veterinarian.

Treatment either before or after the period during which grubs are in the esophagus or spinal canal will not cause the HPR syndrome; however, treatment as soon as possible after the activity of the heel fly ceases is recommended.

Note: Calves and yearlings are more prone to show the HPR syndrome because of heavier infestations.

Note to Veterinarian: The HPR syndrome is not due to a toxic effect of RUELENE 35D and cannot be treated with atropine. The latter is contraindicated in such cases and can cause atropine poisoning. Antihistamines or corticosteroids are indicated.

To Control Hornflies and Lice

Cattle that have been treated for grubs according to the above schedule may be re-treated for lice and hornflies at any time during the year. Based on the life cycle of hornflies, retreatment every 21-28 days is recommended. Re-treat for lice only if reinfestation occurs.

Cattle that have not been treated for grubs may be treated for lice or hornflies at any time during the year. Refer to the statement above concerning treating cattle when grubs are in the tissues of the esophagus and spinal canal.

Note withdrawal times prior to slaughter and calving listed under USE PRECAUTIONS.

USE PRECAUTIONS

Do not apply within 7 days of slaughter.

Do not apply to dry dairy cows within 3 days of freshening, or to cows producing milk for human consumption. If cows freshen during treatment, or if treatment has not been withdrawn the required 3 days prior to freshening, milk must not be used for human consumption for 3 days after the last treatment.

Warning: Active ingredient is a cholinesterase inhibitor. Do not use this product on animals simultaneously or within a few days before or after treatment with or exposure to cholinesterase-inhibiting drugs, pesticides, or chemicals.

Do not treat sick animals. Do not treat animals under stress from castration, dehorning, over exertion, or excitement, or within 10 days after shipping, weaning or exposure to diseases. Some animals, especially those that are sick or under stress, may suffer side reactions such as bloat, salivation and/or stiffening of hindquarters.

Consult a veterinarian before treating animals that are severely weakened or underweight from lice or internal parasites.

Cattle should have free access to water and feed before and after treatment. Consult a veterinarian at the first sign of adverse reaction.

Note to Veterinarian: Do not use stomach tube for relieving bloat because swollen gullet is easily damaged. The use of a trochar and cannula is preferred.



FLAMMABLE
LIQUID
N.O.S.

SPECIMEN LABEL
(BACK)
REDUCED TO 80%

WARNING

For Humans Handling Undiluted RUELENE 35D
KEEP OUT OF REACH OF CHILDREN • INJURIOUS TO THE EYES,
ABSORBED THROUGH SKIN, • HARMFUL IF SWALLOWED

DO NOT GET IN EYES, ON MUCOUS MEMBRANES, ON SKIN, OR ON CLOTHING. Clean contaminated clothes before re-use. Wash thoroughly with soap and water after handling. Avoid contamination of food, feedstuffs, and water supplies. Keep container closed. Use with adequate ventilation. Keep material properly labeled. In case of eye contact, flush eyes with plenty of water for at least 15 min. Call a physician.

Note To Physician and Veterinarian: Active ingredient is a cholinesterase inhibitor. Treat symptomatically. Atropine is an antidote.

WARNING — FLAMMABLE!
KEEP AWAY FROM HEAT OR OPEN FLAME.

Rinse contaminated equipment thoroughly with water. Dispose of unused diluted dip solution by burying it in non-crop lands away from water supplies. Do not reuse empty container. Destroy it by perforating or crushing it and bury it.

This product is toxic to fish. Keep out of lakes, streams, or ponds. Do not apply where runoff is likely to occur. Do not contaminate water by cleaning of equipment or disposal of wastes. Apply this product only as specified on this label.

NOTE: Store at temperatures above freezing.

NOTICE: Seller warrants that the product conforms to its label description and is reasonably fit for the purposes stated on the label when used in accordance with directions under normal conditions of use, but neither this warranty nor any other warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE, express or implied, extends to the use of this product contrary to label instructions, or under abnormal conditions, or under conditions not reasonable foreseeable to seller, and buyer assumes the risk of any such use.

U.S. Patent No. 2,929,762

E275

THE DOW CHEMICAL COMPANY