62719-575 5/12/2008 1/44

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAY 12 2008

Kenneth Racke, Ph. D.
Regulatory Leader
Dow AgroSciences LLC
9330 Zionsville Road
Indianapolis, IN 46268-1054

Subject: Label Amendment: Revision of the Precautionary Statements per California DPR request and revisions to wheat and alfalfa restrictions.
EPA Reg. No. 62719-575
Cobalt
Submission dated April 23, 2008.

Dear Dr. Racke:

The revised labeling referenced to above, submitted in connection with the registration under the Federal Insecticide, fungicide, and Rodenticide Act (FIFRA) as amended, is accepted with the following comments:

1) The Agency concurs with the California Department of Pesticide Regulations request and Dow AgroSciences voluntary adoption of Precautionary Statements based on Acute Dermal Category III rather than Category IV which was determined sufficient by the Agency's toxicological review of this product.

2) Add the following Use Restriction for each of the crops listed on your label "Do not exceed the the maximum rate allowed ai per acre per year by using other gamma-cyhalothrin or lambda-cyhalothrin containing products. The maximum rate allowed for use if both gamma-cyhalothrin and lambda-cyhalothrin products are used during the same crop growing season can be calculated based on the listed maximum rates in the table below":

Maximum Application Rate Allowed of Either Active Ingredient Used Alone (lb ai/acre/season)

CROP	Gamma Cyhalothrin	Lambda Cyhalothrin
Alfalfa	0.06	0.12
Cole Crops	0.12	0.24
Corn	0.06	0.12
Cotton	0.1	0.2

Sorghum	0.04	0.08
Soybeans	0.03	0.06
Sunflowers	0.1	0.2
Wheat	0.03	0.06
Fruit Tree	0.1	0.2
Nut Tree	0.08	0.16
Conifer	0.12	0.24

When the maximum application rate of gamma-cyhalothrin is reached, no lambda cyhalothrin product can be used. The lambda-cyhalothrin quantity can be divided by 2 to calculate the total ai based on gamma-cyhalothrin.

Note: The above table content was taken from the label of a gamma-cyhalothrin containing products EPA Reg. No 74921-2 and 74921-3 where sample calculations for combination use of gamma- and lambda-cyhalothrin are available. The Agency recommends DAS provide an appropriate example.

3) The "Restricted Use Pesticide" must also be listed under the Directions for Use heading per 40CFR 156.10 (i)J(i).

4) Add "bees" to the list of "This product is toxic to fish.....birds and bees".

5) All supplemental labels must be incorporated into this label at your next label printing.

6) Delete "General" from "General Use Precautions" since mandatory statements such as "do not allow... " are listed.

A stamped copy "accepted with comments" of the label is enclosed for your records.
If you have any questions please call me at (703) 308-8328.

Sincerely yours,

Akiva Abramovitch

Akiva Abramovitch, Ph. D. Chemist
Insecticide/Rodenticide Branch
Registration Division (7505P)

(Base label for rigid containers 5 gal or less):

RESTRICTED USE PESTICIDE
For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification.

Cobalt™

Insecticide

For control of various insects infesting listed field, fruit, nut, and vegetable crops.

ACCEPTED
with COMMENTS
In EPA Letter Dated:
MAY 12 2008

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 62719-575

Active Ingredients:	
chlorpyrifos: O,O-diethyl-O-(3,5,6-trichloro-2-pyridinyl) phosphorothioate	30.00%
Gamma-cyhalothrin: cyclopropanecarboxylic acid, 3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethyl,cyano(3-phenoxyphenyl) methyl ester	0.54%
Other Ingredients	69.46%
Total	100.00%

Contains 2.5 lb chlorpyrifos and 0.045 lb *gamma*-cyhalothrin per gallon.
Contains petroleum distillate.

Keep Out Of Reach Of Children

DANGER PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

Precautionary Statements

Hazard to Humans and Domestic Animals

Corrosive • Causes Irreversible Eye Damage • May Be Fatal If Swallowed • Harmful If Absorbed Through Skin • Prolonged Or Frequently Repeated Skin Contact May Cause Allergic Reactions In Some Individuals

Do not get in eyes or on clothing. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse.

Personal Protective Equipment (PPE)

Some materials that are chemical-resistant to this product are barrier laminate and viton. For more information, follow instructions in Supplement Three of PR Notice 93-7. If you want more options, follow the instructions for category G on an EPA chemical resistance category selections chart.

Mixers and loaders using a mechanical transfer loading system and applicators using aerial application equipment must wear:

- Long-sleeved shirt and long pants
- Shoes and socks
- Protective eyewear

In addition to the above, **mixers and loaders** using a mechanical transfer loading system must wear:
- Chemical-resistant gloves
- Chemical-resistant apron
- A NIOSH-approved dust mist filtering respirator with MSHA/NIOSH approval number prefix TC-21C or a NIOSH-approved respirator with any R, P, or HE filter

See Engineering Controls for additional requirements.

All **other mixers, loaders, applicators and handlers** must wear:
- Coveralls over long-sleeved shirt and long pants
- Chemical-resistant gloves
- Chemical-resistant apron when mixing or loading or exposed to the concentrate
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposure
- A NIOSH-approved dust mist filtering respirator with MSHA/NIOSH approval number prefix TC-21C or a NIOSH-approved respirator with any R, P, or HE filter.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Controls

Mixers and loaders supporting aerial applications must use a mechanical transfer system that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4)] for dermal protection, and must:

- Wear the personal protective equipment required above for mixers/loaders
- Wear protective eyewear

Pilots must use an enclosed cockpit in a manner that meets the requirements listed in the WPS for agricultural pesticides [40 CFR 170.240(d)(6)].

Use of human flaggers is prohibited. Mechanical flagging equipment must be used.

When handlers use closed cab motorized ground application equipment in a manner that meets the requirements listed in the WPS for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations

Users should:
- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

First Aid

Organophosphate

If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

If swallowed: Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give **any** liquid to the person. Do not give anything by mouth to an unconscious person.
If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
Note to physician: Chlorpyrifos is a cholinesterase inhibitor. Treat symptomatically. If exposed, plasma and red blood cell cholinesterase tests may indicate significance of exposure (baseline data are useful). Atropine, only by injection, is the preferable antidote. Oximes, such as 2-PAM/protopam, may be therapeutic if used early; however, use only in conjunction with atropine. In case of severe acute poisoning, use antidote immediately after establishing an open airway and respiration.
Note to physician: Probable mucosal damage may contraindicate the use of gastric lavage.
Note to physician: Contains petroleum distillate – vomiting may cause aspiration pneumonia.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-992-5994 for emergency medical treatment information.

Environmental Hazards

This product is toxic to fish, aquatic invertebrates, small mammals and birds. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment washwaters or rinsate. This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

Physical or Chemical Hazards

Combustible. Do not use or store near heat or open flame.

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. Refer to label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

Storage and Disposal

Do not contaminate water, food, or feed by storage and disposal.
Pesticide Storage: Store in original container in secured dry storage area.. Prevent cross-contamination with other pesticides and fertilizers. Do not store above 100°F for extended periods of time. Storage below 20°F may result in formation of crystals. If product crystallizes, store at 50° to 70°F and agitate to redissolve crystals. If container is damaged or spill occurs, use product immediately or dispose of product and damaged container as indicated below.
Pesticide Disposal: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.
Container Reuse: Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available.
Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Refer to label booklet for Directions for Use.

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Notice: Read the entire label. Use only according to label directions. **Before using this product, read Warranty Disclaimer and Limitation of Remedies at end of label booklet. If terms are unacceptable, return at once unopened.**

In case of emergency endangering health or the environment involving this product, call 1-800-992-5994. If you wish to obtain additional product information, visit our web site at www.dowagro.com.

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

EPA Reg. No. 62719-575 EPA Est. _____

Produced for
Dow AgroSciences LLC
9330 Zionsville Road
Indianapolis, IN 46268

Net Contents __

(Base label for refillable rigid containers larger than 5 gal):

RESTRICTED USE PESTICIDE
For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification.

Cobalt™

Insecticide

For control of various insects infesting listed field, fruit, nut, and vegetable crops.

Active Ingredients:

chlorpyrifos: O,O-diethyl-O-(3,5,6-trichloro-2-pyridinyl) phosphorothioate	30.00%
Gamma-cyhalothrin: cyclopropanecarboxylic acid, 3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethyl,cyano(3-phenoxyphenyl) methyl ester	0.54%
Other Ingredients	69.46%
Total	100.00%

Contains 2.5 lb chlorpyrifos and 0.045 lb *gamma*-cyhalothrin per gallon.
Contains petroleum distillate.

Keep Out Of Reach Of Children

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Precautionary Statements

Hazard to Humans and Domestic Animals

Corrosive • Causes Irreversible Eye Damage • May Be Fatal If Swallowed • Harmful If Absorbed Through Skin • Prolonged Or Frequently Repeated Skin Contact May Cause Allergic Reactions In Some Individuals

Do not get in eyes or on clothing. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse.

Personal Protective Equipment (PPE)

Some materials that are chemical-resistant to this product are barrier laminate and viton. For more information, follow instructions in Supplement Three of PR Notice 93-7. If you want more options, follow the instructions for category G on an EPA chemical resistance category selections chart.

Mixers and loaders using a mechanical transfer loading system and applicators using aerial application equipment must wear:

- Long-sleeved shirt and long pants
- Shoes and socks
- Protective eyewear

In addition to the above, **mixers and loaders** using a mechanical transfer loading system must wear:
- Chemical-resistant gloves
- Chemical-resistant apron
- A NIOSH-approved dust mist filtering respirator with MSHA/NIOSH approval number prefix TC-21C or a NIOSH-approved respirator with any R, P, or HE filter

See Engineering Controls for additional requirements.

All **other mixers, loaders, applicators and handlers** must wear:
- Coveralls over long-sleeved shirt and long pants
- Chemical-resistant gloves
- Chemical-resistant apron when mixing or loading or exposed to the concentrate
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposure
- A NIOSH-approved dust mist filtering respirator with MSHA/NIOSH approval number prefix TC-21C or a NIOSH-approved respirator with any R, P, or HE filter.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Controls

Mixers and loaders supporting aerial applications must use a mechanical transfer system that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4)] for dermal protection, and must:

- Wear the personal protective equipment required above for mixers/loaders
- Wear protective eyewear

Pilots must use an enclosed cockpit in a manner that meets the requirements listed in the WPS for agricultural pesticides [40 CFR 170.240(d)(6)].

Use of human flaggers is prohibited. Mechanical flagging equipment must be used.

When handlers use closed cab motorized ground application equipment in a manner that meets the requirements listed in the WPS for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations

Users should:
- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

First Aid

Organophosphate

If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

If swallowed: Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give **any** liquid to the person. Do not give anything by mouth to an unconscious person.
If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
Note to physician: Chlorpyrifos is a cholinesterase inhibitor. Treat symptomatically. If exposed, plasma and red blood cell cholinesterase tests may indicate significance of exposure (baseline data are useful). Atropine, only by injection, is the preferable antidote. Oximes, such as 2-PAM/protopam, may be therapeutic if used early; however, use only in conjunction with atropine. In case of severe acute poisoning, use antidote immediately after establishing an open airway and respiration.
Note to physician: Probable mucosal damage may contraindicate the use of gastric lavage.
Note to physician: Contains petroleum distillate – vomiting may cause aspiration pneumonia.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-992-5994 for emergency medical treatment information.

Environmental Hazards

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Physical or Chemical Hazards

Combustible. Do not use or store near heat or open flame.

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. Refer to label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

Storage and Disposal

Do not contaminate water, food, or feed by storage and disposal.
Pesticide Storage: Store in original container in secured dry storage area. Prevent cross-contamination with other pesticides and fertilizers. Do not store above 100°F for extended periods of time. Storage below 20°F may result in formation of crystals. If product crystallizes, store at 50° to 70°F and agitate to redissolve crystals. If container is damaged or spill occurs, use product immediately or dispose of product and damaged container as indicated below.
Pesticide Disposal: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.
Container Reuse: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose.
Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

Refer to label booklet for Directions for Use.

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In case of emergency endangering health or the environment involving this product, call 1-800-992-5994. If you wish to obtain additional product information, visit our web site at www.dowagro.com.

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

EPA Reg. No. 62719-575 EPA Est. _____

Produced for
Dow AgroSciences LLC
9330 Zionsville Road
Indianapolis, IN 46268

Net Contents __

(Base label for nonrefillable rigid containers larger than 5 gal):

RESTRICTED USE PESTICIDE
For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification.

Cobalt™

Insecticide

For control of various insects infesting listed field, fruit, nut, and vegetable crops.

Active Ingredients:

chlorpyrifos: O,O-diethyl-O-(3,5,6-trichloro-2-pyridinyl) phosphorothioate	30.00%
Gamma-cyhalothrin: cyclopropanecarboxylic acid, 3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethyl,cyano(3-phenoxyphenyl) methyl ester	0.54%
Other Ingredients	69.46%
Total	100.00%

Contains 2.5 lb chlorpyrifos and 0.045 lb *gamma*-cyhalothrin per gallon.
Contains petroleum distillate.

Keep Out Of Reach Of Children

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Personal Protective Equipment (PPE)

Some materials that are chemical-resistant to this product are barrier laminate and viton. For more information, follow instructions in Supplement Three of PR Notice 93-7. If you want more options, follow the instructions for category G on an EPA chemical resistance category selections chart.

Mixers and loaders using a mechanical transfer loading system and applicators using aerial application equipment must wear:

- Long-sleeved shirt and long pants
- Shoes and socks
- Protective eyewear

In addition to the above, **mixers and loaders** using a mechanical transfer loading system must wear:
- Chemical-resistant gloves
- Chemical-resistant apron
- A NIOSH-approved dust mist filtering respirator with MSHA/NIOSH approval number prefix TC-21C or a NIOSH-approved respirator with any R, P, or HE filter

See Engineering Controls for additional requirements.

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- Wear the personal protective equipment required above for mixers/loaders
- Wear protective eyewear

Pilots must use an enclosed cockpit in a manner that meets the requirements listed in the WPS for agricultural pesticides [40 CFR 170.240(d)(6)].

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When handlers use closed cab motorized ground application equipment in a manner that meets the requirements listed in the WPS for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

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Users should:
- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

First Aid

Organophosphate

If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

If swallowed: Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give **any** liquid to the person. Do not give anything by mouth to an unconscious person.
If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
Note to physician: Chlorpyrifos is a cholinesterase inhibitor. Treat symptomatically. If exposed, plasma and red blood cell cholinesterase tests may indicate significance of exposure (baseline data are useful). Atropine, only by injection, is the preferable antidote. Oximes, such as 2-PAM/protopam, may be therapeutic if used early; however, use only in conjunction with atropine. In case of severe acute poisoning, use antidote immediately after establishing an open airway and respiration.
Note to physician: Probable mucosal damage may contraindicate the use of gastric lavage.
Note to physician: Contains petroleum distillate – vomiting may cause aspiration pneumonia.

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Physical or Chemical Hazards

Combustible. Do not use or store near heat or open flame.

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. Refer to label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

Storage and Disposal

Do not contaminate water, food, or feed by storage and disposal.
Pesticide Storage: Store in original container in secured dry storage area. Prevent cross-contamination with other pesticides and fertilizers. Do not store above 100°F for extended periods of time. Storage below 20°F may result in formation of crystals. If product crystallizes, store at 50° to 70°F and agitate to redissolve crystals. If container is damaged or spill occurs, use product immediately or dispose of product and damaged container as indicated below.
Pesticide Disposal: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.
Container Reuse: Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available.
Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Refer to label booklet for Directions for Use.

Notice: Read the entire label. Use only according to label directions. **Before using this product, read Warranty Disclaimer and Limitation of Remedies at end of label booklet. If terms are unacceptable, return at once unopened.**

In case of emergency endangering health or the environment involving this product, call 1-800-992-5994. If you wish to obtain additional product information, visit our web site at www.dowagro.com.

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(Label booklet cover):

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Cobalt™

Insecticide

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Other Ingredients	69.46%
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DANGER PELIGRO

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Agricultural Use Requirements
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Refer to inside of label booklet for additional precautionary information including Directions for Use.

Notice: Read the entire label. Use only according to label directions. **Before using this product, read Warranty Disclaimer and Limitation of Remedies at end of label booklet. If terms are unacceptable, return at once unopened.**

In case of emergency endangering health or the environment involving this product, call 1-800-992-5994. If you wish to obtain additional product information, visit our web site at www.dowagro.com.

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

EPA Reg. No. 62719-575 EPA Est. _____

Produced for
Dow AgroSciences LLC

9330 Zionsville Road
Indianapolis, IN 46268

Net Contents __

(Page 1 through end):

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Precautionary Statements

Hazard to Humans and Domestic Animals

DANGER

Corrosive • Causes Irreversible Eye Damage • May Be Fatal If Swallowed • Harmful If Absorbed Through Skin • Prolonged Or Frequently Repeated Skin Contact May Cause Allergic Reactions In Some Individuals

Do not get in eyes or on clothing. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse.

Personal Protective Equipment (PPE)

Some materials that are chemical-resistant to this product are barrier laminate and viton. For more information, follow instructions in Supplement Three of PR Notice 93-7. If you want more options, follow the instructions for category G on an EPA chemical resistance category selections chart.

Mixers and loaders using a mechanical transfer loading system and applicators using aerial application equipment must wear:

- Long-sleeved shirt and long pants
- Shoes and socks
- Protective eyewear

In addition to the above, **mixers and loaders** using a mechanical transfer loading system must wear:

- Chemical-resistant gloves
- Chemical-resistant apron
- A NIOSH-approved dust mist filtering respirator with MSHA/NIOSH approval number prefix TC-21C or a NIOSH-approved respirator with any R, P, or HE filter

See Engineering Controls for additional requirements.

All **other mixers, loaders, applicators and handlers** must wear:

- Coveralls over long-sleeved shirt and long pants
- Chemical-resistant gloves
- Chemical-resistant apron when mixing or loading or exposed to the concentrate
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposure
- A NIOSH-approved dust mist filtering respirator with MSHA/NIOSH approval number prefix TC-21C or a NIOSH-approved respirator with any R, P, or HE filter.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Controls

Mixers and loaders supporting aerial applications must use a mechanical transfer system that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4)] for dermal protection, and must:

- Wear the personal protective equipment required above for mixers/loaders
- Wear protective eyewear

Pilots must use an enclosed cockpit in a manner that meets the requirements listed in the WPS for agricultural pesticides [40 CFR 170.240(d)(6)].

Use of human flaggers is prohibited. Mechanical flagging equipment must be used.

When handlers use closed cab motorized ground application equipment in a manner that meets the requirements listed in the WPS for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

First Aid

Organophosphate

If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

If swallowed: Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give **any** liquid to the person. Do not give anything by mouth to an unconscious person.

If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Note to physician: Chlorpyrifos is a cholinesterase inhibitor. Treat symptomatically. If exposed, plasma and red blood cell cholinesterase tests may indicate significance of exposure (baseline data are useful). Atropine, only by injection, is the preferable antidote. Oximes, such as 2-PAM/protopam, may be therapeutic if used early; however, use only in conjunction with atropine. In case of severe acute poisoning, use antidote immediately after establishing an open airway and respiration.

Note to physician: Probable mucosal damage may contraindicate the use of gastric lavage.

Note to physician: Contains petroleum distillate – vomiting may cause aspiration pneumonia.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-992-5994 for emergency medical treatment information.

Environmental Hazards

This product is toxic to fish, aquatic invertebrates, small mammals and birds. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment washwaters or rinsate. This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

Physical or Chemical Hazards

Combustible. Do not use or store near heat or open flame.

Directions for Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.
Read all Directions for Use carefully before applying.

This product cannot be reformulated or repackaged into other end-use products.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment, restricted-entry interval, and notification to workers (as applicable). The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI). The REI for each crop is listed in the directions for use associated with each crop..

Exception: If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

Certified crop advisors or persons entering under their direct supervision under certain circumstances may be exempt from the early reentry requirements pursuant to 40 CFR Part 170.

PPE required for early entry into treated areas that is permitted under the Worker Protection Standard and involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls over short-sleeved shirt and short pants
- Chemical-resistant gloves made out of any waterproof material
- Chemical-resistant footware plus socks
- Chemical-resistant headgear for overhead exposure

Notify workers of the application by warning them orally and by posting warning signs at entrances to treated areas.

Storage and Disposal

Do not contaminate water, food, or feed by storage and disposal.

Pesticide Storage: Store in original container in secured dry storage area. Prevent cross-contamination with other pesticides and fertilizers. Do not store above 100°F for extended periods of time. Storage below 20°F may result in formation of crystals. If product crystallizes, store at 50° to 70°F and agitate to redissolve crystals. If container is damaged or spill occurs, use product immediately or dispose of product and damaged container as indicated below.

Pesticide Disposal: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

Nonrefillable containers 5 gallons or less:

Container Reuse: Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Refillable containers 5 gallons or larger:
Container Reuse: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose.
Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

Nonrefillable containers 5 gallons or larger:
Container Reuse: Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available.
Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

General Information

Cobalt™ insecticide is an emulsifiable concentrate for use in listed crops. This product resists washoff once it is dry. Target pests and application rates are provided in the accompanying tables.

General Use Precautions

Insect control may be reduced at low spray volumes under high temperature and wind conditions.

Some reduction in insect control may occur under unusually cool conditions.

Flood irrigation: To avoid contamination of irrigation tail waters, do not flood irrigate within 24 hours following a soil surface or foliar application of Cobalt.

Spray Drift Management

Do not allow spray to drift from the application site and contact people, structures people occupy at any time and the associated property, parks and recreation areas, non-target crops, aquatic and wetland sites, woodlands, pastures, rangelands, or animals.

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment and weather-related factors determine the potential for spray drift. The applicator is responsible for considering all of these factors when making the decision to apply this product.

Observe the following precautions when spraying Cobalt adjacent to permanent bodies of water such as rivers, natural ponds, lakes, streams, reservoirs, marshes, estuaries, and commercial fish ponds.

The following treatment setbacks or buffer zones must be utilized for applications around the above listed aquatic areas with the following application equipment:

Application Method	Required Setback (Buffer Zone) (feet)
ground boom	25
chemigation	25
orchard airblast	50
aerial (fixed wing or helicopter)	150

Increase the buffer zone to 450 feet when ultra low volume (ULV) or very fine spray (per ASABE S-572) application is made.

Do not cultivate within 10 feet of the aquatic area so as to allow growth of a vegetative filter strip. In New York State, a 25 ft vegetated, non-cropped buffer strip not traversed by drainage tiles must be maintained between a treated field and a coastal salt marsh or stream that drains into a coastal salt marsh, for both aerial or ground application. For aerial applications, the 25 ft vegetated non-cropped buffer strip for runoff protection would be part of the larger 50 ft buffer strip (or 450 ft buffer strip for ULV application) required for spray drift.

Making applications when wind is blowing away from sensitive areas is the most effective way to reduce the potential for adverse effects.

The following spray drift **best management practices** are recommended to avoid off-target drift movement from applications.

Aerial Application

- The boom width must not exceed 75% of the wingspan or 90% of the rotor blade.
- Nozzles must always point backward, parallel with the air stream, and never be pointed downward more than 45 degrees.
- Nozzles must produce a medium or coarser droplet size (255 to 340 microns volume median diameter) per ASABE Standard 572 under application conditions. Airspeed, pressure, and nozzle angle can all effect droplet size. See manufacturer's catalog or USDA/NAAA Applicator's Guide for spray size quality ratings.
- Applications must not be made at a height greater than 10 feet above the top of the target plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.
- Use upwind swath displacement and apply only when wind speed is 3 to 10 mph as measured by an anemometer. Do not apply product when wind speed exceeds 10 mph.
- If application includes a no-spray zone, do not release spray at a height greater than 10 feet above the ground or crop canopy.

Where states have more stringent regulations, they must be observed.

The applicator should be familiar with and take into account the information covered in the Aerial Drift Reduction Advisory.

Aerial Drift Reduction Advisory

This section is advisory in nature and does not supercede the mandatory label requirements.

Information on Droplet Size: The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent adverse effects from drift if applications are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversions).

Controlling Droplet Size:

- Volume - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure - Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- Number of nozzles - Use the minimum number of nozzles that provide uniform coverage.
- Nozzle orientation - Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- Nozzle type - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

Boom Length: For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

Application Height: Applications should not be made at a height greater than 10 feet above the top of the target plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

Swath Adjustment: When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator should compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.).

Wind: Drift potential is lowest between wind speeds of 2 to 10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Application should be avoided below 1.5 mph due to variable wind direction and high inversion potential. **Note:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

Temperature and Humidity: When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions: Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Sensitive Areas: The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

Ground Boom Application
The following mandatory spray drift **best management practices** are required to reduce the likelihood of off-target drift movement from ground applications.

- Choose only nozzles and pressures that produce a medium or coarse droplet size (255 to 400 microns volume median diameter), per ASABE Standard 572. See manufacturer's catalog or USDA/NAAA Applicator's Guide for spray size quality ratings.
- Apply with nozzle height no more than 4 feet above the ground or crop canopy.
- Do not apply product when wind speed exceeds 10 mph as measured by an anemometer.

Orchard Airblast Application
The following mandatory spray drift **best management practices** are required to reduce the likelihood of off-target drift movement from airblast applications.
- Nozzles must be directed so spray is not projected above the canopies.
- Apply only when wind speed is 3 to 10 mph at the application site as measured by an anemometer outside of the orchard/vineyard on the upwind side.
- Outward pointing nozzles must be shut off when turning corners at row ends.

The applicator should take into account the following **best management practices** to reduce off-site spray drift. This section is advisory and does not supercede mandatory label requirements.
- Number of nozzles, nozzle orientation and spray volume, air speed and wind direction are key factors in adjusting airblast spray delivery to match the height and density of the crop canopy. Airblast equipment should be adjusted to provide uniform coverage while minimizing the amount of spray movement over-the-top or completely through the crop canopy.
    - High air volumes deliver spray more efficiently than air at high speed. Reducing forward travel speed decreases the air speed necessary to deliver the spray to the top of the crop canopy.
    - Use air guides along with the number and orientation of spray nozzles to achieve the desired spray coverage and directional control.

- The following steps should be taken to minimize drift and the amount of non-target spray:
    - Orient nozzles and adjust air speed/volume/direction to force the spray through the crop canopy but not allow drift past the canopy.
    - Shut off spray delivery when passing gaps in crop canopy within rows.
    - Spray the outside rows of orchards from outside in, directing the spray into the orchard and shutting off nozzles on the side of the sprayer away from the orchard.
    - When treating smaller trees, vines or bushes, shut off top nozzles to minimize over-the-top spray movement.

Application Guidelines

Broadcast Foliar Application
Apply with conventional power-operated spray equipment using nozzles and spray pressures recommended for insecticides. Apply Cobalt in a spray volume of not less than 2 gallons per acre (gpa) for aerial application equipment (fixed wing or helicopter) or not less than 10 gpa for ground equipment, unless otherwise specified. Increase spray volume to ensure adequate coverage with increased density and height of crop canopy. See Spray Drift Precautions section for recommendations on droplet size.

Ground Application: Orient the boom and nozzles so that uniform coverage is obtained. The swath width should not be wider than the boom. Follow nozzle manufacturer's recommendations for insecticide nozzles with respect to nozzle type, pressure, and spacing.

Broadcast Soil Application
Apply with conventional power-operated spray equipment that will apply the product uniformly to the soil surface. Use nozzles that produce medium or coarse droplets (235 to 400 microns). Unless otherwise indicated, a spray volume of 10 gpa or more is recommended. For band application, use proportionally less spray volume.

Aerial Application

Use a minimum spray volume of 2 gpa and follow recommendations for **best management practices** for aerial application, above.

Marking of swaths by flagging, permanent markers or use of GPS equipment is recommended.

Chemigation (Sprinkler Irrigation)

Cobalt may be applied to the following crops through sprinkler irrigation equipment: alfalfa, corn (field and sweet), cotton, sorghum, soybean, and wheat, or other crops as specified in Dow AgroSciences supplemental labeling. Do not apply this product by chemigation unless specified in crop-specific directions in this label or Dow AgroSciences supplemental labeling. Do not apply to labeled crops through any other type of irrigation system.

Note: Unless otherwise indicated in specific use directions, the application rates for chemigation are the same as those recommended for broadcast application.

Special Use Directions for Sprinkler Irrigation
The following use directions must be followed when Cobalt is applied through sprinkler irrigation systems. Thoroughly clean the injection system and tank of any fertilizer or chemical residues, and dispose of the residues according to state and federal laws. Flush the injector with soap and water. Determine the amount of Cobalt needed to cover the desired acreage. Mix according to instructions in the Mixing Directions section and bring mixture to desired volume. Do not add crop oil concentrate (COC) when Cobalt is applied by chemigation. Maintain continuous agitation during mixing and throughout the application period. Set the sprinkler system to deliver the desired inches of water per acre. Start the water pump and sprinkler, and let the system achieve the desired pressure and speed before starting the injector. Start the injector and calibrate the injector system according to Calibration instructions in the following Special Use Precautions section. The mixture containing Cobalt must be injected continuously and uniformly into the irrigation water line as the sprinkler is moving to ensure uniform application at the correct rate. When the application is finished, flush and clean the entire irrigation and injector system prior to shutting down the system.

Special Use Precautions for Sprinkler Irrigation
The following use precautions will result in a safe and successful application of mixtures containing Cobalt:

- Apply this product only through the following sprinkler irrigation systems: center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, micro sprinkler, or hand move. Do not apply this product through any other type of irrigation system. Do not apply through sprinkler systems that deliver a low coefficient of uniformity such as certain water drive units.
- Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.
- If you have questions about calibration, you should contact state extension service specialists, equipment manufacturers, or other experts.
- Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system.
- A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.
- The system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back flow. Refer to the American Society of Agricultural Engineer's Engineering Practice 409 for more information.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid

from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- The irrigation line or water pump must include a functional pressure switch that will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock. The metering pump must provide a greater pressure than that of the irrigation system at the point of injection. The pump must meet Section 675 for "Electrically Driven or Controlled Irrigation Machines" NEC 70 and must contain Viton or Teflon seals.
- To insure uniform mixing of the insecticide into the water line, inject the mixture through a nozzle placed in the fertilizer injection port or just ahead of an elbow or tee in the irrigation line so that the turbulence will assist in mixing. It is suggested that the injection point be higher than the insecticide tank to prevent siphoning.
- The tank holding the insecticide mixture should be large enough to allow the system to complete the application with 1 filling. It must be free of rust, fertilizer, sediment, and foreign material, and equipped with an in-line strainer situated between the tank and the injector pump.
- **Calibration:** In order to calibrate the irrigation system and injector to apply the mixture of Cobalt, determine the following: 1) Calculate the number of acres irrigated by the system; 2) Set the irrigation rate and determine the number of minutes for the system to cover the intended treatment area; 3) Calculate the total gallons of insecticide mixture needed to cover the desired acreage. Divide the total gallons of insecticide mixture needed by the number of minutes to cover the treatment area. This value equals the gallons per minute output that the injector must deliver. Convert the gallons per minute to milliliters or ounces per minute. Calibrate the injector pump with the system in operation at the desired irrigation rate. It is suggested that the timed output of the injector pump be checked at least twice before operation, and the system monitored during operation.
- Do not apply when wind speed favors drift beyond the area intended for treatment. End guns must be turned off during the application if they irrigate non-target areas.
- Do not allow irrigation water to collect or run off and pose a hazard to livestock, wells, or adjoining crops.
- Reentry: Follow requirements in the Agricultural Use Requirements section or crop-specific sections of this label.
- Do not apply through sprinkler systems that deliver a low coefficient of uniformity such as certain water drive units.

Mixing Directions

To prepare the spray, add a portion of the required amount of water to the spray tank and with the spray tank agitator operating add Cobalt. Complete filling the tank with the balance of water needed. Maintain sufficient agitation during both mixing and application to ensure uniformity of the spray mixture.

Cobalt is compatible with insecticides, herbicides, miticides, and fungicides and non-pressure fertilizer solutions commonly recommended except for alkaline materials such as Bordeaux mixture and lime. It is always recommended that a small jar compatibility test be run prior to tank mixing. Prepare tank mixtures in the same manner as recommended above for use of Cobalt alone. When tank mixing Cobalt with herbicides, add wettable powders first, flowables second, and emulsifiable concentrates last. When a fertilizer solution is involved, it is strongly recommended that a fertilizer pesticide compatibility agent such as Unite or Complex be used. Maintain constant agitation during both mixing and application to ensure uniformity of the spray mixture. Do not allow spray mixtures to stand overnight.

Tank Mix Compatibility Test: Test compatibility of the intended tank mixture before adding Cobalt to the spray or mix tank. Add proportional amounts of each tank mix ingredient to a pint or quart jar, cap,

shake, and let set 15 minutes. Formation of precipitates that do not readily redisperse indicates an incompatible mixture that should not be used.

Uses

Alfalfa

Worker Restricted Entry Interval: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours unless PPE required for early entry is worn.

Foliar Application including Chemigation
Apply as a broadcast foliar spray using aircraft or ground spray equipment. Use a higher rate in the rate range for increased pest pressure. Use a minimum spray volume of 2 gpa for aerial application (fixed wing or helicopter) or 10 gpa for ground equipment. Use a spray volume of 5 gpa or more by air or up to 20 gpa by ground when foliage is dense and/or pest population is high and/or under high temperature and wind conditions. Some reduction in insect control may occur under unusually cool conditions. Cobalt may be applied through sprinkler irrigation systems to control listed foliar pests. Use recommended broadcast application rates. See Chemigation (Sprinkler Irrigation) section for application instructions.

Target Pests	Cobalt (fl oz/acre)
corn rootworm adults (spotted cucumber beetle) grasshoppers leafhoppers	7 - 13
alfalfa caterpillar blue alfalfa aphid cutworm spp. green cloverworm pea aphid spotted alfalfa aphid (suppression) (not for use in California) velvetbean caterpillar webworm spp.	13 - 26

alfalfa blotch leafminer alfalfa seed chalcid adult alfalfa weevil larvae and adults armyworms bean leaf beetle blister beetle sp. clover leaf weevil spp. clover root borer adult clover root curculio spp. adult clover stem borer adult corn earworm cowpea aphid cowpea curculio adult cowpea weevil adult Egyptian alfalfa weevil larvae and adults grape colapsis adult green June beetle adult green peach aphid Japanese beetle adult looper spp. Mexican bean beetle pea weevil adult plant bugs spider mites spittlebug spp. stink bug spp. sweet clover weevil adult threecornered alfalfa hopper thrips spp. whitefringed beetle spp. adult	19 - 38

Specific Use Precautions:

- Cobalt should not be tank mixed with other pesticides, surfactants, or fertilizer formulations unless prior use has shown the combination to be non-injurious to alfalfa under current conditions of use. Some phytotoxic symptoms may be observed on young, tender, rapidly growing alfalfa treated with Cobalt. Alfalfa will outgrow these symptoms and no yield loss should be expected.
- This product is highly toxic to bees exposed to direct treatment on alfalfa. Do not apply if nearby bees are clustered outside of hives and bees are actively foraging in the treated area. Protective information may be obtained from your Agricultural Extension Service.
- To avoid contamination of irrigation tail waters, do not flood irrigate within 24 hours following an application of Cobalt.

Specific Use Restrictions:

- **Preharvest Interval:** Do not cut or graze treated alfalfa within 7 days after application of 7 to 13 fl oz per acre of Cobalt, within 14 days after application of 13 to 26 fl oz per acre, or within 21 days after application of rates above 26 fl oz per acre.
- Do not make more than 4 applications per season of Cobalt or other product containing chlorpyrifos or apply any product containing chlorpyrifos more than once per alfalfa cutting.
- Do not make a second application of Cobalt or other product containing chlorpyrifos within 10 days of the first application.

Brussels Sprout

Worker Restricted Entry Interval: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours unless PPE required for early entry is worn.

Foliar Application
Apply with conventional power-operated spray equipment in 20 to 150 gpa of water. Use a higher rate in the rate range when there is increased pest pressure. Consult your state agricultural experiment station, extension service specialist, or integrated pest control advisor for proper time to treat in your area.

Target Pests	Cobalt (fl oz/acre)
cabbage aphid grasshoppers	13 - 19
cutworms fall armyworms imported cabbage worm	13 - 26
beet armyworm cabbage looper cabbage webworm southern cabbage worm stink bugs striped flea beetle (adult) yellowstriped armyworm	19 - 38

Specific Use Restrictions:
- **Preharvest Interval:** Do not apply within 21 days before harvest.
- Do not make more than 3 applications of products containing chlorpyrifos per crop.
- Do not make a second application of Cobalt or other product containing chlorpyrifos within 10 days of the first application.

Corn (Field Corn and Sweet Corn, Including Corn Grown for Seed)

Worker Restricted Entry Interval: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours unless PPE required for early entry is worn.

Conservation Tillage: Preplant, At Plant, or Preemergence Applications
Apply as a broadcast spray to surface trash and exposed soil using power-operated ground spray equipment. Use a total spray volume of 20 gpa or more. Use higher rate in the rate range to extend residual control.

Tank Mixing: Cobalt may also be applied in tank mixtures with paraquat or glyphosate herbicide and/or liquid fertilizer solutions. See Mixing Directions section for tank mixing instructions. Read and carefully follow all applicable directions, restrictions and precautions on labeling for each product use in combination with Cobalt.

Target Pests	Cobalt (fl oz/acre)
armyworms cutworms	13 – 38

At-Plant T-Band Application
Apply as a liquid T-band in fields with no more than 30% cover of crop residue remaining on the soil surface. Apply Cobalt at a rate of 3.8 fl oz per 1000 linear feet of row (51 fl oz per acre with 40-inch row spacing) in a minimum spray volume of 5 gpa . Position a flat fan nozzle over the open seed furrow immediately behind the planter shoe, in front of the press wheel, and adjust to provide a 5- to 6-inch band

width centered over the row. Incorporate into the top 1 inch of soil using tines, chains or other suitable equipment.

The following table provides equivalent application rates for various row spacings when Cobalt is applied at the rate of 2.87 fl oz per 1000 ft of row for grubs, seed corn beetle, seed corn maggot and wireworms, or applied at a rate of 1.89 fl oz per 1000 ft of row for cutworms alone.

Target Pests	Amount of Cobalt Required	
	Row Spacing (inches)	fl oz/acre
cutworms	30	33
	36	28
	38	27
	40	26
grubs seed corn beetle seed corn maggot wireworms	30 36 38 40	50 42 40 38

Sprayer Calibration Information for Band Application:

Fluid Ounces of Spray Required Per 100 Feet of Row for Various Row Spacings and Spray Volumes				
Volume of Spray Per Acre (gal)	30"	36"	38"	40"
5	3.67	4.41	4.65	4.90
10	7.34	8.82	9.30	9.80
15	11.00	13.23	13.95	14.70
20	14.68	17.64	18.60	19.69

Postemergence Application including Chemigation

Apply as a postemergence broadcast spray using sufficient spray volume to ensure thorough coverage of treated plants, but no less than 10 gpa for ground spray equipment or 2 gpa for aircraft equipment. Use higher carrier volume when foliage is dense and/or pest pressure is high and/or under high temperatures and wind conditions. Cobalt may be tank mixed with glyphosate products when application is to be made to glyphosate-tolerant corn. Cobalt may be broadcast applied postemergence through sprinkler irrigation systems at recommended application rates to control listed foliar pests. For best results, tank mix Cobalt with 2 pints of non-emulsifiable oil. See Chemigation (Sprinkler Irrigation) section for application instructions.

Target Pests	Cobalt (fl oz/acre)
grasshoppers	7 - 13
aphids armyworms bean leaf beetle cereal leaf beetle corn rootworm adults (2) cutworms (3) flea beetle adults (1) green cloverworm greenbug meadow spittlebug southern corn leaf beetle webworms (4) western bean cutworm	13 - 26

aster leafhopper chinch bugs (1) corn earworm European corn borer (5) hop vine borer sap beetle southwestern corn borer (6) stalk borer stink bug spp. tarnished plant bug	19 - 38
billbugs (1) common stalk borer (9) corn rootworm larvae (7), (8) Japanese beetle adult lesser cornstalk borer	38 - 42

Numbers in parentheses (-) refer to Pest-Specific Use Directions.

Pest-Specific Use Directions:

1. For best **billbug, chinch bug**, or **flea beetle** control, ground apply in a minimum spray volume of 20 to 40 gpa at 40 psi. If corn is less than 6 inches tall, apply in a 9- to 12-inch wide band over the row. For corn greater than 6 inches tall, apply using drop nozzles directed to the base of the plant. Do not reduce the application rate for banded or directed applications. Concentrate the full labeled dosage rate in the treated zone. When chinch bugs continue to immigrate to corn over a prolonged period or under extreme pest pressure, a second application may be needed.
2. The recommended dosage will control silk clipping by **corn rootworm adults**.
3. For **cutworms**, it is preferable to apply Cobalt when soil is moist and worms are active on or near the soil surface. If ground is dry, cloddy, or crusted at time of treatment, worms may be protected from the spray and effectiveness will be reduced. Shallow incorporation using a rotary hoe or other suitable equipment immediately before or soon after treatment may improve control. A second application may be required if damage or density levels exceed economic thresholds established for your area.
4. For **webworm** control, shallow incorporation using a rotary hoe or other suitable equipment immediately before or soon after treatment is necessary.
5. For **European corn borer** control, use 26 to 38 fl oz per acre when application is made with power-operated ground or aerial equipment or 19 to 38 fl oz per acre when application is made through a sprinkler irrigation system. University research indicates that achieving greater than 50% control of first generation European borer with a single liquid insecticide treatment is highly dependent upon timing, insecticide placement, and weather conditions.
6. For **southwestern corn borer**, a second application may be applied 21 days later if needed due to reinfestation.
7. For postemergence control of **corn rootworm larvae** apply at cultivation. Direct the spray to both sides of the row at the base of the plants just ahead of the cultivator shovels. Cover the insecticide with soil around the brace roots. A cultivation application of Cobalt may be made in addition to an at-planting application of Lorsban® 15G insecticide.
8. Cobalt may also be applied through sprinkler irrigation systems at the rate of 38 to 42 fl oz per acre to control corn rootworm larvae. Time application to coincide with the appearance of the second instar larvae. Apply with enough water to wet the root zone to the depth control needed. If soils are wet, allow enough soil drying to occur such that an application using a minimum amount of water will not produce surface runoff. See Chemigation (Sprinkler Irrigation) section for application instructions.
9. Do not use Cobalt in combination with a burndown herbicide for control of common stalk borer. For **common stalk borer** control, treat approximately 11 days after application of glyphosate or after burndown with paraquat herbicide is complete (3 to 5 days).

Specific Use Restrictions:

- **Preharvest Interval:** Do not apply within 21 days before harvest of grain or ears.

- Do not allow meat or dairy animals to graze in treated areas nor harvest treated corn silage as feed for meat or dairy animals within 14 days after last treatment.
- Do not apply more than 126 fl oz of Cobalt per acre per season.
- Do not make more than 3 applications of Cobalt or other products containing chlorpyrifos per season.
- Do not make a second application of Cobalt or other product containing chlorpyrifos within 10 days of the first application.
- If more than 1 lb ai per acre of a granular chlorpyrifos product is applied at-plant (for a maximum of 1.3 lb ai chlorpyrifos per acre per season), only 1 additional application of Cobalt at 1 lb ai chlorpyrifos per acre is allowed per season, for a total of 2.3 lb ai chlorpyrifos per acre per season.
- Do not apply in tank mixes with Steadfast or Lightning herbicides.
- Do not apply more than 84 fl oz after silk initiation.
- Do not apply more than 42 fl oz after corn has reached the milk stage (yellow kernels with milky fluid).

Cotton

Worker Restricted Entry Interval: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours unless PPE required for early entry is worn.

Foliar Application including Chemigation
Apply as a broadcast foliar spray using aircraft or ground spray equipment in all states except Arizona and California. Use a higher rate in the rate range when there is increased pest pressure. Use sufficient spray volume to ensure thorough coverage of treated plants, but no less than 10 gpa for ground spray equipment or 2 gpa for aircraft equipment. Increase spray volume when foliage is dense and/or pest population is high and/or under high temperature and wind conditions. Treat when field counts indicate damaging insect populations are developing or present. Cobalt may be applied through sprinkler irrigation systems at recommended broadcast application rates to control listed foliar pests. See Chemigation (Sprinkler Irrigation) section for application instructions.

Proper application methods are necessary to ensure thorough spray coverage and correct rate, and minimize off-target drift. Follow Application Guidelines for ground and aerial application and Spray Drift Management recommendations in General Information section of this label.

All States Except Arizona and California

Target Pests	Cobalt (fl oz/acre)
cabbage looper cotton leafperforator cutworms grasshoppers	13 – 26
bollworm (2) cotton fleahopper (1) cotton leafworm cutworms spp. European corn borer fall armyworm plant bugs (1) (*Lygus, Mirids*) saltmarsh caterpillar thrips spp. yellowstriped armyworm	19 - 38
beet armyworm boll weevil pink bollworm stink bug spp.	26 - 38

bandedwing whitefly sweetpotato whitefly tobacco whitefly	38 – 42

Numbers in parentheses (-) refer to Pest-Specific Use Directions.

Pest-Specific Use Directions:

1. Suppression that will minimize damage from plant bugs and cotton fleahoppers. Use higher rates for increased levels of control.
2. **Bollworms:** For best results, it is suggested that fields be scouted twice per week and applications made when worms are 1/4-inch or less in length.

Arizona and California

Target Pests	Cobalt (fl oz/acre)
armyworms bollworm (2) cotton aphid cotton fleahopper cotton leaf perforator cutworms *Lygus* salt marsh caterpillar silverleaf whitefly (1) thrips	26 – 42
pink bollworm	38 - 42

Numbers in parentheses (-) refer to Pest-Specific Use Directions.

Pest-Specific Use Directions:

1. **Silverleaf whitefly:** Apply in tank mix combination with the recommended rate of another insecticide labeled for control or suppression.
2. **Bollworms:** For best results, it is suggested that fields be scouted twice per week and applications made when worms are 1/4-inch or less in length.

Specific Use Restrictions:

- **Preharvest Interval:** Do not apply within 21 days before harvest.
- Do not apply more than 126 fl oz of Cobalt per acre per season.
- Do not make more than 3 applications of Cobalt or other products containing chlorpyrifos per crop season.
- Do not make a second application of Cobalt or other product containing chlorpyrifos within 10 days of the first application.
- Do not allow meat or dairy animals to graze in treated areas.
- Do not feed gin trash or treated forage to meat or dairy animals.

Sorghum - Grain Sorghum (Milo)

Worker Restricted Entry Interval: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours unless PPE required for early entry is worn.

Postemergence Application including Chemigation

Apply as a postemergence broadcast spray using sufficient spray volume to ensure thorough coverage of treated plants, but no less than 10 gpa for ground spray equipment or 2 gpa for aircraft equipment. Control may be reduced at low spray volumes under high temperature and wind conditions. Cobalt may be applied through sprinkler irrigation systems at recommended broadcast application rates to control listed foliar pests. See Chemigation (Sprinkler Irrigation) section for application instructions.

Target Pests	Cobalt (fl oz/acre)
grasshoppers sorghum midge (1) yellow sugar cane aphid and other aphids	7 - 13
chinch bugs (3) cutworms fall armyworms flea beetle spp. greenbug (2) lesser cornstalk borer (3) yellowstriped armyworm	13 - 38
beet armyworm corn earworm European and southwestern corn borer stink bug spp. webworms	19 - 38

Numbers in parentheses (-) refer to Pest-Specific Use Directions.

Pest-Specific Use Directions:

1. **Sorghum midge:** Apply when 30% to 50% of the seed heads are in bloom
2. **Greenbug:** Use a higher rate within the indicated rate range when pest populations are high.
3. **Chinch bugs and lesser cornstalk borer:** Apply as a directed spray toward the base of the plant using power-operated ground spray equipment with sufficient water to ensure coverage of an 8- to 12-inch band centered in the row. For plants less than 6 inches high, apply an 8- to 12-inch band centered over the row. Do not reduce the dosage for banded or directed applications. Concentrate the full labeled dosage rate in the treated zone.

Specific Use Precautions:

- To minimize the potential for chemical injury, do not apply Cobalt to drought stressed grain sorghum within 3 days following irrigation or rain except where the product is applied in irrigation water.
- Be aware that sorghum lines used in seed production fields may be more susceptible to chemical injury. Susceptible inbred lines or hybrids are likely to be at greater risk of yield-reducing chemical injury when treated at the higher application rates. Do not apply more than 26 fl oz of Cobalt per acre to seed sorghum if the additional risk of crop injury is unacceptable.

Specific Use Restrictions:

- **Preharvest Interval:** Do not harvest for grain, forage, fodder, hay, or silage within 30 days after application of 26 fl oz of Cobalt per acre or within 60 days after application of rates above 26 fl oz per acre.
- Do not apply more than 77 fl oz of Cobalt per acre per season.
- Do not make more than 3 applications of Cobalt or other products containing chlorpyrifos per use season.
- Do not make a second application of Cobalt or other product containing chlorpyrifos within 10 days of the first application.
- Do not treat sweet varieties of sorghum.
- Do not apply more than 28 fl oz per acre per season once crop is in soft dough stage.

Soybean

Worker Restricted Entry Interval: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours unless PPE required for early entry is worn.

Conservation Tillage: At-Plant or Preemergence Applications
Apply as a broadcast spray to surface trash and exposed soil using power-operated ground spray equipment. Use a total spray volume of 20 gpa or more. User a higher rate in the rate range to extend residual control.

Tank Mixing: Cobalt may also be applied in tank mixtures with paraquat or glyphosate herbicide and/or liquid fertilizer solutions. See Mixing Directions section for tank mixing instructions. Read and carefully follow all applicable directions, restrictions and precautions on labeling for each product use in combination with Cobalt.

Target Pests	Cobalt (fl oz/acre)
cutworms grasshoppers lesser corn stalk borer	13 – 38

Postemergence Application including Chemigation
Apply as a postemergence broadcast spray using sufficient spray volume to ensure thorough coverage of treated plants, but no less than 10 gpa for ground spray equipment or 2 gpa for aircraft equipment. Use higher carrier volume when foliage is dense and/or pest pressure is high and/or under high temperatures and wind conditions. Apply when field counts indicate damaging pest populations are developing or present. Cobalt may be tank mixed with glyphosate products when application is to be made to glyphosate-tolerant soybeans. Use a higher rate in the rate range when there is increased pest pressure. Cobalt may be applied through sprinkler irrigation systems at recommended broadcast application rates to control listed foliar pests. See Chemigation (Sprinkler Irrigation) section for application instructions.

Target Pests	Cobalt (fl oz/acre)
grasshoppers green cloverworm velvetbean caterpillar	7 - 13
blister beetle spp. cabbage looper cutworms painted lady caterpillar saltmarsh caterpillar silverspotted skipper soybean aphid webworm spp. wollybear caterpillar yellowstriped armyworm	13 - 26
bean leaf beetle corn earworm Japanese beetle adult Mexican bean beetle Mexican corn rootworm adult northern corn rootworm adult potato leafhopper southern corn rootworm beetle adult stink bug spp. threecornered alfalfa hopper thrips spp. western corn rootworm beetle adult	19 – 38

beet armyworm European corn borer lesser cornstalk borer	26 - 38

Specific Use Precaution:
- On determinate soybeans, do not make more than 1 application after pod set.

Specific Use Restrictions:
- **Preharvest Interval:** Do not apply last treatment within 30 days before harvest.
- Do not apply more than 85 fl oz of Cobalt per acre per season.
- Do not make a second application of Cobalt or other product containing chlorpyrifos within 14 days of the first application.
- Do not make more than 3 applications per year of Cobalt or other products containing chlorpyrifos.
- Do not allow meat or dairy animals to graze in treated areas or otherwise feed treated soybean forage, hay, and straw to meat or dairy animals.

Sunflower

Worker Restricted Entry Interval: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours unless PPE required for early entry is worn.

Postemergence Application
Apply as a postemergence broadcast spray using sufficient spray volume to ensure thorough coverage of treated plants, but no less than 10 gpa for ground spray equipment or 2 gpa for aircraft equipment. Use a higher rate in the rate range when there is increased pest pressure.

Target Pests	Cobalt (fl oz/acre)
grasshoppers	7 - 13
banded sunflower moth cutworms fall armyworm painted lady caterpillar seed weevil (4) stem weevil (2) sunflower beetle larvae and adults (1) sunflower moth (3) woolly bears	19 - 38
beet armyworm head-clipper weevil adult Japanese beetle adult leafhopper spp. meadow spittlebug spotter cabbage looper stink bug spp. sunflower maggot adult tarnished plant bug (*Lygus*) (5)	26 – 38

Numbers in parentheses (-) refer to Pest-Specific Use Directions.

Pest-Specific Use Directions:
1. **Sunflower beetle:** For control of larvae or adults, treat when field counts indicate 10 larvae or 1 to 2 adults per seedling.
2. **Stem weevil:** Optimal treatment time is within 5 to 7 days after adult weevils begin to appear.

3. **Sunflower moth:** To control, make first application during early 1% to 5% bloom stage.
4. **Seed weevil:** To control, apply when field counts indicate 10 to 12 adults per plant for oil crop varieties and 1 to 3 adults per plant on confectionery crop varieties.
5. **Tarnished plant bug (*Lygus*):** Use the higher rate in the rate range where populations are heavy. It is recommended to apply at the onset of pollen spread or approximately 10% bloom (R-5 growth stage). For best protection, make a second application 10 days later. Use sufficient water to ensure thorough coverage of treated plants.

Specific Use Restrictions:
- **Preharvest Interval:** Do not apply within 45 days before harvest.
- Do not apply more than 114 fl oz of Cobalt per acre per season or after bloom initiation.
- Do not make more than 3 applications per season of Cobalt or other products containing chlorpyrifos.
- Do not make a second application of Cobalt or other product containing chlorpyrifos within 10 days of the first application.
- Do not allow meat or dairy animals to graze in treated areas.

Tree Nuts (Foliar Sprays)

Worker Restricted Entry Interval: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours unless PPE required for early entry is worn.

Foliar Application
Apply Cobalt as a foliar spray at the dosages indicated to control pests listed in the following table. Mix the required dosage in sufficient water to ensure thorough and complete coverage of the foliage and crop and apply as a concentrate or dilute spray using conventional, power-operated spray equipment. For dilute sprays applied to tree nut crops, mix the required dosage in sufficient water to allow for spray to runoff. For concentrate sprays, apply an equivalent amount of Cobalt per acre. Treat when pests appear or in accordance with local conditions. Aerial application may result in less effective insect control because of reduced coverage. Consult your State agricultural experiment station, certified pest control advisor, or extension service specialist for specific use information in your area.

Crops	Target Pests		Cobalt (fl oz/acre)
almond	ant spp. leaffooted bug leafroller spp.	navel orangeworm peach twig borer stink bug spp.	26 - 57
filbert	eye-spotted bud moth filbert aphid filbert leafroller filbert worm	obliquebanded leafroller omnivorous leaftier stink bug spp. winter moth	
pecan	blackmargined aphid fall webworm	pecan nut casebearer yellow pecan aphid	19 – 57
	ant spp. black pecan aphid hickory shuckworm (2) *Phylloxera* spp.(3)	pecan leaf scorch mite (suppression) (4) spittlebugs (1) stink bug spp.	26 - 57
walnut	ant app. codling moth leaffooted bug leafrollers navel orangeworm	stink bug spp. walnut aphid walnut husk fly walnut scale	

Numbers in parentheses (-) refer to Pest-Specific Use Directions.

Pest-Specific Use Directions:
1. For control of **spittlebug**, use a dosage of 57 fl oz per acre for concentrate sprays.

2. For best results against **hickory shuckworm**, make 2 applications, 10 to 14 days apart.
3. For best control of ***Phylloxera* spp.**, make 2 applications at a 10-day interval using a minimum of 26 fl oz of Cobalt per acre starting at bud swell.
4. For suppression of **pecan leaf scorch mite**, use a preventative program.

Specific Use Precautions:
- Cobalt is highly toxic to bees exposed to direct treatment and should not be applied when bees are actively foraging in the treated area.
- To avoid contamination of irrigation tail waters, do not flood irrigate within 24 hours of application of Cobalt.

Specific Use Restrictions:
- **Preharvest Interval:** Do not apply within 14 days of harvest of almonds, filberts and walnuts, or 28 days of harvest of pecans.
- Do not apply more than 171 fl oz of Cobalt per acre per season as a foliar spray.
- Do not make more than 3 total applications per season of Cobalt or other products containing chlorpyrifos to almonds, pecans and filberts and no more than 2 applications per season on walnuts.
- Do not make a second application of Cobalt or other product containing chlorpyrifos within 10 days of the first application.
- Do not allow meat or dairy animals to graze in treated orchards.

Wheat

Worker Restricted Entry Interval: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours unless PPE required for early entry is worn.

(For use only in Arizona, California, Colorado, Idaho, Kansas, Minnesota, Montana, Nebraska, New Mexico, Nevada, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington and Wyoming)

Postemergence Application including Chemigation
Apply as a postemergence broadcast spray using sufficient spray volume to ensure thorough coverage of treated plants, but no less than 10 gpa for ground spray equipment or 2 gpa for aircraft equipment. Cobalt may be applied through sprinkler irrigation systems at recommended broadcast application rates to control listed foliar pests. See Chemigation (Sprinkler Irrigation) section for application instructions.

Target Pests	Cobalt (fl oz/acre)
aphid spp. (such as Russian wheat aphid, oat bird-cherry aphid, greenbug, English grain aphid) (1) brown wheat mite grasshoppers	7 - 13
army cutworms (2) armyworm spp. cereal leaf beetle (3) cutworms (2) flea beetle spp. grass sawfly orange blossom wheat midge wheat midge (4)	13 – 25
stink bug spp.	19 - 25

Numbers in parentheses (-) refer to Pest-Specific Use Directions.

Pest-Specific Use Directions:

1. Consult university extension bulletins for local treatment recommendations.
2. Control may be reduced under high temperature conditions (greater than 80°F), under dry soil conditions, or if larvae are more than 1/2 inch long.
3. Target application when eggs are near hatching and larvae is emerging as monitored by plant inspection.
4. For control of **wheat midge**, treatment is recommended when 75% of the wheat heads have emerged from the boot and when midge adults are found in the crop (1 midge per 4 to 5 heads). If possible, apply in the late afternoon or early evening when temperatures exceed 50°F and wind speed is less than 7 mph.

Specific Use Restrictions:

- **Preharvest Interval:** Do not apply within 14 days of harvest for forage and hay and within 28 days of harvest for grain and straw.
- Do not make more than 2 applications of Cobalt or products containing chlorpyrifos per season.
- Maximum single application rate is 25 fl oz of Cobalt per acre.
- Do not allow meat or dairy animals to graze or otherwise feed on treated forage within 14 days of application.

Terms and Conditions of Use

If terms of the following Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies are not acceptable, return unopened package at once to the seller for a full refund of purchase price paid. Otherwise, use by the buyer or any other user constitutes acceptance of the terms under Warranty Disclaimer, Inherent Risks of Use and Limitation of Remedies.

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(1) Refund of purchase price paid by buyer or user for product bought, or
(2) Replacement of amount of product used

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AgroSciences or the seller is authorized to vary or exceed the terms of the Warranty Disclaimer or this Limitation of Remedies in any manner.

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Supplemental Labeling

Dow AgroSciences

Dow AgroSciences LLC 9330 Zionsville Road Indianapolis, IN 46268-1054 USA

RESTRICTED USE PESTICIDE

For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification.

Cobalt™

EPA Reg. No. 62719-575

ACCEPTED
with COMMENTS
In EPA Letter Dated:
MAY 9 2008
Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 62719-575

Insect Control in Tree Fruits, Tree Nuts, Conifers, and Deciduous Trees

ATTENTION

- It is a violation of Federal law to use this product in a manner inconsistent with its labeling.
- This labeling must be in the possession of the user at the time of application.
- Read the label affixed to the container for Cobalt™ insecticide before applying. Carefully follow all precautionary statements and applicable use directions.
- Use of Cobalt according to this supplemental labeling is subject to all use precautions and limitations imposed by the label affixed to the container for Cobalt.

Directions for Use

Refer to product label for Cobalt for General Use Precautions, Mixing and Application instructions.

Insect Control in Tree Fruits and Tree Nuts (Dormant/Delayed Dormant Sprays)
(Not for Distribution or Use in the State of Mississippi)

Apply as a dormant or delayed dormant spray. While Cobalt may be used without oil, oil is recommended to control additional pests. See precautions for use of oil below. Apply as a concentrate or dilute spray using conventional, power-operated spray equipment. For dilute sprays [greater than 200 gallons per acre (gpa)], use sufficient spray volume to completely wet tree foliage, but not to point of runoff. For concentrate sprays (less than 200 gpa), uniformly apply an equivalent amount of Cobalt per acre.

Use a higher rate in the rate range when there is increased pest pressure.

Use Precautions:

- Cold or dry conditions may cause Cobalt plus oil sprays to infuse into trees, resulting in bud damage or bud drop. Do not apply until winter rains or irrigation has replenished soil moisture such that bark and twigs are not desiccated.
- To avoid contamination of irrigation tail waters, do not flood irrigate within 24 hours of application of Cobalt.

Use Restrictions:

- Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 days for tree fruits and 24 hours for tree nuts unless PPE required for early entry is worn.
- Make only one application of chlorpyrifos during the dormant season.
- Do not use more than 6.25 pints of Cobalt (2 lb ai chlorpyrifos) per acre per season as a dormant/delayed dormant application.
- Do not allow meat or dairy animals to graze in treated orchards.

Almond, Cherry, Nectarine, Peach, Pear, Plum, Prune

Crops	Target Pests	Cobalt (pint/acre)
almond cherry nectarine peach pear plum prune	American plum borer greater peach tree borer lesser peach tree borer peach twig borer	4 – 6.25

Specific Use Precautions:
- Avoid contact with foliage in sweet cherries as premature leaf drop may result.

Specific Use Restrictions:
- Do not make a soil or foliar application of Cobalt or products containing chlorpyrifos within 10 days of a dormant/delayed dormant application of chlorpyrifos to the orchard.
- Do not apply more than 0.1 lb ai gamma-cyhalothrin per year from any product containing gamma-cyhalothrin for foliar applications to almond.

Additional Restrictions Specific to California:
- Do not use more than 1% dormant oil in almond orchards less than 4 years old.
- Use a minimum of 100 gpa of total spray volume.
- Use up to 2% supreme oil with no more than 4 gpa on almonds.
- Use up to 2% supreme oil with no more than 6 gpa on peaches and nectarines.
- Refer to the University of California pest management guide for pears, plums, and prunes.
- Do not use any adjuvants or surfactants in addition to, or as a substitute for, a petroleum spray oil in a tank mix with Cobalt.
- Do not apply on almonds in the following counties in California: Butte, Colusa, Glenn, Solano, Sutter, Tehama, Yolo, and Yuba.

Apple

Crops	Target Pests	Cobalt (pint/acre)
apple	rosy apple aphid san jose scale	4 – 6.25

Specific Use Restrictions:
- Post-bloom application to apples is prohibited.

Additional Restrictions Specific to California:
- Use a minimum of 100 gpa of total spray volume.
- Refer to the University of California pest management guide for apples.
- Do not use any adjuvants or surfactants in addition to, or as a substitute for, a petroleum spray oil in a tank mix with Cobalt.

Insect Control in Tree Fruits and Tree Nuts (Trunk Spray or Preplant Dip)
(Not for Distribution or Use in the State of Mississippi)

Apply Cobalt to tree trunks and lower branches using a coarse, low-pressure spray to control pests listed in the following table. Apply as required by scouting, usually at intervals of 5 days or more. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds and IPM recommendations. Use a higher rate in the rate range when there is increased pest pressure. Unless otherwise specified, a second application may be made after 2 weeks and a third application may be made after harvest. Avoid spray contact with foliage in sweet cherries as premature leaf drop may result. Consult your state agricultural experiment station or extension service specialist for proper application timing for your area.

Crops	Target Pests	Cobalt (fl oz/100 gal)

cherry	American plum borer greater peach tree borer lesser peach tree borer	76.65 – 153.3
almond peach nectarine	peach tree borers (1) (2)	153.3

Numbers in parentheses (-) refer to Pest-Specific Use Directions.

Pest-Specific Use Directions:

1. **Preplant Dip Application (Peaches and Nectarines Only).** For preplant control of **peachtree borer**, use Cobalt at the equivalent application rate of 3 quarts per 100 gallons of water. Dip trees several inches above the grafting bud scar and plant immediately or allow them to dry before returning to storage. Do not allow peach trees to remain in contact with the dip solution.
2. For control of **peach tree borer** in established trees, apply before newly hatched borers enter the tree. Use as a coarse, low-pressure trunk spray and thoroughly wet all bark areas from ground level to scaffold limbs. Do not allow spray to contact fruit. Consult written recommendations provided by your State agricultural experiment station or extension service specialist for proper time to treat in your area.

Specific Use Restrictions:

- Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 days for tree fruits and 24 hours for tree nuts unless PPE required for early entry is worn.
- **Preharvest Interval:** Do not apply within 14 days before harvest of almonds, peaches and nectarines or within 21 days before harvest of cherries.
- Do not make more than 1 application of a product containing chlorpyrifos per year in peaches and nectarines and no more than 3 applications of a product containing chlorpyrifos per year in cherries.
- Do not apply more than 0.1 lb ai gamma-cyhalothrin per year from any product containing gamma-cyhalothrin for foliar applications to almond.
- Do not allow meat or dairy animals to graze in treated orchards.

Foliar Insect Control in Conifer and Deciduous Trees (Plantations, Nurseries, and Seed Orchards) (Not for Distribution or Use in the State of Mississippi)

Apply Cobalt as required by scouting to control exposed foliage, flower, cone, seed and bark feeding insects. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.

Unless otherwise indicated, apply only as a foliar spray using power-operated ground equipment. Thorough coverage of foliage is essential. Use a minimum 10 gallons per acre (gpa) of finished spray with ground equipment. Use higher volume of finished spray, 20 gpa or more, when foliage is dense and/or pest density is high and/or under high temperature and wind conditions.

Target Pests		Cobalt (fl oz/acre)
aphids European pine sawfly gypsy moth pales weevil (adult)	pine needle scale (1) pine tortoise scale (1) spittlebugs spruce budworm	51.1
pales weevil (2)		15.33 (153.3 fl oz/100 gal)
coneworm spp. (3)	seed bug spp. (3)	0.5 - 2 (5.12 – 20 fl oz/100 gal)

Numbers in parentheses (-) refer to Pest-Specific Use Directions.

1. For **scale control** apply when scale crawlers are active.
2. Apply as a cut stump drench.
3. **Coneworm/Seed Bug/Thrips spp. in Seed Orchards:**
   - For high volume sprayers, dilute 5.12 fl oz of Cobalt per 100 gallons of water and apply 5 to 10 gallons of finished spray per tree.

- For low volume sprayers, dilute 20 fl oz of Cobalt per 100 gallons of water and apply 100 gallons of finished spray volume per acre.

Specific Use Precautions:
Phytotoxicity: Do not apply under conditions of extreme heat or drought stress. Environmental factors and varietal differences significantly influence potential phytotoxic expression. **Testing has shown that Cobalt may be used at recommended rates on the following conifer species without serious phytotoxicity: balsam fir, concolor fir, Douglas fir, eastern white pine, Fraser fir, grand fir, noble fir, Scotch pine, white spruce.** Before treating large numbers of other conifer species, it is recommended that a small block of plants be treated and observed 7 to 10 days for symptoms of phytotoxicity. **Note:** The user assumes responsibility for determining if it is safe to treat other conifer species with Cobalt under commercial growing conditions.

Specific Use Restrictions:
- **Preharvest Interval:** Do not apply within 30 days of harvest. .
- **Chemigation:** Do not apply this product through any type of irrigation system.
- Do not make more than three applications of Cobalt or products containing chlorpyrifos per season.
- Do not make a second application of Cobalt or other product containing chlorpyrifos within 7 days of the first application.
- Do not allow meat or dairy animals to graze in treated areas.
- In plantations and nurseries, do not apply more than 0.12 lb gamma-cyhalothrin (283.45 fl oz of Cobalt) per acre per year.
- In seed orchards, do not apply more than 0.25 lb gamma cyhalothrin (715.4 fl oz of Cobalt) per acre per year.
- **Restricted Entry Interval:** Do not enter or allow worker entry into treated areas during the restricted entry interval of 24 hours unless PPE required for early entry is worn.

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