



Department of Agriculture
STATE OF HAWAII

LICENSED

PERIOD **2014-2016** LIC. NO.

8003.15
Disc.

**Imidacloprid
Insecticide**

Couraze™ 1.6F
Insecticide

GROUP **4A** INSECTICIDE

For control of certain insects infesting various crops.

ACTIVE INGREDIENT:

Imidacloprid, 1-[(6-Chloro-3-pyridinyl)methyl]-

N-nitro-2-imidazolidinimine 17.4%

INERT INGREDIENTS: 82.6%
100.0%

Contains 1.6 pounds of active ingredient per gallon.

SHAKE WELL BEFORE USING

STOP - Read the label before use

**KEEP OUT OF REACH
OF CHILDREN
CAUTION**

For **PRODUCT USE** Information Call 1-800-548-6113

For **MEDICAL Emergencies ONLY** Call 24 Hours A Day 1-866-303-6950

For **TRANSPORTATION Emergencies** Call ChemTrec at 1-800-424-9300

EPA REG. NO. 264-763-67760

NET CONTENTS 1 GAL. (3.785 L)

4326176 060914C 09/07

FORMULATED FOR

 **CHEMINOVA**

1700 Route 23, Suite 300
Wayne, NJ 07470

Product of Germany

FIRST AID

IF SWALLOWED:	<ul style="list-style-type: none">• Call a poison control center or doctor immediately for treatment advice.• Have person sip a glass of water if able to swallow.• Do not induce vomiting unless told to do so by a poison control center or doctor.• Do not give anything by mouth to an unconscious person.
IF IN EYES:	<ul style="list-style-type: none">• Hold eye open and rinse slowly and gently with water for 15 to 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 ON SKIN OR CLOTHING:	<ul style="list-style-type: none">• Take off contaminated clothing.• Rinse skin immediately with plenty of water for 15 to 20 minutes.• Call a poison control center or doctor for treatment advice.

In case of emergency call toll free 1-866-303-6950. Have a product container or label with you when calling a poison control center or doctor, or going for treatment.

Note To Physician: No specific antidote is available. Treat the patient symptomatically.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Harmful if swallowed or absorbed through skin. Avoid contact with skin, eyes, or clothing.

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material such as, barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinylchloride (PVC) or viton.
- Shoes plus socks

Follow manufacturer's instructions for cleaning/ maintaining personal protective equipment, PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering controls statements:

- When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (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

User should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing 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.

ENVIRONMENTAL HAZARDS

Do not apply directly to water, areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

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. This product is toxic to wildlife and highly toxic to aquatic invertebrates.

This chemical demonstrates the properties and characteristics associated with chemicals detected in ground water. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

OBSERVE THE FOLLOWING PRECAUTIONS WHEN MIXING AND APPLYING IN THE VICINITY OF AQUATIC AREAS SUCH AS LAKES; RESERVOIRS; RIVERS; PERMANENT STREAMS, MARSHES OR NATURAL PONDS; ESTUARIES AND COMMERCIAL FISH FARM PONDS.

SPRAY DRIFT MANAGEMENT

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 application decisions. Avoiding spray drift is the responsibility of the applicator.

Mixing and Loading Requirements

To avoid potential contamination of groundwater, the use of a properly designed and maintained containment pad for mixing and loading of any pesticide into application equipment is recommended. If containment pad is not used, maintain a minimum distance of 25 feet between mixing and loading area and potential surface to groundwater conduits such as field sumps, uncased well heads, sink-holes, or field drains.

For Aerial Applications

The spray boom should be mounted on the aircraft so as to minimize drift caused by wing tip vortices. The minimum practical boom length should be used, and must not exceed 75% of the wing span or rotor diameter.

Importance of Droplet Size

An important factor influencing drift is droplet size. Small droplets (<150 - 200 microns) drift to a greater extent than large droplets. Within typical equipment specifications, applications should be made to deliver the largest droplet spectrum that provides sufficient control and coverage. Formation of very small droplets may be minimized by appropriate nozzle selection by orienting nozzles away from the air stream as much as possible and by avoiding excessive spray boom pressure.

Spray should be released at the lowest possible height consistent with good pest control and flight safety. Applications more than 10 feet above the crop canopy should be avoided.

Wind Speed Restrictions

Drift potential increases at wind speeds of less than 3 mph (due to inversion potential) or more than 10 mph. However, many factors, including droplet size, canopy and equipment specifications determine drift potential at any given wind speed. Do not apply when winds are greater than 15 mph and avoid gusty and windless conditions. Risk of exposure to sensitive aquatic areas can be reduced by avoiding applications when wind direction is toward the aquatic area.

Restrictions During Temperature Inversions

Do not make aerial or ground applications during temperature inversions. Drift potential is high during temperature inversions. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Temperature inversions are characterized by increasing temperature 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. 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 mixing.

Airblast (Air Assist) Specific Recommendations for Tree Crops and Vineyards

Airblast sprayers carry droplets into the canopy of trees/vines via a radially, or laterally directed air stream. The following specific drift management practices should be followed:

- Adjust deflectors and aiming devices so that spray is only directed into the canopy;
- Block off upward pointed nozzles when there is no overhanging canopy;
- Use only enough air volume to penetrate the canopy and provide good coverage;
- Do not allow the spray to go beyond the edge of the cultivated area (i.e., turn off sprayer when turning at end rows);
- Only spray inward, toward the orchard or vineyard, for applications to the outside rows.

No-Spray Zone Requirements for Foliar Applications

Do not apply by ground within 25 feet, or by air within 150 feet of lakes; reservoirs; rivers; permanent streams, marshes or natural ponds; estuaries and commercial fish farm ponds.

Runoff Management

Do not cultivate within 10 feet of the aquatic areas to allow growth of a vegetative filter strip. When used on erodible soils, Best Management Practices for minimizing runoff should be employed. Consult your local Natural Resources Conservation Service for recommendations in your use area.

Endangered Species Notice

Under the Endangered Species Act, it is a Federal Offense to use any pesticide in a manner that results in the death of a member of an endangered species. Consult your local county bulletin, County Extension Agent, or Pesticide State Lead Agency for information concerning endangered species in your area.

Resistance Management

Some insects are known to develop resistance to insecticides after repeated use. As with any insecticide, the use of this product should conform to resistance management strategies established for the use area.

Couraze™ Flowable Insecticide contains a Group 4A insecticide. Insect biotypes with acquired or inherent tolerance to Group 4A products may eventually dominate the insect population if Group 4A products are used repeatedly as the predominant method of control for targeted species. This may eventually result in partial or total loss of control of those species by Couraze™ and to other Group 4A products.

The active ingredient in Couraze™ is a member of neonicotinoid chemical class. Avoid using a block of more than three consecutive applications of Couraze™ and/or other Group 4A products having the same or similar mode of action. Following a neonicotinoid block of treatments, Cheminova strongly encourages the rotation to a block of applications with effective products of a different mode before using additional applications of neonicotinoid products. Using a block rotation or windowed approach, along with other IPM practices, is considered an effective use strategy for preventing or delaying an insect's pest's ability to develop resistance to this class of chemistry.

Foliar applications of Couraze™ or other Group 4A products from the neonicotinoid chemical class should not be used on crops previously treated with a long-residual, soil-applied product from the neonicotinoid chemical class.

Other Group 4A, neonicotinoid products used as foliar treatments include: Actara, Assail, CALYPSO, Centric, Clutch, Couraze, Gallant, Impulse, Intruder, LEVERAGE, Nuprid, Pasada, TRIMAX PRO and Venom.

Other Group 4A, neonicotinoid products used as soil/seed treatment include: ADMIRE PRO, Advise, Alias, Belay, Couraze, Cruiser, GAUCHO, Macho, Macho Max, Nuprid, Platinum, Venom, and Widow.

Contact your local extension specialist, certified crop advisor and/or product manufacturer for additional insect resistance management recommendations. Also, for more information on Insect Resistance Management (IRM), visit the Insecticide Resistance Action Committee (IRAC) on the web at <http://www.ircac-online.org>.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

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 (PPE) and restricted-entry interval. 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) of **12 hours**.

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

- Coveralls
- Chemical-resistant gloves made of any waterproof material such as, barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinylchloride (PVC) or viton
- Shoes plus socks

STORAGE AND DISPOSAL

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

Pesticide Storage: Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area. Handle and open container in a manner as to prevent spillage. If the container is leaking, invert to prevent leakage. If container is leaking or material spilled for any reason or cause, carefully dam up spilled material to prevent runoff. Refer to Precautionary Statements on label for hazards associated with the handling of this material. Do not walk through spilled material. Absorb spilled material with absorbing type compounds and dispose of as directed for pesticides on next page. In spill or leak incidents, keep unauthorized people away. You may contact ChemTrec for decontamination procedures or any other assistance that may be necessary. The ChemTrec telephone number is 1-800-424-9300.

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

Container Disposal: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

APPLICATION DIRECTIONS

Do Not Apply Couraze™ 1.6F In Enclosed Structures Such As Greenhouses Or Planthouses.

Couraze™ 1.6F Insecticide should be applied as a directed or broadcast foliar spray. Thorough coverage of foliage is necessary without runoff for optimum insecticidal efficacy. Use adequate spray volumes, properly calibrated application equipment and spray adjuvant if necessary to obtain thorough coverage. Failure to provide adequate coverage and retention of Couraze™ on leaves and fruit may result in loss of insect control or delay in onset of activity. Couraze™ may be applied with properly calibrated ground or aerial application equipment. Minimum recommended spray volumes unless otherwise specified on crop specific Recommended Application sections are 10 gallons/Acre by ground application and 5 gallons/Acre through aerial equipment. Couraze™ may also be applied by overhead chemigation (see additional CHEMIGATION DIRECTIONS FOR USE section on next page) if allowed in crop specific Recommended Application section.

Couraze™ use on crops grown for production of true seed intended for private or commercial planting is generally not recommended but may be allowed under State specific supplemental labeling. As with any insecticide, care should be taken to minimize exposure of Couraze™ to honey bees and other pollinators. Use of Couraze™ on crops requiring bee pollination should be avoided during bloom and a minimum of 10 days prior to bloom. Additional information on Couraze™ uses for these crops and other questions may be obtained from the Cooperative Extension Service, PCAs, consultants or local Cheminova representatives.

Do not apply more than 0.5 lb. active ingredient per acre, per crop season, regardless of formulation or method of application, unless specified within a crop specific recommended applications section for a given crop.

Additional product use information may be obtained by calling **1-800-548-6113** or visiting our web site at www.cheminova.us.com.

MIXING INSTRUCTIONS

To prepare the application mixture, add a portion of the required amount of water to the spray tank and with agitation add Couraze™ 1.6. Complete filling tank with balance of water needed. Maintain sufficient agitation during both mixing and application. Couraze™ may also be used with other pesticides and/or fertilizer solutions. **Please see Compatibility Note on following page.** When tank mixtures of Couraze™ and other pesticides are involved, prepare the tank mixture as recommended above and follow suggested Mixing Order below.

Mixing Order

When pesticide mixtures are needed, add wettable powders or wettable granules first, Couraze™ or other flowables second, and emulsifiable concentrates last. Ensure good agitation as each component is added. Do not add an additional component until the previous is thoroughly mixed. If a fertilizer solution is added, a fertilizer pesticide compatibility agent may be needed. Maintain constant agitation during both mixing and application to ensure uniformity of spray mixture.

Compatibility Note

Test compatibility of the intended tank mixture before adding Couraze™ to the spray or mix tank. Add proportionate amounts of each ingredient in the appropriate order, to a pint or quart jar, cap, shake for 5 minutes, and let set for 5 minutes. Poor mixing or formation of precipitates that do not readily re-disperse indicates an incompatible mixture that should not be used. For further information, contact your local Cheminova representative.

CHEMIGATION DIRECTIONS FOR USE

Refer to GENERAL DIRECTIONS FOR USE section before proceeding with chemigation application.

Types of Irrigation Systems

Chemigation applications of Couraze™ may be made to crops through overhead sprinkler chemigation systems if specified in crop-specific Recommended Application sections. Do not apply Couraze™ through any other type of irrigation system.

Water Volume

Couraze™ chemigation applications should be made as concentrated as possible. Retention of Couraze™ on target site of insect infestation is necessary for optimum activity. Chemigation of Couraze™ in water volumes exceeding 0.10 inches/Acre are not recommended.

Uniform Water Distribution and System Calibration

The irrigation system must provide uniform distribution of treated water. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. The system must be calibrated to uniformly apply the rates specified. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

Chemigation Monitoring

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.

Drift

Do not apply when wind the speed favors drift beyond the area intended for treatment.

Required System Safety Devices

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 backflow. 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 which 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.

Using Water from Public Water Systems

Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, back flow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and to top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. The pesticide injection pipeline must contain a functional automatic quick-closing check valve to prevent the flow of fluid back toward the injection. The pesticide injection pipeline must 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 or in cases where there is no water pump, 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.

ROTATIONAL CROPS*

Treated areas may be replanted with any crop specified on an imidacloprid label, or any crop for which a tolerance exists for the active ingredient, as soon as practical following the last application. For crops not listed on an imidacloprid label, or for crops for which no tolerances for the active ingredient have been established, a 12-month plant-back interval should be observed.

Immediate Plant-back:

All crops on this label plus the following crops not on this label: barley, canola, corn (field, sweet and pop), rapeseed, sorghum, sugar beet, and wheat.

30-Day Plant-back:

Cereals (including buckwheat, millet, oats, rice, rye, and triticale), soybeans and safflower

10-Month Plant-back:

Onion and bulb vegetables

12-Month Plant-back:

All other crops

* Cover crops for soil building or erosion control may be planted any time, but do not graze or harvest for food or feed.

FIELD CROPS

Recommended Applications – Couraze™ 1.6F

Apply specified rate per acre as a broadcast or directed foliar spray to an infested area as pest populations begin to build. Thorough uniform coverage is necessary to achieve optimal control. A spray adjuvant may be used to improve coverage. Couraze™ may not knockdown established and heavy insect populations. Two applications may be required to achieve control. Scout fields and retreat if needed. Couraze™ may be tank mixed with other insecticides as recommended for knockdown of pests or for improved control of other pests.

COTTON

Pests Controlled	Rate fluid ounces/Acre	
Cotton aphid Cotton fleahopper Bandedwinged whitefly Plant bugs (excludes <i>Lygus hesperus</i>) Green stink bug Southern green stink bug Bollworm/Budworm (ovicidal effect)	2.5 - 5.0	
Pests Suppressed		
Lygus bug (<i>Lygus hesperus</i>) Whiteflies (other than bandedwinged whitefly)	3.8 – 5.0	
Notes and Restrictions		
Pre-Harvest Interval (PHI): 14 days Minimum interval between applications: 7 days Maximum Couraze™ allowed per crop season: 25.0 fluid ounces/Acre (0.31 lb A/A) Do not graze treated fields after any application of Couraze™. Couraze™ may be applied through properly calibrated ground, aerial or chemigation application equipment.		
Tank Mix Recommendations		
Pests Controlled (in addition to pests listed above)	Couraze™ Rate fluid ounces/Acre	Bidrin® 8* Rate fluid ounces/Acre
For early season control of: Thrips	2.5 – 3.8	1.6 – 3.2
For mid to late season control of: Plant bugs Stink bugs (including Brown stink bug) Grasshoppers Saltmarsh caterpillar Cotton leafperforator	2.5 – 3.8	4.0 – 8.0
Notes and Restrictions (in addition to Notes and Restrictions listed above)		
*Refer to the Bidrin® 8 product label for specific use recommendations; observe all restrictions and precautions that appear on the label.		

POTATO

Pests Controlled	Rate fluid ounces/Acre
Aphids Colorado potato beetle Flea beetles Leafhoppers Psyllids	3.8
Notes and Restrictions Pre-Harvest Interval (PHI): 7 days Minimum interval between applications: 7 days Maximum Couraze™ allowed per crop season: 16.0 fluid ounces/Acre (0.2 lb AI/A)	

TOBACCO

Pests Controlled	Rate fluid ounces/Acre
Aphids	2.0 – 4.0
Flea beetles Japanese beetle	4.0
Notes and Restrictions Pre-Harvest Interval (PHI): 14 days Minimum interval between applications: 7 days Maximum Couraze™ allowed per crop season: 22.4 fluid ounces/Acre (0.28 lb AI/A)	

VEGETABLE and SMALL FRUIT CROPS Recommended Applications – Couraze™ 1.6F

Apply specified rate per acre as a broadcast or directed foliar spray to infested area as pest populations begin to build. Thorough uniform coverage is necessary to achieve optimal control. A spray adjuvant may be used to improve coverage. Couraze™ may not knockdown established and heavy insect populations. Two applications may be required to achieve control. Scout fields and retreat if needed. Couraze™ may be tank mixed with other insecticides as recommended for knockdown of pests or for improved control of other pests.

Crops contained within certain Crop Groups recognized by EPA are subject to change. Refer to EPA website (www.epa.gov) for latest Crop Groups.

FRUITING VEGETABLES^{1/}

Crops of Crop Group 8 Plus Okra, including: Eggplant, Ground cherry, Okra, Pepper (including bell, chili, cooking, pimento and sweet), Tomato, Pepinos, Tomatillo

Pests Controlled	Rate fluid ounces/Acre
Aphids Colorado potato beetle Leafhoppers Whiteflies	3.8 – 6.2
Pepper weevil	6.2
<p>Notes and Restrictions Pre-Harvest Interval (PHI): 0 day Minimum interval between applications: 5 days Maximum Couraze™ allowed per crop season: 19.2 fluid ounces/Acre (0.24 lb AI/A)</p> <p>Applications For pepper weevil, apply specified dosage of Couraze™ by ground equipment only, timing applications prior to a damaging population becoming established. Good coverage of foliage and fruit is necessary for optimal control. Applications of Couraze™ must be incorporated into a full-season program, where alternations of effective products from multiple classes of chemistry and different modes of action are utilized in a blocked or windowed approach.</p> <p>For additional information, please contact your Cheminova representative, Extension Specialist or crop advisor.</p> <p>When targeting adult whiteflies, use higher rates.</p> <p>^{1/}Not for use on crops grown for seed unless allowed by state-specific supplemental labeling.</p>	

GLOBE ARTICHOKE

Pests Controlled	Rate fluid ounces/Acre
Aphids Leafhoppers	4.0 – 10.0
<p>Notes and Restrictions Pre-Harvest Interval (PHI): 7 days Minimum interval between applications: 14 days Maximum Couraze™ allowed per crop season: 40.0 fluid ounces/Acre (0.5 lb AI/A)</p>	

HERBS^{1/}

Crops of Crop Subgroup 19A including: Angelica, Balm (lemon balm), Basil (fresh and dried), Borage, Bumet, Camomile, Catnip, Chervil (dried), Chinese chive, Chive, Clary, Coriander (cilantro or Chinese parsley leaves), Costmary, Culantro (leaf), Curry (leaf), Dillweed, Horehound, Hyssop, Lavender, Lemongrass, Lovage (leaf), Marigold, Marjoram, Nasturtium, Parsley (dried), Pennyroyal, Rosemary, Rue, Sage, Savory (summer and winter), Sweet bay (bay leaf), Tansy, Tarragon, Thyme, Wintergreen, Woodruff, Wormwood.

Pests Controlled	Rate fluid ounces/Acre
Aphids Flea beetles Leafhoppers Whiteflies	3.5

Notes and Restrictions

Pre-Harvest Interval (PHI): **7 days**

Minimum interval between applications: **5 days**

Maximum Couraze™ allowed per crop season: **10.5 fluid ounces/Acre** (0.13 lb AI/Acre)

Applications

Couraze™ may be applied through properly calibrated ground and aerial application equipment. Thorough coverage with direct contact of the spray material to the target pests is required for optimum control. The addition of an organosilicone-based spray adjuvant at a rate not to exceed the adjuvant manufacturer's recommended use rate may improve coverage and control.

Note

Not all crops and/or varieties listed above have been tested for phytotoxic effects. Without specific knowledge about a particular crop and variety, Bayer CropScience strongly recommends that only small areas or numbers of plants of each be treated and evaluated prior to commercial use.

^{1/} Use not permitted in California unless otherwise directed by supplemental labeling.

HEAD and STEM BRASSICA VEGETABLES^{1/}

Crops of Crop Group 5 including: Broccoli, Broccoli raab (*rapini*), Brussels sprouts, Cabbage, Cauliflower, Cavalo broccoli, Chinese (*gai lon*) broccoli, Chinese (*bok choy*) cabbage, Chinese (*napa*) cabbage, Chinese mustard (*gai choy*) cabbage, Collards, Kale, Kohlrabi, Mizuna, Mustard greens, Mustard spinach, Rape greens

Pests Controlled	Rate fluid ounces/Acre
Aphids Flea beetles Leafhoppers Whiteflies	3.8

Notes and Restrictions

Pre-Harvest Interval (PHI): **7 days**

Minimum interval between applications: **5 days**

Maximum Couraze™ allowed per crop season: **19.2 fluid ounces/Acre** (0.24 lb AI/A)

^{1/} Not for use on crops grown for seed unless allowed by state-specific supplemental labeling.

LEAFY GREEN VEGETABLES^{2/}

Crops of Crop Sungroup 4A Plus Watercress including: Amaranth (leafy amaranth, Chinese spinach, tampala), Arugula (roquette), Chervil, Chrysanthemum (edible leaved and garland), Corn salad, Cress (garden), Cress (upland, yellow rocket, winter cress), Dandelion, Dock (sorrel), Endive (escarole), Lettuce (head and leaf), Orach, Parsley, Purslane (garden and winter), Radicchio (red chickory), Spinach (including New Zealand and vine (Malabar spinach, Indian spinach)), Watercress (commercial production only). Applications must not be made to native cress growing in streams or other bodies of water), Watercress (upland)

Pests Controlled	Rate fluid ounces/Acre
Aphids Flea beetles Leafhoppers Whiteflies	3.8
Notes and Restrictions Pre-Harvest Interval (PHI): 7 days Minimum interval between applications: 5 days Maximum Couraze™ allowed per crop season: 19.2 fluid ounces/Acre (0.24 lb AI/A)	
Applications For applications made to watercress, production fields must be drained of water at least 24 hours prior to application and water must not be reapplied to the field for a minimum of 24 hours following the application. Applications must be made to fully leafed-up canopies only. ^{1/} Not for use on crops grown for seed unless allowed by state-specific supplemental labeling.	

LEGUME VEGETABLES^{1/}

Crops of Crop Group 6 (except soybean, dry) including:

Edible Podded and Succulent Shelled Pea and Bean and Dried Shelled Pea and Bean

Bean (*Lupinus* spp., including grain lupin, sweet lupin, white lupin, and white sweet lupin)

Bean (*Phaseolus* spp., including field bean, kidney bean, lima bean, navy bean, pinto bean, runner bean, snap bean, tepary bean, wax bean)

Bean (*Vigna* spp., including adzuki bean, asparagus bean, blackeyed pea, catjang, Chinese longbean, cowpea, Crowder pea, moth bean, mung bean, rice bean, Southern pea, urd bean, yardlong bean)

Pea (*Pisum* spp. including dwarf pea, edible-pod pea, English pea, field pea, garden pea, green pea, snow pea, sugar snap pea)

Other Beans and Peas (Broad bean (fava), Chickpea (garbanzo bean), Guar, Jackbean, Lablab bean (hyacinth bean), Lentil, Pigeon pea, soybean (immature seed), Sword bean)

Pests Controlled	Rate fluid ounces/Acre
Aphids Leafhoppers Whiteflies	3.5
Notes and Restrictions Pre-Harvest Interval (PHI): 7 days Minimum interval between applications: 7 days Maximum Couraze™ allowed per crop season: 10.5 fluid ounces/Acre (0.13 lb AI/A)	
^{1/} Not for use on crops grown for seed unless allowed by state-specific supplemental labeling.	

ROOT, TUBEROUS AND CORM VEGETABLES^{1/}

Crops of Crop Group 1 (except sugarbeet) including: Arracacha, Arrowroot, Artichoke (Chinese and Jerusalem), Beet (garden)^{2/}, Burdock (edible)^{2/}, Canna (edible, Queensland arrowroot), Carrot^{2/}, Cassava (bitter & sweet)^{2/}, Celeriac^{2/}, Chayote (root), Chervil (turnip-rooted)^{2/}, Chicory^{2/}, Chufa, Dasheen (taro)^{2/}, Ginger, Ginseng, Horseradish, Leren, Parsley (turnip-rooted), Parsnip^{2/}, Radish^{2/}, Oriental radish (diakon)^{2/}, Rutabaga^{2/}, Salsify (black)^{2/}, Salsify (oyster plant), Salsify (Spanish), Skirret, Sweetpotato^{2/}, Tanier (cocoyam)^{2/}, Tumeric, Turnip^{2/}, Yam bean (jicama, manioc pea), Yam (true)^{2/}.

(For recommended applications on Potato see Field Crops section)

Pests Controlled	Rate fluid ounces/Acre
Aphids Flea beetles Leafhoppers Whiteflies	3.5
Notes and Restrictions Pre-Harvest Interval (PHI): 7 days Minimum interval between applications: 5 days Maximum Couraze™ allowed per crop season: 3.5 fluid ounces/Acre (0.44 lb AI/A) on Radish; 10.5 fluid ounces/Acre (0.13 lb AI/A) on other crops Maximum Couraze™ applications per crop season: 1 on Radish; 3 on other crops. ^{1/} Not for use on crops grown for seed unless allowed by state-specific supplemental labeling. ^{2/} Tops or greens from these crops may be utilized for food or feed.	

STRAWBERRY

Pests Controlled	Rate fluid ounces/Acre
Aphids Spittlebugs Whiteflies	3.8
Notes and Restrictions Pre-Harvest Interval (PHI): 7 days Minimum interval between applications: 5 days Maximum Couraze™ allowed per crop season: 11.4 fluid ounces/Acre (0.14 lb AI/A) Do not apply during bloom or within 10 days prior to bloom or when bees are actively foraging.	

TREE, BUSH and VINE CROPS Recommended Applications - Couraze™ 1.6F

Apply specified rate per acre as a broadcast or directed foliar spray to infested area as pest populations begin to build. Thorough uniform coverage is necessary to achieve optimum control. A spray adjuvant may be used to improve coverage. Couraze™ may not knockdown established and heavy insect populations. Two applications may be required to achieve control. Scout fields and retreat if needed. Couraze™ may be tank mixed with other insecticides as recommended for knockdown of pests or for improved control of other pests. Aerial application of Couraze™ may result in slower activity and reduced control relative to results from ground application. For tree and vine crops, recommended application rates are based on full-size, mature trees or vines.

Crops contained within certain crop groups recognized by EPA are subject to change. Refer to EPA website (www.epa.gov) for latest crop groups.

BANANA and PLANTAIN^{1/}

Pests Controlled		Rate fluid ounces/Acre
Aphids	Leafhoppers Thrips	8.0
<p>Notes and Restrictions Pre-Harvest Interval (PHI): 0 day Minimum interval between applications: 14 days Maximum Couraze™ allowed per crop season: 40.0 fluid ounces/Acre (0.5 lb AI/A)</p> <p>Applications Apply specified dosage of Couraze™ as a broadcast or directed spray to infested area insuring thorough coverage. Couraze™ may be applied through properly calibrated ground or aerial application equipment. Aerial application of Couraze™ may result in slower activity and reduced control relative to results from ground application. Addition of an organosilicone adjuvant at a rate not to exceed 2.0 fluid ounces/100 gallons, finished spray solution may improve coverage and pest control.</p> <p>^{1/} Use not permitted in California unless otherwise directed by supplemental labeling.</p>		

BUSHBERRY

Crops of Crop Subgroup 13B including: Blueberry, Currant, Elderberry, Gooseberry, Huckleberry, Juneberry, Lingonberry, Salal

Pests Controlled		Rate fluid ounces/Acre
Aphids	Leafhoppers/Sharpshooters	3.0 – 4.0
Blueberry maggot Japanese beetles (adults) Thrips (foliage feeding thrips only)		6.0 – 8.0
<p>Notes and Restrictions Pre-Harvest Interval (PHI): 3 days Minimum interval between applications: 7 days Maximum Couraze™ allowed per crop season: 40.0 fluid ounces/Acre (0.5 lb AI/A) Maximum number of Couraze™ applications per crop season: 5 Minimum application volume (water): 20.0 GPA – ground; 5.0 GPA – aerial. Do not apply pre-bloom or during bloom or when bees are actively foraging.</p>		

CITRUS

Crops of Crop Group 10 including: Calamondin, Citrus citron, Citrus hybrids (includes chironja, tangelo and tangor), Grapefruit, Kumquat, Lemon, Lime, Mandarin (tangerine), Pummelo, Orange (sweet and sour), Satsuma mandarin, White sapote (*Casimiroa* spp.), and other cultivars and/or hybrids of these

Pests Controlled	Rate fluid ounces/Acre
Aphids Asian citrus psyllid Blackfly Leafhoppers/Sharpshooters Leafminers Mealybugs Scales Whiteflies	10.0 – 20.0 (depending on tree size, target pest and infestation pressure)
Pest Suppressed	
Thrips (foliage feeding thrips only)	10.0 – 20.0
Notes and Restrictions Pre-Harvest Interval (PHI): 0 day Minimum interval between applications: 10 days Maximum Couraze™ allowed per crop season: 40.0 fluid ounces/Acre (0.5 lb AI/A) Do not apply during bloom or within 10 days prior to bloom or when bees are actively foraging.	
Applications Scales – time applications to the crawler stage. Treat each generation.	

COFFEE^{1/}

Pests Controlled	Rate fluid ounces/Acre
Aphids Leafhoppers Whiteflies	8.0
Pest Suppressed	
Scales	8.0
Notes and Restrictions Pre-Harvest Interval (PHI): 7 days Minimum interval between applications: 7 days Maximum Couraze™ allowed per crop season: 40.0 fluid ounces/Acre (0.5 lb AI/A) Do not apply pre-bloom or during bloom or when bees are actively foraging.	
Applications: Apply specified dosage of Couraze™ as a broadcast or directed spray to infested area insuring thorough coverage. Couraze™ may be applied through properly calibrated ground or aerial application equipment. Aerial application of Couraze™ may result in slower activity and reduced control relative to results from ground application.	
^{1/} Use not permitted in California unless otherwise directed by supplemental labeling.	

GRAPE

Including: American bunch grape, Muscadine grape and Vinifera grape.

Pests Controlled	Rate fluid ounces/Acre
Leafhoppers/Sharpshooters Mealybugs	3.0 – 4.0
Grapeleaf skeletonizer	3.8 – 4.0
Notes and Restrictions Pre-Harvest Interval (PHI): 0 day Minimum interval between applications: 14 days Maximum Couraze™ allowed per crop season: 8.0 fluid ounces/Acre (0.1 lb AI/A) Couraze™ may be applied by ground application only.	

HOP

Pest Controlled	Rate fluid ounces/Acre
Aphids	8.0
Notes and Restrictions Pre-Harvest Interval (PHI): 28 days Minimum interval between applications: 21 days Maximum Couraze™ allowed per crop season: 24.0 fluid ounces/Acre (0.3 lb AI/A)	

POME FRUIT

Crops of Crop Group 11 including: Apple, Crabapple, Loquat, Mayhaw, Pear (including Oriental pear), Quince

Pests Controlled	Rate fluid ounces/Acre
Leafhoppers	4.0 – 8.0
Aphids (except woolly apple aphid) Apple maggot Leafminers San Jose scale	8.0
FOR PEAR, ONLY Mealybugs Pear psylla	20.0
Notes and Restrictions Pre-Harvest Interval (PHI): 7 days Minimum interval between applications: 10 days Maximum Couraze™ allowed per crop season: 40.0 fluid ounces/Acre (0.5 lb AI/A) Do not apply pre-bloom or during bloom or when bees are actively foraging.	
Applications Applications targeting apple maggot should be combined with manufacturer's recommended rate of a sticker, such as Nu-Film 17.	

POMEGRANATE^{1/}

Pests Controlled	Rate fluid ounces/Acre
Aphids Leafhoppers/Sharpshooters Whiteflies	8.0
Pest Suppressed	
Scales	8.0
Notes and Restrictions Pre-Harvest Interval (PHI): 7 days Minimum interval between applications: 7 days Maximum Couraze™ allowed per crop season: 24.0 fluid ounces/Acre (0.3 lb AI/A) Do not apply pre-bloom or during bloom or when bees are actively foraging. ^{1/} Use not permitted in California unless otherwise directed by supplemental labeling.	

STONE FRUIT

Crops of Crop Group 12 including: Apricot, Cherry (including sweet and tart), Nectarine, Peach, Plum (including Chickasaw, Damson and Japanese), Plumcot, Prune (fresh and dried)

Pests Controlled	Rate fluid ounces/Acre
Aphids Green June beetle Japanese beetle Leafhoppers/Sharpshooters	Plant bugs Rose chafer San Jose scale
Cherry fruit fly	4.0 – 8.0 6.0 – 8.0
Pests Suppressed	
Plum curculio	Stink bugs
	8.0

Notes and Restrictions for Apricot, Nectarine, Peach:

Pre-Harvest Interval (PHI): **0 day**

Minimum interval between applications: **7 days**

Maximum Couraze™ allowed per crop season: **24.0 fluid ounces/Acre** (0.3 lb AI/A)

Minimum application volume (water): 50 GPA – ground application; 25 GPA – aerial application.

Do not apply pre-bloom or during bloom or when bees are actively foraging.

Notes and Restrictions for Cherries, Plums, Plumcot, Prune:

Pre-Harvest Interval (PHI): **7 days**

Minimum interval between applications: **10 days**

Maximum Couraze™ allowed per crop season: **40.0 fluid ounces/Acre** (0.5 lb AI/A)

Minimum application volume (water): 50 GPA – ground application; 25 GPA – aerial application.

Do not apply pre-bloom or during bloom or when bees are actively foraging.

TREE NUTS^{1/}

Crops of Crop Group 14 including: Almond, Beechnut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert, Hickory nut, Macadamia nut, Pecan, Pistachio, Walnut [black and English]

Pests Controlled	Rate fluid ounces/Acre
Aphids (except Black pecan aphid) Leafhoppers/Sharpshooters <i>Phylloxera</i> sp. (leaf infestations) Spittlebugs Whiteflies	3.5 – 7.0
Black pecan aphid Mealybugs San Jose scale	8.0
Notes and Restrictions Pre-Harvest Interval (PHI): 7 days Minimum interval between applications: 6 days Maximum Couraze™ allowed per crop season: 28.8 fluid ounces/Acre (0.36 lb AI/A) Minimum application volume (water): 50 GPA – ground application, 25 GPA – aerial application Do not apply pre-bloom or during bloom or when bees are actively foraging.	
Applications Applications for control of San Jose scale should be timed according to crawler stage, treating each successive generation. Two applications on a 10 to 14-day interval may be required to achieve control.	
^{1/} Use not permitted in California unless otherwise directed by supplemental labeling.	

TROPICAL FRUIT

Including: Acerola, Atemoya^{1/}, Avocado, Birida^{1/}, Black sapote, Canistel, Cherimoya^{1/}, Custard Apple^{1/}, Feijoa, Jaboticaba, Guava, Llama^{1/}, Longan, Lychee, Mamey sapote, Mango, Papaya, Passionfruit, Persimmon, Pulasan, Rambutan, Sapodilla, Soursop^{1/}, Spanish lime, Star apple, Starfruit, Sugar apple^{1/}, Wax jambu

Pests Controlled	Rate fluid ounces/Acre
Aphids Leafhoppers/Sharpshooters Mealybugs	Thrips (foliage feeding thrips only) Whiteflies
Pest Suppressed	
Scales	8.0
Notes and Restrictions Pre-Harvest Interval (PHI): 7 days Minimum interval between applications: 10 days Maximum Couraze™ allowed per crop season: 40.0 fluid ounces/Acre (0.5 lb AI/A) Do not apply pre-bloom or during bloom or when bees are actively foraging.	
^{1/} Use not permitted in California unless otherwise directed by supplemental labeling.	

OTHER CROPS

Recommended Applications – Couraze™ 1.6F

Apply specified rate per acre as a broadcast or directed foliar spray to infested area as pest populations begin to build. Thorough uniform coverage is necessary to achieve optimum control. A spray adjuvant may be used to improve coverage. Couraze™ may not knockdown established and heavy insect populations. Two applications may be required to achieve control. Scout fields and retreat if needed. Couraze™ may be tank mixed with other insecticides as recommended for knockdown of pests or for improved control of other pests.

CHRISTMAS TREE

Pests Controlled	Rate fluid ounces/Acre
Aphids Adelgids Sawflies	4.0 – 8.0
Notes and Restrictions Minimum interval between applications: 7 days Maximum Couraze™ allowed per crop season: 40.0 fluid ounces/Acre (0.5 lb AI/A) Applications Gall-forming adelgids – time applications to coincide with full bud-swell or first bud-break of earliest bud-breaking trees. Once galls form spraying will be ineffective.	

POPLAR/COTTONWOOD^{1/}

Including: Members of the genus *Populus* grown for pulp or timber

Pests Controlled	Rate fluid ounces/Acre
Aphids Leaf beetle	4.0 – 8.0
Notes and Restrictions Minimum interval between applications: 10 days Maximum Couraze™ allowed per crop season: 40.0 fluid ounces/Acre (0.5 lb AI/A) Do not apply pre-bloom or during bloom or when bees are actively foraging. ^{1/} Use not permitted in California unless otherwise directed by supplemental labeling.	

WARRANTY DISCLAIMER

Cheminova warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. CHEMINOVA MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

INHERENT RISKS OF USE

It is impossible to eliminate all risks associated with use of this product. Crop injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperatures, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of Cheminova or the seller. All such risks shall be assumed by Buyer.

LIMITATION OF REMEDIES

The exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability, or other legal theories), shall be limited to, at Cheminova's election, one of the following:

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

Cheminova shall not be liable for losses or damages resulting from handling or use of this product unless Cheminova is promptly notified of such loss or damage in writing. In no case shall Cheminova be liable for consequential or incidental damages or losses.

The terms of the Warranty Disclaimer above and this Limitation of Remedies cannot be varied by any written or verbal statements or agreements. No employee or sales agent of Cheminova or the seller is authorized to vary or exceed the terms of the Warranty Disclaimer or this Limitation of Remedies in any manner.

Couraze is a trademark of Cheminova, Inc.

Admire Pro, Calypso, Gaucho, Leverage, Provado and Trimax Pro are registered trademarks of Bayer.

Actara, Centric, Cruiser and Platinum are registered trademarks of the Syngenta Group Company.

Assail and Intruder is registered trademarks of Nippon Soda Company, LTD.

Belay and Clutch are registered trademarks of Arvesta Corporation.

Venom is a registered trademark of Valent USA Corporation.

Bidrin is a registered trademark of AMVAC Chemical Corporation.

Alias and Pasada are trademarks of Makhteshim Agan of North America, Inc.

Macho and Impulse are trademarks of Albaugh Inc.

Advise and Gallant are trademarks of Agrilience, LLC

Widow is a trademark of Loveland Products, Inc.

Nuprid is a trademark of NuFarm America Inc.

Net Contents: 1 Gallon (3.785 L)



(01) 3 0896496000 91 1

Couraze™ 1.6F Insecticide

For control of certain insects infesting various crops.

ACTIVE INGREDIENT:

Imidacloprid: 1-[(6-Chloro-3-pyridinyl)methyl]-*N*-nitro-2-imidazolindimine..... 17.4%

INERT INGREDIENTS:..... 82.6%

Contains 1.6 pounds of active ingredient per gallon. 100.0%

SHAKE WELL BEFORE USING

EPA Reg. No. 264-763-67760

STOP - Read the label before use

KEEP OUT OF REACH OF CHILDREN CAUTION

For **PRODUCT USE** Information Call 1-800-548-6113

For **MEDICAL Emergencies ONLY** Call 24 Hours

A Day 1-866-303-6950

For **TRANSPORTATION Emergencies** Call

ChemTrec at 1-800-424-9300

FIRST AID

IF SWALLOWED:	<ul style="list-style-type: none">• Call a poison control center or doctor immediately for treatment advice.• Have person sip a glass of water if able to swallow.• Do not induce vomiting unless told to do so by a poison control center or doctor.• Do not give anything by mouth to an unconscious person.
IF IN EYES:	<ul style="list-style-type: none">• Hold eye open and rinse slowly and gently with water for 15 to 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 ON SKIN OR CLOTHING:	<ul style="list-style-type: none">• Take off contaminated clothing.• Rinse skin immediately with plenty of water for 15 to 20 minutes.• Call a poison control center or doctor for treatment advice.

In case of emergency call toll free 1-866-303-6950.
Have a product container or label with you when calling a poison control center or doctor, or going for treatment.

GROUP 4A INSECTICIDE

Note To Physician: No specific antidote is available. Treat the patient symptomatically.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Harmful if swallowed or absorbed through skin. Avoid contact with skin, eyes, or clothing.

FOR ADDITIONAL PRECAUTIONARY STATEMENTS:

See attached label booklet:

Personal Protective Equipment (PPE),
User Safety Recommendations,
and Environmental Hazards

DIRECTIONS FOR USE: See attached booklet.

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

STORAGE AND DISPOSAL

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

Pesticide Storage: Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

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

Container Disposal: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

FORMULATED FOR
CHEMINOVA, INC.
1700 Route 23, Suite 300
Wayne, NJ 07470

4326176 060914C 09/07