



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

December 15, 2016

Dr. Brian Bret
Regulatory Leader
Regulatory Affairs
Dow AgroSciences
9330 Zionsville Rd.
Indianapolis, IN 46268

Subject: PRIA Label Amendment – Add Aerial Application to Corn and Wheat
Product Name: Instinct HL and Instinct II
EPA Registration Number: 62719-692 and 62719-657
Application Date: March 3, 2016 and March 2, 2016
Decision Number: 514729 and 514728

Dear Dr. Bret:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance

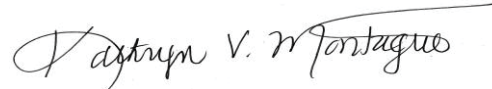
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with FIFRA section 6. If you have any questions, please contact Kathryn Montague by phone at 703-305-1243, or via email at montague.kathryn@epa.gov.

Sincerely,

A handwritten signature in black ink that reads "Kathryn V. Montague". The signature is written in a cursive style with a long horizontal line extending from the end of the name.

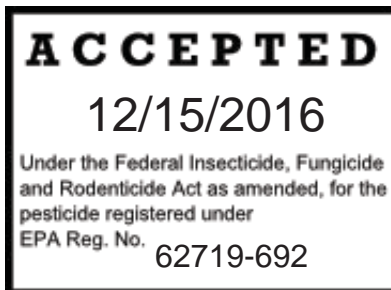
Kathryn Montague, Product Manager 23

Herbicide Branch

Registration Division (7505P)

Office of Pesticide Programs

Enclosure



(Base label):

Instinct[®] HL

NITROGEN STABILIZER OPTINYTE™ TECHNOLOGY

Use to delay nitrification of ammoniacal and urea nitrogen fertilizer compositions in the soil by controlling the nitrification process in all corn and wheat.

Active Ingredient:

nitrapyrin: 2-chloro-6-(trichloromethyl)pyridine.....	25.97%
Other Ingredients	74.03%
Total	100.00%

Contains 2.50 lb of active ingredient per gallon.

Keep Out of Reach of Children

CAUTION

Precautionary Statements

Hazards to Humans and Domestic Animals

Harmful if swallowed. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. Remove and wash contaminated clothing before reuse.

Avoid contact with eyes or clothing.

Personal Protective Equipment (PPE)

Some materials that are chemical-resistant to this product are barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, polyvinyl chloride (PVC) ≥ 14 mils, and viton ≥ 14 mils.

Mixers, loaders, applicators and other handlers must wear:

- Coveralls worn over short-sleeved shirt and short pants
- Chemical-resistant gloves
- Chemical-resistant footwear plus socks
- When mixing and loading, or cleaning equipment, wear a chemical-resistant apron

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.

User Safety Recommendations

Users should:

- Wash thoroughly with soap and water after handling and 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

If swallowed: 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 by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

If on skin: 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.

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 pesticide is toxic to oysters/shrimp. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash waters or rinsate.

This product may contaminate water through runoff. This product has a high potential for runoff for several weeks after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product.

A level well-maintained vegetative buffer strip between areas to which this product is applied and surface water such as ponds, streams, and springs will reduce the potential for contamination of water from rainfall runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours. Sound erosion control practices will reduce this product's contribution to surface water contamination.

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. 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 Handling: Nonrefillable container. Do not reuse or refill this container.

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. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Refillable containers 5 gallons or larger:

Container Handling: 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. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state or local authorities, by burning. If burned, stay out of smoke.

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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, Inherent Risks of Use, 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.

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

EPA Reg. No. 62719-692

EPA Est. _____

®Trademark of The Dow Chemical Company ("Dow") or an affiliated company of Dow

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

NET CONTENTS _____

(Cover, shipping container):

Instinct[®] HL

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OPTINYTE™ TECHNOLOGY**

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pyridine.....	25.97%
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Total	100.00%

Contains 2.50 lb of active ingredient per gallon.

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CAUTION

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.

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

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(Page 1 through end):

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Mixers, loaders, applicators and other handlers must wear:

- Coveralls worn over short-sleeved shirt and short pants
- Chemical-resistant gloves
- Chemical-resistant footwear plus socks
- When mixing and loading, or cleaning equipment, wear a chemical-resistant apron

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.

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Users should:

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Environmental Hazards

This pesticide is toxic to oysters/shrimp. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash waters or rinsate.

This product may contaminate water through runoff. This product has a high potential for runoff for several weeks after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product.

A level well-maintained vegetative buffer strip between areas to which this product is applied and surface water such as ponds, streams, and springs will reduce the potential for contamination of water from rainfall runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours. Sound erosion control practices will reduce this product's contribution to surface water contamination.

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.

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) of 24 hours.

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.

For early entry into 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, wear:

- Coveralls
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks
- Protective eyewear

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. 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:

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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. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

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Product Information

Instinct® HL nitrogen stabilizer is a water-based microencapsulated formulation of nitrapyrin that may be used in the application of ammoniacal dry fertilizers (such as urea, AMS, MAP, DAP), aqua ammonia, other liquid ammoniacal or urea nitrogen fertilizer compositions (such as 28%, 30% or 32% UAN), or manure. Instinct HL is not a substitute for fertilizer.

Incorporation may occur at any time up to 10 days after application and may be either by mechanical means or by moisture (rainfall or overhead irrigation). For moisture incorporation, a minimum of 0.5 inch of moisture is necessary. If 0.5 inch of moisture does not occur within the 10-day window, incorporate mechanically with light tillage.

Precautions and Restrictions

Instinct HL is no more corrosive to standard liquid fertilizer equipment than liquid fertilizer alone or liquid manure alone.

Spray Drift Management

Avoiding spray drift at the application site is the responsibility of the applicator. The potential for spray drift is determined by the interaction of many equipment-and-weather-related factors. The applicator and the grower are responsible for considering all these factors when making decisions.

Do not apply when weather conditions may cause drift to nontarget areas.

Applications must be made at the lowest height above the target area that still provides uniform coverage of the target. Making applications at the lowest yet effective height reduces exposure of droplets to wind.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops.

These requirements do not apply to applications using dry formulations or impregnated dry fertilizer.

1. The distance of the outer most nozzles on the boom must not exceed 3/4 the length of the wingspan or 95% of rotor diameter.

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

The applicator must be familiar with and take into account the information covered in the following **Aerial Spray Drift Advisory Information** section.

Aerial Spray Drift Advisory Information

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

For applications with liquid fertilizer, liquid pesticides, or other liquid carrier, use medium or coarse spray nozzles. 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 drift if applications are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversion section of this label).

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 specified pressures. Use the lower spray pressures specified for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. 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 backwards, parallel to the airstream will produce larger droplets than other orientations. Significant deflection from the 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 larger droplets and lower drift than other nozzle types.

Boom Length: For some use patterns, reducing the effective boom length to less than $\frac{3}{4}$ of the wingspan length or 95% rotor diameter may further reduce drift without reducing swath width.

Application Height: Do not make applications at a height greater than 10 feet above the top of the intended target unless a greater height is required for aircraft safety or for uniform application of the intended spray width when liquid fertilizer is the carrier. 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 cross-wind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Increase swath adjustment distance with increasing drift potential (higher wind, smaller drops, etc.).

Wind: Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Avoid application below 2 mph due to variable wind direction and high inversion potential. Note: Local terrain can influence wind patterns. Every applicator must 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: Do not apply 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. The presence of inversion conditions can be indicated by ground fog. However, if fog is not present, the movement of smoke from a ground source or an aircraft smoke generator can also identify inversion conditions. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upwards and rapidly dissipates indicates good vertical air mixing.

Sensitive Areas: Apply this pesticide 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).

Application Directions

Aerial Application Instinct HL may be applied by aircraft in a liquid carrier such as liquid fertilizer or pesticides, or as impregnated on a granular fertilizer. See Spray Drift Management and Aerial Spray Drift Advisory Information to reduce likelihood of drift on other crops or non-target areas.

Ground Application Instinct HL may be applied through ground application equipment that may be used in the application of ammoniacal dry or liquid fertilizers, or manure.

Chemigation In corn, Instinct HL may be applied through properly equipped chemigation systems at a preplant or postplant application timing prior to crop emergence. In wheat, Instinct HL may be applied through properly equipped chemigation systems preplant up to the 1st detectable joint (Feekes 6 or Zadock 31) growth stage. Unless otherwise indicated in specific use directions, the application rates for chemigation are the same as those specified for broadcast applications.

Directions for Chemigation Instinct HL may be applied through the following irrigation systems: center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, micro sprinkler, drip, hand move, or other systems that provide uniform application. Do not apply through sprinkler systems that deliver a low coefficient of uniformity such as certain water drive units.

Chemigation Equipment Preparation Thoroughly clean the chemigation system and tank of any fertilizer or chemical residues, and dispose of the residues according to state and federal laws. Flush the injection system with soap and/or a cleaning agent and water. Determine the amount of Instinct HL needed to cover the desired acreage. Mix according to instructions in the Mixing Direction section and bring mixture to desired volume. Maintain continuous agitation during mixing and throughout the application period.

Chemigation Equipment Calibration In order to calibrate the irrigation system and injector to apply the mixture containing Instinct HL, calculate or determine the following.

- Calculate the number of acres to be irrigated by the system.

- Calculate the amount of Instinct HL required and other crop inputs such as fertilizers, insecticides, or herbicides.
- Determine the irrigation rate and determine the number of minutes for the system to cover the intended treatment area.
- Divide the total gallons of Instinct HL mixture needed by the number of minutes (minus time to flush out) to cover the treatment area. The following value equals the gallons per minute output that the injector or educator must deliver. Convert the gallons per minute to milliliters or ounces per minute, if needed.
- 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.

Chemigation Equipment Requirements

- The system must contain an air gap, an approved backflow prevention device, a functional check valve, vacuum relief valve (including inspection port), and/or 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 or state specific regulations.
- The Instinct HL mixture injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The Instinct HL mixture 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 Instinct HL mixture 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 when the water pressure decreases to the point where the Instinct HL mixture 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 the Instinct HL mixture and capable of being fitted with a system interlock.
- To ensure uniform mixing of the Instinct HL mixture 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. The injection point must be located after all back-flow prevention devices on the water line.
- The tank holding the Instinct HL mixture must be free of rust, sediment and foreign material and equipped with an in-line strainer situated between the tank and the injector point.

Chemigation Operation Start the water pump and irrigation system and let the system achieve the desired pressure and speed before starting the injector. Check for leaks and uniformity and make repairs before any chemigation takes place. Start the injector system and calibrate according to manufacturer's specifications. The following procedure is necessary to deliver the desired rate per acre in a uniform manner. When the application is finished, flush and clean the entire irrigation and injector system prior to shutting down the system to remove any Instinct HL, herbicide, insecticide or fertilizer residue from the system.

Chemigation Precautions

- Crop injury, lack of effectiveness, or illegal pesticide residues in crop can result from non-uniform distribution of treated water.
- If you have questions about calibration, contact state extension service specialist, equipment manufacturers or other experts.
- A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall operate the system and make necessary adjustments should the need arise and continuously monitor the injection.

Chemigation Restrictions

- The Instinct HL mixture pipeline must contain a functional, automatic quick-closing check valve to prevent the flow fluid back toward the injection
- The Instinct HL mixture 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 Instinct HL mixture 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 Instinct HL mixture 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 the Instinct HL mixture and capable of being fitted with a system interlock.
- Do not allow irrigation water to collect or runoff and pose a hazard to livestock, wells or adjoining crops.
- Do not apply through sprinkler systems that deliver a low coefficient of uniformity such as certain water drive units.
- Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

Mixing Directions

Liquid Fertilizers

Use Instinct HL at the rate of 24 to 48 fl oz per acre when applied with liquid fertilizers such as aqua ammonia, or other liquid ammoniacal or urea nitrogen fertilizers. Instinct HL can be added to urea ammonium nitrate liquid fertilizer without a compatibility agent, although when mixing Instinct HL with fertilizer plus herbicides or insecticides, a jar test may indicate that a compatibility agent is needed.

There are two methods which may be used to create a stable emulsion with Instinct HL plus a compatibility agent in liquid fertilizer:

Premix Method: The compatibility agent and Instinct HL may be mixed together in a separate container and then added to the liquid fertilizer. Continuously agitate as the mixture is added to the fertilizer.

Sequential Method: The compatibility agent may be added to the fertilizer and thoroughly agitated. While the agitation continues, the required amount of Instinct HL may be added to the tank.

Most phosphate ester types of compatibility agents are suitable for use in these mixtures. Follow the label directions for the compatibility agent to determine rates and any use precautions.

Liquid Manure

Use Instinct HL at the rate of 24 to 48 fl oz per acre when applied with liquid manure.

Granular Ammonium and Urea

Apply Instinct HL at a rate of 24 fl oz per acre impregnated on urea, most dry ammoniacal fertilizers, or fertilizer blends containing ammoniacal fertilizers. Uniform impregnation on fertilizer and uniform application in the field is necessary to insure optimum results.

Various types of equipment can be used to impregnate Instinct HL onto dry fertilizers, including vertical and horizontal mixers. Once impregnated, fertilizer may be applied with either spinner, airflow, or other suitable equipment.

Use a minimum of 100 lb of dry fertilizer per acre. With lower rates of fertilizer (higher concentrations of Instinct HL), the fertilizer may not readily absorb all of the liquid. For a suitable free-flowing mixture, add a drying agent to the mixture. Use a minimum of 1 lb of drying agent per pint of Instinct HL unless experience indicates a different amount works well. Do not apply more than 1 lb active ingredient (ai) nitrapyrin per acre per year.

Apply bulk fertilizers impregnated with Instinct HL within 24 hours of impregnation. Do not store the impregnated fertilizer. All individual state regulations, including those related to dry bulk blending registration, labeling and application, are the responsibility of the individual and/or company selling mixtures of Instinct HL and fertilizer.

Do not mix seed with dry fertilizers impregnated with Instinct HL.

Tank Mixing

Instinct HL may also be applied in tank mixtures with preplant incorporated or preemergence herbicides or insecticides registered for use on corn or wheat. The tank mixes may be in water or in most urea-ammonium nitrate solutions, N-P-K solutions, slurries, or suspensions. Check the physical compatibility of tank mixtures as indicated below before mixing in the tank. Maintain constant agitation during both the mixing and application processes to ensure uniform spray mixture. Read and carefully follow all applicable directions including dosage rates, restrictions, and precautions on labeling for the other products used in combination with Instinct HL.

Tank Mix Compatibility Test: To test the compatibility of Instinct HL with liquid fertilizers and/or herbicide or insecticide mixes, add proportionate amounts of each ingredient to a small jar, cap, shake, and let stand for 15 minutes. Formation of precipitates or layers that do not readily redisperse indicates an incompatible mixture and should not be used.

Note: Instinct HL has shown compatibility issues with some ammonium thiosulfate and liquid fertilizers containing boron.

Allow time for complete dispersion/mixing before adding another product to the spray mixture. Add products to the tank mixture in the following order.

- To start, add one-half of the required amount of liquid fertilizer, water, or other urea-ammonium nitrate solutions. Begin agitation.
- Add Instinct HL (Compatibility agent if needed)
- Products in water soluble packaging. Important: Products in water soluble packaging must be premixed with water (slurried) prior to addition to the spray tank
- Wettable powders or dry flowables (slurry if recommended by tank-mix product label)
- Liquid flowables
- Emulsifiable concentrates
- Suspension concentrates
- Soluble liquids
- Add other nutrients
- Finish filling spray tank to required spray volume.

Note: For all tank-mixtures, maintain agitation during mixing and throughout application to ensure spray mixture remains, uniformly suspended. If spray mixture is allowed to settle at anytime, thorough agitation is required to re-suspend the mixture before spraying is resumed.

Directions for Use

Corn (field corn, production seed corn, silage corn, sweet corn, popcorn)

Instinct HL may be mixed alone or in combination with dry fertilizers (urea, AMS, MAP, DAP), liquid manures, liquid fertilizers, such as UAN, aqua ammonia, other liquid ammoniacal or urea nitrogen fertilizers, insecticides, herbicides and/or water.

Preplant, Preemergence, At-Plant Row or Band Injection Application

Use Instinct HL at the rate of 24 to 48 fl oz per acre

Liquid Fertilizers: Use Instinct HL at the rate of 24 to 48 fl oz per acre at a preplant, preemergence, or band injection application. Instinct HL can also be applied in a postplant (sidedress) application at the rate of 24 fl oz from crop emergence up to V6. Reduced rates of Instinct HL at 12 to 18 fl oz per acre may also be applied when corn is in the V4 to V6 growth stage when severe nitrate leaching and or denitrification is not as likely to occur. These applications may be injected, dribbled, or applied as a sidedress band with liquid fertilizers

Liquid Manures: Use Instinct HL at the rate of 24 to 48 fl oz per acre when fall applied. For spring applications with liquid manure apply Instinct HL at 24 fl oz per acre. Apply Instinct HL and manure as a preplant, preemergence, or band injection application.

The best practice for fertilization using manure is to inject the liquid manure into the soil ensuring soil coverage or surface application followed by immediate incorporations. Check local laws and regulations on acceptable manure practices and for the area where manure is to be applied.

Dry Fertilizers: Use Instinct HL at a the rate of 12 to 24 fl oz per acre impregnated on dry fertilizers and may be applied preplant, preemergence, at-plant or post-plant up to V6. Applications can be applied broadcast, injected (knived) or banded.

Restrictions:

- Do not apply more than a 1 lb ai nitrapyrin per acre per year on corn.
- Any application of Instinct HL must be applied prior to the V6 stage of growth.
- **Replant restriction:** All crops (except for leafy vegetables and root and tuber crops) may be planted 30 days or more after last Instinct HL application. Do not plant leafy vegetable crops less than 120 days after last application. Do not plant root and tuber crops less than one year after last application.

Wheat (including Spring and Winter)

Instinct HL may be mixed alone or in combination with dry ammoniacal fertilizers (such as urea, AMS, MAP, DAP), liquid manures, liquid ammoniacal fertilizers (such as UAN, aqua ammonia, or urea fertilizers), insecticides, fungicides, herbicides, and/or water.

Preplant, Preemergence, At-Plant Row or Band Injection Application

Use Instinct HL at the rate of 24 to 48 fl oz per acre.

Liquid Fertilizers: Use Instinct HL at the rate of 24 to 48 fl oz per acre at a preplant, preemergence, or band injection application. Instinct HL may also be applied at 24 to 48 fl oz per acre to actively growing wheat from emergence through 1st detectable joint (Feekes 6 or Zadock 31 growth stage). These applications may be injected, dribbled, or broadcast applied to the crop. Liquid fertilizers broadcast across actively growing wheat can cause leaf necrosis.

Restrictions:

- Do not apply more than a 1 lb ai nitrapyrin per acre per year on wheat.
- Any postplant application of Instinct HL must be applied prior to 1st detectable joint (Feekes 6 or Zadock 31 growth stage).
- **Replant restriction:** All crops (except for leafy vegetables and root and tuber crops) may be planted 30 days or more after last application. Do not plant leafy vegetable crops less than 120 days after last application. Do not plant root and tuber crops less than one year after last application.

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