

# **CORN - PREPLANT INCORPORATION - MORE THAN 3% - FINE SOILS**

## General Information

### PRODUCT INFORMATION

Cadence NXT Herbicide is for preplant, preemergence, or early postemergence use in corn and for weed control in Miscanthus and other non-food perennial bioenergy crops. Use of this product in corn is limited to field corn, production seed corn, silage corn, sweet corn, popcorn. Do not apply this product to any crop other than corn or for weed control in Miscanthus or other non-food perennial bioenergy crops.

Cadence NXT Herbicide may be applied to the surface or incorporated into the top 1 to 2 inch layer of soil. It is specified for control alone, or in tank mix combinations as indicated, for the weeds listed in the Target Weeds section of these use directions. Cadence NXT Herbicide controls weeds by interfering with normal germination and seedling development. Cadence NXT Herbicide will not control emerged weeds present at application.

### Use Restrictions

- 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 ground water is shallow, may result in ground water contamination.
- Not for Sale, Sale Into, Distribution and/or Use in Nassau and Suffolk Counties of New York State.
- On the following soil types, do not apply this product within 50 feet of any well where the depth to groundwater is 30 feet or less: sands with less than 3% organic matter; loamy sands with less than 2% organic matter; or sandy loams with less than 1% organic matter.

See the figure for additional clarification.

- Do not apply this product using aerial application equipment, unless otherwise

directed by approved supplemental labeling in possession of the user at the time of application.

- Chemigation: Do not apply this product through any type of irrigation system, unless otherwise directed by approved supplemental labeling in the possession of the user at the time of application.

- Do not use flood irrigation to apply or incorporate this product.

- This product must not be mixed or loaded within 50 feet of any wells including abandoned wells and drainage wells, sink holes, perennial or intermittent streams and rivers, and natural or impounded lakes and reservoirs. This setback does not apply to properly capped or plugged abandoned wells and does not apply to impervious pad or properly diked mixing/loading areas.

- Operations that involve mixing, loading, rinsing, or washing of this product into or from pesticide handling or application equipment or containers within 50 feet of any well are prohibited unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. Such a pad shall be designed and maintained to contain any product spills or equipment leaks, container or equipment rinse or washwater, and rainwater that may fall on the pad. Surface water shall not be allowed to either flow over or from the pad, which means the pad must be self-contained. The pad shall be sloped to facilitate material removal. An unroofed pad shall be of sufficient capacity to contain at a minimum 110% of the capacity of the largest pesticide container or application equipment on the pad. A pad that is covered by a roof of sufficient size to completely exclude precipitation from contact with the pad shall have a minimum containment capacity of 100% of the capacity of the largest pesticide container or application equipment on the pad. Containment capacities as described above shall be maintained at all times. The above specified minimum containment capacities do not apply to vehicles when delivering pesticide shipments to the mixing/loading site.

States may have in effect additional requirements regarding wellhead setbacks and operational containment.

- Product must be used in a manner that will prevent back siphoning in wells, spills or improper disposal of excess pesticide, spray mixtures or rinsates.

- Do not apply under conditions that favor runoff or wind erosion of soil containing

this product to non-target areas. To prevent off-site movement due to runoff or wind erosion:

- Avoid treating powdery dry or light sandy soils when conditions are favorable for wind erosion. Under these conditions, the soil surface must first be settled by rainfall or irrigation.
- Do not apply to impervious substrates such as paved or highly compacted surfaces or frozen or snow covered soils.
- Do not use tailwater from the first flood or furrow irrigation of treated fields to treat non-target crops unless at least 1/2 inch of rain fall has occurred between application and the first irrigation.
- Do not apply when wind conditions favor drift to non-target sites. To minimize spray drift to non-target areas:
  - Use low pressure application equipment capable of producing a large droplet spray.
  - Do not use nozzles that produce a fine droplet spray.
  - Minimize drift by using sufficient spray volume to ensure adequate coverage with large droplet size sprays.
  - Keep ground-driven spray boom as low as possible above the target surface.
  - Make application when the wind velocity favors on-target product deposition (approximately 3 to 10 mph). Do not apply when wind velocity exceeds 15 mph. Avoid application when gusts approach 15 mph.
  - Low humidity and high temperatures increase the likelihood of spray drift to sensitive areas. Avoid spraying during conditions of low humidity and/or high temperatures. Do not apply during inversion conditions.
- Do not apply Cadence NXT Herbicide to sweet corn as an early postemergence application.
- Maximum Acetochlor Application Rates Per Calendar Year:

Maximum annual acetochlor broadcast application rates for corn must not exceed 3.0 pounds active ingredient (3.4 pints Cadence NXT Herbicide) per acre. Note: 1.0

pint per acre Cadence NXT Herbicide delivers 0.875 pound active ingredient acetochlor per acre.

## Weed Resistance Management Guidelines

Acetochlor, the active ingredient in this product, is a Group 15 herbicide based on the mode of action classification system of the Weed Science Society of America. Any weed population can contain plants naturally resistant to Group 15 herbicides. Such resistant weed plants may not be effectively managed using Group 15 herbicides but may be effectively managed utilizing another herbicide from a different Group and/or by using cultural or mechanical practices. However, any herbicide mode of action classification by itself may not adequately address specific weeds that are resistant to specific herbicides. Consult your Loveland Products, Inc. representative, state cooperative extension service, professional consultants, or other qualified authorities to determine appropriate actions for treating specific resistant weeds.

## Best Management Practices

Proactively implementing diversified weed control strategies to minimize selection for weed populations resistant to one or more herbicides is recommended. A diversified weed management program may include the use of multiple herbicides with different modes of action and overlapping weed spectrum with or without tillage operations and/or other cultural practices. Research has demonstrated that using full labeled rates and following directions for use is important to delay the selection for resistance. Scouting after a herbicide application is important because it can facilitate the early identification of weed shifts and/or weed resistance and thus provide direction on future weed management practices. One of the best ways to contain resistant populations is to implement measures to avoid allowing weeds to reproduce by seed or to proliferate vegetatively. Cleaning equipment between sites and avoiding movement of plant material between sites will greatly aid in retarding the spread of resistant weed seed.

## General principles of herbicide resistance management

1. Apply integrated weed management practices. Use multiple herbicide modes-of-action with overlapping weed spectrums in rotation, sequences, or mixtures.
2. Use the full specified herbicide rate and proper application timing for the hardest

to control weed species present in the field.

3. Scout fields after herbicide application to ensure control has been achieved. Avoid allowing weeds to reproduce by seed or to proliferate vegetatively.

4. Monitor site and clean equipment between sites.

For annual cropping situations also consider the following:

- Start with a clean field and control weeds early by using a burndown treatment or tillage in combination with a preemergence residual herbicide as appropriate.
- Use cultural practices such as cultivation and crop rotation, where appropriate.
- Use good agronomic principles that enhance crop competitiveness
- Use new commercial seed that is as free of weed seed as possible.

Report any incidence of repeated non-performance of this product on a particular weed to your Loveland Products, Inc. representative, local retailer, or county extension agent.

Limitations, Restrictions, and Exceptions

Application Timing and Methods

For the optimum period of effective weed control during the time most critical to corn production, preplant application of Cadence NXT Herbicide should occur as close as possible to planting. Preemergence applications should occur as close as possible to planting, but prior to weed emergence; this product will not control emerged weeds present at application. Postemergence applications should occur prior to weed emergence or in tank mix combination with a product that controls emerged weeds. Note: Do not apply Cadence NXT Herbicide to sweet corn as an early postemergence application.

Preplant Incorporation:

Cadence NXT Herbicide and certain tank mixes may be mechanically incorporated into the top 2 inches of the soil with field cultivators, discs, or spring tooth harrows any time up to 14 days prior to planting. Improper incorporation, excessive crop residues, or poor soil tilth may result in erratic, streaked, or otherwise

unsatisfactory weed control. Do not mix Cadence NXT Herbicide deeper than 2 inches into the soil and avoid moving or shaping soil after incorporation, as weed control may be reduced.

Application Rate: Use the higher rate in the rate range in areas of heavy weed infestation.

More than 3% Soil Organic: On soils with 6 to 10% organic matter, use 2.5 to 3.4 pints per acre. On soils with more than 10% organic matter, use 3.4 pints per acre.

Method

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

[Surface](#)

Rates

[field\\_rates 0](#)

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Restricted Entry Interval

12 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.

Soils

[Fine](#)

[Silty Clay Loam](#)

[Silty Clay](#)

[Sandy Clay](#)

[Clay Loam](#)

[Clay](#)

Tillages

[Conventional](#)

Timings

[Preplant Incorporated](#)