

BACKGROUND

As of November 1, 2020, there are three dicamba herbicide products registered for use on dicamba tolerant soybeans, all are classified as Restricted Use Pesticides (RUP). The three products are Engenia®, XtendiMax® With VaporGrip® Technology and Tavium® Plus VaporGrip® Technology. EPA has classified the three products as RUPs in order to provide additional safeguards for how the products are applied and what pre- and post-application activities are required of applicators. The labels are effective beginning in 2021 and expire on December 20, 2025. The labels have very specific record-keeping requirements and application standards. The Nebraska Department of Agriculture (NDA) believes it is helpful to provide additional guidance to applicators on some terms found in the labels.

LABEL TERMS

Boom Height: All RUP dicamba labels require boom heights at or below 24 inches above the top of the surface being treated. NDA recognizes most spray boom systems vary in height when fully extended due to equipment design, and advises applicators to make sure all sections of the spray boom are capable of being lowered to this distance above the crop canopy. NDA also advises applicators to consider applying hilly or terraced fields in a manner that reduces or avoids the ends of spray booms bouncing up as the terrain changes.

Equipment Rinse Water Management: All pesticide labels provide specific language or guidance on how to properly manage equipment rinsates. Many labels direct the user to dispose of equipment rinse water “on-site”, or to dispose of chemical waste “in compliance with local, state or federal guidelines”. NDA advises applicators that disposal of remaining pesticide tank material “on-site” means sprayed in the field to which the application was made, not dumped at the field edge or released on a parking area at the mixing and loading area back home. NDA reminds applicators that any unapplied material returned to the mix/load site, or equipment wash/rinse water generated over a loadout pad is considered waste pesticide. Collection of this waste should be used at a future time as makeup water on the same crop or site of application allowed by the label. Applicators should note that Title 128, Nebraska Hazardous Waste Regulations, is the state regulation covering the proper disposal of pesticide waste that cannot be applied according to label directions.

Equipment Cleanout Procedure: RUP dicamba labels require applicators to ensure that spray equipment is clean before using the product and after the product is applied. Cleaning equipment prior to loading with dicamba assures that the materials in previous loads do not negatively impact the performance of the dicamba or the crop being treated. The intent of the labels registered by EPA and NDA for 2021-2025 require spray systems to be cleaned following the procedures found on the RUP dicamba labels before using the herbicide the first time, as well as after the application. NDA advises applicators that all mixing, loading and transportation equipment used for dicamba

applications are also potential sources of contamination and should be treated the same as spray equipment when it comes to cleanout before and after changing product mixes.

Sensitive Areas, Sensitive Crops and Residential Awareness: Sensitive areas are defined in the Engenia label as bodies of water and nonresidential, uncultivated areas that may harbor sensitive plant species. The Tavium label defines sensitive areas as residential areas, bodies of water, known habitat for threatened and endangered species, and nontarget crops. The XtendiMax label does not use the term “sensitive areas” but does list “certain plants” to include most broadleaf crops, flowers, ornamentals and trees, whether outdoors or growing in a greenhouse. All three RUP dicamba labels list several broadleaf crops that are sensitive to dicamba; however, not all sensitive crops are listed. NDA advises applicators that any dicamba-sensitive plant grown as a crop is considered a sensitive crop (think about hemp, hops, grapes, small fruits, and trees grown for fruit, nut and lumber production). Applicators are encouraged to consult the DriftWatch website for a listing of enrolled sensitive crops in their area. The website address is <https://ne.driftwatch.org/map>.

Neighboring or Adjacent: The RUP dicamba labels for 2025 - 2025 use the terms “neighboring sensitive crops and residential areas” or “adjacent sensitive crops and certain plants” for those areas requiring protection from spray drift. However, the labels do not indicate a distance for these terms; instead, they defer the decision to the applicator. Since the RUP dicamba labels require applicators to maintain a 240-ft buffer from downwind sensitive crops, sensitive sites or residential areas, NDA believes the terms “neighboring” or “adjacent” should use the same distances, as a minimum, for purposes of scouting and documenting all nearby sensitive crops and areas. Therefore, applicators should scout and document all nearby sensitive crops and residential areas within 240 feet in any direction of the target site. These are minimum distances, and applicators should document other nearby sensitive crops or residential areas that are further than 240 feet away if conditions warrant. NDA’s experience in the last four years has been that even when weather conditions appear to be favorable, microscopically fine particles of the RUP dicamba products have carried off target sites well over one mile, therefore, it is critical for applicators to pay particular attention to surrounding sensitive crops and other areas.

Daytime Application Hours: The RUP dicamba labels for 2021 - 2025 restrict applications so that they are not started earlier than one hour after sunrise and must end no later than two hours before sunset. Since visible sunrise and sunset can be obscured by clouds, trees or terrain, NDA advises applicators to consult with the National Oceanic and Atmospheric Administration (NOAA) Solar Calculator found at <https://www.esrl.noaa.gov/gmd/grad/solcalc/> to determine a precise and official source in determining local sunrise/sunset for purposes of label compliance. The intent of restricting spray applications during early and late daylight hours is to avoid spraying during a possible air temperature inversion event. More information on how to predict air temperature inversions can be found at <https://www.ag.ndsu.edu/publications/crops/air-temperature-inversions-causes-characteristics-and-potential-effects-on-pesticide-spray-drift>.

Measuring Wind Speed, Wind Direction and Temperature: The RUP dicamba labels require that wind speed, wind direction and air temperature be measured and recorded at the start and finish of any application at boom height. NDA recognizes many applicators use technology that accesses nearby or regional weather stations for this purpose; however, the RUP dicamba labels require these readings must be made at boom height, which means an off-site weather station reading does not comply with this label provision. NDA reminds applicators that wind direction should be

recorded as the direction from which the wind is coming, not the direction it is blowing toward. Most hand-held weather instruments record wind direction as a compass heading or as abbreviations such as SW or NE. NDA advises applicators to record the compass direction as the equipment shows it, and avoid trying to interpret a compass reading into a direction abbreviation. NDA advises applicators to document the device used and if practical, take a photograph of the reading at the start and finish times of the application as proof positive what the real-time weather was doing before and after the application.

ENDANGERED SPECIES PROTECTION

All RUP dicamba labels have sections that direct the applicator to take steps, when necessary, to protect endangered species or their habitat. While this language has been in many labels for a number of years, this is the first time Nebraska has actually had habitat listed on an EPA Endangered Species Protection Bulletin (ESPB). The following are important aspects of what this means to pesticide applicators in certain areas of the state.

- Any application of RUP dicamba in an area listed on an ESPB must comply with additional restrictions listed on the bulletin.
- Bulletins can be accessed either on EPA's website or by calling a toll-free phone number and asking for a copy of the bulletin. The website address is <http://www.epa.gov/espp/>. The toll-free phone number is 1-844-447-3813.
- Applicators will need to know the specific location for the field they intend to spray with dicamba. If using the website, applicators will either need to manually zoom to the application site, enter an address or nearby community, or enter the legal description of the field. If calling the toll-free number, applicators will need to tell the person answering the toll-free phone line the information.
- If an applicator finds their target site field lies within an ESPB protection zone, they will need to follow the restriction directions found on the bulletin, which requires a 310' downwind buffer and 57' in-field buffer around all borders of the field. The bulletins do allow for the buffer to extend to the field edge if no sensitive sites or crops are adjacent to the field.
- It is important to note that the 57' ESPB buffer is separate from the downwind buffer.

A close-up image of an endangered species protection zone for Dawson, Phelps and Buffalo Counties is shown on the next page. The area shaded in pink is within the protection zone, and any fields located inside of that zone must follow the added buffer restrictions listed on the ESPB bulletin. An NDA document identifying the endangered species covered by the new dicamba labels can be found at

<http://www.nda.nebraska.gov/pesticide/dicamba/ESHabitatDescriptionSupplement.pdf>



RECORD KEEPING

All RUP dicamba labels have additional record keeping than what is typically required for RUPs. NDA reminds applicators that the Nebraska Pesticide Act requires all RUP applications be recorded within 48 hours of the application for commercial applicators, and that private applicators must record their applications within 72 hours to comply with the RUP dicamba labels.

The following is important to know in order to comply with RUP dicamba label record keeping.

- Dicamba applicator training is required **every year**, and applicators must record the date and provider they used.
- The term “buffer calculation” or “buffer requirement” is most easily satisfied by drawing a simple map showing where buffers were maintained and what distance in feet each buffer was.
- Susceptible crops or sensitive sites must be surveyed and recorded. Labels require the applicator to do this, and if someone else does it (such as an agronomist) the record must indicate who conducted the survey and when.
- No applications may be made after June 30.
- Weather data must be recorded BOTH at start and finish of the application at boom height (NDA advises these measurements be taken at the end of the boom, away from objects that would block the wind).
- Records must show both nozzle type and number, as well as spray pressure at the nozzle.
- Spray system cleanout must show each step taken for cleanout. NDA recommends using a checklist with name or initials of person who performed the cleanout and the date of cleanout.
- While not required as part of the mandatory records, applicators should record ground speed during the application.

NDA has posted a RUP dicamba application record template <https://nda.nebraska.gov/pesticide/dicamba.html>