BACKGROUND

On October 31, 2018, the U.S. Environmental Protection Agency reregistered three dicamba herbicide products for use on dicamba tolerant soybeans as Restricted Use Pesticides (RUP), with a fourth product registered in March. The first three product labels are Engenia®, XtendiMax® With VaporGrip® Technology and FeXapan® With VaporGrip® Technology, the fourth product is Tavium® Plus VaporGrip® Technology. EPA has classified the four product registrations as RUPs in order to provide additional safeguards for how the products were applied and what pre- and post-application activities were required of applicators. The reregistration is effective for the 2019 and 2020 application seasons. Some changes were made to the labels specific to record-keeping requirements and application standards. While most of the new label language is logical and understandable, the Nebraska Department of Agriculture (NDA) believes it would be helpful to provide additional guidance to applicators on some terms found in the four labels. It should be noted that the information listed below applies to any labeled use of the RUP dicamba products, not just for dicamba tolerant soybeans, and could also apply to any other dicamba herbicide labels that EPA might register in the future for use on dicamba tolerant crops.

LABEL TERMS

Boom Height: All RUP dicamba labels require boom heights of “24 inches above target pest or crop canopy”. 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 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, and that tall weeds do not allow an applicator to raise the boom higher than 24 inches above the crop canopy.

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, are the state regulations 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 2019-2020 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 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 (other than crops). The Engenia and Tavium labels identify residential areas as sensitive, whether or not they harbor sensitive crops or plants. All four RUP dicamba labels list a number of 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 including organic crops that are transitioning to certification and fully certified organic. 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 2019-2020 use the terms “neighboring sensitive crops and residential areas” or “adjacent fields” for those areas requiring protection from spray drift. However, the labels do not define a specific distance; instead, they defer the decision to the applicator. Since the RUP dicamba labels require applicators to maintain a 110- or 220-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 areas. Therefore, if using Engenia or Tavium, applicators should scout and document all nearby sensitive crops and residential areas at least 110 feet in any direction of the target site, but use either 110 or 220 feet for XtendiMax or FeXapan, depending on the rate of application. These are minimum distances, and applicators should document other nearby sensitive crops or residential areas that are further than 110 or 220 feet away if conditions warrant.

Daytime Application Hours: The revised labels for 2019-2020 further restrict applications such that applications may not be initiated earlier than one hour after sunrise and must terminate 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 daylight hours is to avoid spraying during a possible air temperature inversion event.

Measuring Wind Speed, Wind Direction and Temperature: The RUP dicamba labels require wind speed, wind direction and air temperature must be measured 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 advises that wind direction should be recorded as the direction from which the wind is coming, not the direction it is going. 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 four 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/](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. The EPA website allows applicators to use multiple ways to search for fields, so applicators need to be prepared with field locations or addresses when using the search function. Applicators will also need that information if using the toll-free number.
- 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 at most requires a 57-foot in-field buffer around all borders of the field, but may allow the buffer to extend to the edge of the field borders if no sensitive sites or crops are adjacent to the field. EPA has indicated applicators who find their field is not within a protection zone should also ask for a bulletin for their field, as the website provides a printable document that indicates there are no endangered species restrictions, which will proved the applicator complied with this portion of the label.

An example of the endangered species protection zone for Dawson, Phelps and Buffalo Counties is shown below. The shaded area 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](http://www.nda.nebraska.gov/pesticide/dicamba/ESHabitatDescriptionSupplement.pdf)
Last revised: 6/15/2019