

2023 Cranberry Chart Book Update

Prepared March 2023 as an addendum to the 2021-2023 Chart Book

UMass Cranberry Station

www.ag.umass.edu/cranberry

REFER TO 2021-2023 CRANBERRY CHART BOOK FOR ADDITIONAL INFORMATION

Special Labels: You must have a copy of all labels when applying any pesticide product. This includes any special labels (Section 18 or 24c Special Local Needs). These labels can be obtained where you purchase your pesticides and are also available on the UMass Cranberry Station website: <http://ag.umass.edu/cranberry/services/special-pesticide-labels>.

PAGE 6 WARNINGS - Note that Echo 720, Echo DF and Echo Zn should be listed as compounds that require a respirator with an organic-vapor removing cartridge.

DISEASE MANAGEMENT 2023

Howler, an OMRI (Organic Materials Review Institute) listed FRAC Group BM02 fungicide (active ingredient *Pseudomonas chlororaphis* strain AFS009) is registered for cranberry disease management. During our 2020 and 2021 fruit rot studies at the UMass Cranberry Station, Howler showed efficacy in managing fruit rot.

- Recommended application rate: 5 lb/A + NIS at 0.25% v/v. Repeat at 7 to 21 day intervals as needed. PHI = 0 days
- For best activity, apply Howler later in the bloom as part of the fungicide regime with other fungicides applied at early and mid-bloom.

Correction to Mastercop rate (typo in Chart Book 2021-2023 on pg. 20):

Mastercop – correct rate for a single application is **3 pts/acre** (NOT 3-9 pts/acre) starting from late bloom and can be applied up to 3 times at 10-14 day intervals (maximum total annual rate of 9 pts/A).

INSECT MANAGEMENT 2023

Chlorpyrifos use has been cancelled. Do not use any existing stock. The tolerance has been revoked so any applications are now unlawful. Existing stock of all formulations (Lorsban 4E, Chlorpyrifos 4E AG, Lorsban Advanced, Lorsban 75 WG) are now considered hazardous waste.

Fanfare (active ingredient *bifenthrin*) – RESTRICTED USE PESTICIDE. Newly registered in Nov 2021, IRAC Group 3. Fanfare is a pyrethroid and has a different mode of action compared to all other major classes of insecticides.

The target of Fanfare is insecticide-resistant cranberry weevil (FIFRA 2EE recommendation); to preserve this crucial tool for weevil management, Fanfare should only target weevil. Wide use against other labeled insects will jeopardize the entire industry's long-term option for resistant weevil. Early sprays (@ May 20) of Fanfare against weevil will also effectively hit green spanworm (remember that the threshold for small-size green spanworm is 18 worms). **Avaunt** is still an excellent choice for cutworm and spanworm issues and may suppress/manage weevil activity.

Fanfare continued:

- Check with your handler prior to use for restrictions. Most handlers are restricting use, with a 100 or 110 day PHI for export use, a 45-day PHI for domestic use, and only ONE application allowed.
- Recommended application rate: 6.4 fl oz/A. 12-hr REI. Fanfare EC formulation available in MA. Chemigation is allowed. Must have supplemental label allowing use on cranberry.
- Fanfare is extremely toxic to fish and aquatic invertebrates. Do not apply to flow through bogs. Before applying, drop ditch water, place flume boards, check the weather for rain, and hold water for 3 days at least and longer if possible.

Weevil Management: Cranberry weevil has developed sequential resistance to compounds over time. Use **Avaunt** if it still works for you; in the event of Avaunt failures, switch to **Actara** (thiamethoxam); in the event of Actara failures, switch to **Fanfare**. For resistance management, if you have success with more than one compound, rotate them.

WEED MANAGEMENT 2023

Sulfentrazone is a state RESTRICTED USE PESTICIDE and is Zone II restricted. However, because it is our only option for moss, it can be used in Zone II. You will still need to complete the MDAR notification if you use any sulfentrazone product in a Zone II.

Spartan 4F - New for 2023. FMC currently has several different sulfentrazone products and is consolidating their labels into a single label for Spartan 4F (EPA Reg. No. 279-3220, 39.6% sulfentrazone). It is the same product as Zeus XC, which will no longer be produced. We have a newly amended 24(c) label that allows cranberry growers to use Spartan 4F in the same manner as Zeus XC for control of moss and other susceptible weeds.

Zeus XC – Special Local Needs 24© for the use on MA cranberry farms for control of moss and other susceptible weeds. A Special Local Needs (SLN or 24c) label allows cranberry growers in Massachusetts to use FMC product Zeus XC (EPA Reg. No. 279-3220, 39.6% sulfentrazone) for control of moss and other susceptible weeds. This label expires December 31, 2024. If you have existing stock of Zeus, make sure to use it before the label expires.

Since we first obtained sulfentrazone in 2020, many growers have now used it with good results. This herbicide can damage cranberry plants if applied too late. You **MUST** apply to plants that are spring dormant (bud scales closed, no potential for herbicide to contact tender new growth inside bud). It is more important to time this herbicide for cranberry safety than it is to time it for the weed growth stage! It may also cause stress symptoms if applied to already stressed cranberry vines (e.g., ones that have scale infestations, were heavily pruned, have poor root development, etc.). For the first time in 2022, we observed some areas on some sporadic beds that were treated with Zeus where the old growth (leaves from previous growing season) remained red as the plants emerged from dormancy. The new shoots emerging from beds appeared to develop normally for the remainder of the growing season.

Special Local Needs 24(c) label to use Cutrine Plus for the management of algae in late water floods (or spring re-floods) in MA cranberry production - New for 2023. Cutrine Plus is a liquid copper-based formulation that is used to control a broad range of algae in late water. If your flood is shallow or if you have had scum problems in late water floods (LW) in the past, plan to treat two weeks into the flood period. Scout for algae and apply when growth is first visible on the water surface. Remember that copper only prevents further algal growth (it does not eliminate existing scum), so prompt treatment is necessary.

Cutrine continued:

The material is injected into the sprinkler system running at 20 psi (30-minute injection, you may continue running for 1-2 hours after to disperse the material). Rates are calculated using label information and the number of acre-feet to be treated. To calculate acre-feet, multiply the number of acres by the depth of the flood in feet. Multiply the desired rate (gallons per acre-feet based on chart from pesticide label) by the acre-feet of water you have calculated for the bed being treated.

Special Local Needs 24(c) to *chemigate* Intensity One for grass control. Intensity One is the ONLY clethodim formulation that can be chemigated in MA. Chemigation of Intensity is no longer allowed.

Special Local Needs 24(c) for *timing of* Intensity One and Intensity. We have a special label that removes the application timing restriction (other labels prohibit applying between hook and fruit set) for Intensity and Intensity One. Applications can be made any time grasses are actively growing, except within 30 days of harvest. This allows for a longer treatment window for poverty grass, which is actively growing during those cranberry growth stages. Although you can apply any time, we advise caution when applying any clethodim (includes Select, Select Max) product during roughneck as floral abnormalities can result.

Section 18 Emergency Exemption allows Kerb Use for Dodder Control is Renewed for 2023 (Active from April 15 through June 30, 2023). Kerb® SC (EPA Reg. No. 62719-397, 35.6% pronamide) can be used in Massachusetts ONLY for dodder control ONLY! If using Kerb in 2023, you must fill out an “Applicator Reporting Form” and return it to MDAR. A copy of the 2023 form will be available on our website with the special labels <https://ag.umass.edu/cranberry/services/special-pesticide-labels> and should also be available at the point of purchase.

- Kerb can be applied after the winter flood has been withdrawn and prior to dodder emergence.
- Kerb can be applied as a single application of 2.5 - 5.0 pints (1.0 - 2.0 lb a.i.) per acre. Alternatively, two applications may be made at a rate of 2.5 (1.0 lb a.i.) per acre. Total product applied must not exceed 5.0 pints (2.0 lb a.i.) per acre per year. Split applications must be separated by a minimum of 20 days. Kerb has a 75- day PHI and a 24-hr REI.
- **Check with your handler prior to use for restrictions.** There are no Kerb MRLs established for many foreign markets.
- Kerb is Zone II restricted! Contact Hilary if you want to use Kerb and you are in a Zone II (508-970-7641).