

## Update to the 2018-2020 Cranberry Chart Book

Prepared May 2019 as an addendum to the 2018-2020 Chart Book

UMass Cranberry Station <http://ag.umass.edu/cranberry> 508-295-2212

REFER TO 2018-2020 CRANBERRY CHART BOOK FOR ADDITIONAL INFORMATION

### DISEASE MANAGEMENT

*Chlorothalonil Update:* The European Union has notified the World Trade Organization of its intent to cancel its approval of chlorothalonil usage. Once this proposal is implemented and the grace period has ended (by October 2020 at the earliest), Maximum Residue Levels (MRL) for chlorothalonil fungicides will be withdrawn for the European Union. All cranberry products will then be subjected to the default 0.01 ppm MRL.

- Chlorothalonil fungicides will continue to be available for use in the U.S. for the domestic market.
- For 2019, all handlers will accept fruit treated with chlorothalonil. However, for subsequent growing seasons, growers whose product is exported to EU should communicate directly with their handlers regarding the use of chlorothalonil products.

*New Fungicide Registration:* **Quadris Top** (active ingredients of both difenoconazole and azoxystrobin) is now labeled and registered for fruit rot management in Massachusetts. FRAC Group 3 and 11.

- Quadris Top is a pre-formulated mixture with a control spectrum similar to that obtained by tank-mixing Indar and Abound for a fungicide application. Instead of Indar (fenbuconazole), it has a different conazole included.
- Recommended application rate: 10-14 fl oz/A. Cost for one application varies from \$28-\$33 per acre.
- For best activity, apply Quadris Top early in the season. Do not apply more than two sequential applications before alternating to a fungicide with a different mode of action. Do not apply within 30 days of harvest.
- Always read the label and communicate with handlers for making fungicide decisions. Some handlers have restricted Quadris Top usage completely and others restricted use to before full bloom for export market.

### INSECT MANAGEMENT

*New Insecticide Registration:* **Exirel** (active ingredient cyantraniloprole) is now labeled and registered for insect management in Massachusetts. IRAC Group 28.

- Exirel is similar to Altacor but cannot be applied during bloom.
- Exirel is labeled for cranberry fruitworm, black-headed fireworm and Sparganothis fruitworm. It may be more active than Altacor and may have activity against weevil.
- Recommended application rate: 10-20.5 fl oz/A. Cost for one application at the high rate will cost around \$70 per acre.
- Handler restrictions – check with your handler, some handlers are restricting use completely, others have a 50 day PHI.

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## **WEED MANAGEMENT**

*New Herbicide Special Labels:* Make sure you have a copy of all labels, including the special label, when applying any pesticide product. Labels can be obtained where you purchase your pesticides and also on the UMass Cranberry Station website: <http://ag.umass.edu/cranberry/services/special-pesticide-labels>.

### **24(c) for Intensity and Intensity One.**

In addition to the 24(c) that allows these products to be chemigated in MA, we now have a label that removes the application timing restriction. Previously, these products could not be applied between hook and fruitset. Now applications can be made any time grasses are actively growing, except within 30 days of harvest. This will allow for a longer treatment window for poverty grasses, which are actively growing during those cranberry growth stages. Although you can apply any time, we advise caution when applying any clethodim product during roughneck as floral abnormalities can result.

### **Section 18 Emergency Exemption allows Kerb Use for Dodder Control (expires June 30, 2019).**

Kerb SC (EPA Reg. No. 62719-397, 35.6% pronamide) can be used in Massachusetts ONLY for dodder control ONLY!

- Kerb applications can be made after the winter flood has been withdrawn and prior to dodder emergence. It can be applied by chemigation or boom application.
- Kerb SC acts mainly through root absorption; therefore, it is necessary to move Kerb SC into the root zone of germinating weeds to provide effective control. If applied by boom, 0.1 - 0.2 inches of irrigation is needed after application to incorporate the herbicide into the soil. If applied by chemigation, add adequate irrigation after application for soil incorporation.
- Kerb can be applied as single application of 2.5 - 5.0 pints (1.0 - 2.0 lb a.i.) per acre. Alternatively, two split applications of Kerb SC 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, whether resulting from a single or split application. Split applications must be separated by a minimum of 20 days. Kerb has a 75-day PHI and a 24-hr REI.
- There are no Kerb MRLs established for foreign markets yet. Check with your handlers before applying Kerb to confirm any restrictions.
- Kerb is Zone II restricted! Please call Hilary (508-295-2212 x 21) if you want to use Kerb and you are in Zone II.
- MDAR requires submittal of a Pesticide Use Form with any application of Kerb. These reports are due November 30, 2019 and are available at point of purchase or on the Station web site.

## Using Adjuvants with Cranberry Pesticides

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Always check the specific label for the product you are applying for adjuvant requirements and recommendations. In general, adjuvant rates are based on the volume of water used for application or per acre rate, and are not related to the rate of pesticide being used. Depending on the type of adjuvant, they can help pesticides be more effective by giving better coverage, better penetration, or better adhesion. Some products suggest using an adjuvant to improve efficacy, while others may not work at all without an adjuvant included!

### **FUNGICIDES**

- **Mancozeb products:** Adjuvants needed.
  - Use a spreader-stickers to improve deposition / durability.
- **Proline:** It is recommended to use a non-ionic surfactant (NIS) at the “lowest recommended rate” for the adjuvant product. For most NIS products, 1 pt/A is typically the lowest rate. Check your product label for details.
- **Indar:** Adjuvants “may be added”.
  - Do not use penetrants.
  - For NIS, 0.25% v:v or ~1 pt/A is sufficient.
  - For organosilicons, a spray mix concentration of 0.05% v:v or less is sufficient.
- **Abound:** Adjuvants “may be added”.
  - Do not use adjuvants that contain silicone.
- **Indar + Abound Mixtures:** Adjuvants “may be added”.
  - Do not use adjuvants that contain silicone.
- **Quadris Top:** Adjuvants “may be added”.
  - Do not use high rates of silicon-based or oil containing adjuvants at high temperatures.
  - Do not exceed 0.125% adjuvant (v/v).

Note: **Bravo** already has Spreader-Sticker in it! Using extra could cause more run-off, reduce retention, and cause injury. If using a generic chlorothalonil, check the label to confirm if adjuvant is needed.

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**INSECTICIDES** - Adjuvants are recommended with:

- Intrepid, Confirm, and DiPel
  - A spray adjuvant should be used.
  - Improves: deposition, redistribution, and weatherability
- Delegate, Altacor, and Avaunt
  - Recommended to improved performance due to cranberry's dense canopy and waxy leaves.

**HERBICIDES** - In general, adjuvants are not needed for PREemergence (soil-active) herbicide applications, and adjuvant are recommended or required for use with POSTemergence herbicide applications.

COC = crop oil concentrate, NIS = Nonionic surfactant

**Callisto (*mesotrione*):** POSTEMERGENCE

- Chemigation = 1 - 4 pt/A NIS or COC
- Spot-treatments
  - NIS (0.25% finished spray volume) = 2 tsp or 0.3 oz/gal
  - COC (1% finished spray volume) = 2.5 TBsp or 1.3 oz/gal

**QuinStar (*quinclorac*):** Chemigating POSTEMERGENCE

- 2 pt/A COC

**Poast (*sethoxydim*):** POSTEMERGENCE

It is highly recommended to use an adjuvant with grass herbicides!

- Boom or aerial applications - 2 pt/A COC
- Spot-treatment COC (1% finished spray volume) = 1.3 oz or 2.5 TBsp / gal

**Select, SelectMax, Intensity, Intensity One, and others (*clethodim*)**

It is highly recommended to use an adjuvant with grass herbicides!

- NIS at 0.25% v:v for SelectMax and Intensity One
- COC at 1% v:v for Select 2EC and Intensity

**Intensity and Intensity One ONLY (*clethodim*) 24C for chemigation!**

It is highly recommended to use an adjuvant. You will have little efficacy if you do not include one!

- 1 - 4 pt/A NIS for Intensity One
- 1 - 4 pt/A COC preferred for Intensity