

CRANBERRY STATION NEWSLETTER

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UMass
Cranberry
Station

Research
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1 State Bog Road
East Wareham, MA 02538
508-295-2212
ag.umass.edu/cranberry

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News from the Entomology Lab

By Marty Sylvia and Katie Ghantous

LORSBAN GONE, TOLERANCE REVOKED

EPA ending chlorpyrifos use for all food crops in the US

The organophosphate insecticide, chlorpyrifos, better known in the cranberry industry by its trade name Lorsban, has been associated with neurotoxicity risks that are especially elevated for children. In April 2021, the Ninth Circuit Court of Appeals ruled that unless the EPA could demonstrate safety, chlorpyrifos must be banned from use on food crops. The EPA was unable to conclude that the risk from aggregate exposure met the safety standard of the Federal Food, Drug, and Cosmetic Act (FFDCA), and revoked the tolerances for all food crops on August 30, 2021. The rule is effective October 29, 2021. The tolerances for all commodities will expire on February 28, 2022.

The loss of chlorpyrifos for the cranberry industry is not a surprise due more than a decade of ongoing registration review and litigation concerning this compound. Massachusetts cranberry growers have largely moved away from Lorsban use already and have been actively using alternatives. Its absence next year may pose some challenges for growers, but the entomologists will update pest management recommendations for 2022 to provide growers with effective chlorpyrifos alternatives.



News from the IPM/Weed Lab

By Hilary Sandler and Katie Ghantous

USING FALL HERBICIDES IN 2021

Allow at least 3 weeks between the time of application and the winter flood. Flooding within 3 weeks of application moves the herbicide into the water and away from the target. Flooding too soon will reduce efficacy, increase environmental risk, and waste money. Although temperatures will be lower and the risk of volatilization is

lower (especially important for Casoron), it is important to plan your application just prior a rain event to favor soil incorporation. This is critical if you still have conventional sprinkler heads, which have been removed for harvest. If your bog has pop-ups, you have the option to water the herbicide in if no rain is forecast.

General Herbicide Notes:

Roundup and other glyphosate products. There are many different generic glyphosate products labeled for use in cranberry, but not all labels include all uses. Make sure the product you are using is labeled for the way you intend to use it! Glyphosate has a 30-day pre-harvest interval (on-bog wiper applications and dry-ditch sprays), so the window for pre-harvest applications is quickly closing (or has already closed).

Post-harvest Roundup sprays can be used as spot applications on the bog (and in the ditches) in the fall. Label rates vary based on the product because the % active ingredient varies between products. Most are for solutions of less than 1%. Rates as low as 1-2% solutions can injure or kills cranberry vines, even into November. So BE CAREFUL! Use this herbicide in situations where the weed(s) have gotten so bad, there are few vines to worry about. Good candidates might include patches of dewberry and poison ivy infestations.

Evital is good against sedges and rushes and works well when applied in the fall after harvest. Evital must be applied with a ground applicator. The fall rate can be as high as 160 lb/A on an established bog and up to 80 lb/A on new plantings; only one application can be made per year. People tend to use higher rates in the fall than the spring. Use higher rates for switchgrass and woolgrass. Lower rates can be used to control barnyard grass, rice cutgrass, needlegrass, and smokegrass. Evital can injure vines on bogs that drain poorly, so be careful. Varieties such as Stevens and McFarlin are sensitive to Evital injury, so use lower rates. **Please let us know if you use(d) Evital on any of the super hybrids** and how it worked for you and if it caused any injury. Apply before a predicted rain to encourage soil incorporation.

Fall applications of Casoron have been used historically but have fallen out of favor over the past 20 years. Some growers are re-experimenting with fall applications of **Casoron** for perennial weed control (especially Poverty Grass, PG). If you are doing fall applications vs PG, please let us know! Asters, loosestrife, nut sedge, woolgrass, narrow leaf goldenrod (follow by late water in spring), and spike rush are among the weeds that may respond to fall applications. Remember you can only apply 100 lb/A in a 12-month period. Casoron is labeled for use in the fall prior to ice sanding but you should not sand on top of a Casoron application. Single doses of high rates are needed to control many established perennial weeds.

The Effectiveness of **Fall applications of Devrinol 2-XT** has not been documented by our lab, but maybe some

of YOU have tried it; let us know!

DO NOT apply **Zeus** in the fall. Applications should be done in the spring prior to budbreak. You may not apply more than 12 oz/A of Zeus in a crop year. Do not apply additional sulfentrazone products if Zeus XC has been applied in the same year.

Controlling Poverty Grass (PG) in the fall. The best option at this time of year is to hand-pull or otherwise physically remove PG. Due to the growth habit of PG, our experience is that grass will NOT grow back from root fragments left behind. Seeds have already been produced and disseminated, so you cannot do anything about those until next year. Fall Evital (80 lb/A) does suppress existing plants but has not been observed to control plants in the spring. You will get some reduction in growth or vigor by spraying Roundup (0.5-1% solution) into the center of the plant if the PG is still green. Be very careful; the Roundup sprays will injure cranberry vines! Poast is very safe on cranberries and will also cause some reduction in PG growth and vigor when applied in the fall (but not nearly the effectiveness of summer applications). It is unknown if Casoron in the fall will have any effectiveness against PG, so if you try it, please let us know.

DID YOU USE KERB IN 2021?

Please remember to send in your report documenting your use of Kerb as per the Section 18 Emergency Exemption permit. The form is available on our website under "Service/Special Pesticide Labels" or click on this link <https://ag.umass.edu/cranberry/services/special-pesticide-labels>. The forms are due November 30, 2021.

News from the Pathology Lab

By Leela Uppala

CORRECTION TO THE 2021-2023 UMASS CRANBERRY CHART BOOK

Please note that on page 20 in the Pathology Chapter (fruit rot section under the grey box for "TIMING - Begin at late-bloom (>50%), then at 7-14-day intervals"), there is an error in the rate of Mastercop. **The correct rate is 3 pts/A per application.** Please grab a pen and make this correction to your paper copy of the Chart Book since it will not be reprinted for 2022!

We have corrected the online version of the Chart Book (<https://ag.umass.edu/cranberry/publications-resources/cranberry-chart-book>) so any future downloads will reflect the correct rate. We strive to provide you with accurate and up-to-date information, but please remember that you should **ALWAYS** read the label of any chemical before use and comply with the manufacturer recommendations. If any of you used a higher rate due to this error, please contact me at 508-295-2212 x18.

SAMPLES NEEDED FOR A FRUIT ROT FUNGAL PATHOGENS STUDY

In collaboration with Dr. Peter Oudemans, from Rutgers University and Dr. Leslie Holland, from the University of Wisconsin-Madison, we initiated a study to understand the current distribution of fruit rot fungal pathogens among different regions. We will be plating 30 randomly collected rotted berries/bed and profile fungal species. I would greatly appreciate it if you could submit fruit samples for this study. We would also need varietal information and approximate location of the bog from which the sample is collected. I will provide you with the results obtained from your respective samples by January 31, 2022. If you are interested in this study and would like to get more information, please contact me at 508-295-2212 x18.

News from the Physiology/Fruit Quality Lab

By Giverson Mupambi

THE NEW CULTIVAR EVALUATION PROJECT

We are happy to report significant progress on the new cultivar evaluation project. The project will benefit cranberry growers in MA by providing reliable information on yield performance, disease susceptibility, and fruit quality of new hybrid cultivars under MA growing conditions. Growers will then be able to make informed choices when renovating their cranberry bogs.

Twelve new hybrid cultivars from New Jersey and Wisconsin breeding programs are being evaluated under rigorous scientific conditions. Section 1 of State Bog at the Cranberry Station was renovated for this project starting in March. Propagation of the rooted cuttings began in early March in the greenhouse and continued until April.



Figure 1: Experimental Plots planted on Section 1, State Bog, Cranberry Station.



Figure 2: Propagation of rooted cuttings of the new cultivars in the greenhouse (left) and rooted plugs ready for planting (right).

The planting of the new cultivars started at the beginning of June and was finished by the end of June. The rooted plugs were planted at the industry standard 1-foot spacing (*Figure 1* above). The vines are performing well with high colonization rates. Differences can already be seen amongst the different cultivars.



Figure 3: Difference in colonization rates between the new hybrid cultivars planted in June 2021.

The biggest challenge with the project has been the excessive amount of rain during the year, which has posed difficulties with erosion control in the ditches.

We want to acknowledge the great industry support for this project from the following individuals and entities: Don Badeau, John Mason, Steve Ward, Van Johnson, Keith Mann, AD Makepeace, Sure-Cran and Oiva Hannula Cranberry Company. For additional information about this study, please contact me at 508-295-2212 x24 or gmupambi@umass.edu.

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Station News

By Hilary Sandler, Director

CONSTRUCTION HAS BEGUN!

Construction has started at the UMass Cranberry Station. During the first week of September, the main initial activity has been site preparation for the new building. J.J. Cardosi, Inc. (Riverside, Rhode Island) was awarded the contract to oversee and conduct the renovation of the existing Lab Building,

re-roofing the current Administrative Building and the construction of the new building. The renovation of the Lab Building will include upgrades to the ventilation and water systems, creation of new lab facilities and IT improvements. The new building will be approximately 5,000 square feet and house the administrative staff, faculty offices and a new meeting room that overlooks the bog.

We will be open during construction, but it will be a busy place and there may be intermittent times when the building(s) might not be accessible. There will also be periods of time that we will have no phones, internet, electricity, or water so please be patient with us. We will try and post outages and lack of accessibility to building(s) on the front page of our website so please check for information and updates. If our phone system is down, you are welcome to call the person you wish to speak with on their cell phone if you have the number.

If you need to visit the Station, please give way to all construction vehicles, and stay alert if you cross into the construction zone to enter our buildings. Parking is available near the greenhouses and/or the shop, to the left of the driveway.

We appreciate your patience as we upgrade and build new facilities for current and future scientists who will generate research-based information for the cranberry industry into the 21st century and beyond.

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