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Insect Management Options Following the Loss of Chlorpyrifos

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This article is written by Ocean Spray, who were kind enough to share the information with all Wisconsin growers. Independent growers should consult their handlers for PHI restrictions and any other limitations before making purchases or applications.



Beginning in 2022, the use of chlorpyrifos (e.g., Lorsban) is no longer allowed in any capacity for either EU or non-EU Qualified fruit. This includes existing stock - NO chlorpyrifos may be used going forward, even if a grower has already acquired the material in a previous season. While the loss of this broad-spectrum material is a challenge, we have several efficacious materials that can be used as a chlorpyrifos replacement for pre-bloom insect control. The list below includes some of these materials and highlights which insect pests can be targeted with each insecticide. We'll focus on pre-bloom management of two pest groups: (1) **Lepidoptera pests (Leps)** which are caterpillar species including Sparganothis, fireworm species, spanworms, cutworms, etc. and (2) **blunt-nosed leafhoppers (BNLH)**

1. **Acephate (e.g., Orthene)**. This material will control both **BNLH** and **Leps**. There is historical concern among some growers that acephate used prior to bloom deters pollinator activity and reduces yield. This was investigated by the WI Ag Science team in 1990/1991 and again in 2020/2021 and no significant relationship between pre-bloom acephate and pollinator activity/yield was ever observed.
2. **Spinetoram (e.g., Delegate)**. Spinetoram is a strong material for managing **Leps** but is NOT effective for controlling **BNLH**. This material is a valuable rotational material because it is specific in its efficacy, thus preserving beneficial insects.
3. **Sulfoxaflor (e.g., Closer)**. This material is **ONLY** useful for the control of **BNLH**. It will NOT work against **Leps**, but it can be applied in conjunction with a lep-specific chemistry (like Delegate) if control of both pest groups is needed at the same time.
4. **Fenpropathrin (e.g., Danitol)**. Currently **ONLY** available for use on **non-EU Qualified fruit**. This pyrethroid insecticide is relatively new to the industry. The pyrethroid class is relatively broad-spectrum and should provide control of both **BNLH** and **Leps**.
5. **Indoxacarb (e.g., Avaunt)**. This material should work well on most **Leps**, but there is some

evidence that it provides moderate to poor efficacy against Sparganothis. Its efficacy against **BNLH is unknown**, but it is not listed as a strong material for leafhoppers in other crops.

6. **Methoxyfenozide (e.g., Intrepid), Tebufenozide (e.g., Confirm), and Novaluron (e.g., Rimon).** These three materials are insect growth regulators (IGR's) that **ONLY target Leps**. None of these materials will provide control of **BNLH**. Intrepid and Confirm are both minimally toxic to bees and can be applied during bloom, but Rimon should **NOT** be applied during or immediately prior to the bloom window.
7. **Cyclaniliprole (e.g., Verdepryn).** Currently **ONLY** available for use on **non-EU Qualified fruit**. Verdepryn is another relatively new material to the industry. It is a diamide, which is the same class of insecticide as Altacor and Exirel. The diamides generally provide strong control of **Leps**. The efficacy of Verdepryn against **BNLH is not currently known**.
8. **Bifenthrin (e.g., Fanfare/Capture).** This pyrethroid insecticide is newly available to the cranberry industry in 2022. A 120 day PHI restriction has been placed on the material for EU-Qualified fruit this year. The non-EU PHI restriction is 45 days. This material is also restricted to a single application per season. It will provide control of **both BNLH and Leps**.

Growers are reminded that the 2022 OSC Code Book should be consulted prior to the application of ANY of these materials. Application timing is particularly critical with the softer chemistries on this list; weekly scouting must be incorporated in order to deploy them effectively. Many of these materials are hard on bees - always consult the label for bee health hazards prior to application.

