

MRL STATUS OF PHOSPHITE FUNGICIDES AS IT RELATES TO PECANS & OTHER TREE NUTS

Background and History:

Phosphite or Phosphonate fungicides are effective in controlling pecan scab. These fungicides are particularly useful in managing fungicide resistance in the scab pathogen population. Phosphite fungicides are safe to use and environmentally friendly compared to many other fungicides.

Often MRL's are established for pesticides. MRL is the "Maximum Residue Limit" for pesticide residues in commodities. MRL's are not necessarily a reflection of product safety and are sometimes used for restricting trade of certain commodities by some countries. If a product is listed as "exempt", then residue testing is not a part of the registration process in that country. For a country that does not list a product as "exempt", then an MRL level is required for commodity imports or the CODEX default level is followed.

The MRL's are published by the international standards group, Codex Alimentarius. This commission oversees worldwide food safety so that commodities can be traded without any safety issues.

"Codex Alimentarius, or "Food Code" is a collection of standards, guidelines and codes of practice adopted by the Codex Alimentarius Commission. The Commission, also known as CAC, is the central part of the Joint FAO/WHO Food Standards Programme and was established by FAO and WHO to protect consumer health and promote fair practices in food trade." (<http://www.fao.org/fao-who-codexalimentarius/en/>)

CODEX standards are not mandatory for countries to follow. A country can set their own MRL level for a pesticide both for internal use and for import. A country can also change an MRL after it has been set. In the event of no established CODEX MRL, the CODEX default is 0.1 mg/kg (or basically zero) is normally used.

Phosphorous Acid (phosphites or phosphonates) does not have a CODEX standard MRL. They are considered "exempt" in the U.S. (and in some other countries), since they have been shown to be safe at levels of over 30,000 ppms. Efforts are underway to establish a CODEX standard for adoption, but that is not yet complete.

Until a few years ago, phosphite residues in commodities were largely ignored by importing countries and exporters alike. This changed in 2014 when Phosphorous Acid residues became an issue for the EU countries and other countries that were importing U.S. commodities including citrus, almonds, walnuts, pecans, etc. Exporters became very concerned about shipping products to areas like the EU, where rejection at the port was a possibility, since the default limit of 0.1 mg/kg (ppm) for phosphite residues was being used. The issue had to be addressed quickly.



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How was this resolved?

The first step was to establish a temporary MRL for commodities going into the EU. The Almond Board, USDA, and many others helped negotiate a temporary MRL for tree nut commodities going into the EU. A temporary MRL for phosphites (using fosetyl-al equivalent) of 75 ppms was put in place for tree nuts in 2015. (2016 Gain Report: https://gain.fas.usda.gov/Recent%20GAIN%20Publications/New%20EU%20MRL%20for%20Fosetyl%20Takes%20Effect_Brussels%20USEU_EU-28_1-4-2016.pdf).

The next step was to conduct residue trials to help set a permanent MRL for tree nuts. Over the next several months, the Almond Board and others worked with the IR-4 group to conduct residue trials for phosphite fungicides on almonds. As a result of that work, an MRL of 500 ppms (fosetyl-al equivalent) was negotiated and established with the EU for tree nuts. This was announced on June 5, 2018, volume 61 of the Official Journal of the European Union (also, https://ec.europa.eu/food/plant/pesticides/max_residue_levels_en). This has been published on the Almond Board website and pecan publications in 2018.

Current State for Pecan and other Tree Nuts:

Growers are free to use phosphite fungicides, like Helena ProPhyt® and Viathon®, on pecan and other tree nuts as long as they are used according to label instructions and within university guidelines. According to the University of Georgia Extension recommendations, pecan growers should make no more than five total applications per season (<https://site.extension.uga.edu/pecan/2018/06/desirable-drop-and-update-on-eu-phosphite-regulations/>). By following university guidelines, residue levels can be kept within tolerances for the export market use of tree nuts.

Consult with your local Helena representative for the specific use rate and application timing for Helena ProPhyt and Viathon.



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