

PROPOSAL:

POLYOXIN D ZINC SALT (Polyoxin DZS)

SUMMARY

Reject the petition to allow polyoxin D zinc salt in organic crop production.

Rationale

- Production process is not available for review by NOSB members and organic stakeholders.
- The petition does not give enough information to determine if polyoxin DZS is synthetic.
- Polyoxin DZS is not compatible with organic production.
- Polyoxin DZS is not essential.
- Potential post-harvest uses have not been clarified.

Cornucopia agrees with the Crops Subcommittee majority opinion:

- Polyoxin DZS is synthetic.
- Polyoxin DZS should **not** be added to the National List at Section 205.601.

BACKGROUND

Polyoxin D zinc salt was petitioned as a disease control material to be used in organic crop production. It is currently used as a pre-harvest foliar spray on conventional crops to control fungal diseases. There are possible additional uses as a post-harvest material.

Polyoxin D inhibits the growth of fungal cell walls. It does not kill the fungus or the fungal spores; it simply stops the growth of hyphae.

International organic regulations

Polyoxin D zinc salt is not allowed in Canada, Europe, or Japan. It is not listed on IFOAM or CODEX Alimentarius (TER, 2012).

CONCERNS WITH POLYOXIN D ZINC SALT

Production process is not available for review by organic stakeholders

The description of the production of polyoxin DZS is withheld as Confidential Business Information. The petition states that it is produced by a microorganism (*Streptomyces*) in a fermentation process.

The NOSB Manual states that Board members have a responsibility to:

Be reasonably informed—It is the duty of all Board members to seek and study the information needed to make a reasoned decision and/or recommendation on all business brought before the Board.

When the needed information is kept confidential, it is not possible for Board members to exercise this duty. The authors of the Technical Review (TR) did have access to the confidential information, but their conclusions should not be used as a basis for decision-making. To further complicate the matter, the authors' names, and possible conflicts of interest, are not disclosed. Any petition that contains Confidential Business Information should be declared insufficient for review by the NOSB.

In order to evaluate this material, all information about the manufacturing process needs to be disclosed to the public, including, but not limited to, answers to the following questions:

- Is this strain of *Streptomyces* genetically engineered?
- What are the ingredients in the growth medium for *Streptomyces*?
- Are any ingredients in the growth medium genetically modified? How is this monitored?
- What is the process for extracting the polyoxin D zinc salt from the growth medium?
- Are inerts used in the final pesticide formulation? If so, which ones?

The petition does not give enough information to determine if polyoxin DZS is synthetic

The petitioner believes that this is a non-synthetic material and therefore its use should be allowed without going through the petition process. The determination on whether a material is synthetic or natural must be made by the NOSB, not by the petitioner.

Because the petitioner refused to supply the needed information the NOSB must rely on the TR, which states that PDZS “may” be synthetic.³⁹

³⁹ Technical Review: Polyoxin D Zinc Salt. 2012. Compiled by The Organic Center

The definition of “synthetic” states that: “*such term shall not apply to substances created by naturally occurring biological processes.*” Composting, for example, is a naturally occurring biological process. All microbial growth is a **biological** process. However, growing one microbe in a controlled environment, and feeding it with a chemical soup, is not a **naturally occurring** process.

Polyoxin DZS is not compatible with organic production

This material is a broad-spectrum fungicide that acts by inhibiting synthesis of the fungal cell walls. It prevents growth of both disease-causing fungi and beneficial fungi, according to the TR.

A long list of the proposed uses of this fungicide is included in the petition, pages 6-8. This is evidence that the fungicide has broad-spectrum activity; in other words, it is harmful to many kinds of fungi. This is not consistent with the organic principle that requires farmers to maintain biodiversity on the farm.

It appears that this fungicide will be used both as a foliar spray to control leaf diseases and a soil application to control soil-borne diseases. Therefore, the reduced biodiversity may occur both on above-ground surfaces and in the soil. Soil biodiversity is particularly critical for decomposition and nutrient cycling.

Polyoxin DZS is not essential

The Organic Materials Review Institute (OMRI) lists many materials available to organic growers for plant disease control. These materials include copper, sulfur, oils and other products. With all these other options available, polyoxin DZS is not essential and should seldom be necessary.

There are many practices available to prevent or minimize fungal diseases, such as increased plant spacing, reduced water use, resistant varieties, nutrient management, sanitation and crop rotation. If cultural controls are not adequate, biological controls and non-synthetic materials are available for disease control. If, and only if, these practices are insufficient to manage the disease, synthetic materials can be used.

Potential post-harvest uses have not been clarified

The petition discusses potential post-harvest uses, but does not clarify the crops or method of use. The petition states:

Proposed new uses are summarized in Confidential Appendix 1.⁴⁰

⁴⁰ Kaken, 2012. Petition to Amend 7 CFR §205.601 to Add Polyoxin D Zinc Salt as a Synthetic Substance Allowed for Use In Organic Crop Production

All uses must be explicitly stated before a material can be added to the National List.

CONCLUSION

Cornucopia agrees with the majority opinion: polyoxin DZS should **not** be added to the National List at Section 205.601.

In the future, any petition that contains Confidential Business Information should be returned to the petitioner as insufficient. This will save time for the volunteer NOSB members and the government employees of the NOP.