

SFIREG Issue Paper

Pesticide Impurities in EPA Registered Pesticides PR 96-8



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Issue- Statement of Policy Regarding Toxicologically Significant Levels of Pesticide Active Ingredients

- Because of a 1996 policy (PR Notice 96-8), cross-contamination of active ingredients in pesticide products by contaminants, that are also pesticide active ingredients, is allowed up to a certain level (three scenario exclusions).
- A number of end points were considered. "In most cases phytotoxicity to target plants was the most sensitive endpoint and, therefore the limiting factor ..."

Prior to the policy:

Any level of an impurity that is also an active ingredient in another pesticide was considered "toxicologically significant" and had to be reported to EPA. No quantitative criteria.

PR Notice 96-8 provided further interpretation of:

- 40 CFR 158.167 [currently §158.340], "Discussion of formation of impurities"
- 40 CFR 158.175 [currently §158.350], "Certified limits".

Example portion of table
(Table PR 96-8 has 7 categories)

A contaminant is defined as an active ingredient that is not on the product's CSF or listed in the discussion of impurities.

Toxicologically Significant Levels of Contaminants

Category	Type of Contaminant	Type of Pesticide that is Contaminated	Toxicologically Significant Level (ppm)*
1	Insecticide, fungicide, molluscicide or nematocide in ...	Any insecticide, fungicide, molluscicide, nematocide, herbicide, plant growth regulator, defoliant or desiccant.	1000
2	Herbicide, plant growth regulator, defoliant or desiccant in ...	Any pesticide where the contaminant is accepted for use on all sites for which the product is labeled.	1000

* The concentration is determined in ppm based on the ratio of the weight of the contaminant to the weight of the formulated product.

Questioning whether it isn't potentially problematic when:

- Products containing an a.i. with a short-half life (and therefore have a short PHI), containing contaminants with long half-lives.
- Esp. if multiple applications are allowed close to harvest.

**Levels of various pesticides found in unopened containers
of Pesticide AZ in Oregon.**

Formulated Product Sample #	Pesticides (ppm)			
	<u>Permethrin</u>	<u>Bifenthrin</u>	<u>Cyfluthrin</u>	<u>Chlorpyrifos</u>
NUF - 1	2.8	1.1	0.42	0.15
NUF - 2	200	0.37	0.088	0.51
NUF - 3	25	1.1	< 0.10	2.0
NUF - 4	1.0	0.27	< 0.10	< 0.040
Ag Crop Tested	0.2 - 0.60 *	0.21 - 0.48 **	-	-

* Note - tolerance on pome is 0.05 ppm

** Note tolerance on grapes is 0.20 ppm

Issues

Market Barriers

- Despite the levels of the contaminant pesticides all being well below the EPA definition of toxicologically significant levels provided in PR Notice 96-8.
 - Levels in tested crop could possibly exceed the tolerance levels for certain crops, resulting in economic hardship for growers and other small businesses.
 - May not be any tolerances, including indirect or inadvertent tolerances.

Consumer Confidence and Truth in Labeling

- Pesticide AZ is a product that can be used under the National Organic Program. OMRI listed.
- There is a lack of awareness that “organic pesticides” and crops may potentially contain undeclared conventional pesticides such as, permethrin, bifenthrin, chlorpyrifos, etc.
- Tested organically grow crops may potentially be rejected by buyers, resulting in economic hardship.

Issues

Herbicide-Resistant Crops

- The number of crops bred to be resistant to over-the-top herbicide use have proliferated since 1996.
- The levels of herbicide contaminants allowable in herbicide products may no longer meet EPA's risk based standard.
- ODA is not aware of any verified instances of damage or illegal residues, but many people are aware of allegations that have been made regarding this topic.

Proposed Remedies Exclusions

EPA expand its *exclusion** list in PR 96-8 to include:

- Products labeled or approved for use in organic production.
- Herbicide products labeled for use on crops which provide over-the-top use directions.

* Any level of contaminant is considered potentially toxicologically significant

Proposed Remedies Review

EPA stated in PR Notice 96-8 that they considered unreasonable adverse effects and reviewed the risks for several endpoints, including adulterated food.

- EPA re-review the endpoints, particularly the potential adverse effects if food should become adulterated.
- One category* has the criteria: “the contaminant needs to be accepted for use on all sites for which the product is labeled”. This criteria needs to be expanded to all categories.

Proposed Remedies Review

- EPA conduct a comprehensive review of its interpretation of the term "toxicologically significant", & incorporate further refinements based on current:
 - Analytical methods (levels of quantification),
 - Pesticide residue tolerance levels, and
 - Agricultural trade practices.
- Require additional studies from registrants with products that have short preharvest intervals on any crops.
- Review how registrants are implementing PR Notice 96-8.

Thank you

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