European Organic Certifiers Council

EOCC/IFOAM Organics Europe
Presentation on Phosphonic Acid

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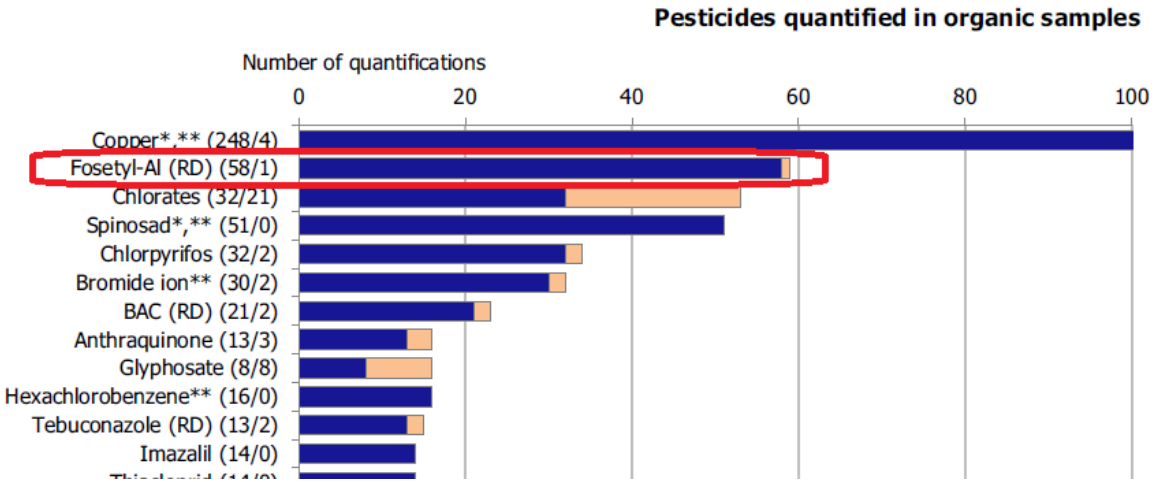
Civil Dialogue Group 10-07-2020

Phosphonic Acid

Phosphonic acid residues represent a very sensitive topic nowadays both at companies, control bodies and EC level; however, by meeting and discussing, we will manage to understand each other and, hopefully, to create a smart and successful collaboration for the future!

EFSA report 2017



Fosetyl-Al residues were among the top three most frequently quantified residues in organic food. Considering that the current residue definition for fosetyl-Al is 'sum of fosetyl-Al and phosphonic acid and their salts expressed as fosetyl', the results for fosetyl-Al may include the presence of phosphonic acid residues coming from potassium phosphonates (which can be used as a foliar feed fertiliser but is also approved as a fungicide) and disodium phosphonate which is also approved for use as a fungicide. These findings, therefore, do not necessarily indicate that there was just a use of fosetyl-Al in the field. This has been explicitly communicated to food business operators in 2014 through a note on the DG SANTE webpage and through the relevant trade associations.

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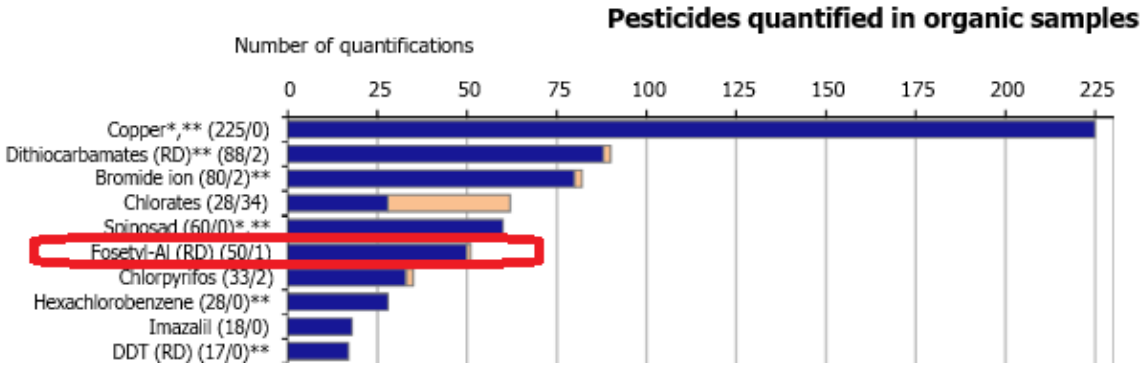
EFSA report 2018. Same situation and repeated information

The 2018 EU report on pesticide residues

EFSA Journal



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2018-october 2019: investigations on Phosphonic Acid

Residu (Meerdere items)

Rijlabels	Aantal van Product
Germany	27
Netherlands	18
Italy	5
Belgium	3
Malta	2
France	2
Denmark	1
Ireland	1
Austria	1
Eindtotaal	60

Residu (Meerdere items)

Rijlabels	Aantal van Product
Turkey	19
China	6
Peru	5
Ecuador	5
Egypt	5
Argentina	4
Chile	3
Vietnam	3
Costa Rica	2
Sri Lanka	2
Serbia	2
Morocco	2
India	1
Brazil	1
Eindtotaal	60

- [x] Acetamiprid Azoxystrobin Fludioxonil Fosetyl-al Iprodione Pyrimethanil Phosphonic Fosetyl
- [x] Azoxystrobin Boscalid Carbendazim Glyphosat Haloxyfop Thiophanate-Methyl Triadimenol Phosphonic
- [x] Benomyl Carbendazim Fosetyl-al Phosphonic Fosetyl
- [x] Boscalid Glyphosat Iprodione Methoxyfenozide Phosphonic
- [x] Cyprodinil Fludioxonil Phosphorous acid Pyrimethanil
- [x] Ethephon Fosetyl-al Phosphonic Fosetyl
- [x] Fosetyl-al Glyphosat Hexachlorobenzene Phosphonic Fosetyl
- [x] Fosetyl-al Phosphonic Fosetyl
- [x] Fosetyl-al Phosphorous acid Fosetyl
- [x] Fosetyl-alFosetyl-Aluminium Phosphonic Fosetyl
- [x] Fosetyl-alFosetyl-Aluminium Phosphorous acid Fosetyl
- [x] Glyphosat Phosphonic
- [ ] Phosphine
- [x] Phosphonic
- [x] Phosphonic Fosetyl
- [x] Phosphorous acid
- [x] Phosphorous acid Phosphonic
- [x] TebuconazolTebuconazole Phosphonic

COP Meeting 16-17 June 2020

B.6. OFIS Notifications

- Phosphonic acid and fosetyl-Al residues in products labelled 'organic' - General discussions on cause and corresponding measures to be taken;

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IFOAM Study about phosphonic acid findings in different EU Countries

IFOAM ORGANICS EUROPE

IFOAM WG REGULATION STUDY ABOUT DIFFERENT WAYS OF DEALING WITH PHOSPHONIC ACID FINDINGS IN EU COUNTRIES. UPDATE 10 JULY 2020

	Austria	Belgium	Denmark	France	Germany	Italy	Ireland	Netherlands	Norway	Poland	Spain	Sweden	Switzerland	United Kingdom
1) if there is a national residue law in the EU Countries	No specific information provided	Yes*	No specific information provided	Yes*	No	Yes*	Yes*	No specific information provided	No specific information provided	No	No	No	No	No specific information provided
2) if there is a decertification limit for Phosphonic Acid and for Fosetyl in the EU Countries	No specific information provided	No*	No* Case by case approach	No*	No	Yes*	Yes*	No*	No* Case by case approach	No specific information provided	No* Case by case approach	No specific information provided	No specific information provided	No* Case by case approach
3) if there is a limit above which the investigation is started in the EU Countries	Always *case by case*	Always* *case by case*	Always *case by case*	LC*	Always *case by case*	Any positive result*	Always* *case by case*	Always* *case by case*	Always *case by case*	Always *case by case*	Any positive result*	Always *case by case*	0,01 ppm	Always *case by case*

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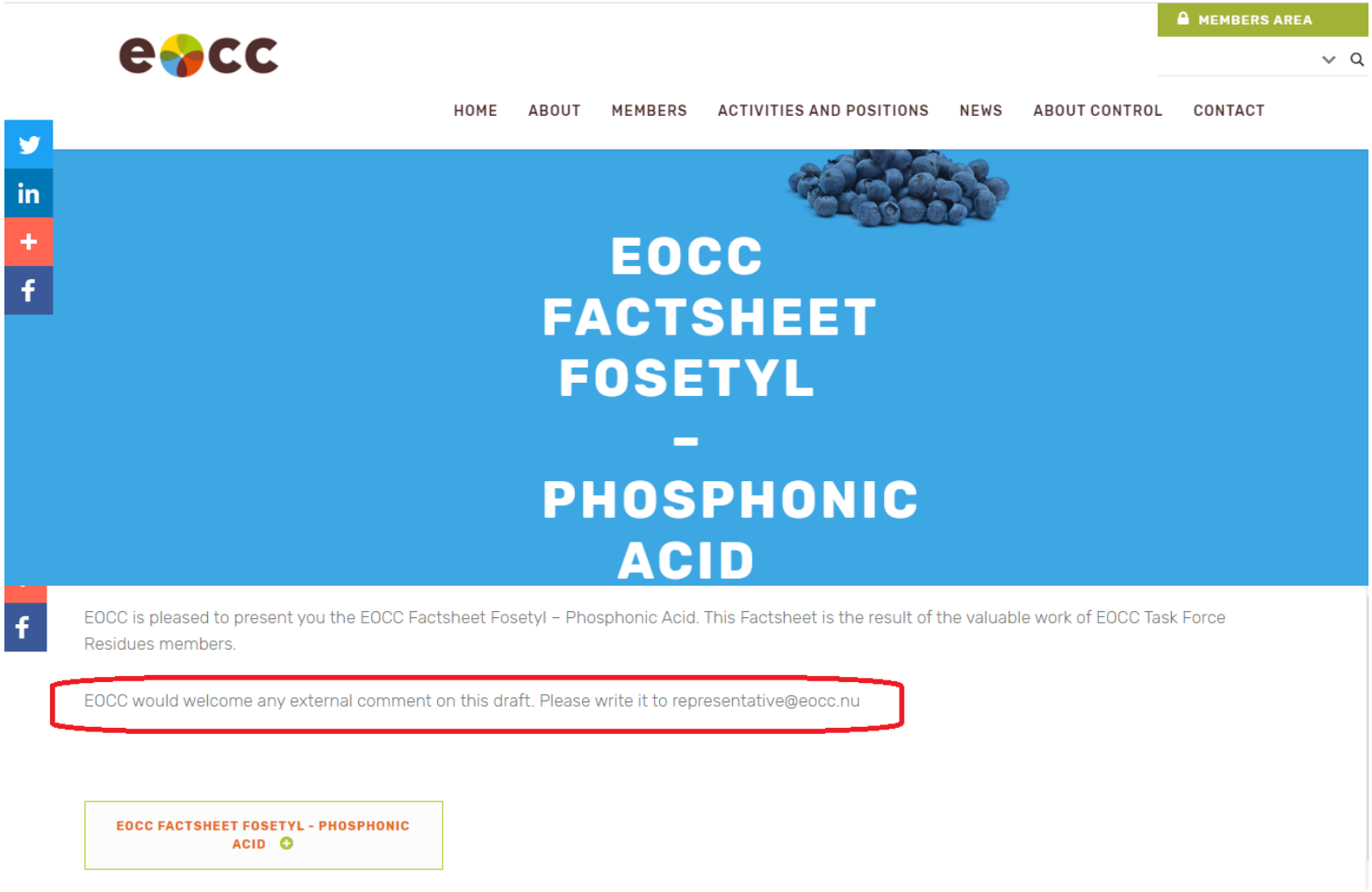
Fact Sheet on Phosphonic Acid. April 2019.



Sources of information for EOCC factsheet:

- EOCC Task Force Residues (with special thanks to CAAE, TUV Nord Integra, SKAL, CCPB, CCPAE, Certisys, ECOCERT/IMO)
- Primoris (pesticide residue laboratory)
- BNN
- Lach & Bruns
- Consiglio per la ricerca in agricoltura e l'analisi dell'economia agraria (CREA) (IT)
- CARM Imida study (ES)
- BIOFOSF research project funded by the Italian Ministry of Agriculture
- Federbio paper (November 2018)
- CREA project (Italy)

Fact Sheet on Phosphonic Acid. April 2019.

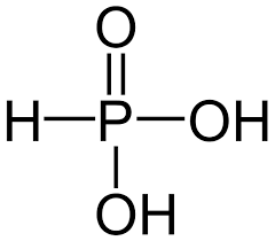
The aim of the factsheet: Providing the background information for CB`s / CA`s / operators in cases of phosphonic acid detection.

The main questions for EOCC are:

- How do EOCC members handle the presence of phosphonic acid in products?
- How do EOCC members handle the presence of Fosetyl in organic products?

Finally we have this recent proposal for harmonisation in cases with phosphonic acid, although this is not a guideline (yet)!

The outcomes of this investigation are harmonized, based on checking the possible sources and experiences of the past.



Background information

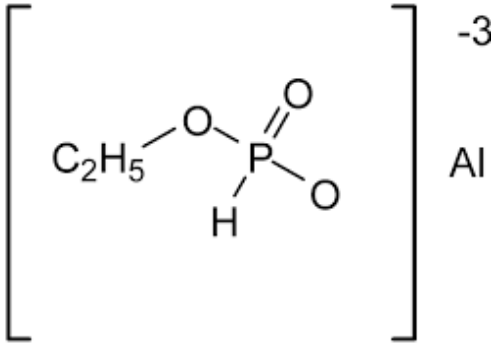
Phosphonates (chemically): Salts of Phosphonic acid

Applications / Sources:

- **Plant strengthening products, foliar fertilizer.**
  Since 2013, Phosphonic acid has been included in the formulation of the fungicide **fosetyl-Al** and is no longer allowed as foliar fertilizer in organic farming where was allowed in several countries. (Oct. 2013)

- **Conclusively: pollution with Phosphonic acid in soil and plants**

Background information



Applications / Sources:

- Degradation product of the pesticide **Fosetyl-Al**

  Residue definition (Reg. (EG) No. 396/2005) of Fosetyl-Al: **Fosetyl-Al** (sum of fosetyl, **phosphonic acid** and their salts, expressed as fosetyl)

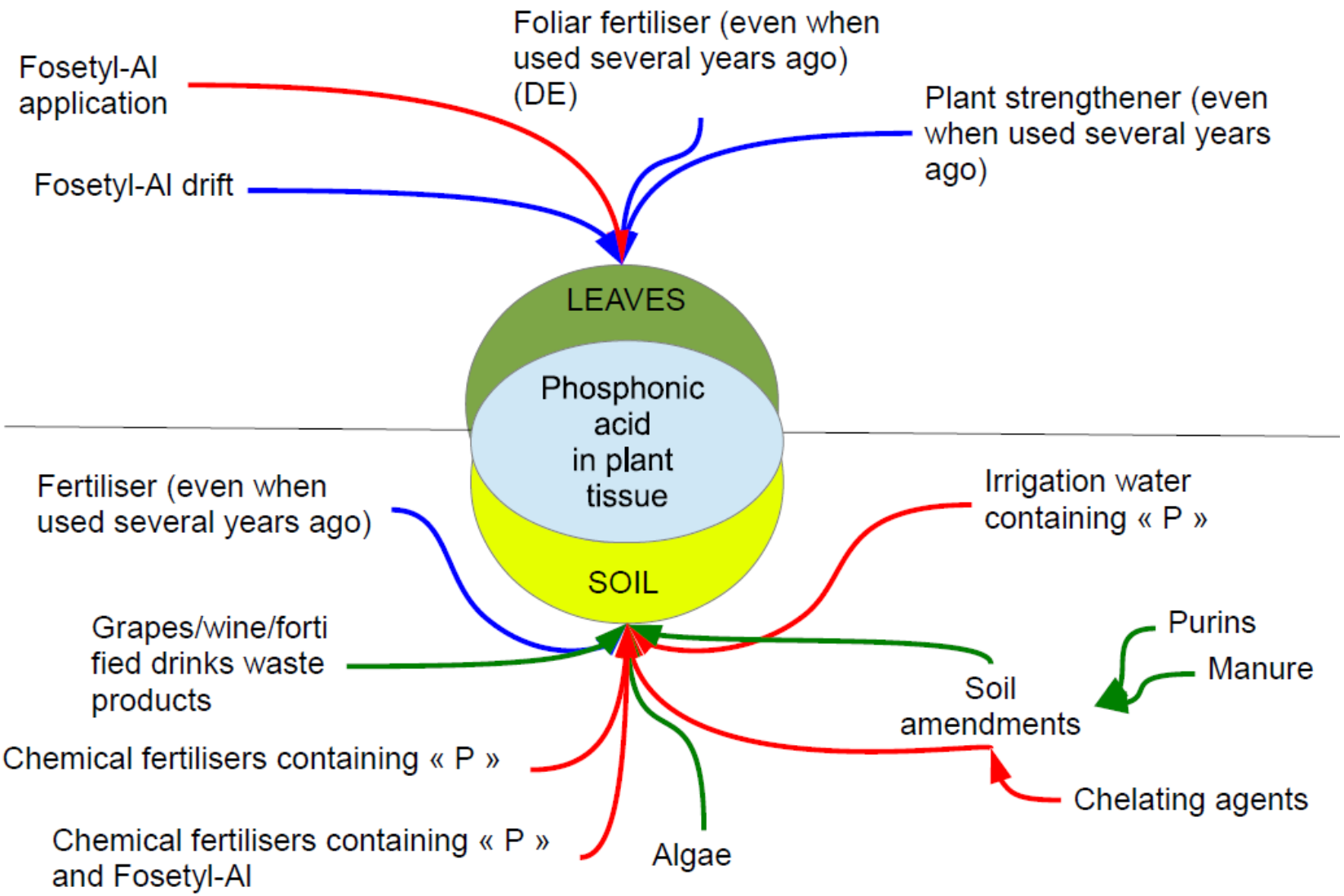
- Phosphonic acid concentration levels are considered for the maximum residue level – independent if Fosetyl itself was applied or not.

Evaluation of Phosphonic acid detected levels

- Neither Fosetyl nor Phosphonic acid nor Potassium-phosphonate are approved according to EU-Organic-implementation Reg. 889/2008.

- Usual Reporting limit of laboratories/quantification level related to Phosphonic acid in fruit and vegetables: 0,01 mg/kg.

- Maximum residue levels (MRL) of Fosetyl including Phosphonic acid (396/2005): up to 500 (!) mg/kg *(f. ex. Cashew nuts)*


Foliar fertiliser (even when used several years ago) (DE)
Fosetyl-Al application
Plant strengthener (even when used several years ago)
Fosetyl-Al drift
LEAVES
Phosphonic acid in plant tissue
SOIL
Fertiliser (even when used several years ago)
Irrigation water containing « P »
Grapes/wine/forti fied drinks waste products
Purins
Manure
Soil amendments
Chemical fertilisers containing « P »
Chelating agents
Chemical fertilisers containing « P » and Fosetyl-Al
Algae

The methodology for official investigation:

- Hypothesis 1: Not authorised substances have been used.
- Hypothesis 2: Authorised substances containing phosphonic acid
- Hypothesis 3: Spray drift from neighbouring farmers.
- Hypothesis 4: Historical use of substances containing phosphonic acid.

⇒ Collect evidence supporting or denying this hypothesis.
⇒ Close the investigation and reply (if necessary the OFIS notification)

Measures to be taken:

- Phosphonic acid is due the use of unauthorised substances during organic crop management
  - ⇒ Apply catalogue of measures (cfr Art 30 of R 834/2007)

- Phosphonic acid is due to the use of authorised substances during organic crop management
  - ⇒ batch remains organic if <MRL

- Phosphonic acid is due to the use of substances not authorised for use during organic crop management but such use took place prior to the start of organic production/conversion or before 2013.
  - ⇒ Batch maintains organic status provided MRL values are not exceeded

- Source of phosphonic acid has not been identified. <MRL

=> Batch could be released as organic (cfr art 91.2 of R 889/2008) but will be identified as a high risk operator.

Thank you for your attention