

An overview on the Phosphonic Acid topic

CERTISYS experiences

Anti Fraud Initiative Webinar
13-10-2020



Cases reported to CERTISYS 2018 - 2020

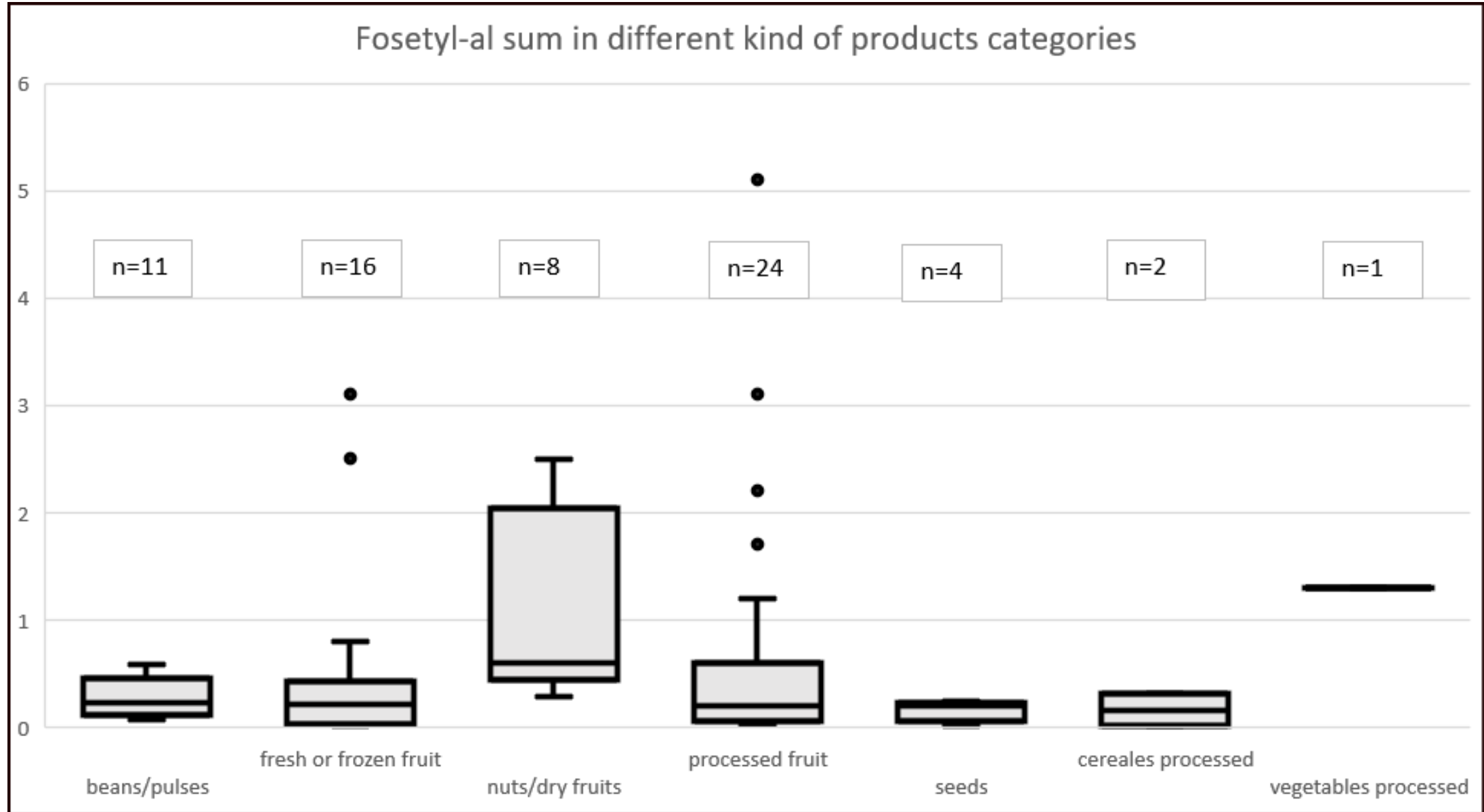
- 66 cases reported to CERTISYS via the Operators or other Control Bodies (CB) / Competent Authorities (CA)

- Mainly in:

- fruits (fresh and IQF)
- fruits products (Juices, Purees...)
- Beans (chickpeas...)
- Nuts and dried fruits (Almonds...)



Results overview



Extreme range of contamination levels

🔍 Contamination from 0.01ppm, up to 5ppm

🔍 A same product / sample tested several times may show extreme variability in test results

🔍 Several counter-analysis end as negative, despite significant results on first tests

🔍 Fosetyl-Al itself **never found**

🔍 Only 2 decertifications following investigations, motivated by other findings such traceability lakes

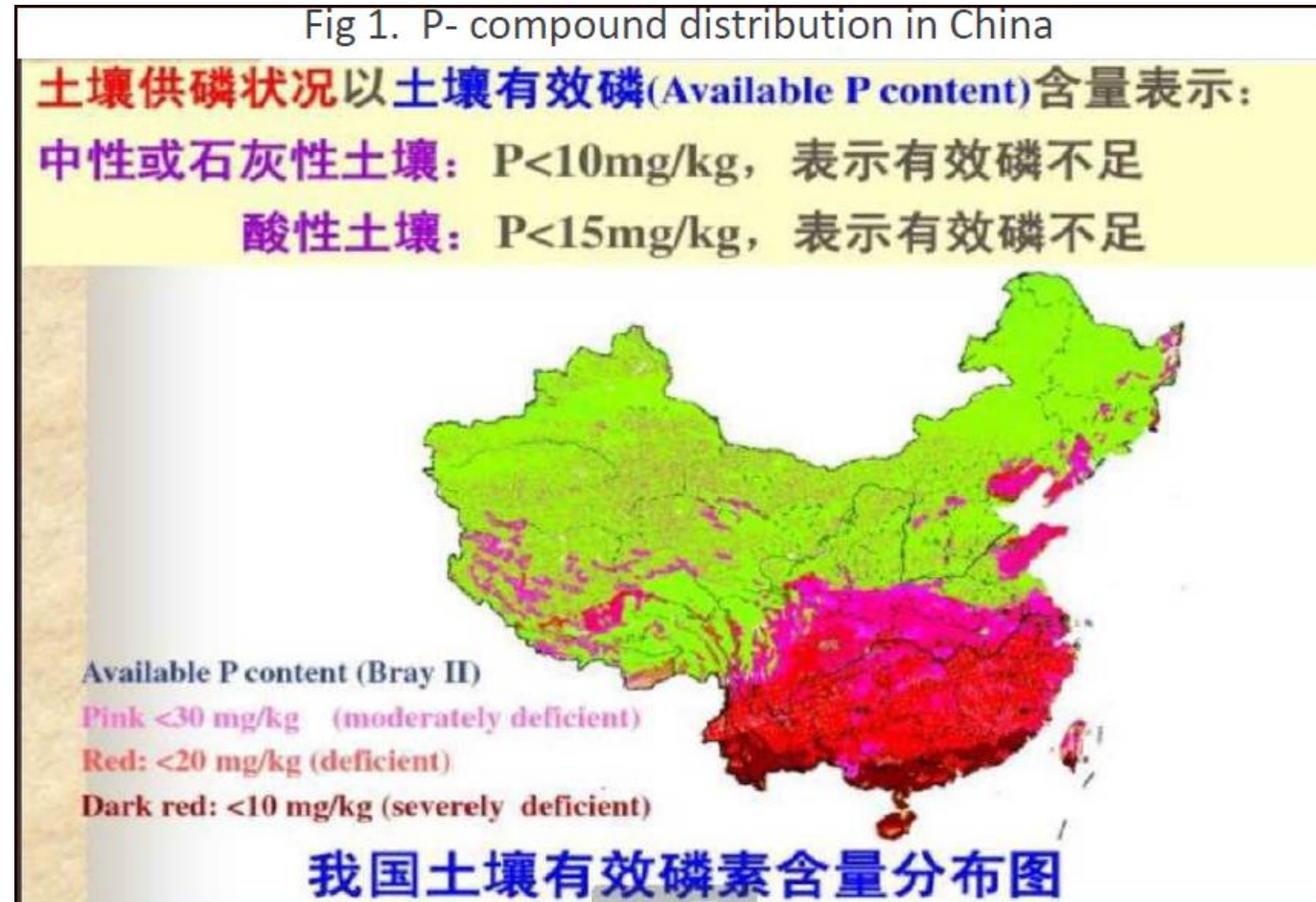
🔍 Presence of Phosphonic acid never found to be linked to the use of non-allowed products



Sources of phosphonic Acid

Soil natural presence

Mostly for products from CHINA



Sources of phosphonic Acid

(fermented) poultry
manure



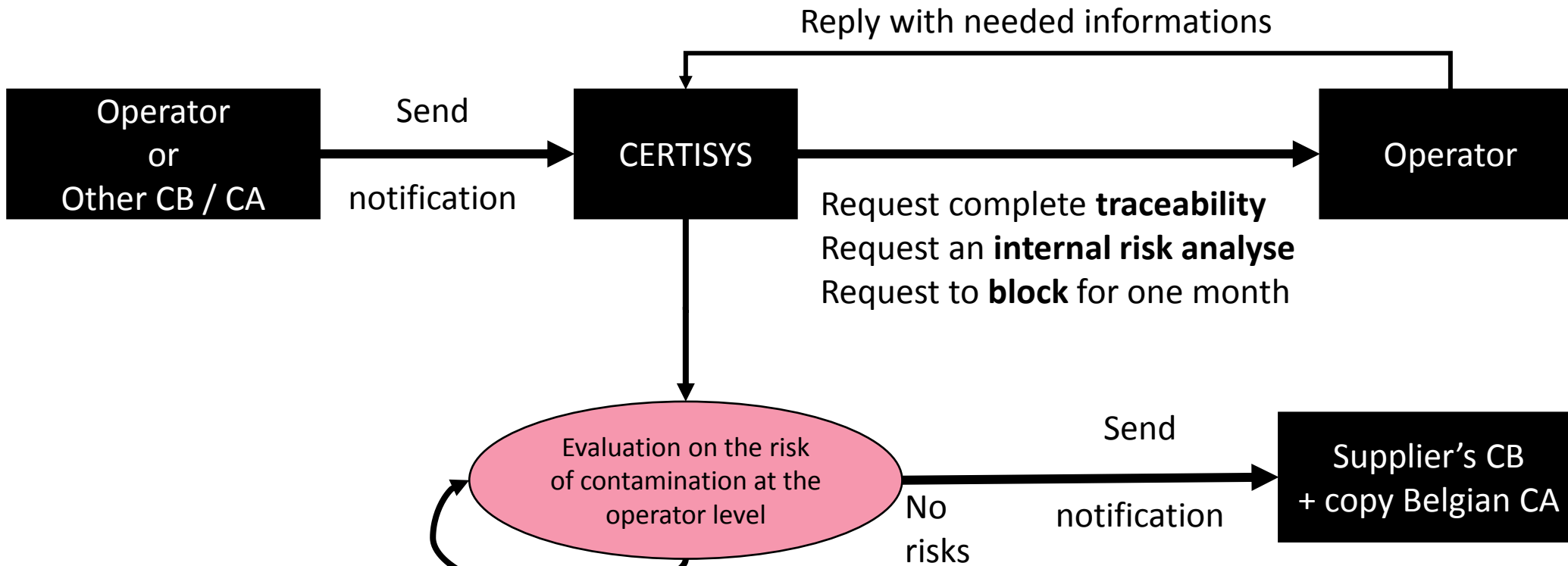
Sources of phosphonic Acid

Historical use of previously allowed "plant strengtheners" or "foliar fertilizers" (or historical use of Fosetyl-Al before Organic conversion)

Phosphonic acid said to cumulate in the wood of the plants and/or on the soil



What happens when CERTISYS receives a notification ?



investigations

Risks:
Study possibilities of contamination under operator responsibility

investigations

What should a good investigation look at ?



Traceability :

Can the operator provide a complete traceability allowing to unequivocally identify the concerned product ?

- Invoices
- Delivery bills
- C.O.I
- Intern traceability linking final product to raw material if needed
- labelling



What should a good investigation look at ?



Traceability



Internal risks of contamination at operator's level (processing stages):

- Organic and non-organic separation ?
- Cleaning procedures adapted and followed?
- Staff training







What should a good investigation look at ?

- 🔍 **Traceability**
- 🔍 **Internal risks of contamination at operator's level (processing stages)**
- 🔍 **Risks of contamination during transport and storage :**
Who's responsible of the transport and storage of the goods ?
Supplier or Client ?



What should a good investigation look at ?

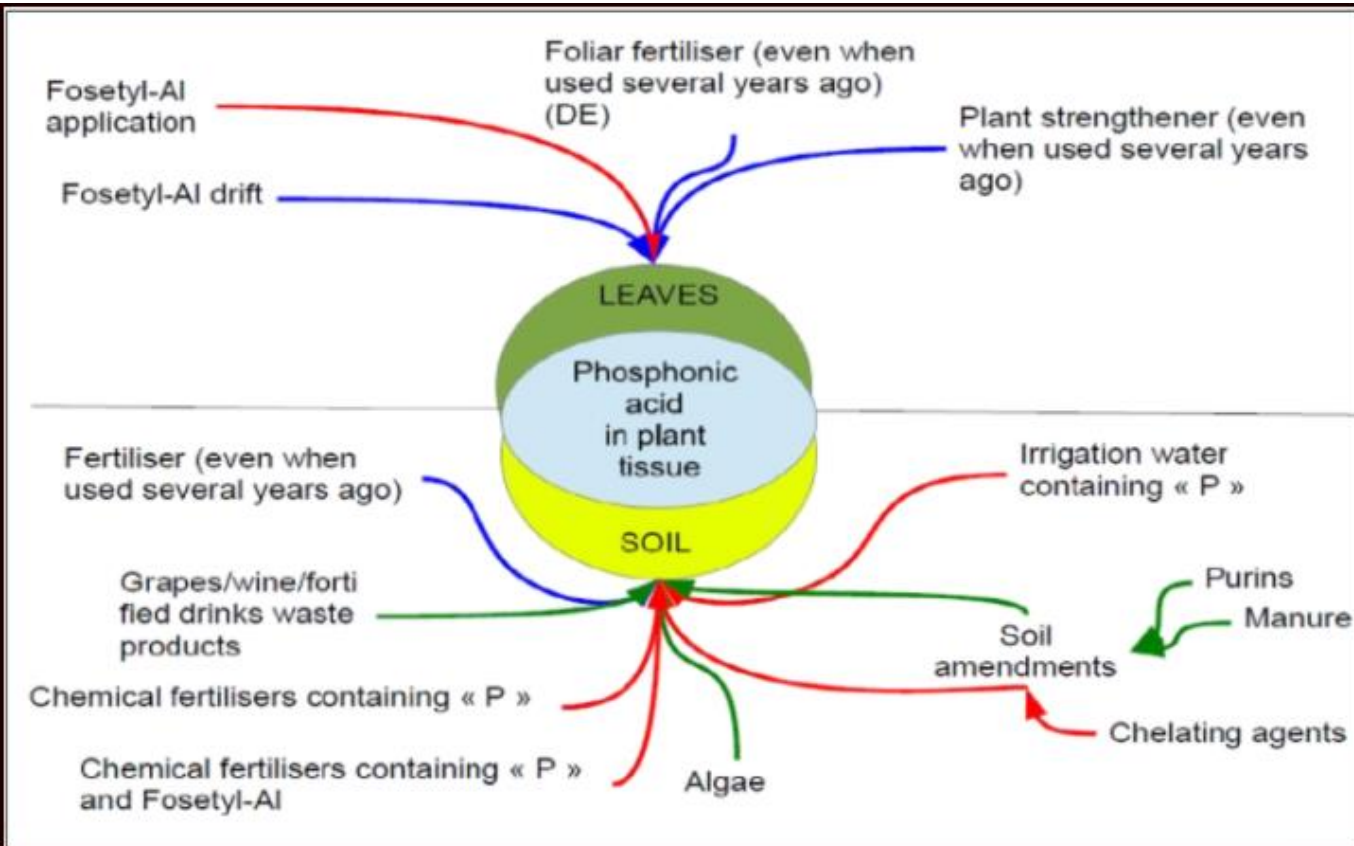
-  **Traceability**
-  **Internal risks of contamination at operator's level (processing stages)**
-  **Risks of contamination during transport and storage**
-  **Risks of contamination at crop level**



What should a good investigation look at ?



🔍 Risks of contamination at crop level



(i) The **unavoidable presence** in the plant and/or the soil due to use of plant strengtheners, foliar fertilisers (possibly containing “P” when used before 2013 in DE), other kind of fertilizer/soil amendments or plant protection products based on Cu but also containing “P”, even two or three years before sampling, due to spray drift and/or growth under stressful conditions e.g. drought.

(ii) The **use of prohibited substances** on the plant or soil due to the use of Foseyl-Al application, the use of chemical fertilisers containing phosphorous, the use of chemical fertilisers containing phosphorous mixed with Foseyl-Al, the use of chelating agents in the preparation of soil amendments and/or irrigation water containing “P”.

(iii) The **use of authorized substances** on organic land due to use of purins or manure as soil amendments, algae or waste products from grapes/wine/fortified drinks preparation.



What should a good investigation look at ?

 **Risks of contamination at crop level**
EOCC approach : Collecting evidences to support 3 hypothesis :

Hypothesis 1: not authorized substances have been used

Fosetyl-AI application ?

FAL allowed on this crop if non-organic?

FAL allowed on other crops of same unit if non-organic?

FAL use relevant on the crop? (fungi risk – 1month prior sampling)

Chemical fertilizer ?

Product sensitive to lack of « P » in soil ?

Soil amendment « enriched » ? Soil amendment contening « P » in chelating agents ?

Documentation on soil amendments?

Remaining product to sample ?

Irrigation water enriched with soluble « P » ?

Records in relation to irrigation water quality ?

Irrigation system closed ?

Irrigation system shared with non-organic productions ?





What should a good investigation look at ?



Risks of contamination at crop level EOCC approach

Hypothesis 2: Authorised substances containing phosphonic acid (natural presence) have been used

Did some of the following substances have been used ?

As soil amendment :

Algae

Purin

Manure

Waste products of the wine industry

Plant strengtener or foliar fertilizer
containing « P »

Micro-organisms

Other inputs containing aminoacids



What should a good investigation look at ?

Risks of contamination at crop level EOCC approach

Hypothesis 3: Drift from neighbouring non organic productions

Fosetyl-AI application by neighbouring farmers

use of Fosetyl-AI authorized on those crops in non organic farming in the country where the crop is grown ?

use of Fosetyl-AI relevant in relation to the risk of fungi in the period of 1 month prior to sampling

plant strengtheners or foliar fertilizer containing "P":

check the plant records and needs of the crops of the neighbouring farmer

