



Phase out of soil fumigants

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To: Ms. Kyriakides
European Commissioner for Health and Consumer Policy
European Commission
B-1049 Brussels.

Concerning: Phase out of soil fumigants.

Dear Ms. Kyriakides, on the agenda of the next pesticide Standing Committee ([ScoPAFF](#)) meeting is again the soil fumigants 1,3-dichloropropene and chloropicrin are discussed. Apart from the discussion if these chemicals meet the approval criteria (they do not, see below our assessment) and cause health damage to residents by massive air pollution, we suggest you should also consider other elements.

Directive 128/2009 provides that IPM, integrated pest management, is applied by all farmers by 1-1-2014. Since IPM starts from prevention (Annex III), preventive measures need to be used as a priority. Crop rotation and healthy soils are among these preventive measures. And this means that there is no place for soil fumigants. Art. 55 of the Regulation states the same. Farmers have to use pesticides properly, applying IPM. This means that pesticides can only be applied as a last resort, only if all preventive measures and non-chemical practices have been used. This is of course not the case for soil fumigants since crop rotation is the best non-chemical alternative (inundation is another one).

Killing soil life is also a grave violation of the new EU Biodiversity Strategy since healthy soils are the objective of the strategy. The objective is that soil biodiversity decline shall be stopped and soil ecosystems restored.

We urge you to propose a phase out of all soil fumigants. Chemicals killing soil life is a clear violation of EU policy. Soil fumigants keep outdated monocultures in place. Monocultures that can have no place in modern agriculture. Phasing them out is long overdue.

- ***1,3 Dichloropropene (DCP) and Chloropicrin (CP) are extremely dangerous substances.***

DCP has been banned twice by the EU (2007 and 2010), but industry (Dow and Kanesho) give it another try with a more purified version. EFSA's peer review in 2018 shows that the industry dossier is a mess. There are 32 data gaps, 7 issues that 'could not be finalised' and 7 'critical areas of concern', 7 reasons that block an approval to be granted. Among these reasons is that a mutagenic potential cannot be excluded, the substance and its metabolites pollute groundwater, and DCP has high risks for arthropods and soil life. No pesticide with such a bad profile has ever been approved by

the EU. Nevertheless DG SANTE drafted a “non-paper” (see Politico 5-11-2019) that bends the rules in such a way that DCP can be approved. The ‘non-paper’ is still not voted in ScoPAFF, while it seems that Poland is preparing a document on the classification of DCP, to be sent to ECHA’s RAC-committee for a final decision. DCP is a nightmare for those citizens that live on the edge of fumigated fields. They are exposed to the gas for weeks.

In 2011 it was decided not to authorise Chloropicrin (CP) due to its high toxicity and dangerousness in the implementing regulation (EU) No. 1381/2011 of 22 December 2011¹: *“During the evaluation of this active substance, concerns were identified. Those concerns were, in particular, the following. There is an unacceptable risk to operators. It was not possible to perform a reliable groundwater exposure assessment as data were missing concerning the metabolite dichloronitromethane and impurities of the active substance as manufactured. Insufficient data were available to conclude on the risks to sediment dwellers, bees, earthworms and non-target plants. A high risk to aquatic organisms, birds and mammals was identified. It was not possible to perform a reliable surface water and sediment exposure assessment as data were missing for chloropicrin and the metabolite dichloronitromethane. No reliable assessment of exposure concentrations in air of phosgene could be performed. A high potential for long-range atmospheric transport was identified.”*

And an industry consortium (ECG, the European Chloropicrin Group) tried again. The same misery as with DCP (EFSA opinion 2020). Many data gaps (27), 11 ‘issues that could not be finalised’ even, and 4 ‘critical areas of concern’, 4 reasons to ban CP. And even the same reasons as for DCP, inconclusive on genotoxic potential, groundwater pollution and killing biodiversity. It is impossible to approve this pesticide and conclude to safe use. But still it is discussed and still several Southern EU member states make the case for approval. Saying it is essential for strawberries and top fruit, while strip use is possible and covering with plastic (VIF) will mitigate risk. Several other EU member states already decided (in the case of the fumigant Metam-sodium) that such mitigation measures are unproven and unrealistic.

- ***1,3 Dichloropropene and Chloropicrin help maintaining unsustainable practices***

1,3 Dichloropropene and Chloropicrin are used as a fumigant for sterilising soils. The reason for sterilising is an unbalanced soil population caused by narrow crop growing schemes and monocultures. Sterilising soils is the ultimo of unsustainability, killing soil biodiversity and destroying natural cycles and equilibriums. Instead of making use of natural elements, natural elements are eliminated.

Good agricultural practices on the contrary make use of balanced soil populations for keeping pest in control, use the carbon cycle and organisms for buffering water and nutrients for plants and use the nutrient cycle to feed plants. The use of fumigants is also a big contradiction with the Directive on the sustainable use of pesticides (128/2009) which takes Integrated Pest management (IPM) as the standard for European crop growing and crop protection (Annex III). The use of DCP and CP would turn this policy into a joke and block the change to sustainable practices.

Art.55 of the Regulation confirms that farmers shall apply pesticide products by ‘proper use’. This proper use again includes IPM with a deadline of 1-1-2014. This means that it

¹<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32011R1381&from=EN>

makes no sense to approve soil fumigants if farmers are not allowed to use pesticide products with these chemicals. Lastly, Europe adopted a new Biodiversity Strategy to stop the decline of biodiversity and restore ecosystems. Applying soil fumigants is a grave violation of this strategy since the chemicals are designed to eliminate soil biodiversity.

Use of DCP and CP in agriculture means wiping out soil biodiversity. In nature -as a rule- after sterilisation, pioneers will occupy the soil. And because any balance between organisms is missing, a few organism will flower in the barren soil and in the next season be the secondary pest. This is a well-known effect in soil fumigation, triggering more use of pesticides.

- ***Use of 1,3 Dichloropropene and Chloropicrin can be prevented by sustainable practices.***

Alternatives for the use of DCP and CP are readily available. A wider crop rotation of course is the most logic solution and should be made mandatory. Use of nematode-resistant crop varieties are additionally a good option to prevent unbalanced situations. Any practice helping a fertile soil (moderate dunging, conservation tillage, cover crops) will also help in going towards good soil management. Another alternative is inundation of the field for some weeks. In the Netherlands this is standard procedure and almost completely substituted the use of Metam-sodium.

On the moment several EU member states allow DCP and CP on the basis of an emergency provision in Regulation 1107/2009 (Art. 53), notably Spain, Italy, Greece, the “unforeseeable danger” clause. This is done in an unjustified because allowing monocultures will trigger unbalanced soils and so can’t be unforeseeable.

- ***Use of 1,3 Dichloropropene is dumping chemical waste***

1,3 dichloropropene is not synthesized as a pesticide but is a waste product in the synthesis of epoxy resins (side-product of epichlorhydrin). So one could say the use of 1,3 D is dumping chemical waste in the environment. This is the more true since half of the 1,3 D is not effective. 1,3 D consists of the ‘cis’ isomer and the ‘trans’ isomer, the latter being inactive against nematodes. A few years ago Dutch Shell even offered the ‘cis’ isomer (purified) on the market but now again an application (by DOW/Kanesho) for the complete mixture is done. The dumping of all these chlorinated chemicals (up to 280 kg/ha) is a heavy burden for the environment.

Soil fumigants are something from the past and should be abandoned as soon as possible,

Sincerely yours,

Hans Muilerman,

Pesticide Action Network, Brussels.

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