From: Sent: To: Subject: Attachments:	(CAB-KATAINEN) 18 April 2016 17:48
	FW: New plant breeding techniques - request for a meeting Greenpeace_Gene-editing_30112015.pdf; EcoNexus_NBT Briefing_Dec 2015.pdf
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Would you be so	o kind? Am busy with BASIL 🕾
Many thanks	
To:	(CAB-KATAINEN)  londay, April 18, 2016 5:47 PM
	From: [mailto: @greenpeace.org] On Behalf Of
	, January 25, 2016 9:37 AM  To: (CAB-KATAINEN)  Subject: New plant breeding techniques - request for a meeting
	Dear ,
	With this email we would like to ask you for a meeting to discuss about the upcoming Commission Communication on new plant breeding techniques. This Communication is being prepared by DG SANTE for publication in March 2016.
	The Communication will set out the Commission's view on whether the techniques listed <a href="https://example.com/here">here</a> are covered by the EU regulations on genetically modified organisms (GMOs).

Greenpeace and ENSSER (European Network of Scientists for Social and Environmental Responsibility) are of the view that these techniques, for reasons that are specific to each, should be classified as genetic modification in accordance with

the EU regulations. Products derived from them should not enter the EU market without prior risk assessment, and labelling.

The attached briefing by EcoNexus shows that each of the techniques brings its own set of risks and uncertainties. The second briefing by Greenpeace highlights our concerns related to a subset of the techniques, called gene-editing techniques, in particular. Below is also a <u>blogpost</u> that introduces the issue from our viewpoint.

and I would be pleased to discuss these issues with you in a meeting.

Best regards,

-
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## New GM food could end up on your plate untested and unlabelled Blogpost by - January 20, 2016 at 11:09

After two decades of commercial use, Europeans still <u>can't stomach</u> genetically modified (GM) food. But their producers may have found a way to bypass public opposition and safety regulation. A new range of GM plants and animals could soon end up on the dinner table without any testing or labelling, and without anybody knowing.

Agrochemical multinationals believe EU laws on genetically modified organisms (GMOs) are too onerous. This is why <u>some companies and researchers contracted by them</u> are seeking to circumvent the law to gain access to the EU market.

They have invested in new ways to artificially modify the genome of farm crops and animals, and new ways to breed them from GMOs. They claim that all these products and techniques – misleadingly labelled as *new breeding techniques* – fall outside the scope of EU GMO regulations. The <u>Commission</u> has readily adopted the industry's terminology.

In particular, producers of new GMOs stake great hopes on so-called *gene-editing* techniques [see box on gene-editing]. Gene-editing supposedly generates mutations that – producers argue – could equally have occurred naturally. It differs from

commercial GM applications, where genes from one species are transplanted into another, but there is nothing 'natural' about it. Examples of gene-editing applications include herbicide-resistant <u>oilseed rape</u> and <u>double-muscled pigs</u>.

Gene-editing changes the genetic code using material from outside the target organism. Much like older GM techniques, it also entails numerous <u>risks and uncertainties</u>. The 'engineering process' is not well understood and can result in unexpected and unpredictable effects on the <u>environment</u>, <u>and human and animal health</u>.

## GMO by law

Europe's laws do not stop old-style GM crops from being imported or grown in the EU. But they do require a detailed – if flawed – assessment of health and environmental risks, as well as labelling, to allow consumer choice. Since 2015, EU national governments can also ban GM crops from being grown in their countries. Nineteen governments have <a href="mailto:banned GM crop farming">banned GM crop farming</a> on all or part of their territory for the foreseeable future.

To avoid public and regulatory scrutiny, producers of new GMOs want the Commission to confirm their reading of the law. This would automatically allow field trials and commercialisation of gene-edited crops and animals, disregarding legal requirements for GMO risk assessment and labelling.

However, EU GMO law is unequivocal. It covers all organisms arising from processes that alter genetic material "in a way that does not occur naturally by mating and/or natural recombination". True, some ways to modify the genome are exempt under certain conditions, based on their "long safety record" – which none of the new techniques can claim to have. These exemptions must be applied narrowly, in line with the precautionary principle that features prominently in EU law.

The Commission is expected to release a legal assessment on new GMOs by the end of March. It has already hinted that the final decision will rest with the European Court of Justice.

If the Commission sides with biotech companies and agrees not to apply EU GMO law to these risky new GMOs, an increasing number of GM products would never be assessed for their potential effects on our food, health or the environment. They would not be labelled either, so European consumers, farmers and breeders would have no way of avoiding them.

The Commission must safeguard the public and the environment and rigorously apply EU law. It should reject any attempts to circumvent regulations and public opposition to GMOs.

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## What is gene-editing?

Gene-editing covers a range of new laboratory techniques to change the DNA of a living organism. As with traditional GM crops, a common 'modification' from gene-editing in plants is resistance to herbicides, such as in <u>oilseed rape</u>. <u>Double-muscled pigs</u> are one of many applications of gene-editing being tested in farm animals.

Most gene-editing techniques use enzymes to 'cut' the genome at a predefined location. The genome then 'repairs' itself. The result is an insertion, replacement or removal of bits of DNA. (Unintended DNA cuts or other gene alterations can also occur, with unknown consequences.)

These techniques include zinc finger nucleases (ZFN), transcription activator-like effector nucleases (TALENs) and the clustered regularly interspaced short palindromic repeat (CRISPR) systems.

Another technique involves the introduction of short strands of synthetic DNA that triggers cells to modify their DNA to match the introduced fragments. This technique oligonucleotide directed mutagenesis (ODM).