Reform proposals by *No Patents on Seeds!* e.V.



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About *No Patents on Seeds!*



ABL Arbeitsgemeinschaft bäuerliche Landwirtschaft e.V.

ARCHE NOAH

biorespect
Wir hinterfragen Biotechnik

BUND Naturschutz in Bayern e.V.

Corporate Europe Observatory

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Schweizerische Stiftung für die kulturhistorische und genetische Vielfalt von Pflanzen und Tieren

Public Eye

TRANSGÉNICOS FORA!

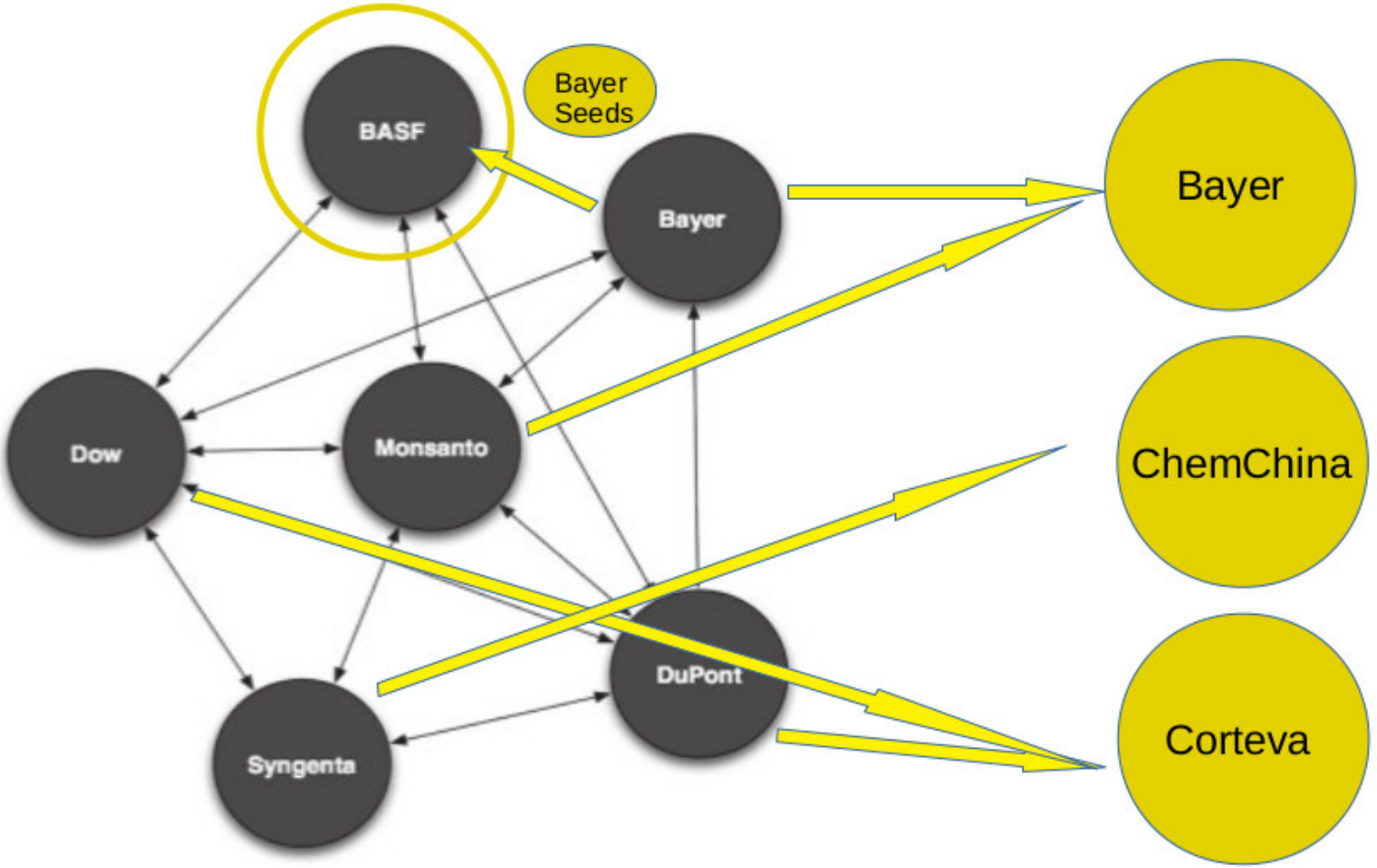
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Overview

- the ‚real life' problem
- the legal problem
- the way forward
- some non-solutions

Agrochemical companies are dominating the patent landsacpe and the breeding sector



Patents on conventional breeding ...



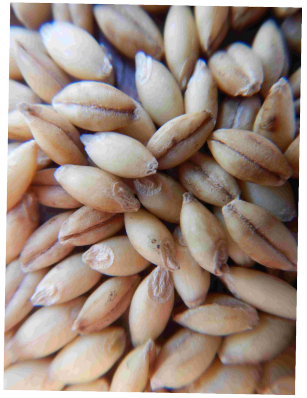
>> are an abuse of patent law, aiming to take control of resources needed for our daily life

>> foster further market concentration, hamper competition and innovation

>> endanger agro-biodiversity, ecosystems and our adaptability in food production systems

>> are putting global food security at risk as well as regional food sovereignty.

… the case of a barley breeder



Karl-Josef Mueller, an organic breeding from Germany: "*After more than twenty years work of breeding barley, and just before we wanted to register our new variety in 2020, we discovered that Carlsberg had filed a patent application on barley with similar characteristics. Consequently, we would have had to shoulder not only the costs of registering our new variety, but also the costs of sorting out totally unexpected legal questions. This is something we simply could not afford.*"

Carlsberg has already filed around a dozen patent applications on barley. Even if not granted yet, patent applications can render deterrent effects to traditional breeders.

www.no-patents-on-seeds.org/en/news/patent_on_barley_and_beer_upheld

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Essentially biological processes and the profound differences between conventional breeding and genetic engineering

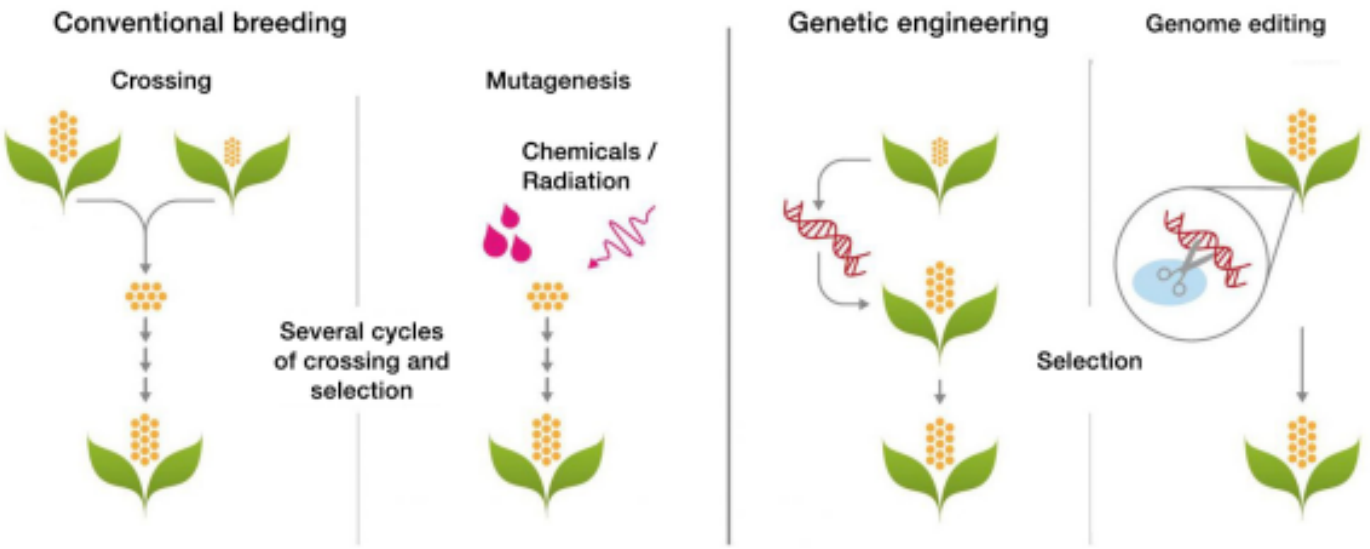
The broccoli & tomato I decisions (G2/07 and G1/08) provide a clear distinction between conventional breeding and genetic engineering:
"*genetic engineering techniques applied to plants (…) differ profoundly from conventional breeding techniques as they work primarily through the purposeful insertion and/or modification of one or more genes in a plant.*"

Only processes that contain a step of a technical nature, which "*by itself introduces a trait into the genome or modifies a trait in the genome of the plant produced*" are not excluded from patentability under Article 53(b) EPC. (Headnote 3)

G2/07 and G1/08 are referring to decision T356/93:
"*the insertion of the relevant DNA sequence into the genome of the plant, could not occur without human intervention.*"

(emphasis added)

Essentially biological processes and the profound differences between conventional breeding and genetic engineering



adopted from Genomxpress Scholae Nr 5, funded by the German Ministry for Education and Research (BMBF), www.no-patents-on-seeds.org/en/publications/report2021

Essentially biological processes and the profound differences between conventional breeding and genetic engineering

The preparatory document CA/56/17 is confusing the differences between conventional methods and genetic engineering.

The President of the EPO, in preparing the decision on Rule 28(2) in 2017, published an preparatory document (CA/56/17): "*Mutagenesis as such is considered to be a technical process which results in a modification of the genome of the plant or animal. This applies to 'traditional' methods like irradiation or chemical mutagenesis, but even more so to molecular methods like Zinc Finger Nucleases, CRISPR, TALEN, ODM (oligonucleotide directed mutagenesis), etc. which require man-made molecules for targeted mutagenesis.*"

(emphasis added)

(!) Note: modification of genome does not mean to directly insert a new trait. It does not necessarily require human intervention.

Essentially biological processes and the profound differences between conventional breeding and genetic engineering

In consequence, there is major confusion in the Guidelines for Examination of the EPO: *"Thus transgenic plants and technically induced mutants are patentable, while the products of conventional breeding are not. Both targeted mutation, e.g. with CRISPR/Cas, and random mutagenesis such as UV-induced mutation are such technical processes."*

But also:
"Genetic engineering techniques applied to plants which techniques differ profoundly from conventional breeding techniques as they work primarily through the purposeful insertion and/or modification of one or more genes in a plant are patentable (see T 356/93)."

(!) Note: UV induced mutations occur in the fields, without any human intervention. In general, all mutations derived from random process also may occur in nature (without human intervention), contrary to those that result from genetic engineering.

Essentially biological processes and the scope of patents

If a patent is granted on plants with specific traits, absolute product protection covers all plants with these traits.
Industry tries to use absolute product protection to escape the prohibitions of Art. 53 (b) and Rule 28 (2). In many cases, the wording of the claims is not restricted to any method. In addition, ‘technical toppings’ are introduced to raise the impression, that traits derived from conventional breeding can also be derived from methods of genetic engineering.

For example, the methods which are listed in the claims of patent application WO2020239495 (“*chemical mutagenesis, radiation mutagenesis, tissue culture or targeted genome editing techniques such as Crispr based techniques*”) are intentionally blurring the distinction between conventional breeding and genetic engineering. In fact, the plants as claimed, were derived from conventional breeding.

Essentially biological processes and the scope of patents

In future, the scope of patents will become an pressing problem:
Many traits which are derived from conventional breeding can be reproduced by methods of new genetic engineering. Thus, to overcome the exemptions of Article 53(b) and Rule 28 (2), the companies routinely may introduce examples using technical methods such as CRISPR/Cas, to finally receive a patent on conventionally bred plants.

There are many examples for patent applications which are following this strategy.

www.no-patents-on-seeds.org/en/background/publications

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Our proposals

Definition of “essentially biological processes”

It has to be made clear that the term “essentially biological processes” covers all conventional breeding processes, including random mutagenesis, as well as all individual steps in the process, such as selection and / or propagation.

> This can be achieved by decision of the Administrative Council by clarifying the content of document CA/56/17.

Excluding patents on cells from plants and animals if derived from essentially biological processes

>This can be achieved by decision of the Administrative Council by clarifying the content of document CA/56/17.

3. Limiting the scope of protection

In the context of plant and animal breeding, the EPO must not grant “absolute product protection”, which enables a patent derived from a technical process to be extended to all conventionally bred plants with the same traits.

> This may require a new rule for interpretation of Article 53 (b).

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Non-solutions

Doing nothing is not a solution

- Legal uncertainty will substantially hamper innovation in conventional plant breeding;
- Due to G3/19 and its missing retro-active effect, we can not wait for the EPO decision making on Rule 28(2);
- We can not leave to industry to give access to biological material only to their conditions and in accordance with their specific interests (such as PINTO database).

Thank you very much for your attention!

NO PATENTS ON SEEDS!

Patente auf unsere Nahrungspflanzen stoppen!

Recherchen zu Patentanmeldungen aus dem Jahr 2020 zeigen, wie die Industrie die Verbote des Patentrechts umgeht



Foto: Falk Heller

Deutsche Zusammenfassung des Berichts „Stop patents on our food plants! Research into patent applications conducted in 2020 shows how the industry is escaping prohibtions in patent law“

Veröffentlicht von *Keine Patente auf Saatgut!* im März 2021.

Unsere Publikationen: https://www.no-patents-on-seeds.org/de/hintergrund/publikationen

NO PATENTS ON SEEDS!



Stop patents on our food plants!

Research into patent applications conducted in 2020 shows how the industry is escaping prohibitions in patent law

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