FACTSHEET
PATENTS ON BEER & EFFECTS

1. MARKETMONOPOLY OF CARLSBERG AND HEINEKEN

Currently, Carlsberg and Heineken are two of the world's largest five breweries. They own well-known brands in Germany, such as Holsten, Astra, Duckstein, Feldschlösschen, Lübzer Hacker-Pschorr, Kulmbacher, Paulaner and Thurn & Taxis. In Austria, Gösser, Schwechater, Zipfer, Puntigamer, Villacher und Reininghaus are part of the Brauunion by Heineken. Worldwide, Heineken alone owns 50% of the beermarket. Usually, these companies are competitors, but have decided to act together on the patents. This means they can achieve a monopolistic position in the market – together they can stipulate that their suppliers are only allowed to grow the patented barley. That way, they profit two-fold –from selling the beer and from the cultivation of the barley. In addition, they can prevent other breeders from breeding better barley. Thus, the companies can extend their already dominant position on the market – to the detriment of farmers, breeders, other breweries and consumers. The patents (EP2384110 and EP2373154) are based on random mutations in the genome of the barley, as commonly used in conventional breeding. Another patent held by the companies claims the use of plants for any further breeding (EP2575433). The use of this new variety of barley is supposed to make the brewing process somewhat simpler and cheaper as well as ensuring that the beer keeps for longer.

Random mutations in the genomes of plants can happen spontaneously, or be facilitated with simple tools. For example, the barley grains were brought into contact with a chemical that is meant to increase the mutation rate. Afterwards the plants with the desired and known traits were selected. Using random mutation and techniques like described are commonly used in conventional breeding. Nevertheless, Carlsberg and Heineken claim the barley as their „invention". The scope of the patents is immense: The patents cover the barley, the brewing process and the beer itself, as well as other beverages made with the malt. Moreover, the patent is not confined to specific processes. If, in future, the described traits are discovered or developed through breeding in other varieties of barley, these would fall under the scope of the patent as granted. This is an abuse of patent law and a violation of currently valid prohibitions in European patent law.

2. LEGAL BACKGROUND: CLOSE THE LOOPHOLES!

European patent law forbids patents on „plant varieties and animal species as well as on **"essentially biological processes for the breeding of plants and animals"** (Article 53 of the European Patent Convention and Article 4.1 of the EU Directive 98/44). This prohibition has been controversially discussed in recent years. In particular, in regard to the following points:

- What are methods of „essentially biological processes" for breeding?
- Are plants and animals bred with mentioned processes patentable?
- How can patented inventions in genetic engineering be prevented from encroaching on conventionally bred varieties?

The EU Commission, the European Parliament and the EU member states have now determined that neither plants or animals derived from conventional breeding, nor associated methods can be patented. Patentable inventions are confined to the field of genetic engineering, e.g. new genetic material is inserted directly into cells.

The European Patent Office has already granted over a 100 patents on conventional breeding. In December 2016, the granting of such patents was put on hold. However, in the meantime, the EPO has created further loopholes: In the future, the EPO still intends to grant patents in cases where random mutation was used in breeding, or where methods for the selection of plants and animals are claimed. This is clear from current EPO documents. This is contrary to the legal interpretation of the EU as formulated by the EU Commission.

Moreover, the scope of the patents currently granted by the EPO is not limited. If plants or animals with specific traits are patented, then the patents cover all plants or animals with those particular traits, independently of whether they were derived from conventional breeding or created through genetic engineering. This undermines the prohibition of patents on conventional breeding. If the European Patent Office overrides the EU in this matter, then it will in future continue to grant patents, such as those granted on barley and beer. There are already patents covering cereal grains, methods of baking and bread.

The governments of Europe need to act now. Through the Administrative Council of the European Patent Office, they can, as participating members, jointly enforce a more rigorous interpretation of the existing prohibitions. The governments of the participating EU member states are represented in the Administrative Council; and each one has a vote. This means that a majority vote (three-quarter majority) in the Administrative Council is sufficient to decide on legally binding rules regarding the interpretation of existing prohibitions.

In fact, in February 2017, the EU governments decided on a joint initiative at the Administrative Council of the EPO. The EU member states participating in the Administrative Council of the EPO must now ensure that the position of the EU is established in legally binding rules of interpretation.

The prohibitions should be defined as follows:

- Patents on plants and animals derived from conventional breeding, or which are based on the necessary biological materials for breeding, are without exception forbidden.
- All usual processes in conventional breeding are excluded from patentability, including random mutation and processes to select plants and animals
- In addition, in the genetic engineering of plants and animals, is the only specific method that can be patented, limiting the scope of patents to particular technical applications.

3. Negative Effects of Patents

Patents on seeds and plants have farfetched effects, many of those negative. In fact, the whole food chain of supply (breeders, farmers, processeors, retailers and consumers) are affected by such patents and derived plants.

- **Seed market – control by a few international corporations**
  If the competition is eliminated (e.g. because of high cost in relation to patent applications), only a few corporations control the seed market and thus the basis of our food and will reach a monopol. Today, only 10 corporations own about 75% of the international seed market. The three largest, Monsanto, DuPont and Syngenta, control over 50% of the market.
- **Increased prices for farmers and consumers**
  Caused by the monopolisation of the seed markets, corporations are free to determine the price of their seeds at a cost for farmers, and ultimately consumers. Seed giants should not be free to decide what is grown on our fields, what will be bred and which price we have to pay for our daily food.

- **Less innovation**
  Contrary to the intended purpose, patents on seeds substantially hinder innovation. They can be used to block access to biological diversity needed to breed and grow plants. Breeders and farmers are not allowed to breed using patented varieties without the permission of the patent holder. If permission is granted at all, an expensive licence fee must be paid to the patent holder.
- **Less biodiversity**
  The diversity of agricultural varieties and wild crops are the main resources for farmers and breeders to develop new varieties. If access to this diversity is hindered, fewer varieties will be grown and thereby decreasing biodiversity in agriculture and the choice for consumers.
- **Endangered food security**
  Given reduced diversity, crops are less resistant of adapting to diseases or changing environmental conditions and could cause crop failure. Resilience to stress periods might be lost due to less variety. A high agricultural diversity is thus essential for our food security.

More information
https://www.no-patents-on-seeds.org/

No Patents on Seeds!
Vienna, January 2019

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