**ARTICLE** *CLASSICALLY BRED PLANTS* 

# SALAD DAYS: TOMATOES, BROCCOLI AND RADISH PATENTS

by Margreet van Heuvel and Bart Swinkels





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When it comes to plants, European courts have been occupied with various debates over salad. Margreet van Heuvel and Bart Swinkels take a look.

Under the European Patent Convention (EPC), patent protection is in principle available to inventions in all areas of technology, including agriculture and horticulture. However, Article 53(b) EPC excludes from patent protection "plant and animal varieties and essentially biological processes for the production of plants and animals". How this provision is to be interpreted has been the subject of much debate over the years.

Plant varieties were excluded by the legislator to prevent double protection of a plant variety by both a patent and a breeder's right. In G1/98, the EPO's Enlarged Board of Appeal (EBA) had to answer the question whether a claim to a plant is patentable if it necessarily also encompasses plant varieties. The EBA found that such a claim is patentable, even if embraces plant varieties, on the condition that the technical feasibility of the invention is not limited to a particular plant variety. This ruling has since been codified into law in the Biotech Directive 98/44/ec and in Rule 27(b) EPC. Interestingly, while the case underlying G1/98 concerned a transgenic plant, the EBA made no distinction between genetically modified (GM) plants and those obtained by classical breeding.

Regarding the exclusion of essentially biological processes for producing plants, the legislator's intent was to enable breeders to develop new plant varieties without being hindered by patents on such processes. However, the term "essentially biological" in Article 53(b) EPC is open to interpretation. One question that has come up is whether the use of molecular genetic techniques during crossing and selection of non-GM plants, so-called marker-assisted breeding, is sufficient for the breeding process to escape the exclusion of essentially biological processes.

Such questions were more recently addressed by the EBA in cases that have become known as the *Tomato* and *Broccoli* cases (G2/07 and G1/08, respectively). In a decision consolidating both cases, the EBA ruled that any process for the production of plants which contains or consists of the steps of sexually crossing whole genomes of plants and subsequently selecting plants is in principle excluded from patentability for being "essentially biological" within the meaning of Article 53(b) EPC. The EBA further ruled that such processes cannot escape the exclusion by including of a step of a technical nature.

The EBA gave a very broad interpretation of the term "essentially biological" in the context of plant breeding. In practice now any claim reciting steps of crossing whole genomes and selection is refused under the EPC, irrespective of whether the claim recites technical features in other steps. Even processes wherein GM plants are further bred or propagated are now excluded.

After the EBA's decision, the *Tomato* and *Broccoli* cases were remitted to the respective Boards of Appeal for further prosecution of the remaining product claims to plants only. Since the technical feasibility of the inventions in both the claimed tomato and broccoli plants is not limited to a plant variety, one might have expected the boards to confirm the patentability of the remaining product claims.

However, the opponent in the *Tomato* case strongly objected against the patentability of product claims on plants which were obtainable (only) by essentially biological methods that had just been excluded by the EBA. The board in the *Tomato* case picked up on this argument and decided to again refer questions to the EBA. In this second referral in G2/12, the board questions whether the exclusion of essentially biological processes for the production of plants under the EPC can have a negative effect on the allowability of a product claim on plants obtainable by such processes. More recently, in the *Broccoli* case the Board has referred similar questions to the EBA. Thus, it appears that both cases will again be consolidated in G2/12.



In the meantime, numerous *amicus curiae* briefs have been filed in G2/12, both against and in favour of patentability of plants from classical breeding processes. Those opposing their patentability argue that patents on plants that are the result of essentially biological processes undermine the exclusion of such processes and render it completely ineffective, because a product claim also provides a patentee with the right to exclude others from practising processes for producing the claimed product.

Conversely, as argued by the proponents, including the president of the European Patent Office, the EPC makes a clear distinction between requirements for patentability on the one hand and the extent of protection and rights conferred by a patent on the other hand. Abandoning this distinction would introduce complication and legal uncertainty. For example, if a claim to a plant were allowable only if said plant was not made by an excluded essentially biological plant breeding process, the question of infringement would hinge on whether such a process was actually used to make the protected product.

However, with today's advance in the field of plant modification, it can be impossible to determine how a given plant was produced as modern modification techniques need not leave any traces of how the plant was modified. Moreover, the EPC recognises other situations where methods are excluded from patentability, but would nonetheless be covered by patentable claims on products used in those methods: a patented drug also provides indirect protection for non-patentable methods for treating the human or animal body wherein that drug is used.

#### **PROCESS MATTERS**

While it may be some time before the EBA in G2/12 decides on the patentability of classically bred plants, earlier this year in the case *Cresco v Taste of Nature*, the Dutch District Court of The Hague was facing these very same issues. In this case the court had to decide on the validity of product-by-process claims on radish sprouts with increased anthocyanin levels that are obtainable through classical breeding (EP1290938).

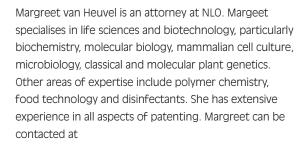
The court found the claimed radish plants are patentable under Article 53(b) EPC. According to the court, in view of the distinction made under the EPC between processes and products, it can be derived from the use of the word "process" in Article 53(b) EPC that the legislators deliberately choose not to bring products within the scope of this part of the Article. This notion is reinforced by the fact that Article 53(b) itself distinguishes between processes and products, because, in addition to the exclusion of essentially biological processes, it contains a specific exclusion of certain products, namely plant varieties. The court concluded that neither of the two exclusions of Article 53(b) EPC applied to the claimed radish plants.

The court further reasoned that the process exclusion should not apply to the product on the ground that a claim to a plant would indirectly also provide protection for the essentially biological process by which the plant may be produced. Only the subject matter as defined by the claims must comply with the requirements for patentability. The fact that a process for producing the claimed subject matter is an act reserved for the patentee does not make such process part of the claimed subject matter. Indeed, according to the court, an opposite view would have the absurd consequence that no product would be patentable because there would always be some reserved acts that would not comply with patentability criteria, if not only because many reserved acts are not new and inventive.

Thus, according to The Hague Court, Article 53(b) EPC excludes from patentability only essentially biological processes for producing plants, and not their products, and also not if those products are the result of such a process. It is to be hoped that this judgment points the way for the EBA in G2/12.



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