

MELON CASE GIVES FOOD FOR THOUGHT TO PATENT PRACTITIONERS



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The European Patent Office (EPO) has received about 800 European patent applications relating to plants in general since 2002. About 90 percent concern genetically modified plants.

EPO statistics dated February 14, 2012 show that 3340 applications never entered the examination phase before the EPO, because the applications were abandoned early by the applicant, for example, on receipt of the search report. Then 245 applications were rejected by EPO and 2235 were withdrawn during substantive examination; 1556 are still pending.

Patenting of genetically modified plants is governed by the EU's 1998 directive on the legal protection of biotechnological inventions, which states that inventions concerning plants and animals are, in principle, patentable. However, the directive does not provide clear guidelines to distinguish between classical breeding, crossing and selection, and modern methods of breeding by biotechnological means.

Article 53 of the European Patent Convention (EPC) defines clear exceptions to patentability, including the exception that patents on "plant or animal varieties or essentially biological processes for the production of plants or animals" shall not be granted. EPC case law has acknowledged various ways of circumventing this exception, at least to some extent, and since 1990, 1602 European patents have been granted for genetically modified plants by drafting creative patent claims. Some of these patents have been contested in oppositions, and some caused referrals to the Enlarged Board of Appeal, to clarify the legal meaning of the concept of "essentially biological processes". The public can contribute comments and ethical considerations on the cases in *amicus curiae* letters and the comments may be taken into account in the decision-making process.

The most well known referrals are the 'broccoli case' (G 2/07) and the 'tomato case' (G 1/08), relating to cross-breeding and subsequent selection of broccoli and tomatoes, respectively.

After oral proceedings the Enlarged Board of Appeal decided, "that a process for the production of plants involving sexually crossing whole plant genomes, and the subsequent selection of plants, is not patentable. The mere inclusion of a technical step which serves to enable or assist the performance of the steps of sexually crossing the whole genomes of plants, or of subsequently selecting plants, does not override this exclusion from patentability".

On the other hand, if such a process contains method steps that indicate a technical nature that by itself introduces a trait into the genome, or modifies a trait in the genome of the plant, provided this introduction or modification is not the result of mixing of the genes of the plants chosen for sexual crossing, then the process is not excluded from patentability.

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Whether the technical nature of the measure is new or known, is simple or complicated or exists in nature, is irrelevant.

The 'melon patent' granted to Monsanto relates to 'marker-assisted breeding' of Closterovirus-resistant melon plants. The melon patent covers the modified plant, parts of the plant and its fruits and seeds, but not the breeding process for obtaining the plant. Closterovirus attacks melons, turns them yellow and reduces fruit yield. The plants are made resistant by the introduction of a known gene from another non-sweet melon plant by way of a conventional breeding method involving the use of a genetic marker.

This 'melon patent' was opposed in February 2012 by the coalition No Patents on Seeds in cooperation with Navdanya, which is a network of 500,000 seed keepers and organic farmers in India. Several grounds for opposition were invoked, including that the invention is not inventive according to Art 56EPC, that the patent concerns an exception pursuant to Art 53(b)EPC and is contrary to morality and public order pursuant to Art 53(a)EPC.

Navdanya claims that Monsanto's melon patent relies on bio-piracy since traits of the patent are taken from indigenous melon varieties in India and that the grant of the patent enables Monsanto to block access to breeding material which contains the resistance-giving gene.

Inventions concerning plants are generally governed by Rule 27(b)EPC implementing the Biotechnology Directive. Although the tomato and broccoli cases have clarified the EPO's position on processes for making genetically modified plants, the melon case raises new issues regarding gene patents that don't cover the genetically modified plant itself.

These oppositions reflect a great concern over the patenting of genetically modified plants and have attracted a lot of public attention. ■

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