

Patent licences: access to « innovation » subject to conditions

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A patent enables its holder to "*protect*" an invention and thus to control its use by third parties. Third parties may, however, use the invention if they sign a licence agreement. In the field of biotechnology, this issue becomes particularly sensitive. In addition to the problems of ownership of living organisms raised by patents, a single plant may also be covered by several patents held by different parties. The situation becomes complicated for anyone wishing to use an "*invention*". The new European regulation on GMOs produced using new techniques falsely claims to facilitate access to licences. But what exactly is a licence, what does it cover, and under what conditions can it be granted?



Jeremy Segrott

A patent confers on its holder a monopoly on the exploitation of the invention it protects. This monopoly takes the form of a right to prohibit third parties from exploiting that invention. This right may be "*assigned*" (sold) as an intangible asset or "*granted*" (licensed). In the latter case, the holder remains the owner of their patent and, if the licence is non-exclusive, they may grant licences to several users.

In response to the many concerns raised during the debate on the deregulation of GMOs produced using new techniques (NGTs) – concerns specifically linked to patents blocking access to seeds – the European legislator claims to have provided a solution¹. It calls on patent holders to grant licences on "*fair and reasonable terms*". However, what these terms actually mean in practice remains to be defined.

The patent licence

A licence is generally granted by the holder of a patent – or a patent application – when they are unable to exploit it commercially themselves, as in the case of a public body, or when they do not wish to do so because their industrial capacity is limited or non-existent (as in the case of a start-up, for example). However, the granting of one or more licences is subject to certain conditions set out in the contract.

Such contracts may contain clauses providing, in particular, for exclusivity granted to a third party, who will then be the only party entitled to a licence (in one or more fields), or for non-exclusivity. The patent holder may, in fact, grant a licence for the same patent to several third parties. Other clauses may define the territory in which the invention may be exploited, the duration, the authorised uses, the right granted to third parties to in turn grant licences under certain conditions, the royalty rates, the terms of payment, the termination of the contract, etc. The contract may also provide for an "*upfront payment*", which is a fixed sum paid upon signing. This serves, in particular, to cover expenses relating to industrial property rights, but also depends on other factors, such as the "*value*" of the invention, whether the licence is exclusive, and so on. Numerous other clauses are also possible, such as a minimum payment, regulatory milestones (administrative authorisation of a product) or those relating to patents, for example upon the grant of a patent, which then increases the value of the licence.

"Ex officio" licences and "compulsory" licences

Under French law, there are so-called "*ex officio*" and "*compulsory*" licences. An *ex officio* licence may be granted by the authorities on grounds of public interest (public health, national defence, the economy), regardless of whether the patent holder agrees or disagrees. During the 2020 Covid pandemic, the *ex officio* licence scheme was activated by the French government to address potential shortages of healthcare products².

A compulsory licence may be granted by a judge, at the request of a third party, in the event of a failure or insufficiency in the "*serious and effective*" exploitation of a patent by its proprietor. A court determines the terms of this licence, "*in particular as regards its duration, scope and the amount of the royalties to which it gives rise*"³.

The specific features of the life sciences

Patent licences can take on particular significance in the life sciences. The issues here are ethically and technically complex and lie at the intersection of several disciplines, such as biotechnology or plant (or animal) breeding through genetic modification. An innovation may thus be covered by one

or more patents held by several parties and require the payment of various cumulative royalties. This is also referred to as "*royalty stacking*".

In the plant sector, patents relate to processes and, in most cases, to the products derived from them or to products (biological materials – proteins, chemical or physical components – or "*genetic information*" defined by nucleotide sequences – DNA, RNA – whether modified or native). Their existence is, of course, problematic for farmers, but also for plant breeders, particularly small and medium-sized ones⁴. The latter must carry out a "*freedom-to-operate analysis*" to verify whether or not their plant innovations are covered by one or more patents. Logically, this is done through a specialist service provider, but they may attempt to carry it out themselves, using, for example, public patent databases, despite the risks associated with their lack of expertise in the subject. However, this category of breeders traditionally has no budget set aside for this type of operation, which is very costly, highly complicated and offers no guarantee of comprehensive results. The resulting legal uncertainty is further exacerbated by the fact that the registration of varieties covered by patents in specific databases – such as Pinto⁵ – is optional. Consequently, these stakeholders may fail to identify one or more patent rights relevant to their activities. They then find themselves compelled, without having been able to truly anticipate it, to negotiate with far more powerful organisations – notably multinational agrochemical companies – for one or more licences to carry out their research on plants, their work on developing new varieties and, of course, the commercialisation of their varietal innovations.

However, for certain specific situations, Article 12 of European Directive 98/44 on biotechnological inventions provides for a system of "*compulsory licensing*". This applies to cases where there is a dependency between a patent and a plant breeders' right (PBR), where the holder of the patent or the plant variety right cannot exploit the plant variety or the patented invention without infringing the other party's rights. For a licence to be made "*compulsory*", the holders of the interdependent rights must have "*unsuccessfully*" attempted to reach an agreement with one another, and "*the variety or invention must represent a significant technical advance of considerable economic significance in relation to the invention claimed in the patent or the protected plant variety*". Only a "*competent authority*", designated by each Member State, will be responsible for making this assessment. However, such compulsory licences are almost never granted, which reinforces the power of the stronger party.

Licensing platforms

In the plant sector, certain licensing platforms – primarily the International Plant Licensing platform (ILP) and the Agricultural Crops Licensing Platform (ACLP)⁶ – offer all their members the same terms of access to each licence. In particular, they offer a "*baseball arbitration*" mechanism whereby appointed arbitrators⁷ – drawn from academia and industry – decide between the royalty proposals put forward by the negotiating parties. These initiatives are, however, shaped by and for powerful companies with substantial patent portfolios. In the case of the ACLP, the members include, amongst others, Corteva, Bayer, BASF, KWS and Limagrain.

The European Regulation on GMOs/NGTs adopted last June provides for a "*Code of Conduct*" designed to prevent patent-related blockages, the implementation of which the European Commission is to coordinate by involving companies in its drafting. This code of conduct, which will, however, remain non-binding and non-compulsory, is to provide for "*voluntary platforms for the licensing of plant biological material*" and "*fair and impartial mechanisms for settling disagreements on licensing fees*"⁸. It remains to be seen how – and for whose benefit – the European Commission will implement this framework, and whether it will prevent a disagreement over the price or the terms of a licence from effectively blocking access to the reproduction of the patented invention. In

any case, this will only affect industrialists, whilst farmers are themselves primarily exposed to the risk of potential patent infringement lawsuits, with no means of protecting themselves in the absence of procedures for identifying the genetic information or biological materials covered by patents.

"Fair and reasonable" licences for whom?

A licence may be "*fair and reasonable*" on paper yet remain out of reach in practice – a paradox inherent in the new NGT regulation itself. The regulation thus encourages patent holders to grant licences on "*fair and reasonable*" terms, but without precisely defining what this concept entails. Furthermore, a licence may be financially affordable for some stakeholders, but not for the smallest among them. Moreover, a plant material may be covered by several patent rights, which means multiple rounds of negotiations and potentially higher costs. For a multinational or a large company with significant legal and financial resources, these constraints are manageable and constitute a barrier that works to their advantage. For small or medium-sized breeders, however, they become a real obstacle to the exploitation of patented inventions, or even of their own seeds which naturally contain patented biological material or genetic information. Not to mention that, as the number of patents increases, the issue of market concentration in the hands of those holding the largest portfolios of rights only grows.

It is precisely in the area of licensing that the future "*Code of Conduct*" under the GMO/NGT Regulation, expected by the end of 2027, will come under particular scrutiny. Although the regulation assigns to it the tasks of improving transparency on patents, facilitating breeders' access to plant biological material and strengthening legal certainty, this mechanism – this code – will be based solely on voluntary participation. Furthermore, whilst the Commission "*should aim that the code of conduct includes commitments [...] by patent holders*", notably regarding the "*granting of licences [...] on fair and reasonable conditions*", this does not amount to compelling them to do so. Similarly, making patents more visible in a database that is itself voluntary – such as a Pinto-style database but one that is easily accessible, user-friendly and comprehensive⁹ – does not mean that users will actually be able to access the material or traits they are seeking, nor comprehensive information on everything covered by patents. In other words, some of the uncertainty may be removed without, however, eliminating the legal barrier posed by patents.

The challenge will therefore be to determine whether this code can genuinely rebalance the power dynamics between seed companies, or whether it risks remaining merely an experimental transparency tool, leaving the most powerful players in control of negotiations. The reference to mechanisms – such as FRAND (Fair, Reasonable and Non-Discriminatory) – which are also voluntary and familiar in certain technology sectors, does not necessarily resolve the issue. Plant genomics technologies do not, at this stage, constitute a field where this approach clearly applies. This code of conduct will merely replace the law with arrangements between stakeholders and, furthermore, endorse the implementation of a patent system whose ultimate aim remains the appropriation of living organisms by multinationals or a handful of large state institutions.

Behind the Commission's promise of "*fair and reasonable access to patented NGT plant biological material*"¹⁰, a far more concrete reality is therefore emerging for small and medium-sized players in the seed sector. This concerns access to seed diversity and, for those seeds that remain accessible, the cost of licences, their number and the issue of cumulative royalties, as well as the ability to negotiate with patent holders and to bear the risk of litigation. These issues will determine the actual ability of stakeholders – including those in non-GMO sectors – to make a living from their activities, as well as the survival of cultivated biodiversity, which has already been largely eroded by over a century of the gradual erosion of farmers' rights.

There also remains the issue of patents relating to "*native genes*" which, depending on their scope, may restrict access to genetic resources for other users of natural biodiversity. This affects both conventional seed companies and farmers.

[Pairwise is expanding its reach through licensing](#)

Driven by the development of new genetic modification techniques (NGTs), the US biotech firm Pairwise is seeing an acceleration in licence applications for its *Fulcrum* genome editing platform¹¹, which is based on the CRISPR/Cas tool. It is reported that 25 licence agreements have been signed covering more than 30 species of arable crops, fruit and vegetables, as well as fruit trees, animals, insects and micro-organisms. According to Pairwise, discussions are also underway with as many potential new partners.

Pairwise says it simplifies access to CRISPR/Cas tools by bundling several technologies into a single package, thereby sparing users the need to negotiate separate licences with different intellectual property rights holders. Pairwise holds, in particular, exclusive rights to the fundamental CRISPR/Cas patents.

This approach, which has attracted players such as Mars in the cocoa sector, Genus in animal genetics and Enza Zaden in vegetable seeds, also raises a strategic question. By facilitating access to CRISPR/Cas, Pairwise is strengthening its position as an intermediary that is difficult to bypass between the holders or controllers of patented technologies and those wishing to utilise them. Simplifying procedures for licencees could thus go hand in hand with increased dependence on its *Fulcrum* platform and its contractual terms.

Does this centralisation of rights genuinely facilitate innovation for all stakeholders, particularly small businesses and research organisations, or does it contribute to further concentrating control over NGTs in the hands of a few intellectual property holders?

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- + European Union, "[Regulation \(EU\) 2026/1388 of the European Parliament and of the Council of 17 June 2026 on plants obtained by means of certain new genomic techniques and their products, and amending Regulation \(EU\) 2017/625 \(Text with EEA relevance\)](#)", 17 June 2026.
 - + Ouest Valorisation, '[The "automatic licence" scheme extended during the pandemic](#)' (only in French language).
 - + Article L613-12 of the Intellectual Property Code.
 - + Denis Meshaka, '[Patents pose a real threat to two plant breeders](#)', *Inf'OGM*, 12 March 2024.
 - + Denis Meshaka, '[GM/NTG Regulation: a trialogue of the deaf under Danish pressure](#)', *Inf'OGM*, 25 November 2025.
 - + [The International Licensing Platform for Vegetables](#), established in 2014 for vegetables, and [the Agricultural Crop Licensing Platform](#), established in 2023 for Europe to cover arable crops, ornamental crops, fruit crops and forestry crops.
 - + ACLP, '[Arbitration](#)'.
 - + Article 30(4)(c) of Regulation 2026/1388.
 - + The Pinto database (*Patent Information and Transparency On-line*) is a database created in 2013 by ESA/Euroseeds (the European seed industry association). Its specific purpose is to establish the link between a commercialised plant variety and the patent(s) (or patent applications) that may cover it. However, it is not exhaustive as it is populated on a voluntary basis by the patent holders themselves (*via* Euroseeds).
 - + Article 30.7 of Regulation 2026/1388.
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