

Patent law: a potential barrier to seed innovation

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Publié le 15/10/2026

In the United States, a legal battle between two seed companies, Corteva and Inari, has highlighted a contradiction in the patent system. Whilst intended to encourage innovation in exchange for the disclosure of inventions, patents can also complicate access to the biological material needed for research and the creation of new varieties. In May 2026, the US Department of Justice intervened to highlight the competition and innovation issues linked to access to patented seeds. However, the dispute will not proceed to trial, as the companies signed an out-of-court settlement on 27 September 2026, the main terms of which remain confidential. A missed opportunity to obtain judicial clarification on the use of patented biological material by a third party.



Steve Long

The promise of a 20-year monopoly conferred by a patent is supposed to incentivise companies to invest in innovation. However, the ongoing legal case between Corteva and Inari demonstrates how this monopoly can become a tool for market lock-in, particularly in the life sciences sector, where patents may cover "*genetic material*" to which other companies wish to gain access for their

research. Patents also affect farmers, who may be accused of infringement without the technical or financial means to defend themselves, and whose seeds and crops may be seized. This issue has been highlighted for several years by various organisations¹ and was a key element of the European debate held between 2023 and 2026 on the deregulation of plant GMOs.

This same debate also revealed that these patent-related difficulties can affect companies wishing to develop new varieties. Whilst the US Department of Agriculture (USDA) published a report in 2023 on this phenomenon, which acts as a brake on the work of seed companies², the risk has just been raised once again by the Department of Justice (DOJ) in a statement of 11 May 2026 before a Delaware court³, in the Corteva/Inari dispute. The two companies have just announced that they have reached an out-of-court settlement⁴, the terms of which are unknown, other than that Inari has undertaken to destroy all of Corteva's biological material. This settlement brings the legal proceedings to an end before the trial takes place, but the positions taken by the companies, as well as that of the Department of Justice, are worth noting.

At a time when the EU has just deregulated GM crops derived from NTGs despite warnings about patent-related issues, this case is particularly illuminating, whether in terms of the appropriation of life, the hoarding of farmers' and traditional seeds, or competition between companies. It is this last aspect that is particularly illustrated by the dispute between Corteva and Inari, which remains a conflict between parties seeking to defend their rights within the patent system rather than to challenge it.

The origins of the dispute between Corteva and Inari

Corteva Agriscience (Corteva) is one of the multinational seed companies which, alongside Bayer, BASF, Syngenta and Limagrain/Vilmorin, control over 56 per cent of the global commercial seed market⁵. It is also one of the main holders of patents relating to GM plants derived from NTGs that may utilise a tool such as CRISPR/Cas9.

Inari Agriculture (Inari), a "*start-up*" founded in 2016, is working to identify combinations of genetic modifications designed to improve agronomic traits, using technology covered by several patents⁶. The company uses "*machine learning models*" to predict which combinations are likely to produce a desired effect.

In September 2023, Corteva sued Inari in the US District Court for the District of Delaware, accusing it primarily of having "*deliberately used a third-party agent to obtain protected seeds, illegally exported the seeds out of , made slight genetic modifications of the biotech traits and is seeking patents for those modified traits*"⁷. Corteva also invoked its rights under Plant Variety Protection (PVP), a right equivalent to the European Plant Breeders Right (PBR), illustrating the complementarity between the two protection regimes for plants derived from NTGs. Under US law, the scope of protection conferred by a plant variety right may extend to "*essentially derived varieties*" of that variety. In this dispute, Inari is alleged to have used Corteva's seeds to create, through genetic modification, plants exhibiting new characteristics. These plants are not necessarily essentially derived varieties. Their legal classification and the scope of Corteva's rights were precisely among the issues raised by the dispute, as highlighted by certain observers⁸.

In December 2023, Inari challenged Corteva's version of events by filing a motion to dismiss the complaint, accusing the company of using the intellectual property system to abusively "*stifle innovation in crop seeds and delay competition from new innovative seed technologies*"⁹. Inari also claimed that Corteva was seeking to restrict the public's legal access to its samples of patented maize seeds and plants, whilst explaining that it had regularly obtained these samples *via* the

ATCC (American Type Culture Collection)[10](#).

In fact, in the United States, the ATCC may accept biological material, such as seeds, for deposit as part of obligations relating to a patent application, as we shall see. It may then supply this material to other parties *via* a "*material transfer agreement*" (MTA), subject to specific conditions, notably the possible requirement to obtain a licence for any use, including for research and new selections[11](#). However, the possibility of modifying the material and filing new patents – which necessarily arises from any licence granted for research purposes – must be distinguished from the possibility of commercialising the resulting product, which remains subject to existing patents. This distinction is important insofar as legal access to a deposited seed does not mean that any use for research purposes is free from patent restrictions. In its statement of May 2026, the US Department of Justice argued that, where a biological deposit is necessary for the disclosure of the invention, activities enabling access to the material and its "*reading*" – for example, ordering and sequencing the genetic material – must be permitted without constituting infringement. This does not, however, mean that all research, modification or development activities carried out using this material are automatically exempt from patent law or contractual restrictions.

Inari viewed the case as a matter of legitimate competition rather than theft. It argued that Corteva, as an "*industry giant*", was using legal proceedings to prevent emerging competitors from challenging its dominant position. Inari argued that patents should encourage invention without being used to stifle derivative innovation or lawful competition.

Initial legal developments

Until the announcement of the out-of-court settlement on 27 September 2026, the case had progressed mainly on procedural grounds, with some notable interventions by the judge, such as on 13 May 2025[12](#). The judge dismissed certain allegations made by Inari, notably that of a "*sham trial*", and upheld other points, such as the fact that certain patents or plant variety rights held by Corteva could not have been used against it.

In May 2026, the Ministry of Justice intervened by filing a government submission, explaining the need for access to biological materials, including where they are covered by patents. More specifically, it argued that "*in cases where a biological deposit is required to satisfy the written description and enablement requirement of Section 112 [on the sufficiency of description of an invention], activities that amount to accessing and “reading” biological material—such as ordering and sequencing genetic material—cannot be deemed to be “without authority” under Section 271 [on infringement]. To hold otherwise would penalize those who access and use the biological material to understand its specifications, thereby disrupting the carefully crafted balance—protecting competition and innovation—underlying the patent laws*".

The Ministry pointed out that access to seeds – which must be submitted as part of a patent application procedure if the application does not describe them sufficiently[13](#) – is important in enabling new players to innovate and compete with established firms. It emphasised that such access can foster innovation and the entry of new firms into the market, without taking a position on the outcome of the dispute. However, it did not advocate a general exemption from the search requirement, but only those steps necessary to access the material and understand its characteristics. The question of how far this protection extends – in particular, whether an activity still constitutes "*reading*" the patent application or amounts to exploitation going beyond that – would therefore have remained at the heart of the dispute, had the trial taken place.

Access to the subject-matter of the patent

The trial would have comprised several aspects, but access to patented seeds would have been central. The patent system is based on an exchange whereby a temporary monopoly is granted to the inventor in return for the disclosure of the invention. However, for biological material such as seed, which cannot simply be described in writing, disclosure is deemed to have been fulfilled if that material is accessible¹⁴. Hence Corteva's deposit of seeds with the ATCC, as we saw earlier.

It is this link between disclosure and access that is the subject of particular consideration in the United States. In October 2024, the Department of Agriculture launched a "*Seed Competition Framework*"¹⁵, one component of which calls on the USPTO (the US Patent and Trademark Office) to review the "*Research Exemption*". It is also asked to clarify the rules relating to disclosure and access to deposits enabling "*functional observation*"¹⁶, that is, the ability to examine a sample of the claimed biological material in order to verify in practice the characteristics or functions described in the patent. The aim is, in particular, to enable researchers to better determine their freedom to operate and the permitted uses of patented seeds.

In the United States, the patent system does not provide for a general exception allowing farmers and smallholders to freely reproduce patented seeds. The European system provides, under certain conditions, for an exemption in favour of farmers¹⁷. The situation regarding research is also more complex than the term "*research exception*" suggests. There is no general exception authorising any experimentation on a patented invention. For registered seeds, the debate therefore centres less on a general freedom of research than on the scope of the right of access to and "*reading*" of biological material.

Without condemning seed patents, the US Department of Justice thus highlighted a potential contradiction in the system whereby a patent holder may seek to prevent access to the biological material that they themselves had to deposit in order to obtain that patent, whilst the ATCC is entitled to distribute material for research purposes.

Another issue in the trial would therefore have concerned the distinction between physical access to a seed for the purpose of analysing its physical composition (genetic, chemical, etc.) and the legal freedom to use it for research into its properties not claimed in the patent or with a view to modifying it. A seed sample may be available from the ATCC whilst being subject to contractual conditions regarding its use. The question would have been whether these conditions can prevent the activities that patent law requires to be made accessible so that the public can "*read*" an invention that is insufficiently described by the patent itself.

A challenge for the entire seed sector

As a product, biological material, a carrier of naturally reproducible genetic information and a subject of research, seeds are not a conventional industrial product. To develop a new variety, researchers and breeders need access to existing genetic resources. A new plant variety is necessarily "*cumulative*", as it builds upon prior characteristics, lines, varieties and genetic resources. It is precisely this access that exceptions or limitations to patent law relating to living organisms are intended to guarantee, and it is this very access that was at the heart of the Corteva vs. Inari dispute. The US Department of Justice considered that this access is particularly important in a seed sector that is increasingly concentrated and characterised by significant barriers to entry. Ultimately, less competition can mean less available diversity and greater dependence on a handful of companies. A 2023 USDA report on competition in the seed sector once again highlighted concerns regarding access to information on intellectual property rights and restrictions that could affect research and breeding¹⁸.

Beyond plant breeders, this issue also affects farmers, who are directly impacted by the appropriation of their seeds through patents and the ban on reproducing them. This is also the case for consumers, and before them, processors and distributors, who could, in the long term, see the range of available plants reduced to just a few patented products. Public research may also be indirectly affected, for example through reduced access to the "*plant material*" essential to its work. The Corteva vs. Inari case therefore illustrates the wider problem of market concentration in the seed sector.

Patents and freedom of "*research*"

The US system already recognises the need for access to the patented subject matter, as confirmed by the 2023 USDA report. It should be recalled that, in the Corteva vs. Inari case, the issue concerned access to the foundation seeds deposited with the ATCC, which are the only authentic reference for research. It did not concern readily available commercial seeds derived from them, which are therefore always more or less different.

Drawn up with the assistance of the USPTO and other federal agencies, this USDA report confirms issues relating to access to information on intellectual property rights and their effects on competition. The 2024 Seed Competition Framework aims to improve transparency regarding seed patents and to enable researchers to better determine their "*freedom to operate*", and it goes beyond a mere call for transparency. In its "*Research Exemption and Disclosure & Enablement*" section, the USDA calls on the USPTO to review and update its guidance on the disclosure of breeding history and access to biological deposits that allow for functional observation. The USDA explains that researchers and breeders face difficulties in identifying the scope of patents applicable to seeds and determining what activities they may carry out with them.

The 2024 Framework does not apply solely to farmers. The USDA states that the sharing of germplasm derived from federal funding must enable innovation by both public and private breeders. However, the specific guidance on "*observational research*" applies to researchers at the Department of Agriculture. A distinction must therefore be made between the general discussion on access to research and genetic resources and this specific guidance intended for federal public researchers.

In the Corteva vs. Inari case, the Department of Justice argued that the public should not be able to legally obtain a patented seed – which is necessary for the disclosure of the patent – without subsequently being able to carry out the operations required to understand the invention. The debate therefore centred as much on the existence of a research exception as on what a researcher must be able to do to "*read*" a biological invention disclosed through a patent application.

However, the system can be harmful, as the role of research can also become a hindrance, as in the context of the digitisation of genetic resources. Research projects may produce or use digital sequencing information (DSI), which is sometimes presented as "*research products*" and is therefore patentable. This classification may allow the obligations relating to access and benefit-sharing (ABS) under the Nagoya Protocol to be circumvented¹⁹. The challenge is therefore not only to guarantee researchers' access to resources covered by patents, but also to prevent a simple analysis of a patented product – wrongly classified as a research result, particularly in digital form – from becoming a means of removing these resources from ABS mechanisms and, more broadly, from the rights of breeders and farmers.

This need for access also exists in Europe. Whilst the unitary European patent provides for harmonisation of the research exception, particularly for plant breeders, this is a recent

development (June 2023) and currently applies only to 18 EU Member States and a relatively small number of new patents. Indeed, this unitary patent does not replace the European patent, which does not include this exception and continues to apply in all European countries. In European countries that have not adopted the unitary patent, the European patent and national regimes remain the sole points of reference, with variations regarding the exact scope of the exception (acts relating to the invention *versus* acts involving the invention, for example). The existence of this exception alone therefore does not guarantee that European breeders will be able to continue using all genetic resources.

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- + Denis Meshaka, ["GMO/NGT Regulation: civil society organisations concerned about the outcome of the trilogue"](#), *Inf'OGM*, 5 November 2025.
 - + Denis Meshaka, ["NGT and patents: the EU has chosen to ignore the US precedent"](#), *Inf'OGM*, 23 September 2026.
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 - + Corteva v. Inari, ["STIPULATION AND \[PROPOSED\] ORDER OF DISMISSAL UNDER RULE 41\(A\)\(2\)"](#), 23 September 2026.
 - + Etc Group and Grain, ["Top 10 Agribusiness Giants: Corporate concentration in food & Farming - 2026 Update"](#), 29 July 2026.
 - + Denis Meshaka, ["AI creates new legal challenges in the field of patentability"](#), *Inf'OGM*, 23 April 2025.
 - + Corteva, ["Corteva Acts to Stop Theft of Intellectual Property, Protect American Farming"](#), 27 September 2023.
 - + Travis W. Bliss, ["Corteva Suit Signals the Battle over GE, EDVs, and Variety Rights Has Begun"](#), 9 October 2023.
 - + Delaware Court, ["DEFENDANTS' ANSWER AND AFFIRMATIVE DEFENCES TO FIRST AMENDED COMPLAINT AND COUNTERCLAIMS"](#), 19 August 2024.
 - + According to Corteva, Inari is said to have obtained them from the ATCC (American Type Culture Collection), the leading biological resource centre in the United States. Wikipedia describes the ATCC as *"a non-profit organisation that collects, preserves and distributes reference microorganisms, cell lines and biological materials for global scientific research"*.
 - + ATCC (American Type Culture Collection), ["Material Transfer Agreement"](#), contractual clause concerning the Scope: "ATCC MATERIALS ARE NOT FOR USE IN HUMANS. ATCC Materials may only be used by Recipient for research purposes and shall not be used for any Commercial Use without first obtaining a Commercial Use license from ATCC. Use may also be subject to restrictions from a Contributor, a patent owner, or a governmental entity and ATCC makes no representation or warranty regarding the existence or the validity of such restrictions. Notwithstanding anything herein to the contrary, ATCC Materials shall not be used in any manner that infringes a valid patent in force. Recipient shall have the sole responsibility for identifying and obtaining any third party licenses required".
 - + U.S. District Court for the District of Delaware, "Corteva Agriscience LLC et al v. Inari Agriculture, Inc. et al, 1:2023cv01059 – Document 250 (D. Del. 2025)", 13 May 2025.
 - + Denis Meshaka, ["Reproducibility of biotechnological inventions"](#), *Inf'OGM*, 11 April 2025.
 - + *Ibid.*
 - + USDA, ["USDA Announces Seed Competition Framework"](#), 21 October 2024.
 - + USDA, ["Recommendations to the PTO for Increasing Research Access to Germplasm"](#), 8 October 2024.
 - + Article 11 of [European Directive 98/44/EC](#) on biotechnological inventions establishes the farmer's privilege, which allows farmers to use the produce of their harvest for breeding purposes on their own farm, notwithstanding patent rights.
 - + Denis Meshaka, ["NGT and patents: the EU has chosen to ignore the US precedent"](#), *Inf'OGM*, 23 September 2026.
 - + Ministry of the Environment and Research, ["Accès aux ressources génétiques et partage des avantages issus de ces ressources"](#).
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