

Patents and « native traits »: circumventing the limits of European law

Par Denis MESHAKA

Publié le 16/07/2026

For over a decade, European institutions have sought to prevent the patenting of plants and traits obtained exclusively through essentially biological processes. However, patents relating to "*native traits*" continue to indirectly cover these traits through claims relating to associated technical features. The recent deregulation of GMOs/NGTs raises concerns about the risk of these patents extending to plants derived from traditional breeding and propagation – which are not patentable – and which therefore naturally contain such "*native traits*".



Rob Oo - Le nouvel Office européen des brevets à Rijswijk (Pays-Bas).

For several years now, European patent law has sought to exclude from patentability plants obtained exclusively by essentially biological processes (EBPs) and the characteristics or "*native traits*" that they express. Nevertheless, patent claims relating to the technical elements associated with such traits – such as molecular markers, genetic sequences or associated methods of detection and/or identification – remain a subject of debate. These elements may, in fact, form the basis of patents whose scope extends beyond the purely technical aspect to indirectly concern

characteristics already present in biodiversity.

"Native traits" at the heart of a legal debate

A *"native trait"* refers to an agronomic characteristic within a species that is associated with a gene or a set of genes: resistance to a disease, tolerance to climatic stress, improvement in a quality characteristic, and so on. According to *"theory"*, the trait – also known as a *"phenotypic characteristic"* – is the observable expression of one or more *"genes"*. In the absence of a legal definition, a *"native gene"* refers, in accepted terminology, to a genetic sequence already present within the diversity of a given plant species and those with which it can naturally cross-pollinate, whether cultivated or wild.

For over a decade, the issue of patentability relating to such traits has fuelled a major European debate. Following the so-called *"Broccoli"* and *"Tomato"* decisions¹ by the European Patent Office (EPO) in 2015, the European institutions have gradually affirmed their determination to prevent the patenting of plants and characteristics or traits obtained exclusively through plant breeding. In December 2015, in a resolution on patents and plant variety rights, the European Parliament stated that *"products obtained through plant breeding, such as plants, seeds, characteristics and native genes, should not be patentable"* (recital D)².

This stance led to an amendment to Article 28 of the Implementing Regulation to the European Patent Convention (EPC) in 2017, followed by Decision G3/19 of the Enlarged Board of Appeal of the EPO in May 2020. This decision confirmed that plants and animals obtained exclusively by means of PEBs are not patentable. However, this decision was not retroactive and did not apply to patents or patent applications filed before July 1, 2017. Patents covering such plants and animals therefore remain in force until July 2037³.

A ban with significant loopholes

However, the debate is not over, since, for example, a report⁴ published in July 2025 by the Consultative Group on International Agricultural Research (CGIAR) shows that, in many countries, including in Europe, patents continue to cover genes or traits present in existing biodiversity. The report analyses the mapping of patents relating to inventions based on plant genetic resources for food and agriculture (PGRFA) under the ITPGRFA (International Treaty on Plant Genetic Resources for Food and Agriculture) and associated digital sequencing information and/or genetic sequencing data (DSI or GSD). It examines how patents, particularly those claiming inventions related to native traits, may restrict further research, breeding and use of PGRFA. This report shows that the appropriation of natural characteristics remains a reality despite the restrictions introduced into European law, notably because the *"disclaimer"* – intended to prevent a patent on plants obtained by a technical process from extending to plants obtained by PEBs – is of very limited applicability, or even illusory⁵.

The EPO's prohibition, in principle, on claims relating directly to plants obtained exclusively by PEBs can, in fact, still be circumvented. Patents can actually still cover parts of plants, products that have undergone technical treatment, or genetic mutations obtained by technical means, in particular through new genetic modification techniques (NGTs), even when these mutations are strictly identical to characteristics found in nature. In practice, claims thus continue to confer exclusive rights over natural genetic resources, under the guise of technical formulations or methods for detecting and/or identifying a sequence or a plant.

Indirect appropriation *via* molecular markers

Since patents cannot directly cover a native trait as such, patent applicants have adopted new strategies for drafting claims. They are increasingly relying on claims relating to technical elements associated with such traits, such as molecular markers, methods of detection and/or identification, or other technical subject-matter distinct from the trait itself. In this way, they may seek to obtain protection that can have effects similar to a patent on the native trait itself.

In practical terms, although molecular marker-assisted selection is not patentable⁶, processes utilising specific markers, as well as the sequences of which they are composed, may, however, be patentable before the EPO. Such claims therefore make it possible to retain indirect control over the identification of the traits in question and over the plants that express them.

Patents have thus been granted on such markers, which may be located on either side of a gene expressing a given trait or cover large chromosomal regions. These patents can therefore prevent third parties from using these markers, and in particular restrict certain breeders' access to the genetic resources in question. As the sequences of such markers are highly conserved within the genome, it is generally very difficult for these third parties to circumvent these patents by using other sequences or alternative identification methods.

This development profoundly alters the practical scope of patents. Without directly claiming a trait naturally present in biodiversity, patent holders can exercise control over its identification and, indirectly, over the plants that carry it.

An issue reignited by the new NGT regulation

The recent deregulation of GMOs produced using new genetic modification techniques (GMOs/NGTs) has reignited this debate. Many stakeholders, notably civil society organisations⁷, are concerned that patents may cover traits already present in biodiversity simply because they are introduced by technical means.

The new regulation distinguishes between NGT1 plants – that is, plants with genetic modifications that *"could also occur naturally or be obtained through conventional breeding"* – and NGT2 plants, which remain subject to GMO regulations. This distinction is based in particular on the opinion issued by the European Food Safety Authority (EFSA)⁸, according to which the criteria applied to NGT1 plants allow them to be considered equivalent to plants obtained through conventional breeding, both in terms of genetic modifications and potential risks. EFSA considers that the genetic modifications defining NGT1 plants already exist in nature or may result from conventional breeding, and has not identified any additional risks associated with these plants compared with conventional plants.

At the same time, the EPO continues to recognise the patentability of inventions relating to plants obtained by technical processes, including where these fall within the NGT1 category, provided that the general conditions for patentability are met. This results in a paradox: plants recognised as equivalent to those derived from conventional breeding may nevertheless be covered by a patent because they were obtained by a technical process.

The absence of any obligation to provide methods for analytically distinguishing NGT1 plants from those derived from conventional breeding further reinforces these questions regarding the actual scope of the patents. If two plants are deemed equivalent and cannot be analytically distinguished, the question arises as to how far the rights conferred by a patent relating to an NGT1 plant may, in practice, extend to plants derived from conventional breeding that exhibit the same characteristic.

The boundaries between the non-appropriable "*native trait*" and the patentable technical subject-matter therefore remain open to circumvention. The use of technical elements distinct from the native trait, such as molecular markers, now appears to be one of the main tools for indirectly extending the scope of certain patents to genetic resources present in biodiversity. This, however, appears to run counter to the direction taken for over a decade by European institutions, which have sought to prevent the appropriation of life forms through patents.

The example of the German seed company KWS, which has been marketing a catalogue of licences covering "*native traits*" since 2022, provides a concrete illustration of this development. Its strategy, based on claims relating to technical elements that indirectly cover "*native traits*" and on the commercial exploitation of its patents, is the subject of a second article.

-
- + European Patent Office, decisions G2/12 and G2/13 of the Enlarged Board of Appeal.
 - + European Parliament, "[European Parliament resolution of 17 December 2015 on patents and plant breeders' rights](#)", 17 December 2015.
 - + A patent may remain in force for 20 years from the date of filing of the patent application.
 - + CGIAR, "[Patent landscape report on inventions based on Plant Genetic Resources for Food and Agriculture \(PGRFA\) and Related Digital Sequence Information Genetic Sequence Data \(DSI/GSD\). Executive summary](#)", November 2025.
 - + Denis Meshaka, "[NGT regulations: trilogue of the deaf under pressure from Denmark](#)", *InfOGM*, 2 December 2025.
 - + EPO, Guidelines for Examination at the EPO, Part G, Chapter II, 5.4.2.
 - + European Coordination of Via Campesina, "[European Parliament approves the deregulation of GMO-NGT plants, but the struggle of European farmers does not stop there](#)", 17 June 2026.
 - + EFSA GMO Panel (EFSA Panel on Genetically Modified Organisms), "[Scientific opinion on the ANSES analysis of Annex I of the EC proposal COM \(2023\) 411 \(EFSA-Q-2024-00178\)](#)", *EFSA Journal*, Vol. 22, Issue 7, e8894, 11 July 2024.
-

Adresse de cet article : <https://infogm.org/en/patents-and-native-traits-circumventing-the-limits-of-european-law/>