



Agri-tech intellectual property rights in Europe

About Mathys & Squire

Ranked Tier 1 in Legal 500, Mathys & Squire is one of Europe's most highly regarded intellectual property law firms. Founded in 1910, we have over 100 years of experience in the protection and commercialisation of intellectual property rights, leading the field with insight, innovation and quality.

The firm has more than 72 qualified attorneys, and has offices in London, Brighton, Cambridge, Luxembourg, Manchester, the Midlands, Munich, Oxford, Paris and York. We are a full service intellectual property firm with specialists in a wide range of technical fields. Our attorneys and trainees have a mix of scientific degrees extending from chemistry, biochemistry, pharmacology, genetics, microbiology, plant sciences and zoology through to physics, electronics, telecommunications and engineering.

Most of our attorneys hold further degrees and many have PhDs. Some of the team have worked in-house within the IP departments of large international organisations and by utilising this experience this enhances our ability to assist in the strategic and active management of IP portfolios.

“Mathys & Squire LLP’s ‘absolutely first class team’ is ‘proactive with advice, but responsive to clients’ needs and requirements’. The group is ‘very knowledgeable, both from a scientific as well as a business point of view’ and ‘proactively safeguards clients’ interests’.”

The Legal 500



Agri-tech intellectual property rights in Europe

Primary food production is the largest industry in the world, and ensuring the stability and integrity of national and international food supply chains is crucial.

The challenges faced by the food sector are greater than ever, as the world population increases and the effects of climate change are felt. Technology is increasingly used to address these challenges, often involving collaboration between multiple disciplines.

As a result, agricultural technology (Agri-Tech) is one of the fastest-growing industries as research in this area gains momentum. Indeed, the importance of Agri-Tech is appreciated by governments across Europe, with both UK and EU funding streams available for research and development in this sector (typically with a requirement for the good management of any resulting intellectual property rights (IP)).

In the face of the challenging and rapidly developing commercial landscape, it is more important than ever for Agri-Tech businesses to obtain protection for all their IP. Technical innovations may be protected via patents.

Designs can protect aspects of a product's appearance, shape or configuration that may not be patentable. New plant varieties can be protected via plant variety rights. Trade marks can be used to identify the source of a product or service and provide brand recognition.

Our team has extensive experience in the Agri-Tech field. For example, we have particular expertise in pesticide and herbicide chemistry, food chemistry and processing, stress tolerance, plant developmental biology and transgenic plant technology.

We also have considerable experience in plant variety right matters, and our highly capable supplementary protection certificate (SPC) team can assist with matters relating to SPCs for plant protection products.

Our team has significant expertise in engineering, electronics, telecommunications and software, including in respect of automated control systems, as applicable to agricultural vehicles and storage and processing facilities. In addition, we have experience in large-scale food processing techniques, such as in the dairy industry.

Patents protect technical innovations that are new and non-obvious relative to anything that has already been made available to the public. Accordingly, if you are considering filing a patent application to protect an invention, then it is essential that the patent application be filed before you disclose the invention to anyone outside of confidence.

Our team would be happy to discuss how best to protect your innovations to provide commercial benefits to your business.

IP protection for biotech and plant-related innovations

Plant and plant-related technology is central to the agri-tech sector, with the latest data indicating that almost 40% of public agri-tech spend in the UK is crop research and development. Although commercially highly significant, the intricacies and exclusions under the relevant legislation can create obstacles to obtaining IP protection, making professional guidance essential.

Intellectual property rights available for plant-related technologies vary from country to country. Although plant related innovations can be patented in many countries, plant variety rights (also known as 'plant variety protection' in the USA and 'plant breeders' rights' in Europe) can provide protection for plant varieties that are excluded from patent protection. SPCs can be used to extend the term of patent protection for plant protection products.



Patents

The extent to which patent rights may be obtained for biotech and plant-related and agri-tech subject matter varies from country to country. Indeed, some countries are markedly more favourable than others.

In Europe it is possible to obtain patent protection for a wide range of plant-related and agri-tech subject matter, such as transgenic plants, herbicides/pesticides, farm equipment, and microorganisms (e.g. silage inoculants).

Following a rule change announced by the EPO in July 2017, it is no longer possible to obtain

European patent protection for a plant variety or plants exclusively obtained by an 'essentially biological process' for the production of plants (such as a breeding or crossing method).*

Plant varieties per se cannot be protected by European patents. In Europe, the However, this exclusion of patent protection for plant varieties is interpreted narrowly. In practice, this means that a granted patent claim may encompass one or more plant varieties, but the patent claim may not be directed to a plant variety *per se*.

*The history behind this rule change is complex, and there is an apparent contradiction between new Rule 28 EPC and previous Decisions of the EPO's Enlarged Board of Appeal. There is currently a further referral to the EPO's Enlarged

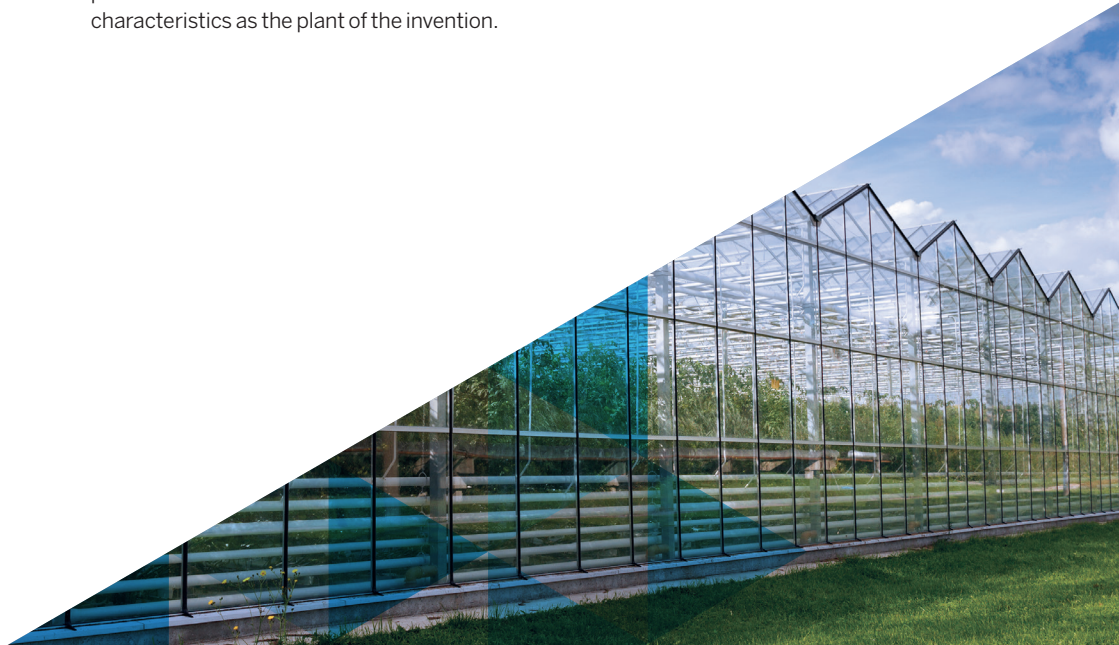
“In Europe it is possible to obtain patent protection for a wide range of plant-related and agri-tech subject matter.”

Transgenic methods of producing plants are patentable in Europe, provided that the method does not include any steps that may be considered an essentially biological process.

The inclusion of a single essentially biological process step means that the whole method is excluded from patentability in Europe.

It is often possible to obtain patent protection for plant products, either in unprocessed form (such as fruit, seeds or tubers, etc.) or processed form (such a soil or meal, etc.). In the case of processed products, it is necessary to demonstrate that the processed product retains the same inventive characteristics as the plant of the invention.

Our team has significant technical expertise and experience across the full scope of biotech/plant-related technologies within the agri-tech sector. We can provide guidance regarding the legal complexities in this field to help you maximise patent protection for your innovations.



IP protection for chemistry-related innovations in the agri-tech sector



Patents

Chemistry-related innovations extend their reach across the entire breadth of the agri-tech sector and patent protection in Europe offers the means to protect such innovations effectively. Our team has experience across a wide range of relevant chemical technologies in this sector.

Small-molecule chemistry and formulation chemistry underpin much of the herbicide and pesticide technologies that exist today. As the biological understanding, particularly in relation to the mechanisms for deterring fungi, insects and rodents and the like has developed, so too have the chemical innovations that have been relied upon for improving herbicide and pesticide activity and selectivity. Not only is this based on developing improved synthetic chemical compounds, it also extends to formulation chemistry to ensure targeted and effective delivery of the active agent. Our team is experienced in obtaining patent protection and advising on freedom-to-operate issues with respect to new herbicidal and pesticidal compounds and formulations, as well as new delivery mechanisms and methods.

Another area of our team's expertise within the agri-tech sector is in the processing of harvested food products and ingredients.

For example, in edible-oil processing a number of chemical processing techniques are relied upon, including degumming, neutralising, bleaching, deodorising and dewaxing, which continue to be a rich source of innovation.

Our team has, for example, drafted and prosecuted applications directed to new processes for removing, as well as preventing, heavy metal ion, free fatty acid and carcinogenic contaminants in vegetable oils intended for human consumption.

A further area of chemical innovation within the agri-tech sector which has been attracting increasing attention relates to the protection of new food products and beverages. Our team has accumulated significant experience in prosecuting applications directed, for instance, to sweetener compositions and formulations in the beverage industry, as well drafting and prosecuting applications directed to new food product innovations in the fast food industry.

Our team has helped one client obtain patents directed to new 'fish 'n' chip' batter compositions which are gluten free and have significantly less oil pick-up after frying.

Plant variety rights

A plant variety right (PVR) is an intellectual property right designed for plant varieties that are commercialised, or from which material is produced and commercialised. PVRs are known as ‘plant breeders’ rights’ in the UK and Europe, and ‘plant variety protection’ in the USA.

In Europe and other countries where patent protection is restricted for plant related inventions, PVRs provide a mechanism for obtaining protection for plant varieties. PVR protection in Europe may be sought nationally in each country of interest, or via a community plant variety right (CPVR), which is a unitary EU-wide right.



Community plant variety rights

CPVRs may be granted for a plant variety in any botanical taxon, provided the plant variety meets the following criteria, known as the DUS criteria:

- **Distinctness** – the variety must be clearly distinguishable from any other variety whose existence is common knowledge at the date the CPVR application is filed;
- **Uniformity** – the variety must be sufficiently uniform in the expression of those characteristics which are included in the examination for distinctness, as well as any others used for the variety description;
- **Stability** – the expression of the characteristics which are included in the examination for distinctness, as well as any others used for the variety description, must remain unchanged after repeated propagation or, in the case of a particular cycle of propagation, at the end of each cycle.

For a CPVR to be granted, a plant variety must also be novel (new). The assessment of novelty for CPVRs differs from that for patents. To qualify for CPVR protection, a plant variety must not have been commercialised:

- a) within the EU more than one year prior to filing a CPVR application or
- b) outside the EU more than four years prior to filing (six years for a tree or vine species).

Once granted, the holder of a CPVR is entitled to prevent third parties from carrying out certain unauthorised acts in relation to the protected plant variety. These acts include:

- production or reproduction (multiplication);
- conditioning for the purpose of propagation;
- offering for sale;
- selling or other marketing;
- exporting from the community;
- importing to the community;
- stocking for any of the above purposes.

An application for a CPVR must be submitted to the Community Plant Variety Office (CPVO). The application will include both an application form and a technical questionnaire, which will include information about the characteristics of the variety in question compared with other known varieties of that species.



UK plant variety rights

The application will be examined by the CPVO. Once this preliminary examination has been carried out, the applicant will be required to submit samples of the variety to an examination office for DUS testing.

There are different examination offices for different plant species. Also, the number and nature of the samples (seed/seedling etc.) required for DUS testing will depend on the variety in question, as will the fee for testing and the number of testing cycles. Ornamental species typically require a single testing cycle. In contrast, some tree species can require multiple testing cycles over several years.

The variety must also be designated a variety denomination, which is the name by which the variety will be known. Although the applicant may propose a denomination, their choice must be approved by the CPVO.

Once DUS testing has been completed, the CPVO will grant a CPVR for the variety.

A granted CPVR may be maintained for up to 25 years from the date of grant of the application (30 years for potatoes, vines and trees), upon payment of annual renewal fees.

A national PVR, also known as a plant breeder's right (PBR) is available in the UK and provides protection within the UK only. The UK PBR derives from the same legal framework as the CPVR. Consequently, the overall system, application process and protection afforded are similar to under the CPVR system.

The effect of Brexit on CPVRs is unknown at present. Nothing has changed yet, and it is unlikely anything will change until the UK leaves the EU. It seems likely that the UK will put in place transitional provisions to allow holders of existing CPVRs to 'convert' the UK part to a UK PVR right, perhaps limited in duration to match the remaining duration of the CPVR. The UK could negotiate for CPVRs filed after the UK leave the EU to cover the UK (although this is perhaps politically unlikely).

It seems more likely that there will be two parallel systems, one for the UK and one for the remainder of the EU. However, no details of any transitional/conversion provisions are known as yet.



National lists and common catalogues

National listing is a legal requirement in the UK for new varieties of the main agricultural and vegetable species. A new variety of a species covered by the National List Regulations must be added to the UK national list before it may be marketed in the UK.

The requirement for national listing ensures that only genuinely new varieties may be marketed. For agricultural crops, it is also necessary to demonstrate that a variety is an improvement over those already commercially available.

The European Commission compiles common catalogues of varieties on member states' national lists. Varieties on the common catalogue are eligible for certification and marketing throughout the European community.



Specialist service areas – trade marks

Our trade mark team understands how vital it is to protect your brand from inevitable threats. The effective management of a trade mark portfolio encompasses the delivery of a wide range of services.



Trade mark portfolio management

As part of our portfolio management service, we will routinely advise on renewals and the use of trade marks, changes to and refreshing of brands, protection overseas, the maintenance of IP policies and the implementation of effective IP management strategies.



Dedicated support and reporting

We will assign the management of your portfolio to a dedicated and experienced paralegal, under the supervision of our qualified trade mark attorneys.

However you like to work, our team will adapt to your needs.

For example, should you require a specific form of reporting or updates, we are happy to accommodate this and provide reports to suit your needs. We can also provide you with access to our records, to assist you in the management and understanding of your trade mark portfolio.



Trade mark availability searches (including brand availability analysis for new products and services)

We work with third party search providers to ensure that our clients receive the most reliable and cost effective method of assessing the state of the trade mark register in the country or countries of interest.



Applications, filing and renewal services

We can file UK, EU and International trade mark applications directly with the UKIPO, EUIPO and WIPO respectively. We work with a network of trusted foreign attorneys, with whom we have longstanding relationships, to file in other countries.



Monitoring and watching services

All trade mark applications located by the watching service would be reviewed by us to screen for those that potentially conflict with your company's trade marks.



Team biographies



Anna Gregson
Partner

Anna is a Partner in our biotech team and is based in our Manchester office. Anna has worked with a diverse range of clients; from university technology transfer organisations to international corporations.

Anna has experience in a wide range of subject matter in the fields of biotechnology and life sciences, including plant biotechnology, therapeutic antibodies, vaccines, plant biotechnology, diagnostics and biomarkers and stem cells. She also has experience of advising on plant variety rights.

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James Pitchford
Partner

James is a Partner in our IT & engineering team and is based in our Cambridge office. James specialises in patent work in the physics, electronics, engineering and materials science sectors, and works with entrepreneurs, start-ups and SMEs, alongside large corporations, research institutions and universities.

James has particular experience in the fields of electromechanical devices, power engineering, electronics, optics, imaging techniques and image processing, telecommunications, semi-conductor devices, composite materials, surface treatment techniques, computer software and data processing algorithms.

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Michael Stott
Partner

Michael is a Partner in our chemistry team and has extensive experience of drafting, prosecution and portfolio management, as well as conducting freedom-to-operate and patent landscape assessments for clients.

Michael has a diverse range of clients which includes SMEs, universities and multi-national corporations. He has a particular interest in working with technologies across the “farm to fork” innovation space. In addition to agri-tech and food chemistry and processing, Michael also has expertise in pharmaceuticals, chemical processing and catalysis, polymers, and materials chemistry.

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Craig Titmus
Partner

Craig is a Partner in our life sciences team and is based in our Cambridge office. He has significant experience of patent drafting and European and international patent prosecution, and he coordinates global IP strategies for a range of clients including start-ups, SMEs, universities, large corporations and the UK Government. Craig’s practice covers a range of biotechnological subject-matter, with a particular focus on vaccines, diagnostics, therapeutic antibodies, plant protection products and biofuels.

Craig’s PhD was in collaboration with a multinational crop research company, focussing on environmental stress tolerance in plants and interfaces between metabolism and the cell cycle.

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