

- *Sarcococca ruscifolia* var. *chinensis* 'Dragon's Gate'
- *Euonymus fortunei* 'Wolong Ghost'
- *Loropetalum chinense* 'Snow Muffin'
- *Loropetalum chinense* f. *rubrum* 'Little Red'

Why, When, and How to Patent a New Plant Variety®

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INTRODUCTION

The United States now leads the world in the issuance of certificates of plant protection. Moreover, the U.S.A. was the first country to offer statutory protection to plant breeders, and it can reasonably be argued that that foresight has allowed the U.S.A. nursery industry to become world class in little more than three generations. Declaring the interest that PlantHaven exists to service plant breeders, this paper seeks to explain and encourage the process of plant patent application within a framework of "best practice".

WHY PATENT

Patents Benefit the Industry. When Thomas Edison and Henry Ford and others finally persuaded a skeptical Congress to enact in 1930 the Plant Patent Act, their primary purposes were, first, to extend to agriculture and horticulture the incentive of offering reward to the industry's innovators, and, second, to provide the consumer with ever better products thereby further enhancing the industry's reputation. True, the plant breeder would be a major beneficiary also, but the value of patents to U.S.A. commerce and industry and consumers in general had been well understood since the founding of the U.S.A. Patent Office over 200 years ago.

Plant Patents Provide the Sole Means of Controlling Propagation. A granted patent allows the patentee or his heirs or assignees to control the manufacture and sale of the patented item. In our context, manufacture equates to propagation, which must be asexual in order to guarantee that the "invention" (the new variety) is being manufactured exactly true to type and definition. A patent owner is entitled to injunctive and compensatory relief for unauthorized propagation, although sadly the onus is on the breeder or owner to establish that an alleged infringement did take the form of multiplication of plants which had been directly descended from the breeder's original.

Patents Provide the Opportunity for Strategic Licensing. Exactly as in other manufacturing industries, the breeder (inventor) will seek to derive the maximum benefit from the new variety. If the breeder is a commercial grower, (or if the breeder's employer so intends) then he or she may deem that the greater benefit derives not from royalties from others but from all the consequences of being the sole producer — the additional production opportunity, the opportunity to enhance reputation or brand. Alternatively, the breeder may determine that it is preferable to set up a healthy royalty stream from a carefully constructed licensing strategy.

Patents Need not be Associated with Exclusivity. If the breeder is interested in a healthy royalty stream then, given the fragmented nature of parts at least of the industry, it is unlikely that any exclusive licensee will deliver maximum income over the entire life of the patent. It may be appropriate to offer a limited exclusivity to a company which is willing to champion the new variety, but that exclusivity should be periodically reviewed and only extendable subject to contractual performance criteria. There are many variants on the strategies adopted by breeders or their agents, but surely it is desirable in the public good that a new variety should be widely available to the public within five years of its introduction. If the breeder or owner agrees with this, then he must put in place a licensing strategy which delivers this widespread availability.

Trademarks Have Their Use but They Do Not Allow Control of Propagation. The use and abuse (mostly inadvertent) of trademarks in our industry should occupy another session. Trademarks should be used to denote origin and to lead the consumer to a brand. Thus 'Monrovia' or 'Gardener's Palette' or 'Encore' or 'Blooms' or 'Proven Winners' are all very appropriate and eminently defensible trademarks. But there is a potential conflict between the necessarily descriptive nature of a variety name — or any selling name, and the necessarily non-descriptive nature of a properly used trademark. The invention of a nonsense cultivar name does not, in my view, free up the selling name (or trade name or fancy name) to be designated and properly used as a trademark. Therefore, I take issue with the practice of adding "TM" to a cultivar or selling name of an individual variety since the name is intended to be that by which the consumer will know and ask for the plant, thereby rendering that name unusable as a trademark.

WHEN TO PATENT

Commercial Decision Making. Naturally, a patent is not worth pursuing unless the breeder or owner anticipates a real benefit from the investment. In general, however, a deliberate breeding program will itself incur far greater costs than the costs of filing and obtaining a patent or grant of plant breeders' rights. In this sense, the patent process is simply the "end game". It is hard to imagine that a good new plant will not generate a payback in royalties during the 20 year life of the patent—even if the cost of obtaining the patent were as high as, say, \$10,000 — which it need not be.

But clearly, not all new plants, while technically patentable, should be patented. Reasons for not patenting may include: insufficient market interest in such a variety, availability of nonpatented alternative, or the prospect of early further improvement that perhaps should be awaited. (As an aside, it is generally the case that good woody plants can earn higher royalties over the life of the patent than can new greenhouse ornamental varieties; new greenhouse varieties generate more royalties earlier, through sheer volume, but they are more liable to be eclipsed by replacement varieties or "upgrades.")

Timing of Patent Application Determined by "Enablement". Patent law and procedure lays great emphasis on the concept of "enablement" of an invention, which may be briefly defined as the act of placing an invention into the public domain in such a way, or to a sufficient extent, that someone reasonably skilled can make the invention for himself. In the horticultural context, it is accepted that a plant cannot

be asexually reproduced without physical access to the very plant material. But the first distribution (not necessarily sale) of a plant variety is presumed to be an enabling act unless very precise terms and restrictions are placed on the purpose of, and further access by others to, the distributed material. And, even if such restrictive terms are put in place, for example in a trials agreement, any breach of them—in the form of further distribution for example—may well constitute enablement and thereby start the patent clock. Once the first enablement has occurred, a patent application must have been accepted for filing within 12 months.

In the case of an invention, enablement can and does take the form of a publication which is sufficiently descriptive as to enable someone reasonably skilled to make the invention. However “mere description” of a new plant variety does not assist anyone to reproduce identically that variety: some access to plant material is required. If a breeder intends to file anyway then it may be prudent to proceed as if publication is indeed enabling rather than take things “to the wire”. Certainly publication in a printed catalog presumes that a commercial decision has been taken, and it is preferable for all concerned that a patent application is filed around the time of that first publication, if not sooner.

Need for Prudence with Respect to Any Worldwide Publication and Sale.

At this time, the industry has been thrown into considerable dismay by a Patent Office decision earlier this year that enablement anywhere in the world is, in effect, enablement in the United States, notwithstanding the inapplicability of U.S.A. Patent Law to on-sale and manufacturing activity which takes place wholly outside the United States. This is a complex issue which is presently subject to many appeals, but the advice to breeders at this time is to regard any distribution-for-sale anywhere in the world as an enabling act, requiring the filing of a U.S. Plant Patent application within 12 months of that first distribution. In this respect, the U.S. is offering very adverse terms to breeders compared with the most of rest of the world where Plant Breeders Rights (PBR) may still be applied for up to 4 years — or even 6 for woody cultivars — from the first date of sale outside the applicant country. Sales within the country of application may not be more than 1 year prior to PBR filing date, although Canada does not allow even that year. It is an unfortunate anomaly, which will be corrected in 2 or 3 years time, that Canada requires a PBR filing prior to any published offer, which can be a catalog entry, including a U.S.A. nursery catalog which circulates in Canada.

HOW TO PATENT

Determination of “Inventorship” — who is Patentee. The right to apply for a U.S. Plant Patent is reserved to the named individual or individuals who bred or discovered the new variety and who (whether the same person or another as joint patentee) was the first person to successfully asexually reproduce the new variety and demonstrate that the new variety can indeed be reproduced identically.

Assignment of Patent Rights. The rights to a patented variety are presumed to belong inalienably to the patentee, who is ordinarily the breeder or discoverer, or to his estate. However, the patentee may choose or agree to assign all, or a share of, his rights to another party or entity. For example, a breeder may elect to hold the rights within his own company or perhaps a family partnership. In the case of a company which employs breeders, it would be usual practice for the company to include in its

contract of employment a clause confirming that all rights in patented varieties will be assigned to the company. Indeed, it is a recommendable practice, for the avoidance of doubt, that all nurseries obtain from appropriate employees a contractual agreement that the rights in any sports or mutations or discoveries arising in the company's stock or crop shall be assigned to the company. It is the policy of PlantHaven never to seek or accept any assignment of patent rights, preferring to advise the breeder always to hold those rights and only to consider assignment for sound personal reasons and only after taking legal advice.

Sports, Discoveries, and Collections in the Wild. Plant Patent law permits a discoverer of a new variety to file for a patent provided the discovery took place in a cultivated area or from amongst plants growing in a cultivated state. The discoverer must so swear in his application, and it will be necessary that the circumstances of the discovery are set out in the application in such a way that the examiner is satisfied that the discovery did not take place in the wild. We can all understand that this is a difficult area, but the underlying principle is that some human activity or intervention must have occurred during the history of the development or observation of the new variety.

Satisfying the Examiner — Background to the Invention; Botanical Description. Any application for a U.S. Plant Patent must contain certain elements which are generally straightforward for most breeders to present. There are, however, two elements which will repay careful attention during the preparation of the application:

First, the breeder must explain in the “background to the invention” — how the new variety came into being. The breeder may choose to explain his credentials for carrying out the work or for making the discovery. Indeed, any circumstantial information which lends credibility to the claimed origin of the variety can be most useful. The examiner is obliged to rely on the veracity of the applicant, and the applicant need not be shy or modest in declaring how the variety arose, using what skills, and with what presumed benefit to the industry.

Secondly, the application must contain a full and complete botanical description of the variety, in all the gory detail that a skilled botanist can apply. Every plant part that can be measured or counted should be listed and described: plant itself, foliage, flower, flower parts, fruit, seed, pest, and disease resistance or susceptibility. The examiner may take issue with the botanical specification, requiring more detail — especially in the case of a genus where there has been much patent activity. The examiner's queries are written up as an “Office Action” requiring a timely response — within 3 months to avoid late penalties. It is clearly preferable to present a very full specification at the time of filing, but it is permissible to add post-filing information provided that it is additionally descriptive, rather than conflicting with previously presented matter.

Use of Registered Patent Practitioner. The Patent Office is under an obligation to assist an inventor (breeder) to file *pro se* (for himself) and will do so provided the breeder demonstrates reasonable competency in his application. However, the “prosecution” of a patent application can run into heavy territory and it is perhaps better that a patent practitioner identifies with the application from the beginning. There are agents or attorneys who have expertise in the field of plant patents and who are willing to work from the breeder's botanical specification or, at a cost,

prepare that specification for the breeder. With a few inquiries within the industry a breeder can obtain leads to reliable and cost-effective patent practitioners.

Costs. For a breeder who is able to prepare and file his application unaided, the basic and minimum fees are, first, a filing fee of \$255 (assuming the breeder is a small entity employing less than 500 persons) and, second, an issue fee of \$310. For straightforward applications, issuance is currently 18 months from date of filing. If a breeder wishes to engage the services of an expert botanical writer and a registered practitioner, then a prudent budget for all-up cost should be \$2,000 plus or minus \$500, depending on circumstances.

Significance of “PPAF — Plant Patent Applied For”, or (Plant) Patent Pending. Having filed an application, the variety may be described as Patent Pending, or Plant Patent Pending. The industry has adopted the alternative, and in my view, less satisfactory, designation ‘PPAF’ or ‘Plant Patent Applied For’. Two questions frequently arise from the industry at this stage:

First, it is asked what significance this designation has. In principle, “Patent Pending” is an advisory to those concerned that the variety is subject to a patent application, which may be issued at any time. At that time, a nursery would be in infringement to be “making, selling, or using” the variety without permission. Moreover, royalties may be due on any activity backdated to the date of filing.

Secondly, the industry has a suspicion that “PPAF” is applied to varieties which have not actually had patents filed, and even that there is no intention to do so — as a deterrence to propagation and sale. This suspicion is enhanced by the fact that patent applications (unlike PBR applications) are not published until 18 months after filing. It is a Federal offence to mislead the public as to the patent status of an item, and the law lays down the penalties. It is likely that persistent, deliberate, and wanton abuse of this designation would attract exemplary penalties.

Duration of Patent. A U.S. Plant Patent endures for 20 years from the date of filing. Other country Plant Breeders Rights have similar duration, or longer in the case of woody species.

CONCLUSION

Again declaring the interest, my colleagues and I at PlantHaven believe that the U.S. Plant Patent system has encouraged innovation in both new plant development and in plant marketing since the patent protection provides a safe framework for investment in marketing and promotion together with control of plant quality. I take this opportunity on behalf of breeders everywhere to thank the industry and particularly the members of I.P.P.S. for your support of good new plant introductions.