

Plant Variety Rights: ALL YOU NEED TO KNOW

GRAHAM SPENCER on why they are a good idea, at least some of the time



Trials of ornamentals at NIAB Cambridge, an international centre for plant research and agronomy

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There is much misunderstanding of Plant Variety Rights (PVR) among gardeners and plant enthusiasts. Some people are strongly opposed to them, even suggesting that they are unethical. But, in my experience, many more people either don't understand PVR or are simply unaware of them.

The terms Plant Variety Rights (PVR) and Plant Breeder's Rights (PBR) are synonymous. I prefer PVR because the owner of a variety may not be the breeder – the rights can be bought and sold or inherited, just like any other property.

PVR are a form of intellectual property right, similar to but distinct from a patent. They give the owner the legal tools to control who can propagate and sell a plant variety, usually by

means of a licence. A licence will permit a grower to propagate and market the variety while paying a royalty for each plant sold (or some similar arrangement for cut flowers, fruits, etc.). The royalties are usually pennies per plant.

Governments around the world introduced PVR to encourage the development of agricultural crops after the Second World War. Later, the scope of rights was extended to all plant genera and species.

The UK introduced the Plant Variety and Seeds Act in 1964 and the Act has been amended since then. The European Union brought in a single EU-wide system in 1994 with the catchy title 'Regulation EC2100/94'.

HOW A PLANT GETS PVR

To qualify, the plant must be:

- **Novel:** this usually means the variety must not have been made available to the trade or public for more than one year before the application for PVR is made.
- **Named:** the name should be different from any others used previously for that genus. Codenames are a popular choice for PVR because they allow a variety to be sold under different marketing names in different countries. Not everyone speaks English. An example is David Austin roses. The shrub rose 'Roald Dahl' for instance is 'AUSOWLISH', while the repeat flowering 'Gertrude Jekyll' is 'AUSBORD'. Another example is the *Hypericum calycinum* 'CROWTHYP', which is sold under the marketing name Fiesta in the United States but as Carnival in Europe, in this case because of a trademark conflict.
- **Distinct:** the plant must be distinct from all other varieties of that species that are common knowledge. There is a debate at present about how distinct a plant needs to be – the so-called 'minimum distance'. In my experience, most breeders and growers would like to see the law changed to require a greater minimum distance between varieties.
- **Uniform:** if I plant ten plants of the variety in a row, they should all grow in more or less the same way. You would not want one plant to grow to twice the height of the others.
- **Stable:** it must not produce mutations or reversions. This is obviously important in variegated leaf plants, for example, or in new varieties that are selected as a mutation from the parent variety.

The final three criteria – distinctiveness, uniformity and stability – are collectively known as DUS.

To be granted PVR, the government body responsible for issuing PVR (which is the Community Plant Variety Office for EU rights and the Plant Variety Rights Office for UK rights) will arrange an official 'technical



The early flowering dark-flowered *Lavandula x intermedia* 'Olympia' bred by Dr Simon Charlesworth, who holds the Scientific National Collection of *Lavandula*, at Downderry Nursery in Kent



Hosta 'June': PVR are a form of intellectual property



Testing distinctiveness, uniformity and stability of *Nemesia* at NIAB: the top two plants are a slightly different colour from the ones below, proving that the variety is unstable



■ A comparison of *Ajuga reptans* Party Colors^{PBR} (left), *A. Sugar Plum*^{PBR} and *A. 'Burgundy Glow'* showing how incremental changes in plant breeding by Mike Tristram of Binsted Nursery – can improve plants



■ *Heuchera* 'Sugar Plum'^{PBR} was bred by Plantago, the nursery that holds the National Collection of the genus

examination', effectively a growing trial of at least one year, often more. The variety will be compared with others in the genus to ensure distinctiveness, as well as being monitored for uniformity and stability. This is known in the trade as a 'DUS trial'. In the UK, trials are often held at the National Institute of Agricultural Botany (NIAB) in Cambridge.

PVR applications are not cheap. In the European Union, application for PVRs and DUS examination costs between €2,200 (about £1,840 in early August) and €5,000 (£4,190) depending on the genus. There is also lots of paperwork. In general, PVR are valid for 25 years from the date they are granted but (in the case of EU rights) the rights holder must also pay an annual fee.

BREEDERS AND PVR

PVR give breeders a return for their work. Before then, once breeders had released a new variety on to the market, there was nothing to stop anyone else from growing and selling

the plant. Breeders would therefore normally not earn anything and their competitors would not have borne any of the development costs.

Naturally, this was a disincentive to innovation. But, by allowing breeders to control their varieties, it became possible to make a living from plant breeding. It is worth noting that few people have become rich from ornamental plant breeding – the rewards are modest, but worthwhile.

With PVR, breeders could make a business case for investing in the development of new varieties. This has led to such substantial increases in the yield of food plants in the past 50 years that the world has a surplus of food (albeit not equally distributed), in spite of the loss of agricultural land and a doubling of the world population. It has also led to significant advances in ornamental plants.

GARDENERS AND GROWERS

As we have seen, since the introduction of PVR the speed of innovation in new plant varieties has increased. For ornamental plants, this has been particularly true since 1994 when EU PVR legislation introduced a lower-cost method to protect innovations across the EU.

However, innovation is not simply about developing black hyacinths or blue roses. While those developments grab the headlines, they represent but a tiny proportion of plant introductions. Better plants can mean varieties with improved habit, a longer flowering season or increased resistance to pests and diseases. Improved plant performance can reduce production costs and help the environment by reducing the need for pesticides, growth regulators and even irrigation.

Finally, while PVR is not a quality mark (there are some bad plants with PVR), it does suggest that the plant has met a minimum threshold – distinct, uniform and stable.

If a plant fails the DUS trial, it is not a good plant. And, given the costs, breeders have good reason to apply for PVR only for plants that are good and that will have reasonable levels of demand or they may not be certain of recouping their investment.

CONSERVATION AND DIVERSITY

There are several reasons why PVR are good for conservation and diversity.

Firstly, breeders are keen to access as wide a variety of parent material as possible. Several breeders I work with seek out heritage varieties to use them to develop new varieties.

Secondly, new varieties tend to benefit from volume production and marketing budgets – the cost of development and the cost of PVR applications mean that a new variety must be sold in substantial quantities to make it pay.

If a variety is widely sold and planted in many gardens, the future for that variety is more secure. We have seen in the past many instances of heritage varieties that are now in National Collections that have been saved from extinction by virtue of their presence in garden collections long after they have ceased to be available in the trade.

Thirdly, in a few cases, the proceeds of PVR directly benefit conservation work. Some National Collection Holders breed plants alongside their collection. Two examples are Vicky and Richard Fox at Plantagogo and Dr Simon Charlesworth at Donderry Nursery.

Some specialist nurseries, while not Collection Holders, also have plant breeding as part of their business, such as Rosy Hardy at Hardy's Cottage Garden Plants. Even some botanical gardens use income from plant breeding to support their work. Todd Boland, at Memorial University Newfoundland Botanical Gardens, in Canada, is a good example.

NOT FOR EVERY PLANT

I don't claim that PVR are the be-all and end-all. They aren't the right tool for every new variety. For those that are likely to sell in small quantities, they are too expensive. In that case, trademarks might be more appropriate or a goodwill royalty from the growers that get the opportunity to launch the variety can help the breeder to defray costs.


Also, for genera where the turnover of varieties is fast (usually annual patio plants such as *Petunia*), the PVR process is not

fast enough. The application process takes two to four years, by which time the variety has already been superseded.

Increasingly, breeders are using trademarks to protect a brand for this type of plant and taking PVR only on breakthrough breeding (varieties that exhibit some startlingly new characteristic) where the variety can be expected to have a longer lifetime.

BREXIT

We do not know yet what the implications for PVR will be. However, it is possible that breeders will need both EU PVR and UK PVR once Brexit is completed, whereas before Brexit they need only EU rights. This will double their protection costs – something that will surely be reflected in diminished choice and increased prices. ❀

 Graham Spencer is the owner of Plants for Europe, an independent plant breeders' agent. His website www.plantsforeurope.com has a wealth of information about PVR

CAN WE PROPAGATE PVR-PROTECTED PLANTS FOR OUR FAIRS?

A plant variety protected by PVR may not be propagated for sale without a licence from the owner of the variety. You could compare it to selling pirated DVDs, writes *Graham Spencer*.

However, in practice, variety owners are unlikely to complain if you propagate one or two plants for a Plant Heritage or garden club plant sale.

Propagation by a nursery, even a small nursery, selling that plant for profit, is likely to attract the wrath of the breeder. When cases have been brought to court, the fines and damages have been substantial – enough to put a nursery out of business.

Be ethical – support plant breeders by ensuring you buy from a reputable source.