

Plant breeders' rights for vine varieties based on the International Convention for the Protection of New Varieties of Plants

R. BECHER

Bundessortenamt, Prüfstelle Haßloch, Neustadter Straße 42, D-6733 Haßloch, F. R. Germany

S u m m a r y : Plant breeders' rights offer an economic stimulant for the creation of new and improved varieties. Only the holder of the right is authorized to commercialize the protected variety. The UPOV Convention contains the necessary rules for the grant of protection. The following conditions must be fulfilled before plant breeders' rights can be granted: distinctness, homogeneity, stability, novelty and an acceptable variety denomination. At present it is being discussed as to how far the new developments in plant breeding, especially in biotechnology, necessitate a revision of the UPOV Convention.

K e y w o r d s : law, plant breeders' rights, UPOV Convention, variety of vine, characteristic, distinctness, homogeneity, stability, novelty, variety denomination, biotechnology, patent.

Introduction

It is a well known fact that man's food supply and farmer's operating income depend to a high degree on plant breeder's efficiency. But the creation of new varieties of plants requires considerable investment in qualified staff, suitable fields, buildings and technical equipment. Therefore, plant breeding can only be economically interesting for a breeder if the commercialization of a new variety depends on his prior authorization in such a way that he can get the remuneration necessary for further investments.

Based on this background, in 1961 the International Convention for the Protection of New Varieties of Plants was created. The purpose of the Convention is to recognize and ensure the proprietary right of plant breeders which is clearly defined in the rules of the Convention. Today 18 states of all five continents apply the rules of the Convention. These states form the International Union for the Protection of New Varieties of Plants (UPOV).

Rules of the Convention

With regard to vine varieties the following rules of the UPOV Convention are important:

- 1.- It is immaterial whether a variety is the result of systematic breeding activities or it is a mutant of an existing variety which has been discovered. In principle all genera and species of plants fall under the rules of the Convention.
- 2.- The prior authorization of the holder of the right is required before propagating material of a protected variety can be produced for the purpose of commercial marketing, offered for sale or marketed.
- 3.- No authorization of the holder of the right is required if his protected variety is used as a basic source for the creation of a new variety (breeder's privilege). However, such authorization is required when, for instance, the repeated use of a protected inbred line is necessary for the commercial production of a hybrid, e. g. in maize or sunflower.
- 4.- The minimum period of protection for grapevine varieties lasts 18 years. In the Federal Republic of Germany the right is granted for 30 years. No prolongation is possible.

5. – Conditions required for plant breeders' rights

5.1 Test for distinctness, homogeneity and stability

Each new grapevine variety has to undergo a test for distinctness, homogeneity and stability. In the Federal Republic of Germany this test is conducted at a testing station of the Bundessortenamt in Neustadt-Mußbach. At least 2 years of observation on fully developed plants are necessary to test grapevine or rootstock varieties. 24 or 20 plants, respectively, are needed for the examinations. In the Federal Republic of Germany all grapevine varieties protected or registered in the variety list or already in test serve as a reference collection.

Distinctness, homogeneity and stability are judged by characteristics which are coded in up to 9 different states of expression in order to facilitate data processing and international communication. In cooperation with professional organizations and experienced scientists UPOV has established test guidelines for grapevine varieties. They contain 77 different characteristics of which 38 are observed in the Federal Republic of Germany. These characteristics are important in the sense of the UPOV Convention for distinguishing varieties. They are also used for the description of the variety.

Example of characteristic coding:

Young shoot: intensity of anthocyanin coloration of tip	
State of expression	Note
absent or very weak	1
very weak to weak	2
weak	3
weak to medium	4
medium	5
medium to strong	6
strong	7
strong to very strong	8
very strong	9

To receive protections the following test criteria must be fulfilled:

5.1.1 Distinctness

Every variety has to be clearly distinguishable by at least one important characteristic from any other variety whose existence is a matter of common knowledge. For that purpose a minimum distance is applied to each characteristic.

5.1.2 Homogeneity

The new variety must be sufficiently homogeneous, taking into account the particular features of its sexual or vegetative reproduction. It is evident that an allogamous species like rye cannot be as homogeneous as an autogamous species like pea or a vegetatively propagated species like grapevine. Dependent on the number of plants observed, a tolerance for the number of off-type plants is fixed.

5.1.3 Stability

The new variety must be stable in its essential characteristics and must correspond to its initial description after repeated reproduction.

5.2 Novelty

At the date of application for plant breeders' rights the variety has to be new, i. e. in the case of grapevine varieties commercialization with the agreement of the breeder must not date back more than 1 year in the state where the application was filed and must not date back more than 6 years in any other state.

5.3 Variety denomination

Every variety needs an acceptable denomination which enables the variety to be clearly identified.

Current statistics

1.- Number of applications for plant breeders' rights between July 1, 1988 and July 1, 1989

UPOV member states	> 5000
Federal Republic of Germany	
total	> 1000
grapevine varieties	7
rootstock varieties	2

2.- Number of protected varieties in the Federal Republic of Germany on July 1, 1989

total	3405
grapevine varieties	47
rootstock varieties	5

Final remarks

In the light of the new development in plant breeding especially in biotechnology it is being discussed within UPOV as to how far the rules of the UPOV Convention have to be strengthened. Three of the most important points for grapevine varieties are mentioned below:

1.- At present, only propagating material falls under the scope of protection. Especially in respect to tissue culture, it is discussed if all material of the protected variety should fall under the scope of protection. Every material means all material out of which the variety can be reproduced.

2.- In order to avoid plagiate breeding with the help of easy mutations or quick changes by biotechnological means, it is being discussed if a system of dependent rights should be introduced into the UPOV Convention. But this only when the new variety is mainly based on an already existing variety.

3.- In respect to patent legislation it is common understanding in most countries that new procedures in plant breeding can be patented as process patents. On the other hand it is also common understanding that artificial genes can be patented as product patents. These two examples indicate that conflicts may arise by an overlapping of patent legislation and plant breeders' rights.

Therefore on an international basis groups of patent experts and plant breeders' rights experts are deliberating on workable interfaces between these two sectors.

Possible changes of the present UPOV Convention in these and many other questions are expected to be made during a diplomatic conference in 1991. Meanwhile, a discussion has also

started in Brussels to establish a common plant breeders' rights system for the 12 member states of the European Economic Community. It is the declared intention of the Community to establish a system which is in full conformity with the content of the present and any future UPOV Convention.

Results of cross-breeding

GERTRUDE MAYER

Höhere Bundeslehr- und Versuchsanstalt für Wein- und Obstbau mit Institut für Bienenkunde,
Wiener Straße 74, A-3400 Klosterneuburg, Austria

Abstract: Since 1921 at the Federal College and Research Station Klosterneuburg cross breedings have been carried out, having in view these purposes:

- 1) Intraspecific crossings for improvement of quality, yield security, chlorosis resistance of white wine grapes and table grapes, but also improvement of colour value of red wine cultivars. The cultivars Zweigelt, Goldburger, Blauburger and Jubiläumsrebe are already registered. Zweigelt ist today the most important red cultivar in Austria. Practical trials are planted with the following promising varieties:

1217/3/22	(Muscat Ottonel x grüner Veltliner)
1296/3/34	(Blauer Burgunder x Blauburger)
1220/3/213	(Jubiläumsrebe x Müller-Thurgau)
1213/1	(Bouvier x Jubiläumsrebe)
- 2) Interspecific crossings for breeding varieties with high quality and good resistance against *Plasmopara viticola*, *Botrytis cinerea*, winter frost and reduced susceptibility against *Uncinula necator*. Practical trials are planted with the following promising varieties:

1358/1/42, 1358/1/47	(Blaufränkisch x S.V. 18402) x Zweigelt
1355/3/33, 1355/2/19	(Blaufränkisch x S.V. 18402) x Blauburger.