

Advanced Sustainable BIOfuels for Aviation

Deliverable D2.6: Selected camelina variety protection at European level

Consortium:

Acronym	Legal entity	Role
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ETA	ETA – Energia, Trasporti, Agricoltura Srl	BEN
CCE	CAMELINA COMPANY ESPANA S.L.	BEN
JRC	JOINT RESEARCH CENTRE – EUROPEAN COMMISSION	BEN

CO...Coordinator, BEN...Beneficiary

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Document Type

PRO	Technical/economic progress report (internal work package reports indicating work status)	
DEL	Technical reports identified as deliverables in the Description of Work	
MoM	Minutes of Meeting	
MAN	Procedures and user manuals	
WOR	Working document, issued as preparatory documents to a Technical report	
INF	Information and Notes	

Dissemination Level

PU	Public	
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	
CON	Confidential, only for members of the Consortium	



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1 Summary

The European Union (EU) is registering an increase in temperature as well as a reduction in rainfall, mainly in the Mediterranean region, which is contributing to its desertification process. To improve the EU soil resilience, Bio4A has established a series of field of trials during the project to corroborate the possibility to cultivate marginal lands without losing organic carbon content.

The decrease in rainfall and soil fertility is leading to a drastic loss in agriculture productivity. In the Mediterranean region, current agriculture is based mainly on cereal production, usually alternating with a fallow land year. This practice is directly linked with the erosion and desertification processes. Replacing the fallow year with a crop alternative will allow farmers reducing the soil degradation process as well as increasing the profitability of their activity.

Camelina is a resilient crop, resistant to low temperatures, characterized by its root development that allows high utilization of water and nutrients. The introduction of camelina in a rotation system can provide major advantages, as it is a cruciferous crop with a deeper root, having several advantages related to soil fertilization and structure. Camelina does not require high input costs as it is cultivated with commercial equipment and requires medium fertilization. In addition, as the camelina seed is not dormant, camelina can be easily controlled, not creating ecosystem issues nor threatening local biodiversity.

Currently, camelina cultivation has not yet reached its maximum productivity potential. As with other oilseed crops, a genetic improvement is required to increase camelina's agronomic competitiveness. Camelina Company España (CCE) is developing a breeding process to select high-yielding varieties which are adapted to different production models and farmer rotations as well as climates.

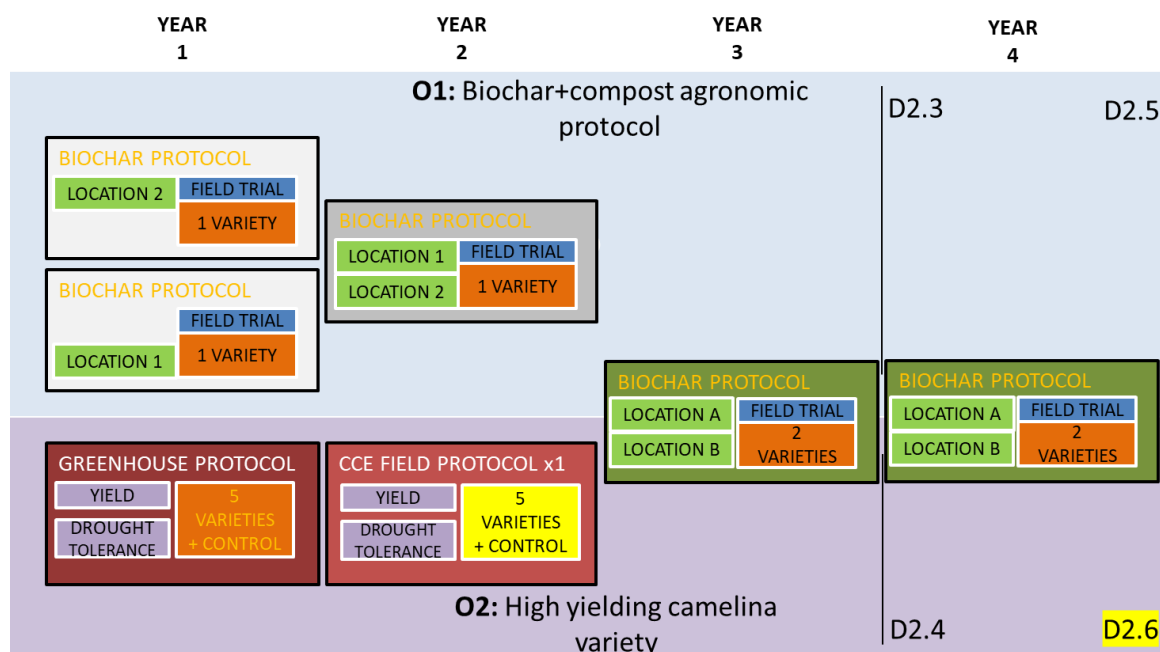
CCE has performed during the Bio4A project field trials to corroborate the performance of camelina on marginal lands with a high risk of desertification. A variety screening trials have been performed to identify the highest yielding variety adapted to degraded and underutilized lands in Spain. This deliverable describes the process of registration and protection of the Intellectual Property Right for the selected camelina variety in Europe.

2 Introduction

The Bio4A project objectives included in task 2.1 (WP2) are the following ones:

- Define the best biochar+compost agronomic protocol in order to upgrade marginal land with a high risk of desertification, based on feedstock production in terms of kg oil per hectare: Deliverable D2.3 and Deliverable D2.5.
- Selection of high yielding camelina variety cultivated under marginal land with high desertification risk in Southern Europe: Deliverable D2.4 and Deliverable D2.6.

These activities have been performed in different trials during the three first years of the project. In the third year, both objectives converged in the same trial located in two locations.



The following report is the final step of the objective 2 (Selection of high yielding camelina variety), which has been divided into two main sections:

- IP strategy for variety protection
A brief description of the Community Plant Variety Rights (CPVR), granted by the Community Plant Variety Office (CPVO), employed for the protection of the new variety is performed.
- Status of the variety protection
CCE has filed for Community Plant Variety Rights (CPVR) for a new camelina variety selected within the BIO4A project, with the denomination CCE42. The current status of the protection process is that the interim technical examination report, performed in 2021, is positive.

3 IP strategy for variety protection

CCE has filed a Community Plant Variety Rights (CPVR) for the new camelina variety tested and selected within the BIO4A project. Below are indicated the main key points related to such variety protection.

Community Plant Variety Office

The Community Plant Variety Office (CPVO) is a self-financed EU agency responsible for the management of the Community Plant Variety Rights System. Located in Angers, France, the CPVO was created by the Council Regulation 2100/94 and has been operational since April 1995.

The CPVO's task is to administer the Plant Variety Rights System in Europe. This system, which is the largest in the world, provides protection with intellectual property rights for new plant varieties.

Since the creation of the CPVO in 1995, the office has received over 53,000 applications, with over 41,000 titles currently in force. The Legal Unit of the CPVO is responsible for representing the Office in appeal proceedings before the Board of Appeal and the Court of Justice of the European Union. It also advises in different areas of law on a diversified range of legally related issues, such as the Register of CPVRs (Community Plant Variety Rights), the procedure for public access to documents and public procurements, internal Committees' decisions and variety denominations.

IP protection system

The European Community's system of protection for plant varieties, which is based on the principles of the 1991 act of the UPOV Convention (International Union for the Protection of New Varieties of Plants), contributes to the development of agriculture and horticulture.

The protection of plant varieties is a specific form of industrial property law applied in various countries around the world. The objective is to encourage and promote the creation of new varieties and to improve the quality of products for the benefit of consumers.

The subject matter of a Community plant variety right is a plant variety. The definition of a plant variety is given by the Basic Regulation: "a plant grouping within a single botanical taxon of the lowest known rank, which grouping, irrespective of whether the conditions for the grant of a breeder's right are fully met, can be

- defined by the expression of the characteristics resulting from a given genotype or combination of genotypes,
- distinguished from any other plant grouping by the expression of at least one of the said characteristics and
- considered as a unit with regard to its suitability for being propagated unchanged."



In order to be eligible for protection a variety has to be distinct, uniform and stable (the DUS requirements), new and have an adequate variety denomination.

DUS requirements

Distinctness

A variety shall be deemed to be distinct if it is clearly distinguishable by reference to the expression of the characteristics that result from a particular genotype or combination of genotypes, from any other variety whose existence is a matter of common knowledge on the date of the application.

Distinctness has to be detectable on the level of the phenotype. Apart from morphological characteristics, for instance, colour or shape of a leaf, the distinctness could be based on physiological characteristics such as disease resistance.

To assess, this requirement candidate varieties have to be compared with existing varieties, the characteristics of which are close to those of the candidate. The comparison is performed on the basis of detailed technical guidelines adopted by the Administrative Council of the CPVO on the basis of protocols developed in the framework of UPOV. In order to select the relevant reference varieties, the competent examination offices make use of extensive databases with descriptions and photographs of varieties of common knowledge.

Uniformity

A variety shall be regarded as sufficiently uniform if the plants of which it is composed are similar or genetically identical as regards the characteristics, taken as a whole, which are considered for this purpose. When assessing uniformity, the particular features of its propagation shall be taken into account. This implies for instance that in respect of seed propagated varieties a lower degree of uniformity is accepted than in respect of vegetatively propagated varieties.

Stability

A variety shall be regarded as stable if, after successive propagations or multiplications or at the end of each cycle it remains true to the description of its essential characteristics (article 9). Taking into account that the DUS examination is limited in time, the assessment of stability necessarily results in a provisional opinion. For this reason, sometimes the CPVO has to verify “the continuing existence unaltered of the protected varieties” (article 64). If the verification would establish that the variety no longer complies with the uniformity or stability requirement the Community plant variety right shall be cancelled.

Novelty

Novelty is another requirement that a variety must fulfil. Novelty has nothing to do with the characteristics of the candidate variety. It is a notion linked to its commercial history. A variety is considered to be novel if, on the date of application for protection of the variety, it has not been sold or disposed of for exploitation purposes with the consent of the breeder:

- earlier than one (1) year before that date within the territory of the Union;
- earlier than four (4) years before that date outside the territory of the European Union or;
- earlier than six (6) years in the case of trees and vines.

Variety denomination

In addition to the DUS and novelty requirements mentioned above, a variety must be identified by a variety denomination. The variety denomination is proposed by the applicant and has to be approved by the CPVO. To be approved by the CPVO, a variety denomination must fulfil several criteria. For example, it must allow the variety to be clearly identified and ensure it is different



from a denomination identifying an existing variety of the same botanical species or a related one.

Procedure

The procedures to be followed and the conditions required in relation to a variety submitted for Community protection can be summarized as follows.

Where to apply

An application for plant variety protection can be made in any of the twenty official languages of the European Community direct to the CPVO or to one of the national agencies in a Member State, which in turn will take the necessary steps to send it on to the CPVO.

Who can apply

Any individual or company whose domicile or headquarters is located in the European Union can apply. Individuals or companies from a state which is a member of the International Union for the protection of new varieties of plants (UPOV) but not a member of the European Union can also apply, provided that an agent domiciled in the Community has been nominated.

Checking the application

When an application is received, the CPVO checks to see that it is complete and eligible and that the variety is novel. If no impediment is found at this stage, the CPVO arranges for a technical examination of the variety submitted.

Technical examination

The purpose of the technical examination is to ensure that in respect of a candidate variety the criteria of distinctness, uniformity and stability, are complied with. The CPVO does not itself carry out these examinations. They are entrusted to bodies deemed competent by the CPVO Administrative Council. The major ones are the Bundessortenamt in Germany, GEVES in France, NIAB in the UK and the Raad voor het Kwekersrecht in the Netherlands. All the offices performing examinations on behalf of the CPVO render similar services in the framework of national listing and plant variety protection systems.

Examinations have to be conducted in accordance with guidelines laid down by the CPVO. Varieties submitted for protection are compared during the examination with other varieties submitted for Community protection and with appropriate varieties of common knowledge at the time of application.

Scope of the right

The scope of Community plant variety rights is to a high degree similar to that of a utility patent even though there are some differences due to the specific nature of plant variety rights. The scope of rights is mentioned in Article 13(2) of the Basic Regulation and includes the exclusive right for the holder to produce and reproduce, condition for the purpose of propagation, sell, market, import and export to the Community and stocking material (variety constituents/harvested material) of the variety. In addition to acts effected in relation to the protected variety itself, acts effected in relation to essentially derived varieties, other indistinct varieties and hybrid varieties dependent on the protected variety for their production may also constitute infringements.

Grant of title

If the CPVO is of the opinion that the findings of the examination are sufficient to base a decision upon, it decides whether or not to grant a CPVR. In the case of a successful application, the CPVO issues the title holder with a certificate attesting to the grant of protection and a copy of the decision containing an official, detailed description of the variety in question.



In the case, that the examination does not lead to clear conclusions, for instance in respect of the assessment of distinctness, an extension of the examination period, with the same sample, can be ordered. It is the responsibility of the breeder to submit sample material, that meets the relevant conditions in respect of germination, flowering, etc. Only in very exceptional cases, the breeder will be offered the possibility to submit a new sample, if the first sample does not perform adequately.

Community protection may be granted as a general rule for twenty-five (25) years, or for thirty (30) years in the case of vines, potatoes and trees. These periods are maxima. For each year of protection, an annual fee has to be paid. When the commercial lifetime of a variety is shorter than the maximum protection period, the breeder could decide to give up protection.

4 Variety protection

Based on the work performed during the BIO4A project, CCE has performed an application for Community Plant Variety Rights for a new camelina variety. This variety is defined as detailed below:

General characteristics in relation to a known commercial variety

Characteristics	State of expression	example varieties if any
Time to flowering	2	1 (Vera, CCE-26)
Height at flowering	3	2 (Vera, CCE-26)
Biomass production	3	2 (Vera, CCE-26)
Seed weight	6	3 (Vera, CCE-26)

Comparison with a similar variety

Denomination(s) of variety(ies) similar to your candidate variety	Characteristic(s) in which your candidate variety differs from the similar variety(ies)	Describe the expression of the characteristic(s) for the similar variety(ies)	Describe the expression of the characteristic(s) for your candidate variety
CCE-34	Time to flowering	3	2
CCE-34	Seed weight	8	6
CCE-34	Seed production	3	4

5 Conclusions

The IP strategy selected by CCE for the protection of the new camelina variety tested and selected within the BIO4A is filing for Community Plant Variety Rights (CPVR) at the Community Plant Variety Office (CPVO) for European protection for 25 years.

The camelina variety tested and protected within the BIO4A project, has been filed with the denomination CCE42. The current status of the protection process is that the interim technical examination report, performed during 2021, is positive.