PRIMA SECTION 2

D.8.4 / IPR MANAGEMENT PLAN

(WP8 Project administrative, legal and financial management)

SUSTEMICROP PROJECT

Development of eco-sustainable systemic technologies and strategies in Mediterranean crop systems contributing to small farming socio-economic resilience

Coordinator:

UNIVERSITY OF LEON (ULE)

Project details and Deliverable information

✓ **Project Details**

Project Title	Development of eco-sustainable systemic technologies and strategies in key Mediterranean crop systems, contributing to small farming socio-economic resilience.
Project Type	Research and Innovation Actions (RIA). Topic 2.2.1. Up-scaling field practices based on agroecology principles to increase ecosystem services and biodiversity, to adapt the small farming systems to climate change and to increase farmers' incomes
Call	PRIMA CALL SECTION 2 2021 – MULTI-TOPIC
Acronym	SUSTEMICROP
Duration	36 months
Project Start Date	01/07/2022

✓ **Deliverable information**

Status: F: final; D: draft; RD: revised draft	F (30/06/23)
Planned delivery date	30/06/23 (M12)
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Dissemination level: PU = Public, fully open, e.g. web; CO = Confidential, restricted under conditions set out in Model Grant Agreement; CI = Classified, information as referred to in Commission Decision 2001/844/EC.	PU
Type: R: Document, report (excluding the periodic and final reports); DEM: Demonstrator, pilot, prototype, plan designs; DEC: Websites, patents filing, press & media actions, videos, etc.; OTHER: Software, technical diagram, etc.	Report (R)

Document history and quality check

✓ **Document History**

Version	Date (DD/MM/YYYY)	Created/Amended by	Changes
1.0	17/05/2023	Juan José Rubio Coque / Rebeca Cobos (ULE)	Structure of the document and first contents
2.0	24/05/2023	Gabriel Serrano / Naiara Merino (ARTICA)	Minor corrections and refinement
3.0	17/06/2023	Juan José Rubio Coque (IIVV) / Patrice This (INRAE) /Cedric Moisy (IFV)	Added content and minor corrections
4.0	19/06/23	Gabriel Serrano / Naiara Merino (ARTICA)	Quality Check comments addressed
Final	19/06/23	Gabriel Serrano / Naiara Merino (ARTICA)	Final format check and submission

✓ **Quality Check Review**

Reviewer (s)	Main Changes
ARTICA+i	Overall review of the document
Gabriel Serrano /Naiara Merino	Overall review of the document and quality check

Table of Contents

List of abbreviations and definitions

Abbreviation	Definition
CA	Consortium agreement
D	Deliverable
IPR	Intellectual Property Rights
M	Month
NDA	Non-Disclosure Agreements
PC	Project Coordinator
QC	Quality Checker
SFP	SUSTEMICROP Full Proposal
StC	Steering Committee
SO	Specific Objective
WP	Work Package
WPL	Work Package Leader

Statement for open documents & Copyrights

1.- Executive summary

Deliverable 8.4. of SUSTEMICROP Project discloses the guidelines for Intellectual Property Rights (IPR) management as derived from the SUSTEMICROP Consortium Agreement.

A procedure is presented covering identification of potential innovations, documentation, tracking and protection of Intellectual Property derived from the SUSTEMICROP project.

2.- Introduction

Deliverable 8.4. (D8.4.) is a document based on SUSTEMICROP Consortium Agreement. It is aimed at providing basic guidelines on how Intellectual Property Rights (IPR) will be managed by the SUSTEMICROP consortium. More specifically, the objective of task 8.3, started in M1 and to be carried out until the end of the project in M36, is to provide SUSTEMICROP members with a clear identification and fair allocation of intellectual rights and patent contributions in such a way that ensures that relevant knowledge is made accessible to those who need it and will benefit from it.

Bearing in mind the collaborative nature of the project, this document will establish rules for the use of foreground, side ground and background knowledge and its distribution within the project as well as the rules for handling sensitive and confidential information.

This knowledge could be protected under different forms including know-how, trade secrets, and patents.

The IPR strategies follow negotiation meetings to determine the percentage of effective contribution of each individual partner to an IPR object that has joint contributions and agreeing on the shared rights, as well as monitoring of innovations that should be IPR-protected.

2.1.- Project Summary.

SUSTEMICROP is a Research and Innovation project that aims to increase the resilience of Mediterranean cropping systems and the competitiveness of small farmers in a climate change-affected environment, through the development of innovative, affordable, and systemic solutions with positive economic, environmental, and societal impacts. SUSTEMICROP will deliver a package of sustainable strategies, products, and tools that, when applied individually or adopted as a whole under integrated management, will allow small farmers to increase their competitiveness, adopt innovations and achieve overall sustainability. The project Consortium is composed of 10 Partners from 7 different countries, covering a range of complementary competences and skills. They all have specialised profiles and possess in-depth knowledge of the role that natural capital plays in developing crop strategies oriented towards sustainability, impact assessment, digital management tools, and an extensive capacity for the development of solutions adapted to small-scale farming for the project target crops (hop, grapevine (both vine and table grapes) and date palm), with high replicability and transferability potential into other crops and Mediterranean regions.

2.2.- Document Scope.

The scope of application of the IPR Management Plan is extended to all SUSTEMICROP project partners, as established in the Consortium Agreement (CA).

3.- Project IPR Management.

As it has been previously reported in the Consortium Agreement the involved partners in SUSTEMICROP Project should agree on and the property and exploitation rights of the Project results, being the main goal to incorporate the knowledge generated in the productive processes of the partners, to increase their competitiveness in the market and scientific value.

In order to achieve this goal several different aspects will be reviewed and fixed next.

3.1.- Introduction: IPR protection.

As agreed on the Consortium Agreement document, one of the main objectives of the IPR management is to control knowledge transfer and IP rights from the onset of the project. For this purpose, this document includes a well-defined strategy as well as the main mechanisms and procedures to be designed and controlled by the Steering Committee (StC) and implemented by all partners.

In order to achieve a correct interpretation of this document, it is necessary to define a series of basic concepts in accordance with the recommendations of the European Union. Among them we can mention:

➢ **Access rights.** Rights to use results or background.

➢ **Background:** means information, in hard copy or in electronic form, including, without limitation, documents, drawings, models, designs, data memoranda, tapes, records, and databases developed before or independent of performance under the project that is necessary for the performance of Project Work and exploitation of its results.

➢ **Dissemination**. The public disclosure of the results by appropriate means, other than resulting from protecting or exploiting the results, including by scientific publications in any medium.

➢ **Exploitation.** The use of results in further research and innovation activities other than those covered by the action concerned, including among other things, commercial exploitation such as developing, creating, manufacturing, and marketing a product or process, creating and providing a service, or in standardisation activities.

➢**Foreground (results):** means the results, including information, materials (including microorganisms' strains and plant material, including interesting cultivars or possible parents for breeding) and knowledge, generated in a given project, whether or not they can be protected. It includes Intellectual property rights, similar forms of protection and unprotected know-how. Thus, foreground includes the tangible and intangible results of the project. Results generated outside a project do not constitute foreground.

➢ **Intellectual Property:** means technical information, Inventions, developments, discoveries, know-how, methods, techniques, formulas, algorithms, data, processes and other proprietary ideas (whether or not patentable or copyrightable). Intellectual Property also includes patent applications, patents, copyrights, trademarks, mask works, trade secrets, and any other legally protectable information, including computer software. It is the rights of the background and the rights of the foreground.

➢ **Owner:** means a party, public or private, holding legal title to Intellectual Property, consistent with national or international laws and regulations

➢ **Beneficiary:** means a Recipient who contributes to the execution of Award Work as part of a Project Team.

➢ **Project Intellectual Property:** means and includes all Intellectual Property first conceived, discovered, developed, reduced to practice and/or generated in the performance of the project.

3.2.- Rights and obligations related to Background.

Each Party will remain the owner and will retain control of its Pre-existing Know-How or background listed in Annex III of the SUSTEMICROP Consortium Agreement.

Unless stated otherwise in the Project, the Parties agree to the general principle that methods, procedures, techniques, models, equipment, datasets, etc., which are developed or improved upon during the implementation of the Project will be considered as Pre-existing Know-How of the Party that introduced the underlying Pre-existing Know-How to the Project.

3.3.- Rights and obligations related to Results.

SUSTEMICROP results will be owned by the Party that generates them.

Joint ownership is regulated according Consortium Agreement (CA) as is indicated in Article VIII (points 2a, 2b, 2c, and 2d).

3.4.- Protection of exploitation of Results.

Every partner should be able to select the most appropriate and effective IP protection tool for every piece of foreground (including microorganisms' strains and plant material, including interesting cultivars or possible parents for breeding) in accordance with the other partners' legitimate interests and with the future planned use, in particular if direct commercial exploitation or further research will be preferred.

Partners are recommended to inform other partners about their individual protection activities plans, especially where dealing with potentially joint IP.

3.5.- Dissemination.

A specific consideration will be paid to dissemination of SUSTEMICROP results. Thus, for the disclosure of project results partners will select the appropriate means (e.g., scientific publications, publication on web sites, conferences, open access, etc.) according to the conditions set forth in the CA (Article VIII; point 4) and in other specific confidentiality agreements, in order to maintain confidentiality during and even after the end of the project when opportune. At this end, WP8 will work closely with WP7 (Communication and Dissemination activities).

Dissemination activities will include:

- Publications: Scientific articles and informative material. Relevant scientific publications and technical papers will be generated and used throughout the project to showcase findings to the scientific community, through newsletter, open- access platform, specialised scientific magazines, research journals, blog posts and social media posts. The partners that disseminate Results with peer-reviewed scientific publications, will aim for open access (**1**).

More specifically and related the publication of knowledge rules indicated in Article VIII (points 4a, and 4b) of the CA will apply.

- Project Presence at Relevant Scientific Conferences and Industry Events. Conferences will be chosen in the C&D Plan, according to their relevance for the potential project impact. All partners will attend to different events to ensure project outputs communication and results capitalisation that the project is visible at the biggest and most widely known agri-food conferences in the Mediterranean area.

- Workshops and Training Actions. (M18-M36). Workshops and training actions will be carried where the cases of study are implemented to bring the Project solutions closer to the farmer. Also, development of support material (videos, interviews, etc.) to increase the visibility and scope of the project.

Finally, and with regard to the dissemination of Knowledge after the end of the Project this could be disseminated if it does not adversely affect its protection. Subject to legitimate interests, the Parties shall ensure further dissemination of their own Knowledge as provided under CA.

3.6.- Transfer and licensing of Results.

Each Party may transfer ownership of its own Results. It may identify specific third parties it intends to transfer the ownership of its Results. To ensure that the rights of the other Parties are not affected by such transfer, the transferring Party shall give at least 45 calendar days advance notice to the other Parties of such transfer and shall ensure that the rights of the other Parties will not be affected by such transfer. The Parties recognize that in the framework of a merger or an acquisition of an important part of its assets, it may be impossible under applicable EU and national laws on mergers and acquisitions for a Party to give the full 45 calendar days prior notice for the transfer as foreseen in the Grant Agreement (CA; Article VIII; point 3).

3.7.- Confidentiality and Non-Disclosure Agreements (NDA).

Regarding confidentiality rules previously indicated in Article VII (points 1 to 7) of the CA will apply. SUSTEMICROP Consortium participants can sign a confidentiality agreement or NDAs for exchanging confidential information (e.g., not yet protected by patents). This will ensure confidentiality obligations, and under which conditions the access is granted between two partners. Also, this should specify the time frame for confidentiality obligations.

3.8.- Intellectual Property Rights Plan.

SUSTEMICROP consortium will aim to follow the guidelines provided by the European IPR helpdesk Fact Sheet [2] to deal with intellectual property (IP) matters in the internationalization process and efficiently manage intellectual property rights (IPR). The SUSTEMICROP consortium will follow its IPR plan process in the following steps (**Figure 1**):

➢ **1. Identification IP from Background and Results.** The background of the SUSTEMICROP project has been identified at the beginning of the project. During the project implementation, partners will identify the Results to be generated (initial estimated Results are available in the SUSTEMICROP Full Proposal). Each exploitable IP from the Results will be identified and recorded. The IP related products can be based on one or more SUSTEMICROP components.

➢ **2. Description of Identified IP**. The next step is to record a clear description of the products and/or knowledges to be protected.

➢ **3. Defining IPR and Ownership.** After identification and description of the issue to be protected, the consortium will identify the ownership and joint ownership of the Results.

➢ **4. IPR Protection Measures**. The general coordinator will be in charge of maintaining the knowledge produced during the project on a regular basis with the partners in innovation. The NDAs can be done on a peer-to-peer basis during collaboration. If necessary, the SUSTEMICROP StC may ask for legal advice for assessing the opportunities to apply for patents or declare copyrights. More specific responsibilities for IPR protection may include a description of innovation elements from R&D work, reviewing existing patents and databases for similar innovation, reporting the status to the StC, and proposing registration for the patents. SUSTEMICROP IPR protection measures will be handled at the participant level and as well as consortium level.

➢ **5. Strategy for Dissemination and Exploitation**. In this step, SUSTEMICROP consortium will plan possible IPR protection strategies for Dissemination and Exploitation such as open access and commercialization of products.

➢ **6. Dissemination and Exploitation Actions**. This step will carry out different protection actions of Dissemination and Exploitation such as scientific publications in open-access journals, patent filing, commercialization of products, etc.

➢ **7. Evaluation**. The final step would be the evaluation of IPR protection measures, dissemination, and exploitation activities.

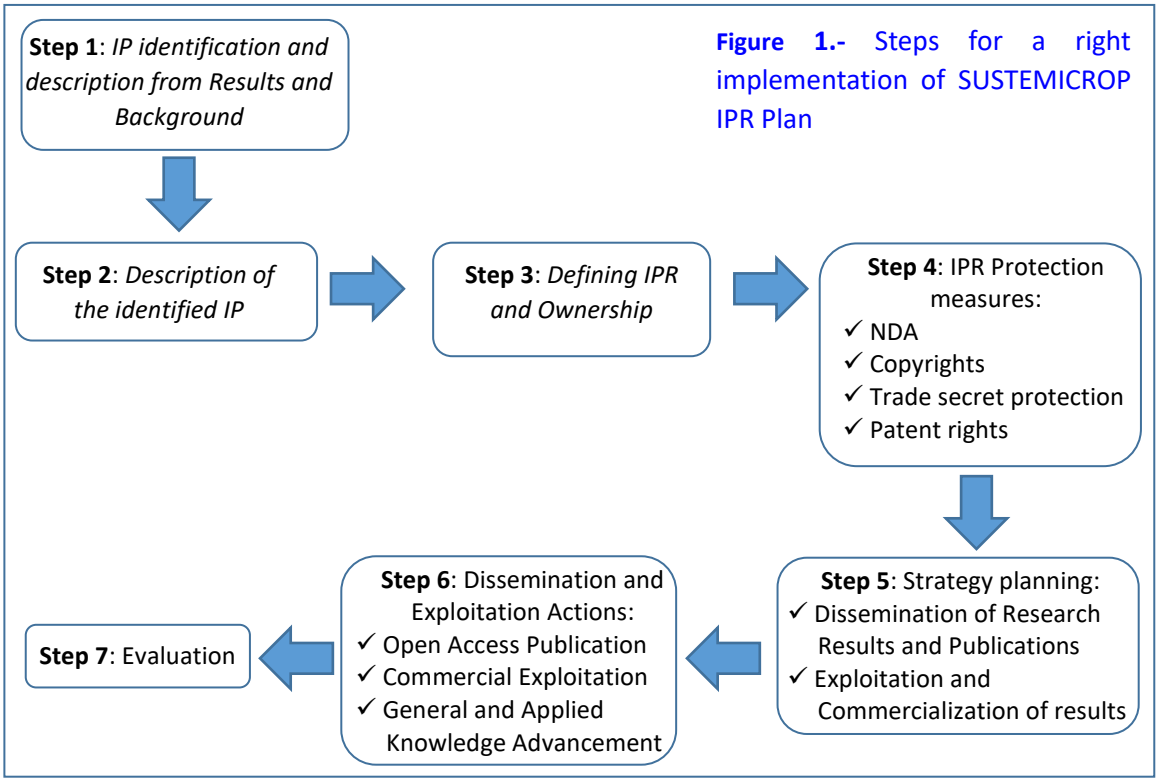

Figure 1.- Steps for a right implementation of SUSTEMICROP IPR Plan

4.- Protection and exploitation of the Project results.

4.1.- Project's description and objectives.

SUSTEMICROP's main objective is to increase resilience of Mediterranean cropping systems and competitiveness of small-scale farming, by developing and implementing systemic eco-sustainable technologies and strategies, adapted to regional particularities, and based on four approaches: i) functional biodiversity as crop defence by the use of crop residues enriched with BCAs; ii) the design and use of biopesticides obtained from natural extracts and sources; iii) the use of novel and traditional varieties better adapted to adverse effects caused by climate change , and iv) agricultural practices (overall) sustainability assessment and related digital supporting tools for improving decision-making by small farmers.

SUSTEMICROP incorporates a set of basic research and development actions to develop specific products and strategies, to be implemented in integrated crop and pest management systems. Products and strategies developed by this consortium will be specific for targeted crops, regions, and systems, and

will allow the use of natural disease control methods, while minimising the excessive use of chemical pesticides (see KPIs 3 and 4). This will preserve and enhance biodiversity and soil nutrients and the adaptation of crops to climate change, thus, contributing to the UN S.D. Goals, the EU Green Deal and the Farm to Fork strategy.

In order to reach this main objective several specific objectives (SO) have been formulated:

➢ SO1).- Design and validate (at least) 16 innovative systemic solutions to address key pests, pathogens, and adaptation to climate change from 10 different Technological Case of Studies in 3 Mediterranean crops, by valorising, selecting, optimizing, and testing different natural resources, products and strategies. Expected results will consist in:

+ Obtain at least 4 BCAs, to combat Fusarium Canker and Verticillium Wilt in hops, Young Grapevine Decline (YGD) in grapevines, and Bayoud Disease in date palm.

+ Obtain 4 new Biofertilizers (BF) combining the BCAs previously defined with compost obtained from residues of hop, grapevine, and date palm crops to be delivered, respectively to the crop's soil in order to progressively enrich the soil with the BCAs and obtain a suppressing effect on the development of the pathogen.

+ Obtain 4 new Biopesticides, based on essential oils (plant natural extracts) or bacterial priming molecules to control Downy and Powdery mildew, Botritys, and Alternaria fungal phytopathogens in hops and grapevines.

+ Obtain 1 new biofertilizer (BF) based on Phosphate-Solubilizing Bacteria (PSB), and evaluation of its capability to increase the Alpha acids levels in hop.

+ Evaluate (more than) 4 grapevine varieties (both table grape and grapevine) in current collections and identify key traits for new breeding, resistance to Downy and Powdery mildew and a better adaptation to specific climatic change conditions (warmer and dryer) in 4 different regions: France, Greece, Lebanon and Tunisia.

➢ SO2).- Design a Sustainable Innovation Framework (SIF) to evaluate SUSTEMICROP practices and innovations applied in the key Mediterranean crops and context, with aggregated indicators (economic - social - environmental).

➢ ▪SO3).- Design new crop management strategies for 3 different crops, to be used in current Integrated Crop management (ICM) or Integrated Pest Management (IPM) systems, by using the innovative systemic solutions obtained in SUSTEMICROP and evaluate its replicability, utility and usability in Mediterranean crops.

➢ SO4).- Understand the factors influencing adoption of innovative systemic solutions by smallholders, aligned with new legislations, the Sustainable Development Goals, and the Farm to Fork strategy.

➢ SO5).- Maximize the outreach and the beneficial influence of the project results, reach the target users, and other interested stakeholders (farmers, food manufacturers, retailers, local public authorities), through an effectively established communication, dissemination and exploitation plan.

Among all these objectives, the results related to SO1 seem a priori to be the ones that could have a higher degree of protection using any of the tools that will be described below.

4.2.- Protection of Project results.

Some details regarding the protection of Results can be found in the CA Article VIII, points 2-2d. Each beneficiary must examine the possibility of protecting its results (for example microorganism strains or plant material) in the most appropriate way (patent, trademarks or any other protection figure), and must adequately protect them for an appropriate period and with appropriate territorial coverage if:

(a) the results can reasonably be expected to be commercially or industrially exploited and

(b) protecting them is possible, reasonable and justified (given the circumstances). When deciding on protection, the beneficiary must consider its own legitimate interests and the legitimate interests (especially commercial) of the other beneficiaries.

In order to get an effective protection of those results or knowledges obtained during the development of SUSTEMICROP Project next tools could be taken into consideration.

4.2.1.- Copyright.

These are rights granted to authors (copyright or authors' rights) and performers, producers and broadcasters (related rights). They include [3]:

- Economic rights that enable rightsholders to control the use of their works and other protected material and be remunerated for their use. They normally take the form of exclusive rights, notably to authorise or prohibit the making and distribution of copies as well as communication to the public. Economic rights and their terms of protection are harmonised at EU level.

- Moral rights include the right to claim authorship of the work and the right to object to any derogatory action in relation to the work. They are not harmonised at EU level.

Licensing is the main mechanism for the exercise of copyright and related rights. Depending on the relevant right, the type of use and the sector, licences are most often granted directly by the rightholder or collective management organisations. The EU has recently adopted legislation to improve the functioning of collective management organisations including through facilitating the provision of multi-territorial licences.

4.2.2.- Patent protection.

A patent is a legal title that allows the patent holder to prevent his/her invention from any third party exploitation, even if it is generated independently. The European Patent Convention allows to file patients for “computer-related inventions”, it may be relevant to seek protection for the SUSTEMICROP platform or its parts, provided the patentable subject qualifies as a computer-related invention eligible for protection by European patents.

4.2.3.- Trademarks.

A trademark is any symbol that can be represented graphically, in particular, words, including names of people, drawings, letters, numbers, product shapes or their displays, on the condition that such symbols be appropriate for distinguishing the products or services of one company from those of other companies (4).

Other minor figures that can be also used to protect foreground are **trade secrets** which are intellectual property (IP) rights on confidential information which may be sold or licensed.

4.3.- Exploitation.

Each partner must examine the possibility of protecting its results and must adequately protect them for an appropriate period and with appropriate territorial coverage if:

(a) the results can reasonably be expected to be commercially or industrially exploited and

(b) protecting them is possible, reasonable and justified (given the circumstances). When deciding on protection, the beneficiary must consider its own legitimate interests and the legitimate interests (especially commercial) of the other beneficiaries.

5.- Conclusions.

In the present deliverable, we describe the best practices and measures that should be implemented by the SUSTEMICROP Consortium for handling IP related issues in a systematic manner.

Furthermore, if the need arises, the Consortium will reach out to the European IPR Helpdesk, legal teams within SUSTEMICROP members or external IPR advisory firms to get support.

6.- References.

1).- https://www.fosteropenscience.eu/sites/default/files/pdf/2006.pdf

2) https://op.europa.eu/en/publication-detail/-/publication/43e0204c-6ed3-11ed-9887-01aa75ed71a1/language-en/format-PDF/source-276235204

3).- https://digital-strategy.ec.europa.eu/en/policies/copyright

4).https://www.oepm.es/en/propiedad_industrial/propiedad_industrial/que_se_puede_proteger_y_como/marca_comunitaria/

List of figures